UNITED STATES BANKRUPTCY COURT
FOR THE NORTHERN DISTRICT OF ALABAMA
SOUTHERN DIVISION

IN RE:	)	
JEFFERSON COUNTY, ALABAMA	)	**CASE NO.: 11-05736-TBB9**
	)	**CHAPTER 9**
Debtor.	)	

NOTICE OF FILING COUNTY EXHIBIT C.344 (PART 4 OF 6)

Jefferson County, Alabama, the debtor in the above-referenced case (the "County"), submits the following exhibits for the plan confirmation hearing set by the Court's *Order Continuing Confirmation Hearing and Extending Related Deadlines* [Docket No. 2169], which is scheduled to commence on November 20, 2013 at 10:00 a.m.:

1. *Ratemaking Record* of Jefferson County [County's Exhibit No. **C.344**] (PART 4 OF 6).

Respectfully submitted this 15th day of November, 2013.

/s/ James B. Bailey
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expenses of operation or maintenance of the sewerage system, and the powers and duties of any trustee with regard thereto;

(7) the setting aside out of such revenue from service charges of reserves and sinking funds, and the source, custody, security, regulation, application and disposition thereof;

(8) determination or definition of the expenses of operation and maintenance of the sewerage system;

(9) the making of service charges for connection with or the use or services of the sewerage system, and the fixing, establishment, collection and enforcement of the same, the amount or amounts of revenues to be produced thereby, and the disposition and application of the service charges charged or collected; provided, however, that the making, fixing and establishment of said charges by the said County Commission shall be subject to review by the Board of Arbitration, as provided for in Subsection (b) of Section 6 of this Act;

(10) the assignment, to secure the payment of such bonds, of any contract for the disposal and treatment of sewerage made pursuant to Section 3 of this act and the performance by the county of the obligations of any such contract. All such provisions contained in any such resolution or resolutions and all such covenants and agreements shall constitute valid and legally binding contracts between the county and the several holders of the bonds, regardless of the time of issuance of such bonds, and shall be enforceable by any such holder or holders by mandamus or other appropriate action, suit, or proceeding at law or in equity in any court of competent jurisdiction.

Section 17. If any section, subsection, clause or provision of this act shall be adjudged unconstitutional or to be ineffective in whole or in part, to the extent that it is not adjudged unconstitutional or is not ineffective it shall be valid and effective and no other section, subsection, clause or provision of this act shall on account thereof be deemed invalid or ineffective, and the inapplicability or invalidity of any section, subsection, clause or provision of this act in any one or more instances or under any one or more circumstances shall not be taken to affect or prejudice in any way its applicability or validity in any other instance or under any other circumstance.

Section 18. This act shall become effective upon its approval by the Governor or upon its otherwise becoming a law.

Approved Sept. 19, 1949.
Time 10:16 A. M.

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[PUBLISH]

IN THE UNITED STATES COURT OF APPEALS

FOR THE ELEVENTH CIRCUIT

No. 07-14648

FILED
U.S. COURT OF APPEALS
ELEVENTH CIRCUIT
July 29, 2009
THOMAS K. KAHN
CLERK

D.C. Docket No. 05-00543-CR-2-CLS-PWG

UNITED STATES OF AMERICA,

Plaintiff-Appelle.

versus

US INFRASTRUCTURE, INC.,
EDWARD T. KEY, JR.,
SOHAN P. SINGH,

Defendants-Appellants.

Appeals from the United States District Court
for the Northern District of Alabama

(July 29, 2009)

Before TJOFLAT and EDMONDSON, Circuit Judges, and RYSKAMP,* District Judge.

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* Honorable Kenneth L. Ryskamp, United States District Judge for the Southern District of Florida, sitting by designation.

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RYSKAMP, District Judge:

Appellants, a corporation and two of its officers, seek review of their convictions of various bribery charges. The government charged that appellants bribed certain officials of Jefferson County, Alabama in return for government contracts. The jury found appellants guilty on all charges. We have reviewed the lengthy record and find no reversible error.

I. BACKGROUND

In 1996, after a Clean Water Act lawsuit alleging that untreated waste illegally entered the area's rivers and streams, Jefferson County ("County") entered into a consent decree requiring the County to repair and rehabilitate its sewers and wastewater treatment plants. The cost of the rehabilitation amounted to nearly $3 billion.

The consent decree process required the County to hire engineering firms through no-bid contracts. The Jefferson County Environmental Services Department ("JCESD") supervised the process of rehabilitating the sewer and treatment plants. County Commissioner Jewell "Chris" McNair ("McNair") oversaw the operation of the JCESD, which included JCESD Director Jack Swann ("Swann"), Assistant Director Harry Chandler ("Chandler"), and Chairman, Product Review Committee Donald Ellis ("Ellis"). McNair supervised the JCESD

from 1988 until his March 29, 2001 retirement.

McNair decided which engineering firms to hire for the project and selected US Infrastructure, Inc. ("USI") as the primary design firm. USI was awarded over $50 million in contracts during the sewer rehabilitation project.

Sohan Singh ("Singh") founded USI in 1994 and remains its President and principal owner. Edward T. Key, Jr. ("Key") is Vice President of USI.

McNair owned and operated the Chris McNair Studio and Art Gallery ("McNair Studio"), which, as explained by his daughter Kim McNair Brock ("Brock"), was "a family business where we do photography, custom framing. And after a period of time, we had an art gallery and banquet facility." The McNair Studio was a private enterprise unrelated to McNair's position with the County.

On August 29, 2005, a federal grand jury sitting in Birmingham, Alabama returned a 127 Count Second Superseding Indictment that, *inter alia*, charged USI, Singh and Key with conspiring to commit bribery by paying McNair approximately $140,000 for work not actually performed by McNair (18 U.S.C. § 371) (Count 32), bribing McNair by giving him checks for that bogus work (18 U.S.C. § 666) (Counts 38-45, 47-49), conspiring to commit bribery by giving McNair approximately $335,000 in cash drawn from USI funds (18 U.S.C. § 371)

(Count 50), bribing Chandler with a $2,000 gift card to Parisian's Department Store (18 U.S.C. § 666) (Count 73) and an envelope containing $1,500 in cash (18 U.S.C. § 666) (Count 74), and obstructing justice by intentionally withholding documents from the grand jury and providing a false letter of compliance with the grand jury's subpoena (18 U.S.C. § 1503) (Count 127). The Indictment also charged Key and USI with bribing Ellis with an envelope containing $500 in cash (18 U.S.C. § 666)(Count 88). The district court severed the Indictment into five separate trials, of which this trial was one. The jury found appellants guilty on all counts.[1]

II. DISCUSSION

A. Sufficiency of the Evidence

Appellants attack the sufficiency of the evidence as to the bogus invoice scheme and the cash bribes conspiracy. Appellants also claim that the government failed to prove that appellants possessed corrupt intent.

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[1] McNair was charged with the USI defendants in the two conspiracy counts and separately with five counts of accepting bribes from appellants, but was severed from the USI defendants. Prior to his trial, he pleaded guilty to one count of conspiracy, Count 32. The government subsequently dismissed him as a defendant to the other counts involving USI. McNair was also convicted of numerous offenses in the first of the five trials.

1. Standard of Review

This Circuit reviews the sufficiency of the evidence *de novo*, examining the evidence in the light most favorable to the government and resolving all reasonable inferences and credibility issues in favor of the guilty verdicts. *United States v. Suba*, 132 F.3d 662, 671 (11th Cir. 1998). This Circuit "will not overturn a conviction on the ground of insufficient evidence 'unless no rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.'" *United States v. Wright*, 392 F.3d 1269, 1273 (11th Cir. 2004) (quoting *United States v. Christo*, 129 F.3d 578, 579 (11th Cir. 1997)). The evidence need not be inconsistent with every hypothesis other than guilt, "as the jury is free to choose among reasonable constructions of the evidence." *Suba*, 132 F.3d at 671-72.

2. Bribery of McNair

To sustain the conspiracy convictions, the Government must prove the existence of an agreement to achieve an unlawful objective, here, exchanging things of value for McNair's influence; the defendant's knowing and voluntary participation in the conspiracy; and an overt act in furtherance of the conspiracy. *Suba*, 132 F.3d at 672. Since illegal conspiracies are secretive by nature, the existence of the agreement and the defendant's participation in the conspiracy may

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be proven entirely from circumstantial evidence. *Id.; accord United States v. Massey*, 89 F.3d 1433, 1438-39 (11th Cir. 1996) (conspiracy to commit bribery). "To hold otherwise 'would allow [defendants] to escape liability... with winks and nods, even when the evidence as a whole proves that there has been a meeting of the minds to exchange official action for money.'" *Massey*, 89 F.3d at 1439 (quotation omitted). The meeting of the minds is provable through inferences drawn from the participants' conduct or other circumstantial evidence of the scheme. *United States v. Obregon*, 893 F.2d 1307, 1311 (11th Cir. 1990).

To sustain the bribery convictions, the government must prove that appellants paid the bogus McNair Studio invoices with the corrupt intent to influence or reward McNair. *United States v. Castro*, 89 F.3d 1443, 1454 (11th Cir. 1996).

Several McNair Studio employees testified that the Studio did not and could not have created the materials for which USI was billed. The evidence demonstrating the materials McNair Studio supposedly created for USI include checks by which USI paid McNair Studio, each one signed by Singh; McNair Studio invoices to USI that correspond to the checks; USI's copies of the McNair Studio invoices; and the actual materials McNair Studio supposedly created and billed to USI. Brock worked at the Studio from 1993 through 2001, where she

handled McNair's checking account and the Studio's cash receipts. For each invoice Brock received either from McNair or by fax from USI, she also received a USI "worksheet" containing purchase order numbers and billing information. Brock testified that without the worksheets, she would have had no idea what to put on the invoices. Brock would prepare an invoice, tell her father when the invoice was finished, and then she or her sister would fax or send the invoice to USI. For every invoice shown to her at trial, Brock was unaware of any work that McNair Studio performed to earn the payments that USI made pursuant to the invoices. The amount of the bogus invoices totaled nearly $140,000. In 1999 to 2000, McNair built an addition that more than doubled the studio's size. Brock was "sure that [McNair] couldn't afford it, or, you know, how is he going to do something on a large scale like that," and told McNair so.

Shenita Hatcher ("Hatcher"), the McNair Studio graphic designer, did not create and never saw the materials supposedly created for USI. She never created any documents while at McNair Studio that even resembled those exhibits. She was unaware of anything at McNair Studio that resembled the binders that contained the purported projects for USI. She also explained that McNair Studio did not have the lamination machine necessary to create such binders.

Several USI employees testified that USI actually created the materials.

Angela Wilson ("Wilson") explained that she or other USI employees created a series of presentations, proposals and statements of qualifications contained in the exhibits. The text for these documents came from USI files, and the materials for the documents were available at USI. USI purchased a laminating machine in 1999. Wilson did the binding and laminating herself. Wilson prepared the documents at Key's request and did not talk to or work with McNair Studio in creating any of the documents.

Mary Duffy ("Duffy"), another USI employee, identified a $12,595 invoice from McNair Studio for "Marketing and proposal services for Atlanta proposal," but explained that USI prepared the proposal by using a Kinko's copy service. She acknowledged that the McNair Studio invoice described work that USI itself performed.

Rosherren Williams ("Williams"), who worked at USI for several months in 1999, typed a series of letters of interest for Key. The letters were essentially form letters that required little effort to produce. At least one letter that USI prepared after Williams left the company bore Williams's initials as the typist.

The record is devoid of any evidence that McNair consulted with USI in any of the projects. Significantly, the Jefferson County contract awarded to USI during the relevant time strictly prohibited USI from hiring McNair, or any other

County employee, in any capacity.

USI gave McNair Studio's invoices special attention. From 1999 to the middle of 2000, USI paid its vendors weekly, and, after the middle of 2000, paid them bi-weekly. In contrast, USI typically paid McNair Studio either that day or the day after USI received McNair's invoices. While Singh did not typically hand-deliver checks to any other vendor, Singh routinely delivered the check to either McNair or his studio.

USI gave preferential treatment to JCESD officials, particularly McNair. Singh told Duffy that "[t]he department heads at Jefferson County were considered friends of the Company, and we were to treat him with the utmost respect and generally be friends with them." A USI document said that "when Sohan is here, he will only take calls from clients, County officials, and other VIP's." The document listed people to be "put through to Sohan, without question," with McNair at the top, followed by other JCESD officials.

McNair admitted to William Dawson ("Dawson"), an engineering contractor who received no-bid contracts from the JCESD between 1999 and 2003, that Singh bribed him. Dawson was convicted separately of paying bribes to McNair. Dawson testified that McNair called him in late 2003 and asked for money, telling him that Singh had been helping him pay his mortgage, but that

Singh had stopped doing so. Specifically, Dawson testified that McNair said that "Singh had been making a note for him [McNair], and that he had to quit doing that, and he was behind and he needed some help." Dawson explained that "the agreement was reached that I would buy a framed piece of art that was in his studio" for $2,700.

As this Circuit noted in *Suba*, "'a common purpose or plan may be inferred from a development and collocation of circumstances.'" 132 F.3d at 672 (quotation omitted). The evidence shows an extended plan or scheme by USI, a company that received $50 million dollars in government contracts over a period of years, to pass nearly $140,000 through bogus invoice payments to the County Commissioner almost wholly responsible for that $50 million. The large sum of money on both sides strongly suggests a common goal to increase each other's wealth through illegal means. *See, e.g., United States v. Poole*, 878 F.2d 1389, 1392 (11th Cir. 1989) (intent to distribute illegal drugs can be shown from the quantity of drugs involved); *United States v. Perez*, 648 F.2d 219, 221 (5th Cir. 1981) (same). In *United States v. Sutherland*, 656 F.2d 1181 (11th Cir. 1981), Maynard and Walker each collected numerous traffic tickets that were favorably disposed of by Sutherland, a municipal court judge. Significantly, for any specific ticket there was no evidence "(1) that the ticket was delivered by Walker or

Maynard to Sutherland, (2) that money was delivered by Walker or Maynard to Sutherland, or (3) that Sutherland favorably disposed of the ticket in exchange for such money." 656 F.2d at 1187. Nevertheless, this Court affirmed their conspiracy convictions based on "the overwhelming circumstantial evidence introduced by the government." *Id*.

The record is more than sufficient to sustain the jury's verdict on the bogus invoice conspiracy. To the extent appellants challenge the substantive bribery convictions based on the same arguments, this challenge is also rejected.

Appellants also claim that the government failed to prove "that the USI defendants intended to reward and influence McNair." Yet McNair admitted to Dawson that Singh had been paying his mortgage.

3. The Cash Bribes Conspiracy

The indictment charged a pattern of substantial cash withdrawals from USI funds and comparable cash deposits by McNair into his personal bank account at similar times. McNair's deposits totaled $46,100 in December 1999, $35,000 in January 2000, and $44,260 in July 2000. McNair gave Brock the cash and told her to complete deposit slips for him or to make the deposits herself. Although Brock did not know where her father got the cash for the deposits, she knew it did not come from the McNair Studio register or cash box and was not reflected in any of

McNair Studio's books. Brock thought it unusual that her father had so much cash, but when she asked him about it, "[h]e would tell us to just do what he asked, to make the deposit, for whatever he asked us to do." McNair had no business other than McNair Studio.

The same day or the day immediately preceding McNair's deposits, Key and Singh would cash USI checks or withdraw thousands of dollars in cash, sometimes in amounts identical to the McNair deposits, from accounts at Compass Bank and AmSouth Bank in Birmingham.[2]

In January 2000, Key deposited a $90,000 check from USI into a newly opened personal account at Compass Bank and immediately began a series of $9,000 withdrawals.[3] The following month Key deposited a second $90,000 check into the account, and the $9,000 withdrawals continued. In July 2002, Key deposited a third $90,000 check, this time into his account at AmSouth Bank.

The day before the first $90,000 check was issued to Key, Singh requested two checks from USI. The first check was for $406,895.20, the second was for

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[2] On December 2, 1999, Key cashed a $9,000 USI check to Singh, and McNair made a $9,000 cash deposit. On November 17, 1999, and again on November 18, 1999, Key cashed a $9,000 USI check to Singh. McNair made two cash deposits the next day, one for $9,000 and one for $8,000.

[3] The largest checks were for $9,000 because Key knew the banks were required to send Currency Transaction Reports to the government for transactions greater than $10,000.

$150,000. USI issued the checks after "Mr. Singh said that he had loaned money to the company and he wanted to be reimbursed." USI's accounting records did not indicate that USI owed Singh $406,000. An FBI agent testified that he traced the $406,000 check to a new account in the name of Singh and his son in Nashville. The second $90,000 check to Key came from this account.

When questioned about his USI stock and his inability to account for the three $90,000 checks that he deposited to his accounts, Key made inconsistent claims that he gave his stock back for free and that he was paid $180,000 for that same stock. Key also claimed that he did not recall receiving and depositing a $90,000 check, which was similarly incredible. The evidence showed that much of the $270,000 was withdrawn in roughly $9,000 increments at times when McNair was making similar cash deposits. The record was more than adequate to support the jury's guilty verdicts on Count 50. Nor are the two conspiracies "inconsistent in theory:" evidence establishing appellants' participation in the bogus invoice conspiracy also supports appellants' participation in the cash bribes conspiracy.

4. Bribery of Chandler and Ellis

Key and Singh told Chandler of their intent to hide the fact that they had given things of value to Jefferson County employees. In 2003 and 2004, Key gave

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Chandler various "gifts," including a gift card for Parisian's Department Store worth $2,000, $1,500 cash, a watch, and another $800 in cash. Chandler, assisting the government, recorded a conversation in which Key told him that the cash Chandler received "ain't ever going to come to light here." Key added: "You don't need to worry about that," "that'll never come up... you don't need to be scared because that - that's never gonna come up." When Chandler said he was "scared that'd be a paper trail" for the gift card, Key responded, "there is nothing on that either," "[t]here's no connection to you or anybody else," "I'm not gonna expose you to anything."

Chandler also recorded a conversation with Singh. When Chandler referred to the Parisian's gift card, Singh said "No. We never gave you nothing. You shouldn't even think about that you know." Singh said that "all I'm saying, sir, for your convenience kinda thing...that never happened here."

Additionally, in 2002, Key gave Ellis an envelope containing $500 cash, saying that the money was for Ellis and another county employee to take a business trip for which the County would not pay Ellis's expenses. Ellis took both the money and the trip. Key also gave Ellis at least one gift card for Parisian's Department Store, that Ellis believed was worth $200, as an Easter gift in 2001.

Key told the FBI that neither he nor USI had ever given a gift greater than

$50 to any government official. USI's letter of compliance with the grand jury subpoena stated likewise. The subpoena requested records of "[a]ny and all payments... made directly or indirectly by USI and/or by any of its officers... for the benefit of any current or former elected or appointed public officials or employees...." USI's letter of compliance, which Key signed, purported to provide "[a] listing of all payments made by USI and its officers," explained that Key gave gifts to USI's "clients" every Christmas, and stated: "In all cases these gifts were valued at less than $50 each."

Appellants claim that the evidence established only that "gifts" were given to Chandler and Ellis and that there is no evidence that those gifts were given with the requisite corrupt intent to influence. The nature and size of the gifts belie their claim, however. Key and Singh expressed their intent to Chandler to hide the fact that those "gifts" were given and carried out that intent in both FBI interviews and USI's letter of compliance with the grand jury subpoena. The record was sufficient to allow the jury to conclude that the payments to Chandler and Ellis were bribes.

5. Obstruction of Justice

Key expressly told the FBI that neither he nor USI had ever given a gift greater than $50, and USI's letter of compliance, which Key signed, stated

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likewise. Key never revealed the $500 he gave to Ellis or the $1,500 he gave to Chandler. Substantial evidence supports the jury's verdict on the obstruction of justice conviction.

B. Evidentiary Rulings

1. Dawson

Appellants challenge the admissibility of Dawson's testimony about McNair's statement that Singh was helping McNair pay his mortgage. The district court considered the admissibility of Dawson's testimony at both a pretrial hearing and again just before Dawson testified. The court's pretrial Order held that Dawson's testimony would be "admissible to show intent, knowledge, and a common plan or scheme under Federal Rule of Evidence 404(b)." During the pretrial hearing, the District Court asked several questions indicating that McNair's statement was admissible as that of a co-conspirator pursuant to Fed. R. Evid. 801(d)(2). Appellants' arguments below and to this Court assume that such was the basis on which this evidence was admitted.

The government does not argue on appeal that Dawson's testimony was admissible under Rule 801(d)(2). During closing argument, defense counsel referred to Dawson's testimony as if it had been admitted for the truth of the

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matter asserted in McNair's statement: that Singh had been paying McNair's note.[4] Accordingly, the government maintains that the statement was admissible as an exception to the hearsay rule under Rule 804(b)(3).

A district court's evidentiary rulings are reviewed only for "a clear abuse of discretion," *United States v. McLean,* 138 F.3d 1398, 1403 (11th Cir. 1998), and this Court "will not hold that the district court abused its discretion where it reached the correct result even if it did so for the wrong reason." *United States v. Samaniego,* 345 F.3d 1280, 1283 (11th Cir. 2003). *See also United States v. Maliszewski*, 161 F.3d 992, 1009 (6th Cir. 1998) (holding that declarant's statement to his wife that someone was trying to remove him from a "drug-supply loop" was not admissible under Rule 801(d)(2)(E) but was admissible under Rule 804(b)(3) even though district court did not consider the applicability of Rule 804(b)(3) as to that statement).

A hearsay statement that inculpates the accused is admissible if "(1) the declarant is unavailable; (2) the statement so far tends to subject the declarant to criminal liability that a reasonable person in his position would not have made the statement unless he believed it to be true; and (3) the statement is corroborated by

[4] "They bring Bill Dawson in here. He…said McNair told him Sohan Singh had been 'paying my mortgage and he quit'…That's what you call hearsay. It's an exception to the hearsay rule, but it's still hearsay….I sure hope you don't convict my client because of that."

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circumstances clearly indicating its trustworthiness." *United States v. Costa*, 31 F.3d 1073, 1077 (11th Cir. 1994).

McNair was "unavailable" within the meaning of Rule 804(a) because he was a codefendant under the same indictment as appellants and, therefore, could not be called as a witness. *United States v. Georgia Waste Sys., Inc.*, 731 F.2d 1580, 1582 (11th Cir. 1984); *accord United States v. Robbins,* 197 F.3d 829, 838 n.5 (7th Cir. 1999).

"Rule 804(b)(3) is founded on the commonsense notion that reasonable people, even reasonable people who are not especially honest, tend not to make self-inculpatory statements unless they believe them to be true." *Williamson v. United States*, 512 U.S. 594, 599, 114 S.Ct. 2431, 2435 (1994). Whether the declarant's statement is against the declarant's penal interest "can only be answered in light of all the surrounding circumstances." *Id.* at 603-04, 114 S.Ct. at 2437. McNair's statement that Singh had been paying McNair's note was against McNair's penal interest as it tended to show he had accepted bribes. *See United States v. Ford*, 435 F.3d 204, 215 (2d Cir. 2006); *United States v. Centracchio*, 265 F.3d 518, 525 (7th Cir. 2001)(admission by former police chief to receipt of cash bribes during plea allocution was self-inculpatory), *abrogated on other grounds, Crawford v. Washington*, 541 U.S. 36, 124 S.Ct. 1354 (2004).

Furthermore, McNair's statement was "truly inculpatory to him only because [it] did not seek to lessen blame *as to his crime* by spreading blame to others." *Centracchio*, 265 F.3d at 525-26. *See also Williamson*, 512 U.S. at 603, 114 S.Ct. at 2436 (contrasting self-inculpatory statements with those "merely attempt[ing] to shift blame or curry favor").

The district court did not hold an evidentiary hearing as to whether McNair's statement was against his interest, which appellants claim is reversible error. Where a district court erroneously admits evidence under Rule 801(d)(2)(E), an appellate court may review the evidence to determine whether the evidence was admissible pursuant to Rule 804(b)(3) even if the district court did not consider the applicability of Rule 804(b)(3).

Finally, McNair's statement is trustworthy because "'it [is] unlikely, judging from the circumstances, that the statement was fabricated.'" *United States v. Jernigan*, 341 F.3d 1273, 1288 (11th Cir. 2003) (quoting *United States v. Gomez*, 927 F.2d 1530, 1536 (11th Cir. 1991)). Given the context of McNair's relationship with Dawson, McNair had no reason to lie about Singh's payments. Dawson had previously bribed McNair and was a confidant of McNair's with regard to the bribery scheme. Courts have found that self-inculpatory statements are sufficiently corroborated where the evidence presented at trial supports the

veracity of the out-of-court statement and where the declarant makes the statement to someone with whom he shares a close relationship. *See United States v. Shukri,* 207 F.3d 412, 416-17 (7th Cir. 2000) (allowing self-inculpatory hearsay statements pursuant to Rule 804(b)(3) because evidence at trial supported truthfulness of the statements and because declarant made the statements to his brother-in-law who was a confederate in the theft conspiracy at issue). *See also Robbins*, 197 F.3d at 840 (deeming declarant's statement to his fiancé trustworthy under Rule 804(b)(3)); *United States v. Barone*, 114 F.3d 1284, 1296 (1st Cir. 1997) (deeming trustworthy hearsay declarant's statement pursuant to 804(b)(3) because statement was made to declarant's sister); *United States v. Matthews*, 20 F.3d 538, 546 (2d Cir. 1994) (deeming statements trustworthy because declarant made them in private to his girlfriend). The statement at issue here was not a custodial statement made to law enforcement officials, thereby obviating any concern that McNair was attempting to curry favor with the government by shifting blame to another individual. As discussed above, the evidence presented at trial was more than sufficient to demonstrate that McNair and Singh were operating a bribery conspiracy.

Upholding the admission of Dawson's testimony comports with Singh's rights under the Confrontation Clause. The Supreme Court held in *Crawford* that

testimonial evidence from an absent witness is admissible only if the witness is both unavailable and the defendant had a prior opportunity to subject the declarant to cross-examination. 541 U.S. at 68, 124 S.Ct. at 1374. Given that McNair's statement to Dawson was part of a private conversation, it is "nontestimonial" within the meaning of *Crawford*, and *Crawford's* strict Confrontation Clause requirements do not apply. *See United States v. Brown*, 441 F.3d 1330, 1359 (11th Cir. 2006) (noting that the "*Crawford* rule applies only to testimonial evidence"); *id*. at 1360 (private conversation "was not made under examination, was not transcribed in a formal document, and was not made under circumstances leading an objective person to reasonably believe the statement would be available for use at a later trial. Thus, it is not testimonial and its admission is not barred by *Crawford*").

2. Henson

Electrical engineer Gus Henson ("Henson") testified that he approached McNair for a government contract after he worked for free for McNair Studio. In 1999, Henson designed the electrical, plumbing, and air-conditioning systems for the McNair Studio addition, using elevations sent to him by USI. Had Henson billed for the project, he would have charged $10,000. After Henson prepared the

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McNair Studio designs, he met with McNair to ask about getting work from the JCESD.

McNair "said there may be a possibility and he - he said I needed to talk with Mr. Swann." Before Henson left, McNair placed a call to a secretary "to see about getting [Henson] an appointment with Mr. Swann." McNair then asked Chandler "to see if we could develop a project...that Henson Engineering could perform," and Chandler's secretary set up a meeting between Swann, Chandler and Henson. At that meeting, Henson proposed a stream monitoring system and was awarded a $25,000 contract to build that system. Because Henson was not able to do the work that JCESD typically required, Chandler developed a project that "primarily was electrical and controls in nature" at McNair's request.

The district court allowed Henson's testimony on the grounds that it was "inextricably intertwined" with the charged offenses because the government had established the requisite "linkage" or "nexus" between appellants' and Henson's testimony. This Circuit has long held that evidence of criminal activity other than the crime charged is not extrinsic under Rule 404(b) if the evidence is inextricably intertwined with evidence of the charged offense. *E.g., Wright*, 392 F.3d at 1276 (11th Cir. 2004); *Gomez*, 927 F.2d at 1535. Rule 404(b) does not apply when the other act evidence is linked in time and circumstances with the charged crime and

concerns the context, motive or setup of the crime; or forms an integral part of the crime; or is necessary to complete the story of the crime. *E.g., Wright*, 392 F.3d at 1276. Moreover,

> Rule 404(b) does not specifically apply to exclude this evidence because it involves an extraneous offense committed by someone other than the defendant. The evidence was not introduced "to show that the defendant has a criminal disposition and that he can be expected to act in conformity therewith," so the policies underlying Rule 404(b) are inapplicable.

United States v. Morano, 697 F.2d 923, 926 (11th Cir. 1983) (quotation omitted); *accord United States v. Meester*, 762 F.2d 867, 877 (11th Cir. 1985). In *Gomez,* Gomez was charged with importing and conspiring to import cocaine. The court allowed evidence that Zuluago entered into a drug transaction two months after Gomez's arrest because a book found in Gomez's car contained Zuluago's phone number, and another witness testified that he discussed Zuluago's drug activity with Gomez. 927 F.2d at 1535. This Court upheld the admission of that evidence as inextricably intertwined because of its "relevan[ce] to the scheme and chain of events surrounding the charged importation conspiracy." *Id*. Similarly in *Meester*, the Court held that evidence that an unindicted co-conspirator had engaged in crimes similar to those charged against the defendants was admissible because it "served to establish a background for the later substantive acts charged

in the indictment and was therefore relevant to prove the existence and purpose of the ongoing conspiracies." 726 F.2d at 877. And in *United States v. Smith*, 122 F.3d 1355, 1359-60 (11th Cir. 1997), this Court found evidence of a third party's bank robbery inextricably intertwined with the bank robbery with which defendant was charged because "strong links" and "integral links" between the two established similar *modus operandi*.

The trial court reasoned that Henson's testimony would "tend to be evidence of a common plan, scheme and design of how business was being carried on in the Environmental Services Department at that time." The link was not only that Singh was with McNair when Henson approached McNair for a JCSD contract, but also that USI had sent Henson the McNair Studio elevations that Henson needed to perform his design work for the studio. Henson's testimony was relevant to the chain of events surrounding the charged crimes, including context and setup; specifically, that Singh had knowledge of McNair's willingness to exchange his influence for things of value as well as the opportunity to take advantage of that willingness. Indeed, USI, which itself performed free services for the McNair Studio renovation, assisted Henson in also performing free services for McNair by giving Henson the elevations that he needed to construct the engineering designs.

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Appellants are wrong that Henson's testimony should have been excluded under Rule 403 on grounds of undue prejudice. Rule 403 is an extraordinary remedy that must be used sparingly because it results in the exclusion of concededly probative evidence. *E.g., Wright*, 392 F.3d at 1276. Thus, in cases where this Court has found other acts evidence inextricably intertwined with the crimes charged, the Court has refused to find that the evidence should nonetheless be excluded as unduly prejudicial, even when the other acts included evidence of violent crimes such as bank robbery, murder and arson. *See Smith*, 122 F.3d at 1360; *United States v. Fortenberry,* 971 F.2d 717, 721 (11th Cir. 1992); *United States v. Morano*, 697 F.2d 923, 926 (11th Cir. 1983). Even appellants' own cited authority explains that the test under Rule 403 is whether the other acts evidence was "'dragged in by the heels' solely for prejudicial impact." *United States v. Veltmann*, 6 F.3d 1483, 1500 (11th Cir. 1993). Given the strong connection between Henson's testimony and the crimes charged, such was not the case here. In any event, Henson did not implicate any of the appellants in a crime. Thus, if his testimony was admitted in error, that error was harmless. *E.g., United States v. Jones*, 28 F.3d 1574, 1582 (11th Cir. 1994), *vacated on other grounds*, 516 U.S. 1022, 116 S.Ct. 663 (1995).

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3. Appellants' Proffered Experts

Various cash withdrawals from Singh's funds were taken to India to finance Singh's son's wedding, which cost the Singhs between $180,000 and $190,000. Singh's wife, Kusum Singh ("Mrs. Singh") admitted on cross-examination that the cash taken to India for the wedding came from two cash withdrawals made by her husband from their private Sun Trust Bank account in Nashville. Those cash withdrawals totaled $380,000. Mrs. Singh and several other witnesses explained that because American dollars command large discounts in India, and because the Indian "bureaucracy" makes obtaining cash from checks or wire transfers very difficult, it is "common practice" to take American dollars into India whenever traveling there. Appellants maintain that the cash withdrawals were solely for the purpose of financing the wedding.

Several defense witnesses testified at length about Indian culture generally and Indian weddings specifically. The government never disputed that the Singhs' wedding costs were about $200,000, or that those costs were paid for in cash taken to India in $9,000 increments. Accordingly, the district court did not abuse its discretion when it excluded a wedding planner's testimony "regarding the customs, obligations and social pressures associated with the lavishness of an Indian wedding," a jewelry expert's testimony "regarding the expense and value of

jewelry purchased in association with the wedding in question," and an Indian economist's testimony about "India's 'cash-culture' and the importance of United States currency in that culture."

A district court has broad discretion in deciding whether to permit expert testimony. *United States v. Frazier*, 387 F.3d 1244, 1258-59 (11th Cir. 2004). Exclusion of expert testimony will constitute reversible error only if it is "manifestly erroneous," *id*. at 1258 (quotation omitted), or "had a 'substantial impact on the outcome'" of trial. *United States v. Paradies*, 98 F.3d 1266, 1289 (11th Cir. 1996) (*quoting United States v. Sellers*, 906 F.2d 597, 601 (11th Cir. 1990)).

The excluded testimony was both cumulative and irrelevant. The jury would have learned nothing from expert witnesses that it did not already know and, in fact, was undisputed—that the wedding was very expensive and paid for by large amounts of cash sent to India for that purpose. *See, e.g., Frazier*, 387 F.3d at 1263 (expert testimony can be excluded if it is "cumulative"). The issue was whether the cash for the wedding came from Singh's personal Sun Trust account in Nashville or whether it came from the Birmingham cash transactions the Indictment alleged were used to bribe McNair. None of the proffered defense testimony would have addressed that issue. Thus, the court did not abuse its

discretion by excluding that testimony.

C. Jury Instructions

Appellants maintain that the trial court's instructions regarding the substantive charges failed to allow the jury the opportunity to consider their theory of the evidence. While a court should instruct a "jury on the defendant's defense theory if the theory has a foundation in evidence and legal support," *United States v. Schlei*, 122 F.3d 944, 969 (11th Cir. 1997) (quotation omitted), a theory of the defense instruction is not required "when the charge given adequately covers the substance of the requested instruction." *United States v. Ndiaye*, 434 F.3d 1270, 1293 (11th Cir. 2006). Refusing to give a proposed "instruction is reversible error only when (1) the proposed instruction is correct, (2) the instruction was not addressed in the charge actually given, and (3) the failure to give the requested instruction seriously impaired the defendant's ability to present an effective defense." *Id.*; *United States v. Arias-Izquierdo*, 449 F.3d 1168, 1185 (11th Cir. 2006).

After the court provided the parties with a copy of its "draft instructions," it asked if there was "any request for revision by defense counsel?" Appellants asked the court to include in its charge the final paragraph of its proposed Instruction 11, stating that bribery requires a "specific" *quid pro quo*. The court

refused that instruction. Appellants then asked the court to give their proposed Instruction 10, that "holiday gifts" to public officials are not illegal "so long as such items are not given with the intent to corrupt." The court refused appellants' specific language explaining: "I think I cover this adequately in my instructions…." Appellants raised no further objections. After the court charged the jury, it specifically inquired if there were "[a]ny exceptions to the oral charge of the court by any attorneys for the defendants." Appellants replied:

> Your Honor, we just reiterate the previous requests to include the instructions regarding *quid pro quo* that we had previously asked the Court for. *But other than that, there are no further exceptions.*

(Emphasis added).

Appellants now claim that the district court erred by refusing its proposed Instructions 7 thru 13.[5] Yet they never objected to the court's decision not to include their Instructions 7-9. While they originally objected to the court's decision not to include their Instruction 10, after the court explained that its draft instructions "cover this adequately," they did not object to the charge as given. Thus, appellants' claims of error with respect to their Instructions 7-10 have been waived, and can be reviewed only for plain error. *Paradies*, 98 F.3d at 1289.

[5] Instructions 7, 8 and 9 were identical except they applied to Singh, Key and USI respectively. Likewise, Instructions 11, 12 and 13 were identical except they applied to USI, Singh and Key respectively.

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Similarly, the specific claim of error appellants raise concerning their Instructions 11-13 were never raised in the district court. Appellants asked the court to include in its charge the final paragraph of their proposed Instruction 11, that bribery requires a specific *quid pro quo*, but said nothing about the court's decision not to give earlier language in that same Instruction. Appellants do not complain about the district court's failure to use their proposed *quid pro quo* paragraph. Instead, they complain that the court refused to include earlier language in the proposed Instruction that states that 18 U.S.C. § 666 only prohibits those gifts to government officials that are "given with the intent to influence or reward." They further complain that the court should have included their proposed Instruction's definition of "corruptly." Because these claims were never raised below, they were waived.

In any event, the court did not err by refusing any of appellants' proposed Instructions because the charge given by the court adequately covered appellants' theories of the defense. Indeed, the words they claim the court should have used are virtually identical to the words the court actually used. Specifically, the court charged the jury that to convict any defendant of bribery under section 666, it must find that the defendant "knowingly gave…things of value" to a government employee, and in doing so "acted corruptly" in "intend[ing] to influence or

reward" that government employee. The court defined acting "corruptly" as an act "performed voluntarily, deliberately, and dishonestly for the purpose of accomplishing an unlawful end or result, or for the purpose of accomplishing some otherwise lawful end or lawful result by an unlawful means or unlawful method." The court then expressly charged that not all gifts to government employees are unlawful:

> Section 666 does not prohibit all gifts to a public official or governmental agent, but only those gifts that are given with the corrupt intent to influence or reward….

Thus, the jury could not convict unless it found that the particular payment to McNair was made "with the corrupt intent to influence or reward." Since a jury is presumed to follow the court's instructions, it could not have convicted appellants because they made legitimate payments for services rendered. Rather, the jury must have found that payments were made with the corrupt intent to influence or reward McNair. Because a defendant is not entitled to his specific wording so long as the charge given accurately states the requested proposition, *United States v. Duff*, 707 F.2d 1315, 1320-21 (11th Cir. 1983), the court's refusal to give appellants' Instructions 7-9 was not plain error.

The court's refusal to give appellants' Instruction 10 was not erroneous. The court expressly charged that section 666 "does not prohibit all gifts" to public

officials, only those "given with the corrupt intent to influence." Adding Instruction 10's additional language about "holiday gifts" would have added nothing because any gift given without the requisite corrupt intent would be lawful, while an alleged gift "given during respective holiday seasons," but given with a corrupt intent, would be unlawful.

To the extent that appellants press their *quid pro quo* argument, the district court's instructions adequately addressed that issue. This Court has rejected the argument that the government must "show a direct *quid pro quo* relationship between [the defendants] and an agent of the agency receiving federal funds." *Castro*, 89 F.3d at 1454; *Paradies*, 98 F.3d at 1289; *accord United States v. Jennings*, 160 F.3d 1006, 1014 (4th Cir. 1998) (a "payment need not be correlated with a specific official act…the intended exchange in bribery can be 'this for these' or 'these for these,' not just 'this for that'"). Appellants' *quid pro quo* instruction was, therefore, an incorrect statement of the law. The district court correctly explained to the jury that the government was required to prove that appellants acted corruptly in giving things of value to a county official with the intent "to influence or reward" that official "in connection with any business transaction, or series of transactions." Given these and other instructions charged

to the jury, the court did not commit plain error by refusing appellants' *quid pro quo* instruction. *Paradies*, 98 F.3d at 1289.

D. Grand Jury Issue

Appellants claim that after they were charged in the June 2005 Superceding Indictment, the government abused the grand jury process by subsequently using the grand jury for the primary purpose of preparing for trial on those charges.

A defendant claiming grand jury abuse "has the burden of showing that the Government's use of the grand jury was improperly motivated."[6] *E.g., United States v. Leung*, 40 F.3d 577, 581 (2d Cir. 1994). While the grand jury cannot be used "solely or even primarily" to gather evidence against an indicted defendant,[7] it can be used to investigate whether a defendant committed crimes not covered in the indictment. *E.g., United States v. Brothers Const. Co. of Ohio*, 219 F.3d 300, 314 (4th Cir. 2000); *United States v. Alred*, 144 F.3d 1405, 1413 (11th Cir. 1998).

[6] Appellants erroneously rely on *United States v. Kovaleski*, 406 F. Supp. 267, 271 (E.D. Mich. 1976), as placing this burden on the government. That case presented a "special problem" that does not exist here. 406 F.Supp. at 270. Defendant had testified at trial but a mistrial was declared when a juror died. Prior to the new trial the prosecutor examined a witness in the grand jury to determine if the defendant had committed perjury. However, the perjury investigation involved the "same issues" that the first trial, and defendant's testimony at that trial, "centered on." *Id.* In this case, after the grand jury indicted appellants for bribing Chandler and Ellis, its continued investigation "centered on" appellants' bribery of McNair, a completely separate issue.

[7] *United States v. Moss*, 756 F.2d 329, 332 (4th Cir. 1985). *See also Beverly v. United States*, 468 F.2d 732, 743 (5th Cir. 1972).

“[T]he law presumes, absent a strong showing to the contrary, that a grand jury acts within the legitimate scope of its authority.” *United States v. R. Enterprises, Inc*., 498 U.S. 292, 300, 111 S.Ct. 722, 728 (1991); *accord Alred*, 144 F.3d at 1413.

The grand jury did not charge appellants with any crime in its February 3, 2005 Indictment. Appellants were first charged with bribing Chandler and Ellis and obstructing justice in the June 22, 2005 Superceding Indictment. While the Second Superceding Indictment expanded the charges against appellants, the new charges all concerned appellants’ bribery of McNair.

Magistrate Judge Putnam concluded that there was no grand jury abuse after holding a pre-trial hearing that included reviewing the transcripts of the USI employees who testified in the grand jury after appellants were first indicted. Although seven USI employees testified before the grand jury in August 2005, Judge Putnam found that only two employees’ testimony addressed charges in the Superceding Indictment. Judge Putnam further found that “[m]ost of the questioning” of those two employees “dealt with payments made or dealings with McNair, not Chandler or Ellis.” Thus, Judge Putnam correctly concluded that, on this record, “it cannot be said that the ‘sole or principal’ purpose of the grand jury process was for discovery relevant to the already-charged offenses.” *See, e.g.,*

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Alred, 144 F.3d at 1413; *United States v. Beasley*, 550 F.2d 261, 266 (5th Cir. 1977).

Appellants incorrectly state that Key "was convicted of obstruction of justice in Count 127, for allegedly failing to properly comply with the April [grand jury] subpoena, *while [he] was under indictment*." (Emphasis added.) Count 127 charged appellants with "providing a false letter of compliance with the grand jury subpoena." On May 24, 2005, prior to any USI defendant being indicted, Key signed a letter on behalf of appellants claiming that the largest gift he had given to any government employee was "valued at less than $50.00." This letter was false in light of Key's much larger "gifts" to Chandler and Ellis. Key was convicted of obstruction for actions he took prior to his indictment. The November 2005 subpoena was issued to investigate possible tax evasion by Key, but never generated any documents and, in fact, provided the government with no information.

Because the government did not use the grand jury "primarily" to obtain evidence that appellants bribed Chandler or Ellis or obstructed justice, appellants' grand jury abuse claim is rejected.

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E. Sixth Amendment Issue

The June 2005 Superceding Indictment was sealed for one month to allow the government to continue investigating appellants' bribery of McNair. While the Indictment was sealed, the FBI arranged, through USI counsel Chriss Doss ("Doss"), a July 7, 2005, interview with Key at Doss's office. Doss was present at the interview. The FBI agent believed that Doss was Key's attorney. The magistrate judge and the district court concluded that the agent's belief was reasonable.

The interview concerned almost exclusively the formation of USI, Key's role in the company, USI's and Key's dealings with McNair and McNair Studio, and personal and corporate financial issues. Key was asked a few questions concerning Chandler and Ellis. The interview resulted in an 18-page FBI Form 302 ("302").

Prior to trial, Key moved suppress the entire 302 as a violation of his Sixth Amendment right to counsel. At a hearing before Magistrate Judge Putnam, the government agreed to redact from the 302 all material relating to any of the charges pending against Key at the time of the interview. Judge Putnam found that the government's agreement to suppress mooted the motion to suppress. At trial, the FBI agent did not testify about any such statement made by Key. The

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302 was neither entered into evidence nor seen by the jury.

"[A]n accused is denied 'the basic protections' of the Sixth Amendment' when there is used against him at his trial evidence of his own incriminating words, which federal agents…deliberately elicited from him after he had been indicted and in the absence of his counsel.'" *Fellers v. United States,* 540 U.S. 519, 523, 124 S.Ct. 1019, 1022 (2004), *quoting Masssiah v. United States*, 377 U.S. 201, 206, 84 S.Ct. 1199, 1203 (1964)). The penalty for violation of this Sixth Amendment right is suppression of the accused's incriminating statements. *E.g., McNeil v. Wisconsin*, 501 U.S. 171, 179, 111 S.Ct. 2204, 2209 (1991). This Sixth Amendment right is "offense specific" and applies only to offenses for which an accused has been charged, not to other offenses still under investigation. *E.g., McNeil*, 501 U.S. at 175-76, 111 S.Ct. at 2207-08; *United States v. Grimes*, 142 F.3d 1342, 1348 (11th Cir. 1998). Thus, "a defendant's statements regarding offenses for which he had not been charged [are] admissible notwithstanding the attachment of his Sixth Amendment right to counsel on other charged offenses." *Texas v. Cobb*, 532 U.S. 162, 168, 121 S.Ct. 1335, 1340 (2001).

Accordingly, Key's July 7, 2005, statements to the FBI are admissible as to all matters except those relating to the charges then pending against him. Because the government agreed not to offer any of Key's statements concerning his

pending charges, and because at trial it kept that promise, Key's Sixth Amendment right to counsel was not violated.

Key claims that his entire statement to the FBI must be suppressed because he was never informed that "he was in trouble" of any kind. That result would be contrary to the policy underlying the "charge specific" nature of the right to counsel. The government's "ready ability to obtain uncoerced confessions is not an evil but an unmitigated good." *McNeil*, 501 U.S. at 181, 111 S.Ct. at 2210. To that end, the "charge specific" limitation provides "a sensible solution to a difficult problem." *Maine v. Moulton*, 474 U.S. 159, 179-80, 106 S.Ct. 477, 489 (1985). Accordingly, Key's Sixth Amendment rights were not violated.

III. CONCLUSION

For the foregoing reasons, the judgments of conviction are

AFFIRMED.

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[PUBLISH]

IN THE UNITED STATES COURT OF APPEALS

FOR THE ELEVENTH CIRCUIT

Nos. 07-11476, 07-11644,
08-10428, 08-10433

FILED
U.S. COURT OF APPEALS
ELEVENTH CIRCUIT
MAY 12, 2010
JOHN LEY
CLERK

D. C. Docket Nos. 05-00544-CR-LSC-TMP
05-00061-CR-2-RBP-TMP
05-00542-CR-2-RDP-PWG
05-00545-CR-LSC-PWG

UNITED STATES OF AMERICA,

Plaintiff-Appellee,

versus

JEWELL C. "CHRIS" MCNAIR,
JACK W. SWANN,
BOBBY J. RAST,
DANIEL B. "DANNY" RAST,
RAST CONSTRUCTION, INC.,
FLOYD W. "PAT" DOUGHERTY,
F.W. DOUGHERTY ENGINEERING & ASSOCIATES, INC.,
GRADY R. "ROLAND" PUGH, SR., and
ROLAND PUGH CONSTRUCTION, INC.,

Defendants-Appellants.

____

Appeals from the United States District Court
for the Northern District of Alabama

____

(May 12, 2010)

Before CARNES, HULL and ANDERSON, Circuit Judges.

HULL, Circuit Judge:

This consolidated appeal arises from five bribery and public corruption cases relating to the $3 billion repair and rehabilitation of a sewer and wastewater treatment system in Jefferson County, Alabama. A 127-count Second Superseding Indictment (the "Indictment") charged sixteen defendants (eleven individuals and five corporate firms) with conspiracy to commit bribery, substantive offenses of bribery, honest services mail fraud, mail fraud, and obstruction of justice. Nine defendants appeal their convictions here. Three of those nine defendants appeal their sentences.

Specifically, the nine defendant-appellants are: two former County officials, three corporate contractors, and four individuals who owned these respective contractors. The two defendant County officials were in charge of the sewer program and received hundreds of thousands of dollars worth of bribes from the defendant contractors. In many cases, the contractors disguised these payments by

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altering invoices or hiding costs within their accounting systems. In turn, the defendant contractors obtained hundreds of millions of dollars worth of payments on construction and engineering contracts with the County. The County officials approved the contractors' pay requests, change orders, time extensions, and/or requests for field directives, all of which financially benefitted the defendant contractors.

After review and oral argument, we conclude the evidence at the trials overwhelmingly established the defendant-appellants' guilt, and they have shown no reversible error in the district courts' rulings, pre-trial or in the trials, in the cases consolidated on appeal. Thus, we affirm all of the defendant-appellants' convictions except Roland Pugh Construction, Inc.'s conviction on Count 75, which is barred by the statute of limitations. We also affirm Jewell C. "Chris" McNair's sentence in full. We affirm Jack W. Swann's sentence in part but remand for further proceedings as to the amount of the fine. As to the sentence of Roland Pugh Construction, Inc., we (1) affirm the district court's findings of fact as supported by the record; and (2) conclude there was no error in the district court's calculations under the sentencing guidelines; but (3) in light of the reversal of its Count 75 conviction, we vacate its sentence and remand for resentencing without Count 75.

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I. BACKGROUND

A. Jefferson County Officials

The defendant County officials implicated in the bribery scandal are:

Defendant McNair: Jewell C. "Chris" McNair ("McNair") was a Jefferson County Commissioner. McNair was responsible for overseeing the operation of the Jefferson County Environmental Services Division ("JCESD"), which included the sewer system.[1]

Defendant Swann: Jack W. Swann ("Swann") was the Director of the JCESD.

Defendant Wilson: Ronald K. Wilson ("Wilson") was Chief Civil Engineer for the JCESD and served on the Product Review Committee ("PRC").[2] After leaving the JCESD in 1999, Wilson formed his own firm, Civil Engineering Design Services, Inc. ("CEDS").

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[1]The repair and rehabilitation project, which is the subject of this appeal, was required under the terms of a consent decree between Jefferson County and the U.S. Environmental Protection Agency. The consent decree was entered into as a settlement of claims brought by the U.S. Justice Department in 1994 against Jefferson County for violations of the Clean Water Act, and it required Jefferson County to repair and upgrade dilapidated sewer lines and wastewater treatment plants that were overflowing and leaking sewage into local watersheds. The JCESD initially estimated the work would cost County ratepayers $1.2 to 1.5 billion over the next decade. The actual costs were closer to $3 billion.

[2]The PRC was a technical committee that reviewed materials, specified the products that could be used on the sewer project, and qualified contractors for certain kinds of work on the project. During the relevant time period, the PRC had between 10 and 11 members. Among them were defendants Wilson and Barber, and co-conspirators Harry Chandler, Donald Ellis, and Larry Creel.

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Defendant Barber: Clarence R. Barber ("Barber") was Chief Construction Maintenance Supervisor for the JCESD and served on the PRC.

B. Contractors

These defendant corporate firms and individuals had either construction or engineering contracts with the JCESD and were implicated in the bribery scandal.

Pugh defendants: Roland Pugh Construction, Inc. ("PUGH"); Grady Roland Pugh, Sr. ("Roland Pugh"), founder, board chairman, and 70% owner of PUGH; and Joseph E. "Eddie" Yessick ("Yessick"), President and 10% owner of PUGH. PUGH had $178 million in sewer construction contracts with Jefferson County between August 1999 and January 2002. PUGH was a "dig-and-replace" contractor.[3]

Rast defendants: Rast Construction, Inc. ("RAST"); Bobby J. Rast ("Bobby Rast"), President and co-owner of RAST; and his brother Daniel B. Rast ("Danny Rast"), Vice President and co-owner of RAST. RAST had about $100 million in sewer construction contracts with Jefferson County during the same period. RAST was another "dig-and-replace" contractor.

[3]A "dig-and-replace" contractor traditionally digs up broken sewer pipes, replaces them, and paves over the repair. Some dig-and-replace contractors have the capacity to perform "cured-in-place" work. The "cured-in-place" process involves the relining of cracked pipes with a cement product that cures inside the pipes and seals the cracks from within. None of the defendants here performed cured-in-place work. However, PUGH and Defendant Rast Construction, Inc. entered into joint ventures with contractors who could perform cured-in-place work, as discussed later.

Dougherty defendants: F. W. Dougherty Engineering & Associates, Inc. ("FWDE") and Floyd W. "Pat" Dougherty ("Dougherty"), President and owner. FWDE received $11.4 million in no-bid engineering contracts with Jefferson County during the same period.

USI defendants: US Infrastructure, Inc. ("USI"); Sohan Singh ("Singh"), President of USI; and Edward Key ("Key"), Vice President of USI. USI received about $50 million in engineering contracts with Jefferson County between 1999 and 2003.

C. Co-conspirators

Five other individual co-conspirators pled guilty and testified for the government in one or more of the five trials:

Grady Pugh: Grady Roland Pugh, Jr. ("Grady Pugh") was CEO and 10% owner of PUGH. He is the defendant Roland Pugh's son.

Chandler: Harry T. Chandler ("Chandler") was Assistant Director of the JCESD and served on the PRC.

Ellis: Donald R. Ellis ("Ellis") was an engineer for the JCESD and Chairman of the PRC.

Creel: Larry P. Creel ("Creel") was a Maintenance Supervisor for the JCESD and served on the PRC.

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Dawson: William H. Dawson ("Dawson") was the owner of Dawson Engineering, Inc. ("Dawson Engineering"), which received at least $20 million worth of no-bid engineering contracts from Jefferson County.

While the Indictment alleges certain conduct by these five individuals as co-conspirators, they are not named defendants in the Indictment at issue in this appeal.

D. The Indictment

The Indictment contained 127 counts.[4] Six of the counts charged a bribery conspiracy. Specifically, Counts 1 (against McNair and the Pugh, Rast, and Dougherty defendants), 32 (against McNair and the USI defendants), 50 (against McNair and the USI defendants), 51 (against Swann and the Pugh, Rast, and Dougherty defendants, except for Roland Pugh), 75 (against Wilson and PUGH), and 78 (against Barber and the Pugh defendants) charged conspiracy to commit bribery under 18 U.S.C. §§ 371 and 666.

Counts 2-31, 33-49, 52-74, 76-77, and 79-89 charged one or more defendants with substantive bribery offenses (or aiding and abetting bribery) under

[4]The original indictment was filed on February 7, 2005, and the Superseding Indictment was filed on July 13, 2005. After the five co-conspirators listed above pled guilty over a period of several months, the government submitted the Second Superseding Indictment on August 26, 2005, dropping the defendants who had pled guilty. The counts referenced in this opinion are as numbered in the Second Superseding Indictment.

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18 U.S.C. § 666. For the most part, these substantive bribery offenses were the overt acts charged in the conspiracy counts.

Counts 90-101 charged honest services mail fraud under 18 U.S.C. §§ 1341 and 1346 against defendants Swann, Yessick, and PUGH. Counts 102-121 charged honest services mail fraud under 18 U.S.C. §§ 1341 and 1346 against defendants Swann, Wilson, CEDS, FWDE, and Dougherty. Counts 122-124 charged mail fraud under 18 U.S.C. § 1341 against the Dougherty defendants. Counts 125-127 charged obstruction of justice against certain defendants under 18 U.S.C. § 1503.

Some of these counts were dismissed before trial, and other counts were dismissed prior to jury deliberations. And some defendants, such as Roland Pugh, were dismissed from some of the counts that went to the jury. This opinion addresses only the counts that were actually submitted to the jury.

E. Five Trials

The 127-count Indictment was severed into five separate cases for trial: *McNair* (05-061), *Swann* (05-544), *Barber* (05-542), *Wilson* (05-545), and *USI* (05-543).[5] The *McNair* trial involved bribes by the Pugh, Rast, and Dougherty

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[5]Grady Pugh, Chandler, Ellis, Dawson, and Creel testified for the government in the *McNair* trial. Chandler, Ellis, and Wilson testified for the government in the *Swann* trial. Grady Pugh, Chandler, and Yessick testified for the government in the *Barber* trial. Grady Pugh and Chandler testified for the government in the *Wilson* trial. Chandler, Ellis, and Dawson testified

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defendants primarily to McNair but also to Chandler and Ellis. The *USI* trial involved bribes to McNair by the USI defendants. The other trials involved bribes to Swann, Barber, and Wilson, respectively.

In the *USI* trial, defendants USI, Key, and Singh were convicted of, among other things, conspiracy to commit bribery and substantive bribery offenses for making payments to defendant Commissioner McNair and the JCESD's Chandler and Ellis. This Court affirmed defendants USI, Key, and Singh's convictions and sentences in United States v. US Infrastructure, 576 F.3d 1195 (11th Cir. 2009), cert. denied, __ S. Ct. __, 78 U.S.L.W. 3540 (U.S. Mar. 22, 2010) (No. 09-967). Defendant McNair entered a conditional guilty plea to Count 32 (conspiracy to accept a $140,000 bribe from the USI defendants).[6] McNair reserved the right to appeal the district court's denial of his motion to dismiss Count 32. McNair's appeal in the *USI* case has been consolidated with the present appeal.

F. Nine Parties to This Appeal

This present consolidated appeal involves not only defendant McNair's appeal in the *USI* case but also these defendants' appeals in the other four trials:

(1) *McNair* trial: defendants McNair, PUGH, Roland Pugh, RAST, Bobby

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for the government in the *USI* trial.

[6]McNair's motion to dismiss sought dismissal of Counts 32 and 50 (both counts of conspiracy to commit bribery), arguing under "Wharton's Rule" that a conspiracy cannot exist as an offense separate from the substantive offense of bribery (charged in Counts 33-37).

Rast, Danny Rast, FWDE, and Dougherty. Defendant Yessick (President of PUGH) was convicted at trial and does not appeal.

(2) *Swann* trial: defendants Swann, PUGH, RAST, Bobby Rast, FWDE, and Dougherty. Defendant Yessick was convicted at trial and does not appeal.

(3) *Barber* trial: defendant PUGH. Defendants Barber and Yessick pled guilty and do not appeal.

(4) *Wilson* trial: defendant PUGH. Defendant Wilson was convicted at trial and does not appeal.

Albeit from five separate cases, the defendant-appellants raise many of the same issues. We discuss (1) the evidence in the *McNair*, *Swann*, *Barber*, and *Wilson* trials, and (2) the issues commonly raised by the defendants, followed by (3) certain issues pertaining to particular defendants.

II. THE *McNAIR* TRIAL (05-061)

The *McNair* trial, held from April 6 to 21, 2006, involved over $350,000 in bribes the Pugh, Rast, and Dougherty defendants paid to Commissioner McNair and $6,600 in bribes they paid to County employees Chandler and Ellis. The government called 36 witnesses, including Chandler, Ellis, Dawson, Creel, and Grady Pugh. The defense called 23 witnesses. No named defendant testified.

The government's witnesses described in great detail the bribes to McNair,

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Chandler, and Ellis, and how those three County officials financially helped the Pugh, Rast, and Dougherty defendants in their contracts with and payments from Jefferson County. Because the defendant contractors in the *McNair* trial claimed they paid McNair only out of a long-time friendship and lacked corrupt intent, the district court admitted certain evidence, under Federal Rule of Evidence 404(b), about how these same defendants bribed Swann and other County employees in order to show the defendants' corrupt intent and common plan. Thus, our recitation of evidence in the *McNair* trial covers bribes given not only to McNair but also to Swann and other County employees.

A. McNair Helps Contractor-Defendants

Jefferson County was governed by five elected Commissioners, each of whom had a different area of responsibility. Defendant McNair held office as a County Commissioner from 1996 until his retirement in March 2001. McNair was responsible for overseeing the JCESD, which included the sewer systems. McNair had authority to approve pay requests from the sewer construction contractors, to approve change orders[7] increasing the contract price paid to those contractors, to approve change orders modifying the contract terms in favor of those contractors, to approve emergency payments to contractors, to select consulting engineers

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[7]Change orders are contract modifications in the Jefferson County Commission's Agenda items.

through a no-bid process, and to approve the engineers' contracts and payments. Although final approval required the vote of the entire Commission, there was no evidence that the Commission questioned or disapproved of any pay request or change order approved by McNair or any selection or award of a contract recommended by McNair. McNair's nickname among the contractors was "Big Man."

McNair approved payments (in the hundreds of millions of dollars) to the Pugh, Rast, and Dougherty defendants (the "contractor-defendants"), approved change orders (in the millions of dollars) benefitting PUGH and RAST, and approved no-bid engineering contracts (in the millions of dollars) to FWDE, all while these defendants were paying for materials and labor to expand and renovate McNair's photography studio. Each item requiring Commission approval, such as contract awards or modifications, needed McNair to approve it first and then to put it on the Commission's agenda for further approval.[8] The sewer construction contracts were awarded through a sealed bid process and would go to the lowest

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[8]For example, the December 1999 Commission Agenda shows a modification adding $1,081,621 (about 28% of the contract value) to a PUGH contract, and a $112,600 contract award to FWDE. The January 2000 Agenda indicates a modification adding $489,133 to a PUGH contract. The February 2000 Agendas indicate a modification adding $400,724 to a RAST contract, a $721,132 contract award to FWDE, and a modification adding $1,377,267 to a PUGH contract. The March 2000 Agenda indicates a $5,289,002 contract award to PUGH. The April 2000 Agenda indicates contract awards of $994,640 and $348,103 to FWDE, a modification adding $439,722 to a RAST contract, and a modification adding $850,264 to a PUGH contract.

bidder. But the prospective contractors had to satisfy technical standards set by the PRC before they would be eligible to bid.

Once a new contract was awarded and in place, Chandler and other supervisors, such as Ellis, could approve changed or additional work as "field directives." If a requested change exceeded the original contract amount, Chandler and Ellis could recommend "change orders" (requests for additional funds), which McNair would then approve and place on the Commission's agenda, without further competitive bidding. The JCESD also could award "emergency" work to construction contractors without competitive bidding. For emergency jobs, Barber typically selected the contractor, negotiated the price, and then sent the pay requests to McNair, Swann, and Chandler for approval. Together, McNair, Swann, and Chandler approved a variety of contracts for the sewer project.[9]

The construction contractors' work was supervised by independent consulting engineers, whose jobs were to make sure the contractors performed according to specifications and to sign off on payments and requests for change orders. This supervision was provided by engineering firms such as FWDE, USI,

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[9]For example, Chandler, Swann, and McNair approved a $1,168,788.02 payment to PUGH for work done in January 2001. Chandler, Swann, and McNair approved a $2,652,820 payment to PUGH for work done in June 2000. Chandler, Swann, and McNair approved a $1,000,000 payment to RAST in October 2000. Swann and McNair approved — in one day on an emergency basis without Chandler's or the County engineer's usual approval — a $1,152,888 payment to RAST for work done in October 2000.

and Dawson Engineering. The engineering consultant contracts were awarded without bidding. Swann and Chandler selected engineering firms, negotiated their contracts, and recommended them to McNair for final approval.

The County's PRC initially decided to qualify only three contractors to do "cured-in-place" work: W.L. Hailey ("Hailey"), Insituform, and Reynolds. Because the traditional "dig-and-replace" work was grouped with "cured-in-place" work for all the major construction contracts, this PRC decision effectively limited the "big jobs" to only three bidders: a RAST-Hailey joint venture, a PUGH-Insituform joint venture, and Reynolds, which did its own dig-and-replace work. In late 1999, the PRC changed the criteria, making it more difficult for other contractors to pre-qualify for "cured-in-place" work, and potentially delaying by two years the qualification of otherwise qualified contractors.[10]

Contractor PUGH's CEO Grady Pugh admitted to receiving a "general benefit" from giving McNair "envelopes of cash," in that "Jefferson County treated us real well. We had an opportunity to do a tremendous amount of work there. The work that we did there generated huge profits . . . [I]t took our company [PUGH] from a normal struggling contracting company in [the] mid to late '90s, to a thriving, wealthy, strong construction company."

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[10]The PRC and its requirements are discussed more later in the *Wilson* trial section.

During the relevant period, PUGH dedicated about 70% of its work to the Jefferson County sewer rehabilitation and received tens of millions of dollars in revenue from that sewer work. In 1996 and 1997, at the sewer rehabilitation's outset, PUGH made gross profits of 10%, and as the project continued and payments were made to JCESD officials, the company's sewer rehabilitation profits increased to 50% in 1999, 40% in 2000, and 45% in 2001, making PUGH tens of millions of dollars each of these years.

RAST also received tens of millions of dollars in revenue per year from its Jefferson County sewer work. And the engineering firms, including FWDE, received revenue in millions of dollars per year from their work on the sewer rehabilitation. McNair made the decision every time FWDE or Dawson Engineering was selected as the outside consulting engineer and awarded a professional service contract. After electrical contractor Gus Henson did some work for McNair without charge, McNair had Swann arrange a County contract for him, even though the County did not normally hire electrical engineers for sewer work.

In total, from August 1999 to January 2002, Jefferson County paid $178 million to PUGH, $100 million to RAST, $11.4 million to FWDE, and $8 million to Dawson Engineering.

B. Bribes of McNair

McNair owned a small photography business called McNair Frame & Photo Art, Inc. ("McNair's studio"). Between 1999 and early 2002, McNair started a major expansion and renovation of the studio, which would more than double its size. McNair's expansion included adding extras to the studio, such as an apartment for his daughter, a second-story deck, external stairs, a "guard shack," and a security gate.

All contractor-defendants in this case generously contributed to the renovation and expansion of McNair's studio. In 1999, FWDE's President Dougherty sent Bill Bailey, an FWDE employee initially hired as an inspector for County jobs, to work as the construction superintendent for the studio's renovation. FWDE paid Bailey for the approximately 18 months he spent working at McNair's studio. During that time, FWDE paid Bailey $74,240. Although some of his time was charged to "administration," FWDE President Dougherty charged some of Bailey's studio time to a JCESD sewer project. McNair was not charged for Bailey's work. As superintendent, FWDE's Bailey oversaw construction at McNair's studio by numerous other contractors, including PUGH and RAST.[11]

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[11]As 404(b) evidence, the government showed that in addition to paying $74,240 to Bailey, FWDE paid the salaries of its employees, Wayne Hendon and John Stanger, while they acted as construction superintendents overseeing renovation of JCESD Director Swann's home. FWDE paid Hendon $94,090 and Stanger $28,839 for that work.

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RAST excavated for the expansion's footings for McNair's studio. In July 1999, PUGH ordered concrete and for four weeks had a four-man crew pour concrete walls and do other work on the studio, paying the crew $11,709. PUGH's crew supervisor talked to McNair while the concrete work was in progress, but McNair did not question why he was there or where he was from, nor did McNair offer to pay for this work.

In late 1999, FWDE's Bailey asked Barry Mosley of Mosley Construction to do wood framing and other finish work at McNair's studio. McNair initially paid Mosley, first with a check and then with cash, but eventually McNair stopped paying. Bobby Rast then told Bailey that "McNair was running out of funds" and that RAST would begin paying Mosley directly. From July 2000 to December 2000, RAST wrote 20 checks totaling $52,990 to Mosley as his work at the studio progressed, and, at Bobby Rast's direction, coded these payments as expenses on a JCESD sewer project. Either Bailey or someone from RAST's office, such as Danny Rast, brought Mosley the checks.

In January 2002, RAST gave Mosley two more checks totaling $7,200 for work he and his crew did on the studio's "guard shack," a two-story, 12 x 12 building designed by defendant Dougherty, and built, in part, by defendants RAST and FWDE. Bobby Rast caused these payments to be coded as expenses on the

"Upper Valley Rehab" or Kilsby contract, a JCESD sewer project. For tax purposes, all payments to Mosley were deducted as business expenses on sewer projects. Mosley did no work on those projects. After a local newspaper reported RAST's construction work at JCESD Director Swann's home, RAST amended its tax returns for 1998-2000 and 2002 to eliminate these and other deductions. The deductions, which totaled over $140,000, were based on expenditures for McNair's studio and Swann's home that had been cost-coded to sewer projects and treated as business expenses.

After the publicity, Bobby Rast told his bookkeeper in "effect that we really didn't need any document invoices in the files with Jack Swann's or Chris McNair's shipping address on them." The bookkeeper then located and discarded several invoices related to work at McNair's studio and Swann's home.

RAST furnished the labor and PUGH furnished the materials to construct a second-story deck for the rear of McNair's studio. Bailey handwrote a list of materials and ordered the necessary steel. When Besco Steel Supply ("Besco") delivered the steel, its delivery tickets identified PUGH and Yessick as its customers and indicated some of the steel was for the Valley Creek Treatment Plant, a JCESD sewer job on which PUGH was the contractor and FWDE the consulting engineer. In September 2000, PUGH paid Besco and charged the

JCESD for $3,773 worth of steel with FWDE's approval, and RAST poured the concrete deck and stairs, set the handrails, and built the steps.

Around September 2000, FWDE employee Dave Bechtel ordered two sets of aluminum handrails for the studio deck and a staircase from Thompson Fabricating, which was directed to bill PUGH. The $5,500 invoice for the first set of handrails charged the work as performed on the Valley Creek Treatment Plant and falsely indicated that the handrails were shipped there. In February 2001, an $11,700 invoice for the second set of handrails referenced "CHRIS MC." as the customer, but also falsely indicated that the handrails were shipped to Valley Creek when in fact they were shipped to McNair's studio. PUGH paid both invoices and billed the County for the first set of handrails after adding a markup and charges for labor and equipment. RAST installed the handrails.

In May 2000, at McNair's request to Roland Pugh, Grady Pugh flew McNair's daughter and FWDE's Bailey on PUGH's airplane to Georgia, where they picked out carpet for McNair's studio. Before take-off, Roland Pugh told his son Grady Pugh that "McNair has called [again] and says that he's broke and he doesn't have enough money to leave for the deposit on the carpet" and "[s]o, if you would, write a check for the deposit." Grady Pugh paid the deposit with a $4,820 PUGH check made out to the Mill Store and had it treated on PUGH's books as an

expense on the "last rehab contract."[12]

FWDE's Bailey hired subcontractor Clint Gilley to install the carpet at McNair's studio. In October 2000, FWDE's Bailey called RAST to request checks for subcontractor Gilley. After Bobby Rast was consulted, RAST gave Gilley two checks totaling $5,301 for his work at McNair's studio.

In addition to paying for materials and providing work crews, PUGH also made other contributions to McNair's studio. When the project began in 1999, Roland Pugh told PUGH's other three owners, Grady Pugh, Andy Pugh, and Yessick, they had to give money to McNair because he was building a studio and, as 10% owners of the PUGH company, they had to "kick in" their share. Grady Pugh gave approximately $1,500 in cash to Roland Pugh's secretary that time.[13]

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[12]The Indictment alleges as an overt act on Count 1: "On or about May 24, 2000, Defendant ROLAND PUGH instructed Grady Pugh to fly an airplane owned by Defendant PUGH, INC. to LaGrange, Georgia, to buy carpet and flooring material for the benefit of Defendant McNAIR. . . . On or about May 24, 2000, Defendant ROLAND PUGH caused Grady Pugh to pay $4,820 to The Mill Store, Inc. for carpet and tile for installation at McNair Studio for the benefit of Defendant McNAIR."

[13]The government also presented evidence of cash allegedly given to McNair. Roland Pugh collected money from the other owners to give to McNair. On July 18 and 19, 2000, Roland Pugh, Grady Pugh, and Yessick wrote checks to cash (totaling $9,000) in proportion to their ownership interests. Roland Pugh gave Grady Pugh an envelope of money and asked him to give it to McNair. Grady Pugh took the envelope to the studio where he saw Bailey and told him he was there to help McNair. Grady Pugh stated the money was "financial help" that McNair needed at that time. Grady Pugh then met with McNair for a few minutes and left the envelope with McNair.

When the studio needed an air conditioning system, McNair again called Roland Pugh asking PUGH to pay for it. Roland Pugh told Grady Pugh that McNair needed $40,000, but that "y'all don't have to put up any money this time, I'm going to do it in a different way." Roland Pugh gave a $10,000 check dated December 22, 2000 to Grady Pugh's wife, Genae Pugh, who

McNair also wanted a security gate for the studio. In August 2000, Danny Rast hired subcontractor Master Access Controls ("MAC") to install an electronic gate and agreed that RAST would provide the electrical conduit, wiring, and concrete pad for the gate's motor. MAC met with FWDE's Bailey at McNair's studio site, installed the gate, and sent its invoices to the attention of Danny Rast. RAST paid the subcontractor $5,866.92. McNair paid nothing.

Also in December 2000, at Danny Rast's request, RAST gave Bailey & Sons' Bobcat Service, owned by Danny Bailey, a $5,500 check for landscaping at McNair's studio. However, RAST's records indicated Danny Bailey was working on a JCESD sewer project. Although Danny Bailey had done work for RAST before, he did not send the invoice for the studio work through regular billing, as he normally would, but instead sent it "Atten Dan Rast."[14]

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cashed it and gave the money to Roland Pugh. That same day, Roland Pugh wrote a $10,000 check to Angie Pugh (Andy Pugh's wife) and a $9,750 check to cash. A week earlier Roland Pugh had written a $9,000 check to cash. Around Christmas 2000, at Roland Pugh's request, Grady Pugh picked up another envelope containing cash from Roland Pugh's secretary, went to McNair's house, spoke with him for a few minutes, and put the money down on a couch with McNair watching.

It appears from the closing arguments that all of the above cash and checks relate to Counts 4, 13 and 14 (on which the defendants were acquitted).

[14]Huffman Electric was hired to do electrical work at McNair's studio by FWDE but was told to bill RAST. When Huffman sent an $11,252 invoice to RAST in November 1999 without making it to the attention of Bobby or Danny Rast, RAST's vice president, Roy Weaver, responded that they "have no job at this location." Huffman then began billing McNair directly. At first McNair paid the bills, but he eventually fell behind in his payments and owed approximately $45,000 by July 2000. Around this time, Grady Pugh allegedly made a delivery of cash to McNair, and RAST took over paying for Mosley's wood framing services.

In November 2000, McNair asked Dawson Engineering to contribute to the studio's renovation. After McNair called William Dawson, the founder of Dawson Engineering, the two met at McNair's studio. McNair handed Dawson a brochure for an audiovisual system and told Dawson that, while McNair had "never asked [Dawson] for anything before," he needed to ask Dawson to "help [him] with something." McNair opened the brochure to a specific page, showed it to Dawson, and indicated he wanted Dawson to pay for the equipment and its installation. Dawson went to Holt Audio Video ("Holt") and purchased the equipment for $16,400. Dawson testified he would not have done this for McNair if McNair had not been associated with the sewer rehabilitation process. When Dawson saw the invoice indicated the bill was for Dawson Engineering but the shipment was for McNair's studio, he became "uncomfortable with the whole situation" and asked Holt to alter the shipping information by putting a sticker over the McNair studio's address, which Holt did. Dawson later pled guilty to conspiring to commit bribery.

Work at the studio continued after Commissioner McNair retired in March 2001. FWDE's Bailey hired Buchanan Plumbing and Sewer Service ("Buchanan") to plumb the "guard shack." In November 2001, FWDE employees signed Buchanan's $1,775 in invoices and sent them to RAST, which paid them. RAST recorded the payments as "Plumbing Work at Kilsby Circle," a sewer project, even

though Buchanan never did any work there.

After McNair's retirement, Roland Pugh told Grady Pugh "that GD [sic] McNair has called again, and he wants us to do some work over in Arkansas" and "surely this is the last time we'll have to do anything for him since he's out of office." Grady Pugh flew with McNair to Arkansas to look at the site and plans. Following this visit, PUGH's Yessick hired George Word, an Arkansas building contractor, in August 2001 to build a 3,000-square-foot retirement home for McNair. Both PUGH and FWDE paid for its construction.[15] PUGH's checkbook carried the notation "Gift per Eddie [Yessick]. No job." After McNair's retirement, RAST also continued to perform work at McNair's studio and paid $8,135.78 for McNair and his wife to take a cruise to Alaska in September 2001.[16]

C. Bribes of Chandler and Ellis

The Pugh, Rast, and Dougherty defendants also gave, at no charge, goods,

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[15]After McNair's retirement, PUGH paid George Word $44,192.75 in the first half of October 2001, and, at Yessick's instruction, internally charged the expense to miscellaneous jobs/construction materials. McNair told George Word that FWDE would make the next payment. On October 24, 2001, after FWDE's bookkeeper Rick Brinson saw Dougherty speaking with McNair in FWDE's parking lot, Dougherty asked the bookkeeper to write a $50,000 check to a construction company. About 20 to 30 minutes later, George Word's $50,000 invoice, dated a day earlier, arrived by fax. The bookkeeper wrote the check, gave it to Dougherty, and made an extra copy of the paperwork and kept it at home. Upon being subpoenaed for these records later, the bookkeeper searched FWDE's records, but could not find the invoice. The only copy he found was the extra one he kept at home.

[16]After McNair's retirement, on May 14 and 15, 2001, PUGH, FWDE, and Bobby Rast each gave McNair a check for $5,000 (totaling $15,000). Bobby Rast's check was for a "retirement gift" and FWDE's was for a "motor home."

services, labor, materials, and other things of value to (1) JCESD Assistant Director Chandler, and (2) JCESD Engineer and PRC Director Ellis. At a lunch, PUGH's President Yessick offered to landscape Chandler's home. Chandler at first refused, but weeks later Yessick offered again, and Chandler accepted. PUGH provided crews and paid for the materials for the extensive landscaping, including grading, drainage work, and new sod, as well as construction of a patio, walkway, and retaining walls. Chandler paid nothing for that work.

In October 2001, Yessick arranged and paid for a $610 condo rental for the Chandler family vacation at the Pelican Beach Resort in Destin, Florida.[17] Chandler asked for, and PUGH delivered, a load of sand for Chandler's house for free.

In the spring of 2002, Chandler asked Bobby Rast to help with his expenses for a trip to Europe to attend technical conferences. Ellis planned to attend too. At RAST's office, Bobby Rast gave Chandler an envelope containing $5,000 in cash and told Chandler to split the money with Ellis. Chandler had expected $250 to $500 and was "uncomfortable and thought about giving it back, but [he] didn't."

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[17]The government also presented evidence that in April 2000, PUGH's Yessick invited Chandler on a fishing trip to Bienville Plantation in Florida, where the trip was paid for by PUGH. Grady Pugh arranged to have Yessick and Chandler fly to Florida in the PUGH company's airplane. The jury acquitted PUGH and Yessick on Count 70, which referenced this trip.

Instead, Chandler "eventually gave half" to Ellis.[18] The Dougherty defendants also gave Chandler tickets to Disney World and a trip to San Antonio.

D. The Defense

For the most part, the defendants did not dispute that they provided, at no charge, these goods, services, labor, materials, and other things of value to Commissioner McNair.[19] Instead, the defendants argued they lacked the "corrupt" intent necessary for bribery and that the government had failed to prove the required *quid pro quo* for the benefits provided to McNair. The defendants also asserted they helped McNair based on their friendship with him or for goodwill. In support, defense witnesses testified to McNair's decades-long friendship with Roland Pugh, Dougherty, and the Rast family, and described how the contractor-defendants frequently performed work for McNair at no charge. The contractor-defendants also contended their experience, skills, and business reputation were strong enough so that they did not need to resort to bribery to win County contracts.

The defense spent considerable time attacking the credibility of Grady Pugh,

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[18]Other JCESD employees also received cash from the contractors. Danny Rast gave $1,500-$2,000 in cash to JCESD Field Supervisor Larry Creel, who sometimes awarded emergency work. PUGH gave $500 in cash to Creel for airplane tickets after Creel asked for a flight on PUGH's company airplane.

[19]Roland Pugh is the only defendant to dispute that he gave anything to McNair.

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including inconsistencies in his testimony. The defense suggested he was lying out of hatred for his father Roland Pugh and to obtain a favorable sentence recommendation from the government.

The government countered the defendants' corrupt-intent arguments by offering 404(b) evidence of similar items of value the same contractors had provided for Swann, Wilson, and Barber (who were not defendants in the *McNair* trial). The government argued the large scale and overall pattern of these payments were inconsistent with the defendants' claims that they were favors undertaken merely out of friendship for McNair. The government also presented evidence that McNair made numerous unexplained cash deposits.[20]

E. Jury's Verdicts

Before sending the case to the jury, the district court dismissed several substantive counts that charged bribes to McNair after his retirement in March 2001, and struck the corresponding overt acts from the conspiracy count (Count 1), reasoning that 18 U.S.C. § 666 (the bribery statute) could not apply when McNair was no longer a public official.

In the *McNair* trial, the jury convicted defendants McNair, PUGH, Roland

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[20]In the *McNair* trial, the government did not explain the source of the cash deposits. But in the *USI* case, the government showed these cash deposits corresponded with cash withdrawals from USI, Singh, and Key. See US Infrastructure, 576 F.3d at 1206.

Pugh, Yessick, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty on Count 1 of conspiring to bribe McNair. Count 1 alleged 54 overt acts originally. Several overt acts were dismissed pre-trial, but Count 1, as submitted to the jury, charged 39 overt acts in furtherance of the conspiracy.

As to bribes by the Pugh defendants, the jury convicted defendant McNair on these substantive bribery counts: 2 ($5,500 for hand railings) and 3 ($11,700 for hand railings). The jury convicted defendant PUGH on Count 15 (same hand railing facts as Counts 2 and 3). The jury convicted defendants PUGH and Yessick on Count 71 ($610 for Chandler condominium rental).

As to bribes by the Rast defendants, the jury convicted defendant McNair on these substantive bribery counts: 5 ($52,990 for carpentry work by Barry Mosley), 6 ($5,866 for security gate installation by Master Access Controls), 7 ($5,300 for carpet installation by Clint Gilley), 8 ($5,500 for landscaping work by Bailey & Sons), 9 (several thousand dollars for fabrication and construction of stairs), and 10 (several thousand dollars for concrete deck construction). The jury also convicted defendants RAST and Bobby Rast on Counts 19-22 (same facts as Counts 5-8, respectively), 72 ($2,500 cash to Chandler by RAST and Bobby Rast), and 87 ($1,000 cash to Ellis by RAST and Bobby Rast). RAST was also convicted on Counts 23 (same facts as Count 9) and 24 (same facts as Count 10). The jury

convicted defendant Danny Rast on Counts 19, 20, and 22 (same facts as Counts 5, 6, and 8).

Defendant McNair was also convicted on Counts 11 ($27,434 by the Dougherty defendants for project management and supervision by Bailey) and 12 ($16,400 by Dawson for installation of audio visual system). The jury convicted defendants FWDE and Dougherty on Count 28 (same facts as Count 11).[21]

In summary, the jury convicted defendant McNair on the bribery conspiracy count and ten substantive bribery counts. The jury convicted defendants PUGH, Roland Pugh, and Yessick on the bribery conspiracy count; defendant PUGH on two substantive bribery counts; and defendant Yessick on one substantive bribery count. The jury convicted defendants RAST, Bobby Rast, and Danny Rast on the bribery conspiracy count; defendant RAST on eight substantive bribery counts; defendant Bobby Rast on six substantive bribery counts; and defendant Danny Rast on three substantive bribery counts. The jury convicted defendants FWDE and Dougherty on the bribery conspiracy count and on one substantive bribery count

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[21]In the *McNair* trial, the jury acquitted defendant McNair on Count 4 ($30,000 cash from the Pugh defendants), defendants PUGH and Yessick on Count 13 ($20,000 cash to McNair) and on Count 70 ($1,000 trip for Chandler to Bienville Plantation, Florida), and defendants PUGH and Roland Pugh on Count 14 ($10,000 cash to McNair). The $30,000 in Count 4 appears to consist of the cash in Counts 13 and 14.

The *McNair* jury also acquitted defendant Danny Rast on Count 21 ($5,300 bribe of McNair for carpet installation through Clint Gilley), defendants RAST and Danny Rast on Count 89 ($1,000 cash to JCESD employee Larry Creel), and defendants RAST and Bobby Rast on Count 126 (obstruction of justice in connection with withholding items from the grand jury).

each. All defendants but Yessick appeal all conviction counts.

III. THE *SWANN* TRIAL (05-544)

The *Swann* trial, held from September 19 to October 2, 2006, involved more than $330,000 in bribes paid to County employee Swann by the Pugh, Rast, and Dougherty defendants. The government called 25 witnesses, including Wilson, Chandler, and Ellis. The defense called 20 witnesses, including Grady Pugh. No named defendants testified except for Swann.

The government's witnesses described in great detail the bribes to Swann and how Swann financially helped the Pugh, Rast, and Dougherty defendants in their contracts with and payments from Jefferson County. And to counter the defendants' lack-of-corrupt-intent defense, the government introduced 404(b) evidence describing bribes that the same Pugh, Rast, and Dougherty defendants gave to McNair, Barber, Wilson, and Chandler.[22]

A. Swann Helps Contractor-Defendants

JCESD Director Jack Swann reported directly to Commissioner McNair. It was Swann's responsibility to implement the EPA consent decree, which included recommending engineering firms to McNair and negotiating the scope and price of

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[22]For example, in the *Swann* trial, the government presented evidence about how RAST bought Barber a piece of land. This evidence is outlined later in this opinion under the *Barber* trial evidence. Defendant Barber pled guilty to this charge.

no-bid engineering contracts, such as with FWDE. Swann supervised the sewer work and made recommendations to McNair for payment approvals and change orders. Swann also was able to grant time extensions and field directives that greatly benefitted RAST and PUGH.

For example, in May 1998, the JCESD awarded the Vestavia Trunk Sewer Replacement project to PUGH. PUGH's failure to meet the project's May 17, 2000 completion date would trigger a liquidated damages clause, obligating PUGH to pay $1,000 per day. In March 2000, PUGH was running far behind schedule on this project and requested a 120-day extension to the May 17 completion date. Swann initially denied PUGH's request.

On June 13, 2000, PUGH renewed its request, this time for a 180-day extension. On July 10 — five days after PUGH's Yessick hired Guthrie Landscaping ("Guthrie") to landscape Swann's property — Swann granted PUGH's request for a 180-day extension to the May 17 completion date. Swann's extension saved PUGH $180,000 in potential liquidated damages.

In July 2000, the JCESD awarded the Valley Creek Trunk Relief Tunnel project (designed by FWDE) to RAST and its joint venture partner W.L. Hailey. In December 2001, during the first phase of the project, RAST's tunnel-boring machine became stuck in the ground. An independent engineer concluded the

machine became stuck because RAST may have discounted certain information in a geotechnical survey. And the JCESD's supervising engineer faulted RAST for using "the wrong machine." Nevertheless, Swann authorized RAST to remove the machine at a cost of $2.6 million to Jefferson County.

Further, Swann declined to invoke the performance bond against RAST, which would have guaranteed the project's completion at the original contract price of $27.8 million. Instead, RAST won a re-bid for an additional contract worth $23.8 million. Consequently, the County effectively paid RAST over $50 million for work RAST was obligated to perform under the original $27.8 million contract.

Swann also approved a lucrative field directive that benefitted PUGH ($827,417) and three that benefitted RAST ($2,020,367). Although in the County's internal accounting system Swann recorded the County's payments to the RAST-Hailey joint venture for each of these field directives as payments for the Valley Creek Tunnel Relief project, none of the field directives involved work on that project. Swann also exercised great influence over the selection of engineers, like FWDE.

B. Bribes of Swann

In 1998, Swann and his wife Nila purchased a house two doors down from

their own residence. The Swanns lived in their residence while they renovated their new home. Between September 1998 and June 2002, the Swanns put over $600,000 worth of additions and improvements into their new home. FWDE, RAST, and PUGH provided Swann, at no charge, more than $330,000 in goods, services, labor, and materials for that work. For certain improvements paid for by FWDE, Swann admitted he did not reimburse FWDE or Dougherty. As they had done for the McNair studio project, the contractor-defendants worked together on Swann's new home. While the work was going on, Swann periodically came over to observe the work at the new home. While Swann was recommending and approving JCESD actions worth millions of dollars, the contractor-defendants were providing hundreds of thousands of dollars in materials and services to renovate and expand Swann's new home.

Specifically, in the fall of 1998, Dougherty sent FWDE supervisors Wayne Hendon and Bill Bailey to meet with Swann and his wife about plans to remodel their new home. Over the course of the three-year project, FWDE employees continually supervised the remodeling of the new home. From about October 1999 to March 2001, FWDE paid employee John Stanger $28,839 for his work at Swann's home. During that time period, FWDE's Hendon spent half of every work day supervising other contractors at Swann's home and billed his time as a

nonpaying job. FWDE paid Hendon $94,090 for his work at Swann's home. In the fall of 1998, FWDE hired subcontractor Dudley Davis for framing, costing over $28,000. Dougherty visited the site periodically.

In the winter of 1999, Bobby Rast sent RAST superintendent Luke Cobb to supervise RAST crews who did demolition work and poured concrete for Swann's new home. Bobby Rast had RAST employee Derek Houston serve as a point of contact for RAST's suppliers and subcontractors for Swann's home and paid Houston $6,300 for his work there. In 2000, RAST paid its employees $18,867.20 in miscellaneous labor costs for their work on Swann's home and McNair's studio. RAST avoided using Swann's name on invoices, delivery tickets, and internal accounting reports, instead using his nickname, "Little Big Man."

RAST also bought bricks and other materials, and paid different subcontractors for installation of hardwood floors and stairs and exterior brickwork, plumbing work, and painting. RAST paid $3,535 for flooring and stairs installation that Don's Carpet One performed at Swann's new home in 2000 or 2001. In the fall of 1999, RAST paid $1,964 for brick and mortar work by Alabama Brick Delivery. In the fall of 2000, RAST paid Kimro Painting & Services, Inc. ("Kimro Painting") $9,733 for painting work at Swann's new home. In May 2001, RAST paid $4,441.50 to Sherman International for concrete work.

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The delivery ticket for ready-mix concrete RAST purchased from Sherman International directed delivery to the Swann address but identified it as the "Rast Residence." In October 2001, RAST paid Brown Mechanical Contractors, Inc. ("Brown Mechanical") for $9,540 worth of plumbing work performed at Swann's new home. Bobby Rast had the payments to Brown Mechanical coded as expenses to RAST's Jefferson County contracts for "Annual Rehab" and "Minor Pump Station."

In the summer of 2000, PUGH began contributing to Swann's new home remodeling. PUGH's President Yessick hired subcontractor Aquatic Gardens to install a waterfall and koi pond at a cost of $7,422. Yessick told Aquatic Gardens to send its invoices to PUGH and not mention Swann by name.

Yessick hired other subcontractors for various work after Swann claimed to have overpaid for the remodeling. Yessick hired Guthrie to help landscape Swann's new home, and in July 2000 Guthrie gave an initial estimate of $40,000. PUGH's book entries and invoices for Guthrie's work on Swann's home were never kept in Swann's name, but always under some other code. Yessick had PUGH's accountant charge Guthrie's expenses to "Metro Park Roadway," a Jefferson County job. By December 2001, PUGH had paid Guthrie $93,680 for its landscaping work at the Swann home, which included $1,200 a month for ongoing

weekly yard maintenance.

In January 2002, PUGH's President Yessick asked Guthrie to stop submitting invoices to PUGH, and instead PUGH advanced Guthrie $47,000 for three years worth of landscaping and maintenance on Swann's new home; and Guthrie performed about $10,000 worth of work. Although PUGH's manager of accounts testified she filed Guthrie's invoices regularly and that PUGH kept these records for 5 to 7 years, the invoices were not found during the government's investigation.[23] In December 2001, Yessick used a PUGH check to buy $1,000 worth of bookstore gift certificates for Swann.[24]

In August 2002, after Grady Pugh and Yessick heard rumors of a government investigation, Guthrie was asked to stop working on Swann's property, even though there was a balance remaining on the advance Yessick had given to Guthrie. At that time, Yessick directed his assistant to send an invoice to Swann's mother-in-law for $12,572 for tree removal and "remodeling work." In

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[23]Count 101 ($47,000 check from Guthrie) was dismissed on the government's motion during the third day of trial. On that trial day, Paul Guthrie (the owner of Guthrie) testified that, even though Guthrie received a $47,000 check from PUGH's Yessick for Guthrie's work at Swann's home, Guthrie to date had done about $10,000 worth of work on Swann's home, not $47,000. Swann was convicted on Count 52, which charges him with receiving approximately $100,000 in work done by Guthrie.

[24]The government also presented evidence that Bobby and Danny Rast used at least $4,000 of RAST's funds to pay for Swann's expenses on two trips to England. Swann and the Rast defendants were acquitted on Counts 59 (Swann accepted $3,015 trips to England and Scotland) and 68 (Rast defendants paid Swann for those trips).

September 2002, Yessick instructed his assistant to create an invoice, this time to Swann's mother, for $46,684 of landscaping work. In November 2002, the Swanns paid PUGH this amount with checks drawn from joint checking accounts the Swanns had taken out with their mothers, after taking out two home equity loans in each of their mothers' names.[25]

C. The Defense

In the *Swann* trial, the defense basically was that the defendants lacked the corrupt intent to commit bribery and acted at all times in good faith. The contractor-defendants contended they performed work on Swann's home out of goodwill and without expecting anything in return. Swann argued he did not have an intent to be influenced by the things the contractor-defendants gave him.

In addition, the defendants presented evidence showing that Nila Swann (Swann's wife) had an engineering background, acted as her own general contractor, hired and supervised subcontractors, and initially paid the bills for the work on the Swann home. Swann testified that Nila handled all of the couple's financial matters and that he assumed she was paying for the work. According to Swann, Nila frequently changed her mind, was not a good manager, and disputed the cost and scope of the work with the subcontractors. Dougherty and the Rast

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[25]The plan all along had been for the Swanns' mothers to move into the old home after the new home was built.

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brothers were longtime friends of Nila and Jack Swann. Swann stated that Dougherty and the Rast brothers stepped in only to offer advice and take over supervision to make the work go more smoothly. The contractor-defendants claimed that they paid several of these disputed bills to preserve their own business relationships with the subcontractors and their expectation was that the Swanns would eventually reimburse them. However, with the sole exception of PUGH's belated invoices to Swann for landscaping and remodeling work, there was no evidence that the Swanns paid the contractor-defendants for the work at their new home.

As to the conspiracy charge, the defendants also claimed that the government had not presented sufficient evidence to show an unlawful agreement between Swann and any of the contractor-defendants.

In the *Swann* trial, the government presented 404(b) evidence about similar items of value the same contractor-defendants had provided to McNair for his studio, their help with McNair's home in Arkansas, and other benefits they provided for McNair, Barber, and Chandler.

D. Jury's Verdicts

The jury convicted defendants Swann, PUGH, Yessick, RAST, Bobby Rast, FWDE, and Dougherty of conspiring to bribe Swann (Count 51).

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The jury convicted Swann on these substantive bribery counts: 52 ($100,000 from PUGH through subcontractor Guthrie Landscaping), 53 ($7,422 from PUGH through subcontractor Aquatic Gardens), and 54 ($1,000 in gift certificates to Alabama Book Smith from PUGH). The jury convicted defendants PUGH and Yessick on Counts 61-63 (same facts as 52-54, respectively).

The jury convicted defendants Swann, PUGH, and Yessick on Counts 90-100 (honest services mail fraud involving PUGH's paying $93,680 in checks to Guthrie for landscaping work performed for Swann).

The jury also convicted defendant Swann on Counts 57 ($9,733 in painting by Kimro Painting from RAST) and 58 ($8,940 in plumbing by Brown Mechanical from RAST) and defendants RAST and Bobby Rast on Counts 66 and 67 (same facts as Counts 57 and 58, respectively).[26]

The jury also convicted defendant Swann on Count 60 ($24,176 for construction supervision by FWDE's Stanger) and defendants FWDE and

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[26] In the *Swann* trial, the jury acquitted defendant Danny Rast on Count 51 (conspiracy to bribe Swann), on Count 66 ($9,733 in painting work for Swann by Kimro Painting) and on Count 67 ($8,940 in plumbing work for Swann by Brown Mechanical).

The jury also acquitted defendant Swann on Count 59 ($3,015 bribe received by Swann from the Rast defendants in the form of England and Scotland trips); defendants RAST, Bobby Rast, and Danny Rast on Count 68 ($3,015 bribe given to Swann in the form of England and Scotland trips); and defendant PUGH on Count 125 (obstruction of justice).

Dougherty on Count 69 (same facts as Count 60).[27]

In summary, the jury convicted defendant Swann on the bribery conspiracy count, six substantive bribery counts, and eleven honest services mail fraud counts. The jury convicted defendants PUGH and Yessick on the bribery conspiracy count, three substantive bribery counts, and eleven honest services mail fraud counts. The jury convicted defendants RAST and Bobby Rast on the bribery conspiracy count and two substantive bribery counts. The jury convicted FWDE and Dougherty on the bribery conspiracy count and one substantive bribery count. Defendants Swann, PUGH, RAST, Bobby Rast, FWDE, and Dougherty appeal all conviction counts.

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[27]When the Indictment was severed into the five separate cases for trial, Counts 107-121 of the Indictment were scheduled to be tried in the *Wilson* trial (05-545). The government later dismissed Counts 107-121 and re-filed them essentially as Counts 1-17 in a new indictment docketed as case number 06-084. This case (06-084) was consolidated for trial with the *Swann* trial (05-544).

The *Swann* jury heard evidence on these 17 counts of honest services mail fraud under 18 U.S.C. §§ 1341 and 1346. In November 1999, Wilson resigned from the JCESD and formed his own engineering consulting firm, CEDS. With Swann's help, Wilson immediately obtained two no-bid engineering contracts ($483,000 and $350,000) from the County worth a total of $833,000. To get around "revolving door" provisions in Alabama's ethics law that prohibited former employees from doing business with the County for two years, Wilson made arrangements for his firm to operate as FWDE's "subcontractor." FWDE was awarded the contracts. Even though Wilson's firm performed the work, FWDE passed Wilson's invoices on to the County under FWDE's own name. These 17 counts of honest services mail fraud related to money paid to CEDS.

Wilson and CEDS pled guilty to one count each and are not defendant-appellants in the *Swann* appeal. The *Swann* jury acquitted Swann, FWDE, and Dougherty on these 17 counts involving money paid to CEDS through FWDE. This evidence was introduced only in the *Swann* trial, not in the *Wilson* trial.

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IV. THE *WILSON* TRIAL (05-545)

In the *Wilson* trial, held from June 1 to 13, 2006, defendants Wilson and PUGH were charged with conspiring to commit bribery (Count 75). Defendant Wilson was charged with accepting from PUGH a $4,500 bribe in the form of a scholarship for his son to attend the University of Alabama at Birmingham ("UAB") (Count 76). The defense argued that the scholarship was not intended as a bribe.

The government called 9 witnesses, including Chandler, Grady Pugh, and Roland Pugh's secretary Janice Kuykendall. The defense called 3 witnesses.

A. Wilson Helps PUGH

Defendant Wilson was the Chief Civil Engineer for the JCESD and served on the PRC. As Chief Civil Engineer, Wilson was in charge of all sewer line work. Wilson was also the project engineer on several construction contracts, including some of PUGH's. As project engineer, defendant Wilson approved all sewer contractor pay requests, which were submitted monthly, before sending them on to Chandler, the JCESD's Assistant Director. Project engineers also approved requests for extensions of time to complete contracts. Contractors were subject to a penalty of $1,000 per day if they failed to complete a contract on time.

On July 26, 1999, PUGH submitted to USI — the outside consulting

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engineer for the "Village East 3" contract — a request for a 175-day extension to complete work on the project. The completion date was May 11, 1999. On July 27, 1999, USI forwarded the request to defendant Wilson. When PUGH requested the 175-day extension on July 26, it was already 76 days overdue. PUGH was at risk for a $76,000 penalty — $1,000 in liquidated damages for each of the 76 days.

On August 20, 1999, defendant Wilson faxed Grady Pugh a letter instructing him to send $4,500 to UAB for Wilson's son. On August 23, defendant Wilson approved the extension. This saved PUGH not only the $76,000 penalty for the delay from May 11 to July 26 but also $1,000 per day for each day until PUGH completed the job. On August 24, 1999, PUGH sent a $4,500 check to UAB for Wilson's son.

In addition, defendant Wilson served on the PRC, which set technical standards for construction firms who bid on contracts for the County's sewer project. Some of the projects called for "cured-in-place" ("CIP") or "trenchless" techniques for replacing existing sewer lines. In the late 1990s, this was a relatively new technology, and only a handful of contractors had the expertise to do it properly. Like other municipalities, Jefferson County required contractors to meet specified minimum requirements for prior experience before they were permitted to bid on CIP work.

In September 1999, the PRC significantly tightened these requirements, making it more difficult for new contractors to pre-qualify. However, the three contractors who were already doing CIP work in Jefferson County were grandfathered in and did not have to go through the pre-qualification process. Two of those three CIP contractors were joint venture partners with RAST and PUGH. Although the three contractors did compete against each other in a sealed bidding process, Jefferson County's qualification requirements cut down the number of competitors and enabled these CIP contractors to charge Jefferson County higher prices than they could charge other municipalities for similar work. When two non-local competitors finally qualified to join the bidding in 2001, prices quickly dropped from over $50 per linear foot to about $28.

The government also offered 404(b) evidence showing certain items of value that PUGH provided for McNair, Chandler, and Barber, and that RAST provided for Wilson,[28] and the favorable decisions PUGH obtained from the JCESD. Grady Pugh offered similar testimony, and, as in the *McNair* trial, the defense again attempted to impeach Grady Pugh by pointing out inconsistencies in his testimony, his hatred of his father (Roland Pugh), and his efforts to obtain a favorable sentencing recommendation from the government.

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[28]RAST paid for Wilson to spend a week in London and a weekend in Paris with his wife.

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B. Bribes of Wilson

Sometime in mid-1999, defendant Wilson complained to Grady Pugh over lunch about the cost of college and that he might not be able to afford to send his son Justin to UAB for the upcoming semester (fall 1999). Grady Pugh responded that PUGH "had done a lot" for "colleges and education" and suggested PUGH might "sponsor a scholarship," but wanted to make sure "we couldn't get in any trouble for it." Sometime in August 1999, Wilson called Grady Pugh to accept the scholarship offer.

As noted above, on August 20, 1999, defendant Wilson used a JCESD fax machine to send Grady Pugh a letter expressing his gratitude and instructing him to send a $4,500 check to UAB to credit Wilson's son's account. PUGH sent the check to UAB four days later. There was no evidence that the son ever sent PUGH an application for the scholarship. Grady Pugh's secretary typed the letter and signed Grady Pugh's name. Grady Pugh never met nor spoke with Wilson's son before sending the $4,500 check to UAB on August 24, 1999. The accompanying letter simply asked UAB to credit the payment to Wilson's son's account and gave no other instructions. Although PUGH had made charitable contributions to schools and colleges, including UAB, it had never previously awarded a scholarship to an individual student. Grady Pugh thought the money would go

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toward "books and tuition" but could not remember exactly what Wilson had said to him.

Grady Pugh was unaware that FWDE had already paid Wilson's son's tuition and fees for the 1999-2000 school year.[29] UAB applied PUGH's scholarship money to Wilson's son's account in four quarterly installments of $1,125 per installment, as was its standard practice for scholarships when a donor did not instruct otherwise. UAB took about one third of the PUGH money to cover the son's housing and other fees, and disbursed the remainder of the PUGH money directly to the son each quarter. The installments were disbursed to the son in September 1999, December 1999, March 2000, and June 2000. Wilson's son signed a receipt each time. Grady Pugh testified that he never did anything after August 1999 to follow up on the "scholarship" and he did not know that UAB would defer full payment into the following year. The government did not present any evidence that Wilson was aware of UAB's payment arrangements.

Grady Pugh explained his intent in giving the scholarship to Wilson's son:

> When you offer somebody something like that . . . you expect them to help you if they can. And when I did that for [Wilson], I felt like if he got a chance to help us, he would.

Grady Pugh explained that giving things of value to County employees provided

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[29]The government did not allege there was anything improper about the FWDE scholarship.

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PUGH with the "general benefit" of "hav[ing] preferential treatment and, you know, if we had problems it would help resolve the problems. Numerous ways that things could be made easier."

C. Jury's Verdicts

The jury convicted defendants Wilson and PUGH on Count 75 and defendant Wilson on Count 76. Wilson has not appealed. PUGH appeals as to Count 75.[30]

V. THE *BARBER* TRIAL (05-542)

In the *Barber* trial, held from January 8 to 17, 2007, defendants Barber, PUGH, Roland Pugh, and Yessick were charged with conspiring to bribe Barber by, among other things, PUGH's paying and Barber's accepting $47,927 in real property and nearly $1,200 in trips to casinos and beaches (Count 78). Defendants PUGH and Roland Pugh were also charged with bribing Barber by giving him that $47,927 property (Count 83), and defendant PUGH was charged with paying for these trips (Counts 84-86).[31]

Defendants Barber and Yessick pled guilty to Count 78. Only PUGH and

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[30]Count 77 charged PUGH with the substantive offense of bribing Wilson with the scholarship, but was dismissed before trial on the government's motion.

[31]The trips were to Isle of Capri Casino, Vicksburg, Mississippi ($148), Beau Rivage Resort & Casino, Biloxi, Mississippi ($546), and Phoenix III Condominiums, Gulf Shores, Alabama ($481).

Roland Pugh went to trial. The government called 7 witnesses, including Chandler, Grady Pugh, and Yessick. The defense called 7 witnesses, including Barber.

A. Barber Helps PUGH

Barber supervised the JCESD's twenty-six job-site County inspectors. Barber was responsible for hiring sewer contractors to do no-bid emergency work, approving contractors' paperwork, and certifying their expenses before sending the expenses to JCESD Assistant Director Chandler.

In January 2000, Barber determined the sewer pipes in the Paradise Lake subdivision should be replaced on an emergency basis instead of being repaired. On January 7, Barber told City Inspector Hodges that Barber had chosen a contractor who could do the job in about 45 days. PUGH's President Yessick sent Barber a letter, dated January 27, 2000, offering that PUGH could do the job for about $1.2 million. That same day, Yessick also sent Hodges a letter, dated January 27, 2000, stating that PUGH would be performing the job. Given that emergency work contracts were limited to $50,000 or less, PUGH eventually received a no-bid field directive in the amount of $857,000, on which PUGH made a 50% profit. However, because Barber had classified the work as an emergency, there was no contract for Paradise Lake on which to put the field directive. The

emergency work contract therefore was placed on the unrelated multi-million-dollar Cahaba River project.

B. Bribes of Barber

Beginning in 1997 and continuing through 2001, PUGH's President Yessick caused PUGH to pay to send Barber on an annual beach resort or casino vacation in locations including Orange Beach, Alabama and Biloxi and Vicksburg, Mississippi. PUGH paid $148 for Barber's stay in Vicksburg, $546 for his stay in Biloxi, and $481 for his stay at the Phoenix III Condominiums in Orange Beach, Alabama. PUGH recorded the payments for the trips to Orange Beach and Biloxi in PUGH's books as sewer "rehab" projects.

In the spring of 2000, Barber asked PUGH's Yessick if he would find and purchase a piece of property in McCalla, Alabama on which Barber could retire. Yessick consulted a realtor for this purpose, visited several properties himself, and, in November 2000, signed a contract to purchase land in the name of "Roland Pugh" for $47,500. The next week, Yessick gave the realtor a check for $1,000, signed by PUGH's CFO Lorelei Heglas. In anticipation of the cost PUGH would incur for the land purchase, Yessick instructed PUGH CFO Heglas to charge $45,000 to the Paradise Lake project.

However, days before closing, Roland Pugh's administrative assistant Janice

Kuykendall told Yessick that PUGH no longer intended to buy the land in PUGH's name but instead planned to give Barber a cashier's check to buy the land in his own name. PUGH assistant Kuykendall told Yessick to travel to Tuscaloosa to get the check and then take back from the realtor all documents referring to PUGH.

PUGH's Yessick got the check, which was made out to the settlement attorney for $46,877, and on which the "NAME OF REMITTER" line was left blank. Yessick then gave Barber the check. Barber closed on the land contract in his own name on December 18, 2000. Yessick also gave Barber a cashier's check for $1,050 to replace the check he gave to the realtor. The realtor prepared papers to refund PUGH's deposit.

In September 2002, a newspaper article revealed an investigation into PUGH and Barber. Six months later, over a seven-week period, Barber sent PUGH a series of checks amounting to $46,877. Yet Barber paid no interest, and there was no evidence of any document indicating a loan.

At trial Yessick testified that he paid the charged bribes in the hope that Barber, who supervised the JCESD's job-site inspectors, would assist if PUGH were to have a problem with an inspector being "irrational." Counsel for PUGH and Roland Pugh argued that they did not provide things to Barber with the intent

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to influence him.[32] The government presented 404(b) evidence showing that PUGH's Yessick paid for Chandler to go on a fishing vacation, that Grady Pugh bought a carpet for McNair, that Grady Pugh made cash payments to McNair, and that PUGH worked on McNair's home in Arkansas.

C. Jury's Verdicts

The jury convicted PUGH on Counts 78 (bribery conspiracy), 83 ($47,927 in real property), and 84-86 (trips). Roland Pugh was acquitted on Counts 78 and 83, the only counts against him in the *Barber* trial. PUGH appeals all conviction counts.

VI. QUID PRO QUO ISSUES

All defendant-appellants argue that their bribery convictions under 18 U.S.C. § 666[33] must be vacated because the Indictment failed to allege, and the government failed to prove, the contractor-defendants gave specific benefits to County employees in exchange for, and with the intent that, the employees perform

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[32]Defendant Roland Pugh called Barber to testify that he (Barber) never met Roland Pugh until after the relevant time period and that Barber did not have an intent to be influenced by the trips that PUGH bought for him.

[33]The defendant-appellants' § 666 convictions are: (1) McNair, Counts 1-3, 5-12, 32; (2) Swann, Counts 51-54, 57, 58, 60; (3) PUGH, Counts 1, 15, 51, 61-63, 71, 75, 78, 83-86; (4) Roland Pugh, Count 1; (5) RAST, Counts 1, 19-24, 51, 66, 67, 72, 87; (6) Bobby Rast, Counts 1, 19-22, 51, 66, 67, 72, 87; (7) Danny Rast, Counts 1, 19, 20, 22; (8) FWDE, Counts 1, 28, 51, 69; and (9) Dougherty, Counts 1, 28, 51, 69.

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a specific official act, termed a *quid pro quo*.[34] The defendant-appellants also argue the district court erred, at a minimum, by refusing to charge the jury that the government must prove a specific *quid pro quo*. We begin by reviewing the relevant parts of § 666.[35]

A. 18 U.S.C. § 666

Section 666 proscribes theft and bribery in connection with programs of local governments receiving federal funds.[36] Section 666(a)(1)(B) criminalizes a local government employee's "corruptly" soliciting or accepting a bribe:

(a) Whoever . . .

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[34]Black's Law Dictionary defines *quid pro quo* as follows: "An action or thing that is exchanged for another action or thing of more or less equal value; a substitute." Black's Law Dictionary 1367 (9th ed. 2009). Defendants argue the government must prove a specific or identifiable thing of value was exchanged for a specific or identifiable official act.

[35]The interpretation of a statute is a question of law we review de novo. United States v. Searcy, 418 F.3d 1193, 1195 (11th Cir. 2005); United States v. Mazarky, 499 F.3d 1246, 1248 (11th Cir. 2007). Whether an indictment is sufficient is also a question of law reviewed de novo. United States v. Steele, 178 F.3d 1230, 1233 (11th Cir. 1999). "An indictment is sufficient if it: (1) presents the essential elements of the charged offense, (2) notifies the accused of the charges to be defended against, and (3) enables the accused to rely upon a judgment under the indictment as a bar against double jeopardy for any subsequent prosecution for the same offense." Id. at 1233-34 (quotation marks omitted).

[36]A predicate to a § 666 offense is that the defendant must be an agent of an "organization, government, or agency [that] receives, in any one year period, benefits in excess of $10,000 under a Federal program involving a grant, contract, subsidy, loan, guarantee, insurance, or other form of Federal assistance." 18 U.S.C. § 666(b). It is undisputed that Jefferson County received the requisite amount of federal funds and that McNair, Swann, Wilson, Barber, Chandler, Ellis, and Creel were employees and thus agents of Jefferson County.

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> (1) being an agent[37] of [a] local . . . government, or any agency thereof--
>
> . . . .
>
> > (B) corruptly solicits or demands for the benefit of any person, or accepts or agrees to accept, anything of value from any person, intending to be influenced or rewarded in connection with any business, transaction, or series of transactions of such . . . government, or agency involving anything of value of $5,000 or more; or
>
> shall be fined . . . , imprisoned not more than 10 years, or both.

18 U.S.C. § 666(a)(1)(B). Defendants McNair, Swann, Wilson, and Barber, as Jefferson County employees, violated § 666(a)(1)(B) if: (1) they solicited or accepted anything of value; (2) with the corrupt intent to be influenced or rewarded; (3) in connection with any business, transaction, or series of transactions of Jefferson County involving anything of value of $5,000 or more.[38] Id. The

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[37]As to "agent," the district court in the *McNair* trial charged the jury: "The term 'agent' means a person authorized to act on behalf of a local government and includes an employee, officer, manager or representative of a local government. Jefferson County, Alabama is a local government of Alabama." In the *Swann*, *Barber*, and *Wilson* trials, the district court charged the jury: "The term 'agent' as relevant to this case means any employee, officer, director, manager or representative of a local government. Jefferson County, Alabama, is a local government of Alabama."

[38]The $5,000 in § 666(a)(1)(B) and (a)(2) refers to the value of the "business, transaction, or series of transactions," not the value of the bribe. See United States v. Zimmermann, 509 F.3d 920, 927 (8th Cir. 2007) (concluding a benefit of more than $5,000 received for less than $5,000 in bribes was sufficient for a § 666(a)(1)(B) conviction); see also Salinas v. United States, 522 U.S. 52, 57, 118 S. Ct. 469, 473 (1997) ("Subject to the $5,000 threshold for the business or transaction in question, the statute forbids acceptance of a bribe by a covered official . . . ."); United States v. Castro, 89 F.3d 1443, 1454 (11th Cir. 1996) (describing in dicta the $5,000 element in § 666(a)(2) as "in connection with any business transaction [sic] or series of transactions"); but see United States v. Abbey, 560 F.3d 513, 521 (6th Cir.) (stating in dicta that "§ 666 contains . . . a requirement that the illegal gift or bribe be worth over $5,000"), cert. denied, 130 S. Ct. 739 (2009). Where the bribe-giver receives an intangible benefit, some courts

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counts in the Indictment as to McNair and Swann track the language of the statute.

Section 666(a)(2) also criminalizes "corruptly" offering or giving a bribe to a local government employee:

> (a) Whoever . . .
>
> . . . .
>
> (2) corruptly gives, offers, or agrees to give anything of value to any person, with intent to influence or reward an agent of [a] . . . local . . . government, or any agency thereof, in connection with any business, transaction, or series of transactions of such organization, government, or agency involving anything of value of $5,000 or more;
>
> shall be fined . . . , imprisoned not more than 10 years, or both.

Id. § 666(a)(2). The contractor-defendants — PUGH, Roland Pugh, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty — violated § 666(a)(2) if: (1) they gave to a County employee anything of value; (2) with the corrupt intent to influence or reward them; (3) in connection with any business, transaction, or series of transactions of Jefferson County involving anything of value of $5,000 or more. Id. The counts in the Indictment as to these contractor-defendants also track the language of § 666(a)(2).

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have used the bribe amount as a proxy to stand for the value of the business or transaction. See United States v. Marmolejo, 89 F.3d 1185, 1194 (5th Cir. 1996) (using, under § 666(a)(1)(B), the more than $5,000 paid to sheriff to determine the value of conjugal visits received by prisoner); United States v. Fernandes, 272 F.3d 938, 944 (7th Cir. 2001) (using the value of bribes to prosecutor, under § 666(a)(1)(B), where prosecutor received bribes in exchange for his expunging the bribe-givers' DUI convictions). Here, the parties do not dispute that the $5,000 level was met.

It is well established in this Circuit that an indictment is sufficient if it tracks the language of the statute and provides a statement of facts that gives notice of the offense to the accused. See United States v. Jordan, 582 F.3d 1239, 1246 (11th Cir. 2009); United States v. Walker, 490 F.3d 1282, 1296 (11th Cir. 2007); United States v. Sharpe, 438 F.3d 1257, 1263 (11th Cir. 2006); United States v. Ndiaye, 434 F.3d 1270, 1299 (11th Cir. 2006). By listing the items of value received or given by the defendants, each count of the Indictment provides sufficient facts and circumstances to give adequate notice of the charges to be defended against. Thus, we readily determine the Indictment itself was not defective for failure to allege a specific *quid pro quo*.

B. Paradies and US Infrastructure Decisions

Nonetheless, this does not resolve whether the language in § 666(a)(1)(B) or (a)(2) effectively requires the government to prove a specific *quid pro quo* to obtain a § 666 conviction. This question has been before this Court twice before but only under plain error review, and even then, we did not squarely answer it. See United States v. US Infrastructure, 576 F.3d at 1212-14; United States v. Paradies, 98 F.3d 1266, 1289 (11th Cir. 1996).

In Paradies, the defendant claimed that the district court erred in failing to charge the jury that a *quid pro quo* was an element required to convict under § 666

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Id. at 1289. This Court did not decide if *quid pro quo* was an element but concluded there was no reversible jury charge error because the jury charge tracked the statutory language of § 666 and the defendant did not object to the charge. Id.

The Paradies Court also rejected a challenge to the sufficiency of the evidence. Id. The Paradies Court stated: "the evidence at trial was sufficient for a jury to find that Jackson [the official] accepted payments for his votes and his influence upon the City Council and the administration," and "[s]uch a finding would satisfy any quid pro quo requirement under the statute." Id. In other words, Paradies concluded that even if § 666 requires a *quid pro quo*, that requirement is satisfied by showing a series of payments intended generally to influence the official's decisions.

Subsequently, our United States v. US Infrastructure decision involved an appeal from the fifth trial (the *USI* trial, 05-543) that arose out of the Indictment here. US Infrastructure, 576 F.3d at 1202-03. The defendants in US Infrastructure argued the jury charges on the § 666 counts were erroneous because they did not include their proposed instruction that the jury must find a specific *quid pro quo* to convict under § 666. Id. at 1213. This Court concluded that the district court "did not commit plain error by refusing [defendants'] *quid pro quo* [jury] instruction." Id. at 1214. As its sole basis for this conclusion, US Infrastructure stated this

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Court had already rejected this argument in two prior cases: "This Court has rejected the argument that the government must 'show a direct *quid pro quo* relationship between [the defendants] and an agent of the agency receiving federal funds.'" US Infrastructure, 576 F.3d at 1214 (quoting United States v. Castro, 89 F.3d 1443, 1454 (11th Cir. 1996), and citing Paradies, 98 F.3d at 1289). However, as shown above, Paradies did not actually make a holding to that effect. Neither did United States v. Castro.[39] Nonetheless, US Infrastructure itself holds a specific *quid pro quo* is not required for a § 666 conviction. Because US Infrastructure was only plain error review, we now make the same holding but under de novo review.

We begin with the statutory language itself.[40] Importantly, § 666(a)(1)(B) and (a)(2) do not contain the Latin phrase *quid pro quo*. Nor do those sections

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[39]In Castro, the issue was whether § 666(a)(2) required that the bribe-givers intended to enter into a direct exchange with an agent of an entity receiving the federal funds, or if it was sufficient that they offered the bribe to a third-person middleman with the intent to influence that agent by having that middleman authorize that agent to issue payments to the defendants. Castro, 89 F.3d at 1453-54. The Castro Court concluded that "influence" under § 666 could be exercised indirectly and that it was sufficient that the defendants intended to influence the agent by causing a middleman to authorize the agent to issue payments. Id. Although in reaching this conclusion the Castro Court stated, "[w]e reject appellants' suggestion that the government had to show a direct *quid pro quo* relationship between [the defendants] and an agent of the agency receiving federal funds," id., Castro was addressing whether there was a "directness" requirement between the bribe-giver and the agent and did not answer the question before us here.

[40]"When construing a criminal statute, [this Court] begin[s] with the plain language; where 'the language Congress chose to express its intent is clear and unambiguous, that is as far as we go to ascertain its intent because we must presume that Congress said what it meant and meant what it said.'" United States v. Browne, 505 F.3d 1229, 1250 (11th Cir. 2007) (quoting United States v. Steele, 147 F.3d 1316, 1318 (11th Cir. 1998) (en banc)).

contain language such as "in exchange for an official act" or "in return for an official act." In short, nothing in the plain language of § 666(a)(1)(B) nor § 666(a)(2) requires that a specific payment be solicited, received, or given in exchange for a specific official act. To accept the defendants' argument would permit a person to pay a significant sum to a County employee intending the payment to produce a future, as yet unidentified favor without violating § 666.

The requirement of a "corrupt" intent in § 666 does narrow the conduct that violates § 666 but does not impose a specific *quid pro quo* requirement. In all the trials consolidated in this appeal, the district court's jury charge, with slight variations, defined "corruptly" as follows: "An act is done 'corruptly' if it is performed voluntarily, deliberately and dishonestly for the purpose of *either* accomplishing an unlawful end or result *or* of accomplishing some otherwise lawful end or lawful result by an[y] unlawful method or means." It is acting "corruptly" — dishonestly seeking an illegal goal or a legal goal illegally — that separates permissible from criminal. The addition of a corrupt *mens rea* avoids prosecution for acceptable business practices.[41]

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[41]We do not read the definitional language of "corrupt" to impose a *quid pro quo* requirement. In any event, the district court charged that definition. It also has been suggested that § 666's language — a thing of value given with corrupt intent to influence — effectively constitutes a *quid pro quo* in that the payment is made for influence. This at best would be *"quid pro quo* light." Even if one views § 666 this way, the district court charged the language of the § 666 statute.

For all of these reasons, we now expressly hold there is no requirement in § 666(a)(1)(B) or (a)(2) that the government allege or prove an intent that a specific payment was solicited, received, or given in exchange for a specific official act, termed a *quid pro quo*.

As to the defendant County employees, the government must show only what § 666(a)(1)(B) says: that a County employee "corruptly" accepted "anything of value" with the intent "to be influenced or rewarded in connection with any business, transaction, or series of transactions" of the County. And as to the contractor-defendants, the government must show only what § 666(a)(2) says: that the defendant "corruptly" gave "anything of value" to a County employee with the intent "to influence or reward" that person "in connection with any business, transaction, or series of transactions" of the County.

To be sure, many § 666 bribery cases will involve an identifiable and particularized official act, but that is not required to convict. Simply put, the government is not required to tie or directly link a benefit or payment to a specific official act by that County employee. The intent that must be proven is an intent to corruptly influence or to be influenced "in connection with any business" or "transaction," not an intent to engage in any specific *quid pro quo*.[42]

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[42]The defendant-appellants rely on United States v. Siegelman, 561 F.3d 1215 (11th Cir. 2009), petition for cert. filed, 78 U.S.L.W. 3083 (U.S. Aug. 10, 2009) (No. 09-167), 78

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C. Other Circuits

In concluding § 666 does not require a specific *quid pro quo*, we align ourselves with the Sixth and Seventh Circuits. See United States v. Abbey, 560 F.3d 513, 520 (6th Cir.), cert. denied, 130 S. Ct. 739 (2009) (stating "the text says nothing of a quid pro quo requirement to sustain a conviction" and "while a *quid pro quo* of money for a specific legislative act is sufficient to violate [§ 666(a)(1)(B) or (a)(2)], it is not necessary") (quotation marks omitted); United States v. Gee, 432 F.3d 713, 714-15 (7th Cir. 2005) (holding that "[a] *quid pro quo* of money for a specific legislative act" is not necessary under § 666(a)(1)(B) and that an exchange of money for the official's "influence" was enough); United States v. Agostino, 132 F.3d 1183, 1190 (7th Cir. 1997) ("We decline to import an

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U.S.L.W. 3090 (U.S. Aug. 10, 2009) (No. 09-182), and United States v. Massey, 89 F.3d 1433 (11th Cir. 1996), but neither case answers the question here. In Siegelman, the district court gave a *quid pro quo* instruction in response to the defendant's request. The district court instructed the jury that they could not convict unless "the defendant and official *agree* that the official will take specific action in exchange for the thing of value." Siegelman, 56 F.3d at 1225. This Court stated "[s]o, whether or not a *quid pro quo* instruction was legally required, such an instruction was given," and "[t]herefore assuming a *quid pro quo* instruction was required in this case, we find no reversible error." Id. at 1225, 1227.

In Massey, "[t]he jury convicted [attorney] Massey of one count of bribery in violation of 18 U.S.C. § 666(a)(2) finding that Massey purchased [Judge] Sepe's lunches at Buccione in exchange for court appointments." Massey, 89 F.3d at 1439. This Court rejected Massey's claim that the government was required to produce direct evidence of a verbal or written agreement to this effect and stated "inferences drawn from relevant and competent circumstantial evidence" were sufficient. Id. (quotation marks omitted). The *quid pro quo* issue here was not raised or discussed in Massey. The fact that the evidence of a specific exchange was sufficient to sustain the § 666(a)(2) bribery conviction in Massey does not mean one is required to obtain a § 666(a)(2) conviction here.

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additional, specific *quid pro quo* requirement into the elements of § 666(a)(2).”); but see United States v. Jennings, 160 F.3d 1006, 1014 (4th Cir. 1998) (concluding the “corrupt intent” element in § 666 requires the government to prove a *quid pro quo*, but stating the “*quid pro quo* requirement is satisfied so long as the evidence shows a ‘course of conduct of favors and gifts flowing to a public official *in exchange for* a pattern of official actions favorable to the donor’” and “the intended exchange in bribery can be ‘this for these’ or ‘these for these,’ not just ‘this for that’” (citations omitted)).

The Second Circuit’s decision in United States v. Ganim, 510 F.3d 134 (2d Cir. 2007), also supports our analysis to some extent.[43] The defendant “Ganim’s challenges to the jury charge primarily relate[d] to a single issue: namely, whether proof of a government official’s promise to perform a future, but unspecified, official act is sufficient to demonstrate the requisite quid pro quo for a conviction” under § 666(a)(1)(B). Id. at 141-42. Although accepting a *quid pro quo* requirement for a bribery conviction, the Second Circuit rejected Ganim’s claim

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[43]The defendant in Ganim was convicted of these “bribery-related crimes”: “(1) extortion in violation of the Hobbs Act, 18 U.S.C. § 1951; (2) ‘honest services mail fraud’ in violation of 18 U.S.C. §§ 1341 & 1346; (3) federal programs bribery in violation of 18 U.S.C. § 666(a)(1)(b) [sic]; and (4) bribe receiving in violation of Connecticut General Statutes section 53a-148 (collectively, the ‘bribery-related crimes’).” Ganim, 510 F.3d at 141. The Ganim opinion first analyzed the *quid pro quo* issue collectively as to the bribery-related crimes. Id. at 141-42. It later discussed the jury charges under an “Extortion” subheading, but much of that discussion related to all bribery-related crimes in the case. Id. at 142-47. Because Ganim discussed the bribery-related crimes collectively, it did not focus on the language of § 666(a)(1)(B).

that "a direct link must exist between a benefit received and a specifically identified official act." Id. at 142. The Second Circuit held "that the requisite quid pro quo for the crimes at issue [which included § 666(a)(1)(B)] may be satisfied upon a showing that a government official received a benefit in exchange for his promise to perform official acts or to perform such acts as the opportunities arise." Id. (emphasis added). The Second Circuit added that "so long as the jury finds that an official accepted gifts in exchange for a promise to perform official acts for the giver, it need not find that the specific act to be performed was identified at the time of the promise, nor need it link each specific benefit to a single official act." Id. at 147.

The Second Circuit also explained that "requiring a jury to find a quid pro quo . . . ensures that a particular payment is made in exchange for a *commitment* to perform official acts to benefit the payor in the future," and "[o]nce the quid pro quo has been established, however, the specific transactions comprising the illegal scheme need not match up this for that." Id. at 147. The Second Circuit's analysis lies somewhere beyond a no-*quid pro quo* requirement, as adopted by the Sixth, Seventh, and now the Eleventh Circuits, and the Fourth Circuit's requirement. While the Second Circuit requires a *quid pro quo*, that requirement is satisfied by a *quid* (thing of value) in exchange for a promise to perform an unidentified, official

act at some point in the future. Id. at 142-47. In other words, in the Second Circuit the *quo* need not be specific or even identifiable at the time of the *quid*, and to that extent the Second Circuit arguably supports our conclusion. And to some extent, confusion reigns in this area because courts often use the term *quid pro quo* to describe an exchange other than a particular item of value for a particular action.

D. Sun-Diamond and § 201

Because there is no support for the defendant-appellants' *quid pro quo* argument in the text of § 666, they rely on how the Supreme Court interpreted a different criminal statute, 18 U.S.C. § 201, in United States v. Sun-Diamond Growers of California, 526 U.S. 398, 119 S. Ct. 1402 (1999). However, Sun-Diamond does not address § 666, and there are significant differences in the text of the two statutes (§§ 201 and 666).

The defendant Sun-Diamond was a trade association convicted of providing "illegal gratuities" under 18 U.S.C. § 201(c)(1)(A) for having given tickets, meals, and other items to the federal Secretary of Agriculture. Id. at 401, 119 S. Ct. at 1404-05. Section 201(c)'s illegal gratuity provision prohibited Sun-Diamond from: "giv[ing] . . . anything of value to any public official . . . for or because of any official act performed or to be performed by such public official . . . ." 18

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U.S.C. § 201(c)(1)(A) (emphasis added).[44] In Sun-Diamond, the district court charged the jury it could convict if it found "Sun-Diamond provided [the Secretary] with unauthorized compensation simply because he held public office," and that "[t]he government need not prove that the alleged gratuity was linked to a specific or identifiable act or any act at all." Id. at 403, 119 S. Ct. at 1405 (emphasis added). The "point in controversy" was that the jury instructions suggested that an illegal gratuity "did not require any connection between [defendant's] intent and a specific official act." Id. at 405, 119 S. Ct. at 1406.

The Supreme Court in Sun-Diamond concluded that § 201(c) did require a link between the gratuity and a specific "official act" because the statutory text prohibited gratuities given or received "for or because of any official act performed or to be performed" and then defined "official act" as "any decision or action on any question, matter, cause, suit, proceeding or controversy . . . ." Id. at 406, 119 S. Ct. at 1407 (quoting § 201(c)(1)(A) and (a)(3)). And it was specifically this text of the illegal gratuity statute — "for or because of any official act" — that the Supreme Court in Sun-Diamond found to be "pregnant with the requirement that some particular official act be identified and proved." Id. at 406, 119 S. Ct. at 1407 (emphasis added). In stark contrast, none of these phrases are used in

[44]There is no threshold monetary requirement in §§ 201(b) or 201(c)(1)(A).

§§ 666(a)(1)(B) or 666(a)(2).

We recognize that the Supreme Court in Sun-Diamond also distinguished between a § 201(b) bribery crime and a § 201(c) illegal gratuity crime. Id. at 404-05, 119 S. Ct. at 1406. The Supreme Court pointed out that bribery in § 201(b) "requires a showing that something of value was corruptly given, offered, or promised to a public official (as to the giver) or corruptly demanded, sought, received, accepted, or agreed to be received or accepted by a public official (as to the recipient) with intent, *inter alia*, 'to influence any official act' (giver) or in return for 'being influenced in the performance of any official act' (recipient)." Id. at 404, 119 S. Ct. at 1406 (quoting 18 U.S.C. § 201(b)). The Supreme Court explained that "[t]he distinguishing feature of each crime is its intent element." Id. at 404, 119 S. Ct. at 1406. The Supreme Court explained further that in § 201:

> Bribery requires intent "to influence" an official act or "to be influenced" in an official act, while illegal gratuity requires only that the gratuity be given or accepted "for or because of" an official act. In other words, for bribery there must be a *quid pro quo* – a specific intent to give or receive something of value in exchange for an official act. An illegal gratuity, on the other hand, may constitute merely a reward for some future act that the public official will take (and may already have determined to take), or for a past act that he has already taken.

Id. at 404-05, 119 S. Ct. at 1406 (emphasis added).[45] The Supreme Court also

[45] A bribe under § 201(b) is punishable by up to 15 years' imprisonment, while the lesser crime of illegal gratuity under § 201(c) is punishable by up to 2 years' imprisonment. 18 U.S.C. § 201(b), (c).

stated: "The District Court's instructions in this case, in differentiating between a bribe and an illegal gratuity, correctly noted that only a bribe requires proof of a *quid pro quo*." Id. at 405, 119 S. Ct. at 1406.

Although § 201(b) requires that a bribe be given or received to influence an "official act" or "in return for" an "official act," § 666 sweeps more broadly than either § 201(b) or (c). Section 666 requires only that money be given with intent to influence or reward a government agent "in connection with any business, transaction, or series of transactions." 18 U.S.C. § 666(a)(1)(B) & (a)(2). Section 666 does not say "official act" but says "any business, transaction, or series of transactions." Id. Section 666 does not say "in return for" or "because of" but says "in connection with." Id.

More importantly, the Supreme Court in Sun-Diamond was concerned with accidentally criminalizing legal gratuities under § 201(c), such as giving a ball cap, a sports jersey, or token gift to the Secretary of Agriculture "based on his official position and not linked to an identifiable act." Id. at 406-07, 119 S. Ct. at 1407; see Ganim, 510 F.3d at 146 ("Undergirding the [Supreme] Court's decision in Sun-Diamond was a need to distinguish legal gratuities (given to curry favor of an official's position) from illegal gratuities (given because of a specific act)."). That concern is diminished here because § 666 contains a corrupt intent requirement. In

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any event, as reasoned by the Second Circuit, "there is good reason to limit Sun-Diamond's holding to the statute at issue in that case, as it was the very text of the illegal gratuity statute — 'for or because of any official act' — that led the Court to its conclusion that a direct nexus was required to sustain a conviction under § 201(c)(1)(A)." Ganim, 510 F.3d at 146. "Nor is there any principled reason to extend Sun-Diamond's holding beyond the illegal gratuity context." Id.

E. Rule of Lenity

We also reject defendant-appellants' argument that the rule of lenity requires us to read a specific *quid pro quo* requirement into § 666. The rule of lenity may apply in a number of different circumstances. For example, "[t]he rule of lenity is applied when a broad construction of a criminal statute would 'criminalize a broad range of apparently innocent conduct.'" United States v. Svete, 556 F.3d 1157, 1169 (11th Cir. 2009) (en banc) (quoting Liparota v. United States, 471 U.S. 419, 426, 105 S. Ct. 2084, 2088 (1985)), cert. denied, __ S. Ct. __, 78 U.S.L.W. 3546 (U.S. Mar. 22, 2010) (No. 09-7576). However, "[t]he simple existence of some statutory ambiguity . . . is not sufficient to warrant application of that rule, for most statutes are ambiguous to some degree." Muscarello v. United States, 524 U.S. 125, 138, 118 S. Ct. 1911, 1919 (1998). The mere possibility of a narrower statutory construction by itself does not make the rule of lenity applicable. Svete,

556 F.3d at 1169. Application of the rule requires a "grievous ambiguity." Muscarello, 524 U.S. at 138-39, 118 S. Ct. at 1919 ("The rule of lenity applies only if, 'after seizing everything from which aid can be derived,' . . . we can make 'no more than a guess as to what Congress intended.'") (citation omitted).

The rule of lenity does not apply here because defendant-appellants fail to identify a "grievous ambiguity" in § 666(a)(1)(B) or (a)(2), or to show that the statutory language criminalizes innocent behavior. Section 666(a)(1)(B) and (a)(2) criminalize only those acts done "corruptly," and, indeed, § 666 provides a defense for "bona fide salary, wages, fees, or other compensation paid, or expenses paid or reimbursed, in the usual course of business." 18 U.S.C. § 666(c).

F. Defendants' Proposed Jury Charges

In the *McNair*, *Swann*, *Barber*, and *Wilson* trials, all defendant-appellants requested jury charges that included a *quid pro quo* requirement.[46]

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[46]For example, in the *McNair* trial, PUGH requested this instruction:

In order for you to find defendant [PUGH] guilty, you must find beyond a reasonable doubt that [PUGH] gave something of value to Defendant McNair with the specific intent of obtaining a *quid pro quo*, that is, that [PUGH] gave the item of value with the specific intent to improperly cause Defendant McNair to commit a specific act in favor of [PUGH], or with the specific intent of illegally rewarding Defendant McNair for having previously committed such an act. In other words, the United States must show that [PUGH] provided the item of value either (1) with the expectation that Defendant McNair would improperly provide something specific in return or (2) for the purpose of rewarding McNair for something improper that Defendant McNair had previously done.

In the *Swann* trial, Bobby Rast, for example, requested this instruction:

[Y]ou must find beyond a reasonable doubt that Bobby Rast gave something of value to Defendant Swann with the specific corrupt intent of obtaining a *quid pro quo*, that

In the *McNair* trial, the district court rejected the proposed *quid pro quo* instructions, gave the Eleventh Circuit's pattern jury instructions for § 666 as to corruptly giving bribes, telling the jury:

> As I've said, the defendants, other than Jewell C. "Chris" McNair, are charged in various counts of violating a portion of Title 18, Section 666, which makes it a federal crime or offense for anyone to corruptly give, offer or agree to give anything of value to anyone who is an agent of a local government receiving significant benefits under a federal assistance program intending to reward or influence that agent in connection with any business, transaction, or series of transactions of such local government involving anything of value of $5,000 or more.
> . . . .
> Fifth: And this is another thing that the government would have to prove beyond a reasonable doubt.
> That each such gift, offer or agreement to give, that by each of those gifts, offer or agreement to give, the Defendant [] corruptly intended to reward or influence Jewell C. "Chris" McNair in connection with a transaction, or series of transactions, with Jefferson County, Alabama, which transaction or series of transactions involved something of value of $5,000 or more.
> Sixth: That in doing so, the Defendant [] acted corruptly.
> An act is done "corruptly" if it is performed voluntarily, deliberately, and dishonestly, for the purpose of either accomplishing an unlawful end or result or of accomplishing some otherwise lawful end or lawful result by

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is, that Bobby Rast gave the item of value with the specific corrupt intent to improperly influence Defendant Swann to commit a specific official act in favor of Bobby Rast, or with the specific corrupt intent of illegally rewarding Defendant Swann for having previously committed such an act. In other words, the United States must show that Bobby Rast corruptly provided the item of value either (1) with the expectation that Defendant Swann would improperly provide some official specific act or acts in return or (2) for the purpose of rewarding Jack W. Swann for some specific improper official act or acts that Defendant Swann had previously done.

an unlawful method or means.[47]

The district court also gave the pattern § 666 jury charge, with slight variations, as to corruptly receiving bribes. The judges in the subsequent trials (*Swann*,[48] *Barber*,[49] and *Wilson*[50]) agreed with the district

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[47]See Eleventh Circuit Pattern Jury Instructions (Criminal Cases) at 180-81 (Offense Instruction 24) (2003). The district court instructed the jury the government must prove all elements of a § 666 crime, such as that McNair had to be an agent and the County had to receive over $10,000 in federal funds. We quote in the text only the part of the pattern charge about the corrupt intent element.

[48]In the *Swann* trial, the district court instructed the jury as to corruptly accepting bribes:

> As to [the § 666 substantive bribery] counts the defendant Jack W. Swann can be found guilty of [§ 666 bribery] only if all the following facts are proved beyond a reasonable doubt.
>
> . . . .
>
> The fifth element which is common to all of those counts as the first four were, that . . . by such acceptance or agreements, the defendant Jack W. Swann intended as to the count under consideration to be influenced or rewarded in connection with a transaction or series of transactions of Jefferson County, Alabama which transactions or series of transactions involve something of value of $5,000 or more.
>
> And six, that in so doing the defendant Jack W. Swann acted corruptly.
>
> An act is done corruptly if it is performed voluntarily and deliberately and dishonestly for the purpose of either accomplishing an unlawful end or result or of accomplishing some otherwise lawful end or lawful result by any unlawful method or means.

The court gave a similar pattern § 666 jury charge as to corruptly giving bribes.

[49]In the *Barber* trial, the district court instructed the jury as to only PUGH's corruptly giving bribes because Barber, the acceptor, pled guilty:

> The defendant Roland Pugh Construction, Inc., can be found guilty of the offense charging a violation of [§ 666(a)(2)] only if all the following facts are proved beyond a reasonable doubt:
>
> . . . .
>
> Fifth, that by giving, offering, or agreeing to give things of value to Clarence R. Barber, defendant Roland Pugh Construction, Inc., intended to influence or reward Clarence R. Barber in connection with any business transaction or series of transactions which involve something of $5,000 or more.
>
> And, sixth, that in doing so, the defendant Roland Pugh Construction, Inc., acted corruptly.

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court's ruling in the *McNair* trial and gave jury instructions that did not include defendant-appellants' requested *quid pro quo* instructions.[51]

Given our conclusion that § 666(a)(1)(B) and (2) do not require proof of a specific *quid pro quo*, defendant-appellants' proposed jury instructions containing that requirement were incorrect statements of law. Thus, the district courts did not

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> . . . .
> An act is done corruptly if it is performed voluntarily, deliberately, and dishonestly for the purpose of either accomplishing an unlawful end or result, or of accomplishing some otherwise lawful end or result by any unlawful method or means.

[50]Because in the *Wilson* case only PUGH appeals, we quote the "corruptly giving" part of the court's jury charge:

> The purpose of the plan alleged by the government in the indictment was also for the defendant, Pugh Incorporated, through Grady R. Pugh, Jr., to corruptly give, offer, and agree to give things of value to defendant Ronald K. Wilson with the intent of influencing and rewarding him for supporting their interests in connection with the J.C.E.S.D. sewer rehabilitation construction program in violation of [18 U.S.C. § 666(a)(2)].
> . . . .
> Title 18 of the United States Code section 666(a)(2) makes it a federal crime or offense for any person to corruptly give, offer, or agree to give anything of value to any person with the intent to influence or reward an agent of a local government or local governmental agency receiving significant benefits under a federal assistance program, in connection with any business, transaction or series of transactions of such local government or government agency involving anything of value of $5,000 or more.
> . . . .
> An act is done corruptly if it is performed voluntarily, deliberately, and dishonestly for the purpose of either accomplishing an unlawful end or result or of accomplishing some otherwise lawful result by any unlawful method or means.

[51]"In considering the failure of a district court to give a requested instruction, the omission is error only if the requested instruction is correct, not adequately covered by the charge given, and involves a point so important that failure to give the instruction seriously impaired the party's ability to present an effective case." Svete, 556 F.3d at 1161 (quotation marks omitted). The district court's refusal to give a requested instruction is reviewed for abuse of discretion. Id.

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abuse their discretion in refusing them. See US Infrastructure, 576 F.3d at 1213 (determining omission of a specific *quid pro quo* requirement in § 666 jury instruction was not plain error); Paradies, 98 F.3d at 1289 (same).

In the *McNair* trial, all defendant-appellants also requested that the jury be instructed that if a thing of value was given out of friendship or merely to foster goodwill and not to corruptly influence or reward, then a not-guilty verdict is required. After that request, the district court in the *McNair* trial supplemented the pattern instructions with this:

> Section 666 . . . does not prohibit all gifts by or to a public official, does not prohibit all receipts -- does not prohibit receipt of all gifts by or to a public official, but only gifts received with the corrupt intent to be influenced or rewarded by that governmental official in connection with a business or transaction or series of transactions of that governmental entity involving $5,000 or more.[[52]]

After the defendant-appellants insisted the district court specifically identify friendship and goodwill gifts as legal gratuities, the court responded "if it's corrupt and dishonest, it's not for good will, is it?" The district court explained that giving defendant-appellants' instruction would "carr[y] with it some sort of suggestion

[52]In the *Swann*, *Barber*, and *Wilson* trials, PUGH also requested the same jury charge. The Rast and Pugh defendants either requested this jury instruction or adopted PUGH's request, in the *Swann* trial. And in the *Swann*, *Barber*, and *Wilson* trials, the district court gave similar supplemental jury charges expressly advising the jury that § 666 does not prohibit all gifts to a public official, but only those gifts with the corrupt intent to influence or reward specified government officials in connection with the business or transaction or series of transactions of that governmental entity.

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that I'm adopting that idea that that's what these payments were." This exchange then took place:

THE COURT:	What if it's good will and corrupt?
[ROLAND PUGH'S COUNSEL]:	It can't be.
THE COURT:	Okay. That's your answer.

A finding that a gift was made or accepted with corrupt intent necessarily excludes friendship and goodwill gifts. There is no reversible error in the court's charge in this regard.[53]

VII. SUFFICIENCY OF THE EVIDENCE

A. Conspiracy and Corrupt Intent

All defendant-appellants challenge the sufficiency of the evidence to support their convictions on various counts.[54] Defendants' primary arguments are the government failed to prove a conspiracy among the defendants (as to Counts 1, 51,

[53]We also find no merit to defendant-appellants' claims on appeal as to any other proposed jury instructions because they were either incorrect, too argumentative or flawed in some way, not necessary, or already adequately covered by the court's charge as a whole. In particular, we conclude the court's charge adequately covered defendants' theory of defense that the payments were gifts made out of friendship or to foster good will and adequately charged the jury on the honest services mail fraud counts (90-100) as discussed later.

[54]"This Circuit reviews the sufficiency of the evidence de novo, examining the evidence in the light most favorable to the government and resolving all reasonable inferences and credibility issues in favor of the guilty verdicts." US Infrastructure, 576 F.3d at 1203. We "will not overturn a conviction on the grounds of insufficient evidence unless no rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." United States v. Wright, 392 F.3d 1269, 1273 (11th Cir. 2004) (quotation marks omitted).

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75, and 78) or any corrupt intent as to all the bribery counts.[55]

To sustain the conspiracy convictions, the government must prove (1) "the existence of an agreement to achieve an unlawful objective, here, giving things of value" to County employees with the corrupt intent to influence or reward them; (2) "the defendant[s'] knowing and voluntary participation in the conspiracy;" and (3) "an overt act in furtherance of the conspiracy." US Infrastructure, 576 F.3d at 1203; see also United States v. Jennings, 599 F.3d 1241, 1250-51 (11th Cir. 2010). Defendants argue the government failed to present any evidence of an agreement among them.

The problem for defendants is direct evidence of an agreement is unnecessary; the existence of the agreement and a defendant's participation in the conspiracy may be proven entirely from circumstantial evidence. Id.; United States v. Massey, 89 F.3d 1433, 1439 (11th Cir. 1996). "A defendant may be found guilty of conspiracy if the evidence demonstrates he knew the 'essential objective' of the conspiracy, even if he did not know all its details or played only a

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[55]Defendants PUGH, Roland Pugh, Yessick, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty were convicted on Count 1 for participating in a conspiracy to bribe defendant McNair. Defendants PUGH, Yessick, RAST, Bobby Rast, FWDE, and Dougherty were convicted on Count 51 of participating in a conspiracy to bribe defendant Swann. Defendants PUGH and Wilson were convicted on Count 75 of participating in a conspiracy (between PUGH, Grady Pugh, and Wilson) to bribe Wilson. Defendant PUGH was convicted on Count 78 of participating in a conspiracy (between PUGH, Roland Pugh, Barber, and Yessick) to bribe Barber.

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minor role in the overall scheme." United States v. Guerra, 293 F.3d 1279, 1285 (11th Cir. 2002). The government need not show "each defendant had direct contact with each of the other alleged co-conspirators." Id. "It is not necessary for the government to prove that a defendant knew every detail or that he participated in every stage of the conspiracy." United States v. Jones, 913 F.2d 1552, 1557 (11th Cir. 1990). "For a wheel conspiracy to exist those people who form the wheel's spokes must have been aware of each other and must do something in furtherance of some single, illegal enterprise." United States v. Fernandez, 892 F.2d 976, 986 (11th Cir. 1989) (quotation marks omitted). "[A] common purpose or plan may be inferred from a development and collocation of circumstances." US Infrastructure, 576 F.3d at 1205 (quotation marks omitted).

Extensive witness and documentary evidence firmly established that the things of value described in the conviction counts were given by the contractor-defendants and accepted by McNair, Swann, Barber, Wilson, and other County employees. The defendants in the *McNair* and *Swann* trials mainly dispute whether the government proved they acted (1) with corrupt intent (versus for friendship), and (2) in agreement (versus independently). The government presented more than sufficient evidence of both corrupt intent and a conspiracy agreement.

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First, ample evidence showed that the contractor-defendants worked together on McNair's studio and Swann's home and that they did so with a common purpose of providing sizable benefits to influence McNair and Swann in the billion-dollar sewer rehabilitation program. There was no evidence of gifts to these "friends" before the sewer projects began. Instead, the gifts to McNair and Swann and other County employees were made during the same time period of the sewer projects. The large sums — both in bribes and sewer payments — indicate a common scheme of all defendant-appellants to receive County sewer money through illegal means. The jury was free to disbelieve the defendants' claims of gifts for friendship and to find corrupt intent to influence McNair and Swann in connection with the County's massive sewer payments to the contractor-defendants. The juries could readily believe the gifts worth hundreds of thousands of dollars to McNair and Swann after the sewer work began were actually bribes intended to make sure the contractors profited excessively from the work. In fact, the evidence recounted above showed pervasive and entrenched corruption.

Second, the evidence of how the contractor-defendants divided up and coordinated their work on the same personal projects for McNair (his studio) and Swann (his home) during the same time frame is strong evidence of a conspiracy. For example, FWDE's Bailey supervised the construction of McNair's studio

while PUGH and RAST provided labor and materials. RAST furnished the labor to build the deck, and PUGH furnished the materials. RAST excavated for the footings, and PUGH ordered the concrete and poured concrete walls. FWDE paid Mosley Construction for the wood framing initially, and then RAST began paying Mosley. FWDE ordered the aluminum handrails, PUGH paid for them, and RAST installed them. The same pattern of dividing up the work was followed for the Swann home. For example, an FWDE employee supervised the work at Swann's home. PUGH's Yessick hired a company to install a koi pond for Swann, and PUGH listed Danny Rast as a point of contact.[56]

Third, the extent to which the parties went to conceal their bribes is powerful evidence of their corrupt intent. For example, evidence in the *McNair* trial showed FWDE employed Bailey as a full-time construction superintendent for the McNair studio renovation and reported Bailey's time as purportedly performed on a JCESD sewer project. FWDE concealed a $50,000 payment Dougherty made to subcontractor George Word Construction for building McNair's Arkansas retirement home.[57] FWDE has no record of the transaction at all. The only

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[56]In addition, after McNair's retirement, PUGH, FWDE, and Bobby Rast each gave McNair a check for the same amount — $5,000 — all within a two-day period.

[57]Earlier, PUGH had paid Word $44,192.75 in the first half of October 2001, and, per Yessick's instruction, internally charged the expense to miscellaneous jobs/construction materials. McNair told George Word that FWDE would make the next payment.

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existing record of this transaction was made by a bookkeeper, who copied the invoice and check and kept them at home because of his suspicions. FWDE also supplied a construction superintendent, Hendon, for Swann's home remodel. For nearly two years, Hendon was on FWDE's payroll but actually spent half of every workday at Swann's home. FWDE's Stanger replaced Hendon for an additional nine months. Dougherty was aware of this work at Swann's home. FWDE paid a subcontractor over $28,000 — with checks signed by Dougherty — to frame the addition to Swann's home.

Likewise, RAST paid nearly $77,000 for materials and subcontractors for McNair's studio. RAST also supplied significant amounts of labor for McNair's studio, including excavating for the footings and constructing its deck and metal steps. RAST hid these expenses by coding them to JCESD projects.

After a newspaper article revealed RAST's work on Swann's home, Bobby Rast told his bookkeeper that they "didn't need any document invoices in the files with Jack Swann's or Chris McNair's shipping address on them," causing her to discard these invoices. Before the article, RAST had treated its payments to McNair and Swann as business expenses, deducting them on its tax returns. After the article, RAST amended several years' returns to eliminate more than $140,000

of those deductions.[58]

Similarly, RAST crews performed demolition work and poured concrete for the basement, walls, stairs, and elevator pit at Swann's home. RAST also spent more than $28,000 purchasing concrete and bricks and paying subcontractors to repair the plumbing, paint Swann's home, and install hardwood floors and stairs. As with McNair, RAST concealed its work for Swann, in particular avoiding the use of Swann's name on invoices, delivery tickets, and accounting reports, and coding the work and expenses either to miscellaneous or JCESD projects.

PUGH also concealed its work on McNair's studio. For example, when Besco delivered steel to McNair's studio, Besco's delivery tickets identified PUGH and Yessick as its customer and indicated that some of the steel was for the Valley Creek Treatment Plant, a JCESD sewer job on which PUGH was the contractor and FWDE the consulting engineer.

Defendants claim they could not have intended to corruptly influence McNair because his authority was purely "ministerial," since he only ratified what JCESD officials below him (such as Swann) had already approved. Given

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[58]Sufficient evidence also supports the Rast defendants' convictions for bribing Chandler and Ellis. First, Chandler asked Bobby Rast for money to attend technical conferences that Ellis was also planning to attend. Instead of giving Chandler a check for $250-$500 as Chandler expected, Bobby Rast gave Chandler an envelope containing $5,000 cash and told Chandler to split it with Ellis.

McNair's ultimate authority and responsibility, a jury could infer McNair became a "rubber-stamp" for the defendants' pay requests, field directives, and contract modifications that crossed his desk because of the large sums in goods and services he received from the contractor-defendants. And because he was responsible for placing sewer items on the County Commission's weekly agenda, McNair controlled every sewer matter requiring Commission approval.[59]

B. PUGH's Challenges to Counts 75 and 78

PUGH challenges the sufficiency of the evidence as to its bribery conspiracy convictions on Count 75 (the Wilson scholarship) and Count 78 (land and vacations for Barber). However, ample evidence supports both convictions.

The evidence established that when Grady Pugh gave Wilson's son the scholarship, he expected Wilson to return the favor. Grady Pugh testified that when he provided the Wilson scholarship, he "felt like if [Wilson] got a chance to

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[59]Defendants also contend the government failed to prove any specific payment (or work on McNair's studio or Swann's home) was given or done in exchange for a specific official act by McNair or Swann. Because a specific *quid pro quo* is not an element of a § 666(a)(1)(B) or (a)(2) crime, there was necessarily no failure of proof as to that element.

Alternatively, even assuming these § 666 crimes require, as the Second Circuit concluded in Ganim, that the government prove payments or such work were given or done in return for a promise of as yet unidentified future conduct favorable to the contractor-defendants in their County sewer projects, the evidence overwhelmingly established such facts and thus any error in the jury charge was harmless. And even under the Fourth Circuit's approach in Jennings, which requires a "course of conduct of favors and gifts flowing to a public official *in exchange for* a pattern of official actions favorable to the donor," the evidence here was sufficient, and thus any jury charge error was harmless. Jennings, 160 F.3d at 1014.

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help us and return the favor, he would." Only three days after Wilson faxed Grady Pugh information as to where PUGH should send the scholarship check — and the day before Grady Pugh sent it — Wilson approved PUGH's request for a time extension that had been sitting on Wilson's desk for four weeks. When PUGH submitted its extension request, PUGH was already exposed to liability of $76,000 in liquidated damages. The amount of exposure exceeded $100,000 by the time Wilson actually granted PUGH's request.

The evidence also supports the verdict that PUGH and Yessick conspired to bribe Barber. Barber oversaw all of the JCESD inspectors and awarded the no-bid emergency work contracts. In 1997, 1998, 1999, and 2001, PUGH paid for Barber's vacations, but hid the payments in the company's books. PUGH readily agreed to Barber's June 2000 request to buy him a lot for a retirement home. PUGH's Yessick contracted for the lot in Roland Pugh's name but charged $45,000 to the Paradise Lake project to pay for it. Then, just before the closing, PUGH instead gave Barber a cashier's check to buy the lot in his own name. The remitter's name was left blank on that check. Yessick was told to retrieve all evidence that PUGH was ever involved. This required the realtor to fabricate a fictitious house sale to refund the original $1,000 deposit.

Moreover, just months before Barber solicited PUGH for the purchase of the

lot, Barber designated the Paradise Lake project as an emergency. Because the cost of the project — $827,417.75 — greatly exceeded Barber's $50,000 emergency work approval limit, and because there was no Paradise Lake contract on which to grant a field directive, the work was performed as a field directive on the unrelated multimillion dollar Cahaba River project. PUGH netted a profit of more than $400,000.

PUGH argues the Wilson scholarship and Barber land transaction are not bribery conspiracies, but merely "buyer-seller" transactions. PUGH relies primarily on two drug cases, United States v. Mercer, 165 F.3d 1331, 1335 (11th Cir. 1999) (cash for drugs), and United States v. Dekle, 165 F.3d 826, 830-31 (11th Cir. 1999) (sex for drugs), for the proposition that there is no conspiracy where there is merely a "buy-sell transaction" without an "agreement to join together to accomplish a criminal objective beyond that already being accomplished by the transaction." Mercer, 165 F.3d at 1335 (quotation marks omitted). PUGH argues that there was nothing agreed upon with Wilson or Barber outside of the one gift or one buy-sell transaction. The drug cases of Mercer and Dekle are materially different from § 666 bribery conspiracy cases. In a drug deal, once the sale is complete, there is no further criminal objective. In § 666 cases, once the gift is made, the defendant typically intends to corruptly influence the County employee's

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future actions. See United States v. Tilton, 610 F.2d 302, 307 (5th Cir. 1980)[60] (bribee conspired with briber in part because of common goal of increasing their personal wealth). In § 666 cases, the defendants share both an anticipation of future action and a common goal of increasing their wealth illegally.[61]

C. Swann and PUGH's Challenges to Counts 90-100

In the *Swann* trial, Swann, PUGH, and Yessick were convicted of eleven counts (90-100) of honest services mail fraud under §§ 1341 and 1346. The convictions involve Swann's receiving landscaping services worth $140,000 from PUGH and Yessick. On appeal, Swann and PUGH claim the evidence was insufficient to support their convictions.[62]

To establish a violation of § 1341, the government must show the defendant "(1) intentionally participates in a scheme or artifice to defraud another of money or property, and (2) uses or 'causes' the use of the mails . . . for the purpose of executing the scheme or artifice." United States v. Ward, 486 F.3d 1212, 1222

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[60]This Court adopted as binding precedent all Fifth Circuit decisions prior to October 1, 1981. Bonner v. City of Prichard, 661 F.2d 1206, 1209 (11th Cir. 1981) (en banc).

[61]To the extent defendant-appellants make sufficiency of the evidence arguments as to any other § 666 conviction counts, we reject them as without merit.

[62]Yessick does not appeal. On appeal, Swann and PUGH do not challenge the constitutionality of the honest services statute. Instead, Swann raises two claims: (1) insufficient evidence to sustain his §§ 1341, 1346 convictions, and (2) the district court erred by refusing to give a "good faith" instruction to the jury. PUGH adopted Swann's claim of insufficient evidence.

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(11th Cir. 2007).[63]

Section 1346 adds "honest services" language to the § 1341 offense, providing that "the term 'scheme or artifice to defraud' includes a scheme or artifice to deprive another of the intangible right of honest services." 18 U.S.C. § 1346. "To prove 'honest services' mail fraud, the Government must show that the accused intentionally participated in a scheme or artifice to deprive the persons or entity to which the defendant owed a fiduciary duty of the intangible right of honest services, and used the United States mails to carry out that scheme or artifice." United States v. Browne, 505 F.3d 1229, 1265 (11th Cir. 2007). When a public official "secretly makes his decision based on his own personal interests — as when an official accepts a bribe or personally benefits from an undisclosed conflict of interest — the official has defrauded the public of his honest services." United States v. Lopez-Lukis, 102 F.3d 1164, 1169 (11th Cir. 1997).

Here, Swann received approximately $100,000 in landscaping and lawn

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[63] Section 1341 provides in pertinent part:

> Whoever, having devised or intending to devise any scheme or artifice to defraud, . . . places in any post office or authorized depository for mail matter, any matter or thing whatever to be sent or delivered by the Postal Service, or deposits or causes to be deposited any matter or thing whatever to be sent or delivered by any private or commercial interstate carrier, or takes or receives therefrom, any such matter or thing, or knowingly causes to be delivered by mail or such carrier according to the direction thereon, or at the place at which it is directed to be delivered by the person to whom it is addressed, any such matter or thing, shall be fined under this title or imprisoned not more than 20 years, or both.

18 U.S.C. § 1341.

maintenance from a company (PUGH) that he had the power to favor in the sewer rehabilitation program. In the summer of 2000, after Swann told PUGH's Yessick he had overspent in remodeling his house, Yessick hired Guthrie Landscaping to landscape Swann's two properties. By December 2001, PUGH had paid Guthrie more than $93,000, including $1,200 per month in 2001 for lawn maintenance. In January 2002, Yessick asked Guthrie to stop submitting invoices to PUGH and instead advanced Guthrie $47,000 for three years of landscaping and maintenance. PUGH paid a total of approximately $140,000 to Guthrie for landscaping work for the Swanns.[64]

Although Swann contends there was "no bribe" and none of this was "done in secrecy," the evidence shows PUGH and Swann took steps to conceal any record of the services provided to Swann. Guthrie mailed its invoices to PUGH and, at Yessick's request, identified the work by job number only. Yessick directed PUGH's controller to charge the expense to the Metro Park Roadway, a County job. Guthrie's invoices were never found in PUGH's files.

After Swann and Yessick learned of the investigation, Guthrie was abruptly asked to stop working at Swann's home, even though there was a balance

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[64]In addition to the substantive bribery counts against Swann (Count 52) and PUGH (Count 61) for these landscaping services, both defendants were convicted of separate counts (Counts 90-100) of honest services mail fraud for payments PUGH made by mail to Guthrie.

remaining on its $47,000 advance. In August and September 2002, approximately two years after hiring Guthrie, Yessick directed his assistant to create invoices to Swann's mother and mother-in-law for landscaping, tree removal, and "remodeling work." The Swanns then took out home equity loans in the names of their mothers, and wrote two checks to PUGH totaling approximately $59,000 on joint accounts they held with their mothers. Yessick gave these checks directly to PUGH's controller, telling her they were partial payment for $105,000 in landscaping work PUGH had done, which work he had previously directed her to record as "miscellaneous AR." Yessick told the controller to credit the $59,000 in checks to PUGH as "miscellaneous income" and "to write off" the approximately $46,000 that remained.

Swann contends that PUGH merely located the landscaping contractor and that he always intended to reimburse PUGH for payments to Guthrie. However, PUGH and Swann concealed the landscaping arrangement. The concealment itself is strong evidence that Swann accepted these services not as a loan, but as a bribe. See United States v. Hunt, 521 F.3d 636, 646-47 (6th Cir. 2008), cert. denied, 129 S. Ct. 2157 (2009); United States v. Dial, 757 F.2d 163, 170 (7th Cir. 1985).

Swann also claims he was unable to, and did not, assist PUGH in any way. Yet, five days after PUGH's President Yessick hired Guthrie to landscape Swann's

two properties, Swann granted a 180-day extension for PUGH's joint venture on the Vestavia Trunk project. That extension saved PUGH's joint venture $180,000 in potential liquidated damages. Two months earlier, Swann had denied a 120-day extension request on the same project, noting that timely completion of the project was "a requirement of the specifications." And in 2000, Swann approved a $827,417.75 field directive for PUGH's Paradise Lake project and caused it to be charged to the unrelated Cahaba River project. As noted earlier, Barber had designated the project as an emergency, and then Swann later approved this field directive.

The evidence fully supports the jury's guilty verdict on Counts 90-100 as to Swann and PUGH.[65]

D. Roland Pugh's Arguments

Roland Pugh challenges the sufficiency of the evidence to support his conviction for conspiracy to commit bribery of McNair (Count 1). Roland Pugh

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[65]Swann also claims the district court erred by refusing his proposed jury instruction that good faith is a complete defense to mail fraud. The district court instructed the jury that to convict, it must find beyond a reasonable doubt that defendants "knowingly devised or participated in a scheme to fraudulently deprive the public of an intangible right of honest services" and did so willfully with intent to defraud. The court defined "intent to defraud" as "to act knowingly and with the specific intent to deceive someone." Because a finding of specific intent to defraud necessarily excludes a finding of good faith, Swann's requested instruction was "substantially covered by other instructions that were delivered," and Swann has shown no error in the refusal to give his requested good faith charge. United States v. Opdahl, 930 F.2d 1530, 1533 (11th Cir. 1991) (quotation marks omitted).

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also argues the government failed to prove a "wheel" or "hub and spoke" conspiracy because there was no evidence he knew the Rast and Dougherty defendants (the other "spokes") were bribing McNair (the "hub").

This ignores the fact that Roland Pugh directed Grady Pugh to fly McNair's daughter and FWDE's superintendent Bill Bailey (who was overseeing construction at McNair's studio) on the PUGH company airplane to Georgia to pick out carpet for McNair's studio. Before take-off, Roland Pugh told Grady Pugh that "McNair has called now and says that he's broke and he doesn't have enough money to leave for the deposit on the carpet. So, if you would, write a check for the deposit." Grady Pugh paid the deposit with a $4,820 PUGH check and had it treated on the company's books as an expense on the "last rehab contract."[66]

Roland Pugh also gave McNair money in connection with the project to develop McNair's studio. When the project began, Roland Pugh told PUGH's other three owners, Grady Pugh, Andy Pugh, and Yessick, that they had to give money to McNair because he was building a studio and, as ten percent owners, they had to "kick in" their ten percent. Grady Pugh gave approximately $1,500 in

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[66]Grady Pugh's testimony in this regard was corroborated by Bill Bailey's testimony.

cash to Roland Pugh's secretary that time to give to McNair.[67]

On another occasion, Roland Pugh collected money from the three other PUGH owners to give to McNair for his studio. On July 18 and 19, 2000, three of them wrote checks to cash in proportion to their ownership interests. (Roland Pugh: $7,000, Andy Pugh: $1,000, Yessick: $1,000). Roland Pugh gave Grady Pugh an envelope of money and asked him to give it to McNair. Grady Pugh took it to McNair's studio where he saw FWDE's Bailey and told Bailey he (Grady Pugh) was there to help McNair, and that it was "financial help" that McNair needed at that time. Grady Pugh then visited with McNair for a few minutes and set the envelope down between the seats of the van they were in as McNair watched. After McNair retired, Roland Pugh complained to Grady Pugh about McNair's demand for help building a retirement home, saying that "surely this is the last time we'll have to do anything for him since he's out of office."[68]

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[67]We reject Roland Pugh's claim that his conspiracy conviction falls outside of the statute of limitations because no member of the "Pugh spoke" committed an overt act after August 26, 2000. The Rast and Dougherty defendants took actions in furtherance of the conspiracy well within the statute of limitations. "[A]n individual conspirator need not participate in the overt act in furtherance of the conspiracy. Once a conspiracy is established, and an individual is linked to that conspiracy, an overt act committed by any conspirator is sufficient." United States v. Thomas, 8 F.3d 1552, 1560 n.21 (11th Cir. 1993). Because Roland Pugh had joined the conspiracy to bribe McNair and because that conspiracy continued into the statute of limitations period, Roland Pugh's conviction stands even if he took no actions within that period. The district court properly instructed the jury that it could convict Roland Pugh if any co-conspirator committed an act after August 26, 2000.

[68]Roland Pugh cites the drug case of United States v. Mercer, 165 F.3d at 1335-36, for the proposition that there is no conspiracy where there is merely a "buy-sell transaction." As

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Later, after McNair asked Roland Pugh to pay for the studio's $40,000 air conditioning system, Roland Pugh gathered funds by writing checks to his daughters-in-law and to cash. Once again, Grady Pugh delivered an envelope of cash to McNair, this time at his house.

As a result, there was sufficient evidence for the jury to convict Roland Pugh and to find that he was aware of at least some of the other co-conspirators, such as FWDE and FWDE's Bailey, given that they were working on separate parts of a larger project. Accordingly, we reject Roland Pugh's sufficiency of the evidence challenge to his conviction on Count 1.

The cases Roland Pugh relies on are inapposite. In United States v. Chandler, 388 F.3d 796, 807-08 (11th Cir. 2004), the "hub" of the conspiracy ensured "there was no connection whatsoever between the various spokes," and the spokes "knew nothing about each other." The evidence here shows that Roland Pugh was aware not only of PUGH, Yessick, and Grady Pugh's involvement in the McNair project, but also that of the Dougherty and Rast defendants' involvement. For the same reason, United States v. Glinton, 154 F.3d 1245 (11th Cir. 1998), is not on point. Id. at 1251 n.5 (concluding "hub and spoke" conspiracy must have

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explained earlier, Mercer is materially different from § 666 bribery conspiracy cases. In any event, Roland Pugh's argument lacks merit as to Count 1 because there is ample evidence that persons other than Roland Pugh and McNair were involved in the transactions in the bribery conspiracy.

"some interaction between those conspirators who form the spokes of the wheel as to at least one common illegal object") (quotation marks omitted).

E. McNair's Arguments Regarding Dawson

The evidence at the *McNair* trial showed McNair's conviction for accepting a bribe from Dawson is adequately supported. Dawson's firm received millions of dollars in no-bid engineering contracts from McNair, and the vast majority of Dawson's work was on JCESD contracts. McNair solicited the studio's $16,400 audio-video system from Dawson. Dawson "was uncomfortable with the whole situation" and would not have agreed if McNair was not part of the sewer rehabilitation process, so he had the store conceal the delivery address on the invoice.

VIII. 404(B) EVIDENCE

All defendant-appellants challenge the admission of other bad acts evidence under Federal Rule of Evidence 404(b).[69] Specifically, they contend the district courts erred by admitting, for example, Swann-bribe evidence in the *McNair* trial and McNair-bribe evidence in the *Swann* trial.

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[69]A district court's evidentiary rulings under Federal Rule of Evidence 404(b) are reviewed only for "a clear abuse of discretion." US Infrastructure, 576 F.3d at 1208. "[T]his Court 'will not hold that the district court abused its discretion where it reached the correct result even if it did so for the wrong reason.'" Id. (quoting United States v. Samaniego, 345 F.3d 1280, 1283 (11th Cir. 2003)).

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Federal Rule of Evidence 404(b) provides:

> Evidence of other crimes, wrongs, or acts is not admissible to prove the character of a person in order to show action in conformity therewith. It may, however, be admissible for other purposes, such as proof of motive, opportunity, intent, preparation, plan, knowledge, identity, or absence of mistake or accident . . . .

Fed. R. Evid. 404(b). This Court uses a three-part test to determine whether other bad acts are admissible under Rule 404(b):

> First, the evidence must be relevant to an issue other than the defendant's character; Second, the act must be established by sufficient proof to permit a jury finding that the defendant committed the extrinsic act; Third, the probative value of the evidence must not be substantially outweighed by its undue prejudice . . . .

United States v. Matthews, 431 F.3d 1296, 1310-11 (11th Cir. 2005) (quotation marks omitted). "[I]n every conspiracy case, a not guilty plea renders the defendant's intent a material issue. Evidence of such extrinsic evidence as may be probative of a defendant's state of mind is admissible unless the defendant affirmatively takes the issue of intent out of the case." Id. at 1311 (alterations and internal quotation marks omitted).

Moreover, Rule 404(b) does not exclude evidence that is "inextricably intertwined" with evidence of the charged offense. United States v. Wright, 392 F.3d 1269, 1276 (11th Cir. 2004); United States v. Aleman, 592 F.2d 881, 885 (5th Cir. 1979). Rule 404(b) does not exclude evidence that is "linked in time and

circumstances with the charged crime" or that "forms an integral and natural part of an account of the crime to complete the story of the crime for the jury." Wright, 392 F.3d at 1276 (quotations omitted); United States v. Edouard, 485 F.3d 1324, 1344 (11th Cir. 2007).

We conclude the contested evidence was admissible for three reasons. First, the evidence was inextricably intertwined with evidence of the charged bribery offenses. Second, even if not inextricably intertwined, this evidence was relevant to show corrupt intent and admissible under 404(b). Defendant-appellants expressly argued they lacked corrupt intent and gave gifts to McNair and Swann out of friendship and good will.[70] Evidence that the contractor-defendants gave things of value to Swann in McNair's trial and to McNair in Swann's trial was highly probative of the contractor-defendants' intent. See Edouard, 485 F.3d at 1345 (concluding extrinsic evidence is relevant "where the state of mind required for the charged and extrinsic offenses is the same"). Moreover, evidence of similar conduct that occurs during the same time period has "heightened" probative value. Jones, 913 F.2d at 1566. Indeed, the district court judge, in the *McNair* trial, explained in a pre-trial order:

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[70]Roland Pugh does not stress lack of corrupt intent because he claims he was not involved at all in any gift. Other than Roland Pugh, defendants do not argue things of value were not given by them to County officials, but they claim they were gifts, not bribes.

> While the jury might conceivably find that the defendant felt such a strong sense of friendship with McNair that they would give him substantial gifts or make him substantial loans, the fact that they gave alleged "gifts" or made "loans" to others involved with the same or similar projects would certainly be relevant to the issues of "motive" and "intent." It could also bear on "plan" . . . [and i]f the projects are the same or similar, they may well be a part of the same "series of transactions." . . . [W]hat might arguably be a "gift" to one person becomes less likely a gift if the "gifts" are widespread to others involved with the same or similar projects.[[71]]

Similarly in the *Swann* trial, another district court judge found that this sort of evidence of intent is "exactly what 404(b) testimony is here for."

Third, the evidence was admissible under 404(b) to show the contractor-defendants' common plan and motive. Specifically, the evidence showed a common plan of bribing County officials controlling the sewer projects by providing them with work on their personal homes or businesses and working together to do so during the same time frame of the sewer projects. For example, in the *McNair* trial, evidence showed — just as FWDE's Bailey was supervising, and RAST and PUGH were providing labor and materials for the McNair studio expansion — FWDE's Stanger was supervising and using a RAST credit card to purchase materials for Swann's separate home renovation. Similarly, in the *Swann* trial, the evidence showed that RAST sent Luke Cobb to pour a concrete

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[71]The *McNair* judge stated in a subsequent order, "[t]he offenses were similar and temporally close. The 404(b) evidence was clearly appropriate to meet the government's requirement to prove intent."

foundation for McNair's studio, just as he had done for the expansion of Swann's home, and that PUGH had provided Chandler with landscaping, just as it did for Swann. Indeed, the evidence recounted at length above gives repeated examples of how the 404(b) evidence was relevant to show both corrupt intent and a common plan and motive.

Furthermore, the district courts in both the *McNair* and *Swann* trials gave limiting instructions for the 404(b) evidence several times during the trials. See United States v. Diaz-Lizaraza, 981 F.2d 1216, 1225 (11th Cir. 1993) (concluding prejudice could be mitigated by giving a cautionary instruction on the limited use of such evidence). In the *McNair* trial, for example, after testimony of Dougherty's contributions to Swann's remodeling, the court instructed in part:

> This evidence is being allowed for the limited purpose, with respect to Mr. Dougherty, as to what Mr. Dougherty's intent may have been at the time that he may have made payments, or contributions, or gifts, to Mr. McNair. Not that Mr. McNair is charged with receiving anything in connection with Mr. Swann's house.
>
> But the evidence is allowed for the purpose of your considering that if Mr. Dougherty was making some sort of payments, or contributions, or gifts, on behalf of Mr. McNair; and if he was also making some sort of gifts, or payments, or contributions on behalf of Mr. Swann, you can consider that combination with regard to your determination, which will be a necessary determination for you to make, as to what Mr. Dougherty and his company's intent was, and the nature of that intent, whether it be corrupt or otherwise, at the time he made gifts, or contributions, or payments, on behalf of Mr. McNair.

In the *Swann* trial, the court gave similar limiting instructions several times.[72]

And the jury acquitted some defendants on some counts while convicting them on others. This further demonstrates the jury was not confused and could segregate the 404(b) evidence from other evidence. United States v. Prosperi, 201 F.3d 1335, 1346 (11th Cir. 2000) ("A discriminating acquittal also can signal that the jury was able to sift through the evidence properly."); United States v. Coy, 19 F.3d 629, 635 (11th Cir. 1994) (concluding that a split verdict demonstrates "absence of confusion" for 404(b) purposes).[73]

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[72]In the *Barber* and *Wilson* trials, the district courts admitted 404(b) evidence but gave similar limiting instructions several times.

For the first time on appeal, Swann contends that the limiting instructions were not specific enough because they did not always identify by name the defendant against whom the 404(b) evidence was not being offered. We review this issue for plain error. See infra section XII.D. Where, as here, the district court's instructions accurately reflect the law, this Court gives "wide discretion as to the style and wording employed . . . ." United States v. Starke, 62 F.3d 1374, 1380 (11th Cir. 1995). Moreover, at several times during trial, the district court specifically offered to name defendants against whom the evidence was not offered, and appellants — including Swann — declined:

COURT: I have asked y'all that every single time we have given a limiting instruction if you want me to use specific names and I have been told no up to this point. . . . I want you to know I am willing to sit here and tell you the names. I think it would be appropriate, but you are asking me not to; is that right?

[SWANN'S COUNSEL]: Yes, sir.

Swann has not shown reversible error, plain or otherwise, in any of the jury instructions.

[73]For example, in the *Swann* trial, the jury convicted Swann of bribery conspiracy, 6 substantive bribery counts, and 11 fraud counts, but acquitted him of one bribery count and 17 fraud counts. In the *McNair* trial, the jury convicted and acquitted different defendants on the same charges. In *McNair*, the jury convicted McNair on Counts 1-3 and 5-12 but acquitted him on Count 4. In both the *McNair* and *Swann* trials, the jury convicted Bobby Rast but acquitted Danny Rast on some of the same counts. In the *Barber* trial, the jury convicted PUGH but

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Defendant-appellants' claim that the 404(b) evidence should have been excluded under Rule 403 lacks merit too. Under Federal Rule of Evidence 403, evidence must be excluded if its probative value "is substantially outweighed by the danger of unfair prejudice." Wright, 392 F.3d at 1276. "Rule 403 is an extraordinary remedy that must be used sparingly because it results in the exclusion of concededly probative evidence." US Infrastructure, 576 F.3d at 1211. This Court in US Infrastructure rejected defendant USI's argument that certain 404(b) evidence of a non-party's bribes of McNair was inadmissible on Rule 403 undue prejudice grounds, stating "in cases where this Court has found other acts evidence inextricably intertwined with the crimes charged, the Court has refused to find that the evidence should nonetheless be excluded as unduly prejudicial . . . ." Id. "[T]he test under Rule 403 is whether the other acts evidence was 'dragged in by the heels' solely for prejudicial impact." Id. (quoting United States v. Veltmann, 6 F.3d 1483, 1500 (11th Cir. 1993)). Because the other acts evidence was inextricably intertwined with the charged crimes, it was not excludable under Rule 403. In any event, its probative value substantially

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acquitted Roland Pugh on the same counts.

Moreover, in the *Swann* and *Wilson* trials, the district court charged the jury to consider each defendant "separately and individually" and reminded them that "each defendant is on trial only for the specific offenses or offense charged against such defendant in the indictment." In the *McNair* and *Barber* trials, the district court gave the same instruction with slight variations. Such jury instructions substantially mitigate the risk of spillover prejudice. United States v. Cross, 928 F.2d 1030, 1039 (11th Cir. 1991).

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outweighed any undue prejudice.

Appellant McNair also points out that the government did not introduce any evidence that McNair knew about, condoned, arranged, or otherwise sanctioned any of the transactions constituting 404(b) bribe evidence against Swann. However, the Swann evidence was inextricably intertwined with the case against McNair because sewer rehabilitation decisions went through two or three stages of review in some situations, and thus the evidence showed the contractor-defendants were giving things of value to County employees at every level of the JCESD. For example, pay requests, contract modifications, and change orders were sometimes approved at the lower levels by the JCESD's assistant director and engineers or by private engineers (like FWDE and Dougherty), and then, when necessary, sent to Swann as the JCESD's director — and then passed on to McNair for approval or submission to the County Commission with McNair's recommendation. The bribery of other County employees shown in the *McNair* and *Swann* trials was an integral part of the overall bribery scheme because it showed a common plan and motive of the contractor-defendants and completed the story. The government amply showed linkage between contractor-defendants' bribes to McNair and those to Swann and other County employees and vice versa. While the *USI* trial considered in US Infrastructure involved 404(b) testimonial

evidence by electrical contractor Henson, which is not at issue in this appeal, this Court's analysis in US Infrastructure is apt here: "Henson's testimony was relevant to the chain of events surrounding the charged crimes, including context and setup . . . ." US Infrastructure, 576 F.3d at 1211.[74]

Finally, defendant-appellants point out that the two trials were severed and that "[s]everance under Rule 14 of the Federal Rules of Criminal Procedure is warranted only when a defendant demonstrates that a joint trial will result in 'specific and compelling prejudice' to his defense." Defendant-appellants argue that, because the district court severed the case, it "must have found that the jury would be unable to consider the evidence separately as it pertained to individual defendants."

This argument is unavailing. The district judge who severed these cases stated in a later telephone conference that, "perhaps some of [these cases] didn't even call for severance, but I leaned toward trying to avoid as much confusion as I

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[74]The district court also did not err in admitting evidence of cash deposits to McNair's studio's construction account. See United States v. Lattimore, 902 F.2d 902, 903 (11th Cir. 1990) (stating "[w]here the charged crime involves pecuniary gain and the Government presents other evidence of the defendant's guilt, evidence of the sudden acquisition of money by the defendant or his or her spouse is admissible, even if the Government does not trace the source of this new wealth."). This evidence was highly relevant to McNair's intent to accept goods and services bribes, especially since these cash deposits were to the McNair studio account and the goods and services bribes involved the same McNair studio. The cash deposits also were listed as overt acts in Count 50. The defendants also have not shown reversible error as to their claim of untimely notice under 404(b).

could." In the same teleconference, the district court ruled that 404(b) evidence of other bribes was relevant and that jury instructions would prevent improper use of that evidence. ("I'm going to assume that if I tell them three or four times, they'll understand it.") At the beginning of the *McNair* trial, the court stated the cases were severed because it would be "cumbersome to try" them together, but "[t]hat doesn't necessarily mean that evidentiarily, they're not related." During the *McNair* trial, the district court again rejected defendant-appellants' argument that severance of the counts meant that evidence related to the severed counts was irrelevant, stating:

> But that doesn't have anything to do with whether or not something is or is not relevant evidence to some other situation. That's like saying, they indicted them for a bank robbery thing but you can't show that they spent some of the cash over here in another deal or something.

Defendant-appellants cite no legal support for their argument that severance per se means other bribe evidence cannot be admitted. That the district court gave the defendants the benefit of trying McNair and the contractor-defendants in one trial, and then Swann and the contractor-defendants in a separate trial, does not mean all evidence about bribes to Swann could not be introduced in the *McNair* trial and vice versa.

IX. PROSECUTORIAL MISCONDUCT IN *MCNAIR* TRIAL

As to their convictions in the *McNair* trial, defendants PUGH and Roland

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Pugh argue that the prosecutor engaged in misconduct by (1) failing to correct Grady Pugh's false testimony, and (2) eliciting additional false testimony from Grady Pugh, thereby violating their due process rights.[75] Specifically, these defendants argue that at trial Grady Pugh falsely denied having previously said he delivered cash bribes to McNair before a May 24, 2000 trip to buy carpet and falsely testified that he delivered the money after that May 24, 2000 trip.

These cash bribes were part of Counts 13 and 14. During the *McNair* trial, the time line of these events was at issue because it determined whether Counts 13 and 14 were barred by the statute of limitations.[76] The jury acquitted PUGH and Roland Pugh on Counts 13 and 14.[77] While the acquittal moots the statute of limitations issue, the time line of the cash bribes remains relevant only as to Count 1 (bribery conspiracy) and only because those cash bribes were alleged as overt

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[75]PUGH's brief specifically adopts Roland Pugh's prosecutorial misconduct arguments, and Roland Pugh adopts all relevant portions of PUGH's brief as to all issues. McNair, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty adopt all arguments of all defendants as to all issues.

[76]The parties referenced the five-year limitations period for Counts 13 and 14 as from August 26, 2000 to August 26, 2005, the date the Second Supseding Indictment was submitted, which added Roland Pugh as a defendant. 18 U.S.C. § 3282. Count 13 charged PUGH and Yessick with giving McNair $20,000 in cash. Count 14 charged PUGH and Roland Pugh with giving McNair at least $10,000 in cash in January 2001. However, if the cash bribes occurred before the May 24, 2000 carpet purchase in Georgia, the defendants argued Counts 13 and 14 would be barred by the five-year statute of limitations.

[77]While PUGH was convicted on multiple counts, Roland Pugh was convicted on only Count 1, the bribery conspiracy count. Other than some documentary evidence, Grady Pugh was the only witness testifying against Roland Pugh as to Count 1.

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acts in furtherance of the overall conspiracy to bribe McNair, for which PUGH and Roland Pugh were convicted. On appeal PUGH and Roland Pugh argue Grady Pugh's false testimony about the time line goes to his credibility and that if the jury knew he was lying, this could have affected the guilty verdict on Count 1.[78]

To establish prosecutorial misconduct for the use of false testimony, a defendant must show the prosecutor knowingly used perjured testimony, or failed to correct what he subsequently learned was false testimony, and that the falsehood was material.[79] See United States v. Woodruff, 296 F.3d 1041, 1043 n.1 (11th Cir. 2002); United States v. Dickerson, 248 F.3d 1036, 1041 (11th Cir. 2001); United States v. Alzate, 47 F.3d 1103, 1110 (11th Cir. 1995); see also Napue v. Illinois, 360 U.S. 264, 270-71, 79 S. Ct. 1173, 1177-78 (1959). Perjury is defined as testimony "given with the willful intent to provide false testimony and not as a result of a mistake, confusion, or faulty memory." United States v. Ellisor, 522 F.3d 1255, 1277 n.34 (11th Cir. 2008).

"When a government lawyer elicits false testimony that goes to a witness's credibility, we will consider it sufficiently material to warrant a new trial only

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[78]For the conspiracy charged in Count 1, it did not matter whether the cash deliveries were within the statute of limitations because there was ample evidence of other overt acts within the five-year statute of limitations period. See United States v. Arias, 431 F.3d 1327, 1340 (11th Cir. 2005).

[79]We review a claim of prosecutorial misconduct de novo because it is a mixed question of law and fact. United States v. Duran, 596 F.3d 1283, 1299 (11th Cir. 2010).

when the estimate of the truthfulness and reliability of the given witness may well be determinative of guilt or innocence." United States v. Cole, 755 F.2d 748, 763 (11th Cir. 1985) (quotation marks and alteration omitted). In other words, "[t]he materiality element is satisfied if the false testimony could reasonably be taken to put the whole case in such a different light as to undermine confidence in the verdict." Dickerson, 248 F.3d at 1041 (quotation marks omitted). The false testimony is deemed material if there is a reasonable likelihood the false testimony could have affected the judgment of the jury. Alzate, 47 F.3d at 1110; United States v. Barham, 595 F.2d 231, 242 (5th Cir. 1979).

In addition, a prior statement that is merely inconsistent with a government witness's testimony is insufficient to establish prosecutorial misconduct. United States v. Michael, 17 F.3d 1383, 1385 (11th Cir. 1994) ("We refuse to impute knowledge of falsity to the prosecutor where a key government witness'[s] testimony is in conflict with another's statement or testimony."); Hays v. Alabama, 85 F.3d 1492, 1499 (11th Cir. 1996) (determining there was no due process violation where "there has been no showing that [the witness's] later, rather than earlier, testimony was false"); United States v. Gibbs, 662 F.2d 728, 730 (11th Cir. 1981) ("Though knowing prosecutorial use of false evidence or perjured testimony violates due process . . . it is not enough that the testimony . . . is inconsistent with

prior statements."); United States v. Brown, 634 F.2d 819, 827 (5th Cir. 1981) ("[D]ue process is not implicated by the prosecution's introduction or allowance of false or perjured testimony unless the prosecution actually knows or believes the testimony to be false or perjured; it is not enough that the testimony is challenged by another witness or is inconsistent with prior statements.").

A. Grady Pugh's Testimony About Cash Deliveries

The false testimony claim stems from notes the prosecutor made during Grady Pugh's two meetings with the prosecutor for plea negotiations on June 17 and 21, 2005. An FBI agent, counsel for Grady Pugh, and separate corporate counsel for PUGH were also present. The prosecutor's 2005 notes refer to Grady Pugh's two cash deliveries to McNair and his trip to Georgia where Grady purchased carpet for McNair on May 24, 2000 (for which Grady signed a PUGH company check bearing that date). The government disclosed the prosecutor's notes to defense counsel several months before trial.

At the *McNair* trial, Grady Pugh testified he delivered two envelopes of cash to McNair — the first at McNair's studio and the second at McNair's home at Christmas 2000 — both after he (Grady Pugh) took a flight to Georgia to purchase the carpet on May 24, 2000. In response, PUGH's counsel sought to impeach Grady Pugh using the prosecutor's 2005 notes, attempting to show the notes

reflected Grady Pugh gave both cash envelopes to McNair before Grady Pugh purchased the carpet on May 24, 2000. PUGH's counsel showed Grady Pugh the notes of the June 17, 2005 meeting indicating Grady delivered two cash envelopes to McNair:

[GRADY PUGH]:	It says in here that I delivered money to the studio and to his house, in these notes. . . .
[PUGH'S COUNSEL]:	Does it not say, the next time that Roland [Pugh] asked Grady [Pugh] to deliver an envelope of money, it was to McNair, was at McNair's studio?
[GRADY PUGH]:	It says that, yes, sir.
[PUGH'S COUNSEL]:	Okay. Despite that, that does not refresh your recollection?
[GRADY PUGH]:	Despite what it says, it's not true.[80]

PUGH's counsel then showed Grady Pugh the prosecutor's notes from the June 21, 2005 meeting and asked if he recalled that he told the prosecutor the two cash

[80]The June 17, 2005 meeting notes state:
–Roland Pugh asked Grady to deliver the money to McNair
–One Roland money [sic]
–Grady recalls being at Northport and having to take the envelope, which was a half inch thick, to McNair's house
–Grady and McNair sat down together in the house and chatted and then Grady left the envelope there between the two of them where McNair saw him put it
–The next time that Roland asked Grady to deliver an envelope of money it was to McNair was at McNair Studio
–McNair was late and Grady had to wait for him
–When McNair showed up, Grady and McNair went to the van where they chatted and then Grady left the envelope there where McNair saw him put it down
–This delivery of money was after the shell of the studio had been erected
–Roland Pugh called Grady and told him that "McNair needs to look at some carpet" (or words to that effect) and that McNair needed RPC [PUGH] to make the deposit on the carpet
–Grady got the company plane to Birmingham and took McNair's daughter and Bill Bailey to LaGrange, Georgia to pick out the carpet

deliveries were before the carpet trip, but Grady replied he did not recall saying it in that order as follows:

> [PUGH'S COUNSEL]: I want to direct you to the portion of [the prosecutor's] notes which read, Grady [Pugh] delivered the second envelope of cash to McNair at the studio.
>
> . . . .
>
> [PUGH'S COUNSEL]: And after that, I want to direct your attention to the portion of [the prosecutor's] notes that say, Bill Bailey was there. And it continues, quote "best I recall" close quote, this was the first time Grady [Pugh] met Bill Bailey; and then it continues. Months later, Grady [Pugh] flew to Georgia for the carpet. . . . Does this refresh your memory that when you met with [the prosecutor and an FBI agent], that the sequence you provided was that the first delivery was to the house, the second delivery was to the studio, and they were both done months before you flew to Georgia for the carpet?
>
> [GRADY PUGH]: I don't recall saying it in that order. The order that I remember it in, is the order that I told you Friday. I went to the studio first, then I went to the carpet, and then I went to Mr. McNair's house; and that's the way I remember it. That's the way it happened.[[81]]

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[81]The June 21, 2005 meeting notes state:
–Grady thinks the RPC [PUGH] office was still in Northport when he delivered the first envelope to McNair
–Grady had to drive from Northport
–Grady thinks the second McNair envelope was when RPC's office was in the trailers in Avondale
. . . .
–Grady delivered the second envelope of cash to McNair at the studio
–He and McNair had already spoken inside the studio and then went to McNair's van
–Bill Bailey was there when Grady delivered the cash to McNair Studio but Grady does not appear to recall talking to Bailey about the money he was giving to McNair

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PUGH's counsel suggested to the district court that he might call the prosecutor as a witness. The Court responded: "I think whatever you'd be calling him for doesn't amount to a hill of beans, and I'm not going to let it be done just to cause friction or embarrassment or whatever. So my strong inclination will be not to allow it." The defense did not call the prosecutor to testify.

In closing argument, PUGH's counsel argued Grady Pugh lied about the time line of these events, that his cash deliveries occurred outside the statute of limitations, and that the prosecutor's notes supported this argument. PUGH's counsel also recited portions of the prosecutor's notes.[82]

–'Best I recall' this was the first time Grady met Bill Bailey
–The weather was sunny but not cold
–Months later, Grady flew to Georgia for the carpet

[82]In closing argument, PUGH's counsel stated:
And then you heard on Monday, I finally got to show in Mr. Dillon's notes of that very interview. And he read to you from Mr. Dillon's own notes of the June 17th meetings. And he read to you, where they were talking chronologically in the June 17th, the first meeting, where he said that he delivered a note, an envelope to Mr. McNair's house, and the next time he was asked to deliver the envelope to the studio, and that then he was talking chronologically about going to look for carpet. And it was even clearer when he got into the notes of the second interview where he said he delivered the second envelope of cash to McNair at the studio, the best he could recall. Remember I even got him -- I think it was in quotes. Best I recall, this was the first time Grady met Bill Bailey. The next line, months later, Grady flew to Georgia for the carpet. Those are from Mr. Dillon's own notes of that meeting and that's what you heard the testimony was. Those do not establish any payment in July, whatsoever. They don't establish any payment that's been alleged in this case whatsoever. . . .
He gave even another story while on the stand. I was asking about the sequence and I was asking him whether these notes from his meeting refreshed his memory and he said I don't recall saying it in that order. The order that I remember it in is the order that I told you Friday. I went to the studio first, then I went to the carpet, and then

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We conclude defendants PUGH and Roland Pugh have not met their burden to show Grady Pugh's testimony was actually false, much less that the government knew it was false. First, the notes themselves are in bullet form and contain no dates nor any explicit indication that they were necessarily intended to be read in chronological order. At trial Grady Pugh agreed he had a "clear recollection" of what he said during the meetings. At trial Grady Pugh reviewed the notes on defense counsel's instruction and stated that the notes were "not laid out in the order that things happened," that he did not "recall saying it in that order," and, "[d]espite what it says, it's not true."[83]

Importantly, the documentary evidence is consistent with Grady Pugh's trial testimony that he delivered the money after the carpet purchase. The government introduced these checks: on May 24, 2000, Grady Pugh signed a $4,820.81 PUGH check made out to the carpet store; on July 18-19, 2000, Grady Pugh, Roland Pugh, and Yessick signed checks to cash totaling $9,000; and from December 15 to 22, 2000, Roland Pugh signed $38,750 in checks to Roland Pugh's daughters-in-law and to cash. Further, other witnesses corroborated Grady Pugh's

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I went to Mr. McNair's house, that's the way I remember it; and that's the way it happened.

[83]Nothing in the record indicates that after the 2005 meetings, Grady Pugh checked or adopted the prosecutor's notes.

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trial testimony. For example, Bill Bailey testified he flew with Grady to pick out carpet and saw him "again" at the studio, where they "talked about airplanes for a second" before Bailey asked Grady "if he was here to help Chris McNair again," to which Grady answered yes.

Even assuming that Grady Pugh's denials of prior inconsistency were false or his time line of events was false, defendants, at a minimum, have not shown the prosecutor knew Grady Pugh's testimony was false, especially given how the documents and other witnesses corroborated his testimony.

In any event, defendants have shown no reversible error. The jury heard the relevant portions of the notes read into the record when PUGH's counsel was cross-examining Grady Pugh. During closing arguments, PUGH's counsel argued that the prosecutor's notes contradicted Grady Pugh's trial testimony and again recited relevant portions of the notes. Defense counsel thoroughly and exhaustively cross-examined Grady Pugh. Defense counsel pointed out other inconsistencies within Grady Pugh's trial testimony and in his grand jury testimony. The jury was also well aware Grady Pugh had made a plea deal and that the government's assessment of his cooperation would impact his eventual sentence. The jury had the information it needed to make an informed decision as to Grady Pugh's credibility. See United States v. Calderon, 127 F.3d 1314, 1325

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(11th Cir. 1997) ("[C]redibility determinations are the exclusive province of the jury.") (quotation marks omitted). "Therefore, because we find that the uncorrected, allegedly perjurious statements do not 'undermine confidence in the verdict,'" we reject defendants' prosecutorial misconduct claims. Dickerson, 248 F.3d at 1042 (citations omitted).[84]

B. Grady Pugh's Testimony About Note-Taking

Defendants PUGH and Roland Pugh also claim the prosecutor intentionally elicited from Grady Pugh the false testimony that "everyone was taking notes" at the 2005 meetings, even though the prosecutor knew he had instructed the FBI agent not to take notes.[85]

At trial the prosecutor asked Grady Pugh about the note-taking:

Q: And when you signed that plea agreement, Mr. Pugh, had you already met with us on two occasions at the FBI office?
A: Yes, sir.
Q: And when you met with the FBI and myself, was your lawyer there?
A: Yes, sir.
Q: And was the company lawyer there?
A: Yes, sir.

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[84]We note the defense did not call others present at the 2005 meetings as to what Grady Pugh said. And regardless of whether others at the 2005 meetings were taking notes, defense counsel still could have called them to elicit their personal recollection of what Grady Pugh said. However, we need not rely on this fact as it is abundantly clear counsel effectively cross-examined Grady Pugh.

[85]The prosecutor acknowledged he told the FBI agent not to take notes during the 2005 meetings.

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Q: And was everybody taking notes?
A: Yes, sir.

On cross-examination, the defense attempted to clarify this assertion, but Grady Pugh stated that it "looked to me like everybody was taking notes." PUGH's corporate counsel asked Grady Pugh, "[a]nd do you remember that I objected and I indicated that I would take notes?"

The foregoing colloquy is ambiguous as to whether the prosecutor was referring to the lawyers in the room or also to the FBI agent. Grady Pugh reasonably could have taken "everybody" to mean the two lawyers about whom the defense had just asked. Moreover, while the record shows the FBI agent was not taking notes, defendants submitted no evidence that Grady Pugh's counsel or PUGH's counsel were not taking notes.[86] In sum, the defense has not met its burden to show the prosecutor believed or knew Grady Pugh's note-taking testimony was false. In any event, the defendants have not shown a reasonable likelihood that correction on this particular point, even if it did constitute "false testimony," could have changed the jury's evaluation of Grady Pugh's overall

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[86]The government stresses it would have been remarkable had Grady Pugh's counsel not taken notes during his own client's debriefings and plea negotiations in these two meetings. The prosecutor also points out that there is a reference in a December 2005 hearing before the magistrate judge that there was note-taking by Grady Pugh and PUGH's counsel at these meetings. We need not rely on that reference because it is enough to say defendants submitted no evidence that Grady Pugh or PUGH's counsel were not taking notes and have not carried their burden to show Grady Pugh's testimony was false.

credibility. Therefore, it does not undermine confidence in the verdict. See Dickerson, 248 F.3d at 1041.

X. STATUTE OF LIMITATIONS IN *WILSON* TRIAL

In the *Wilson* case, defendant PUGH claims the district court erred by denying its motion to dismiss Count 75 as time-barred under the five-year statute of limitations. See 18 U.S.C. § 3282.[87] Count 75 charged that from about August 1999 and continuing though June 2000, defendants PUGH and Wilson (as the JCESD's Chief Engineer) entered into a bribery conspiracy whereby Wilson corruptly solicited and accepted, and PUGH corruptly gave, a $4,500 payment (in the form of a bogus scholarship for Wilson's son) with the intent of influencing and rewarding Wilson for supporting PUGH's interests in connection with the JCESD sewer rehabilitation reconstruction program. Count 75 alleged that an object of the conspiracy was for Wilson to enrich himself and that PUGH and Wilson conspired to conceal PUGH's payment to Wilson by having it disguised as a bogus scholarship to UAB.

PUGH argues that Count 75 falls outside of the five-year limitations period because the latest overt act by a co-conspirator charged in the Indictment — Grady

[87] "We review a district court's denial of a motion to dismiss the indictment for an abuse of discretion." United States v. Clarke, 312 F.3d 1343, 1345 n.1 (11th Cir. 2002). "We review the district court's interpretation and application of statutes of limitations de novo." Id.

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Pugh's sending a $4,500 check to UAB — was committed no later than August 24, 1999, which was outside the limitations period of February 7, 2000 to February 7, 2005.[88] The government responds that the Indictment charged Wilson's receipt of the benefit of UAB's four quarterly disbursements to his son as four separate overt acts, and the last two disbursements (March 17 and June 7, 2000) were made to the son within five years of PUGH's indictment on February 7, 2005. In reply, PUGH stresses that it is undisputed that UAB and Wilson's son were not members of the bribery conspiracy, and thus there was no overt act by a co-conspirator within the limitations period.

"In a conspiracy prosecution brought under § 371 the government in order to avoid the bar of the limitation period of § 3282 must show the existence of the conspiracy within the five years prior to the return of the indictment, and must allege and prove the commission of at least one overt act by one of the conspirators within that period in furtherance of the conspiratorial agreement." United States v. Davis, 533 F.2d 921, 926 (5th Cir. 1976); see Grunewald v. United States, 353 U.S. 391, 396, 77 S. Ct. 963, 969-70 (1957) (addressing a three-year limitations period and concluding the government must prove that conspiracy was still in

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[88]In this statute of limitations calculation, the parties use the February 7, 2005 date of the initial indictment. While the initial indictment itself bears the dates of February 3 and February 7, we use what the parties use.

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existence at beginning of limitations period and that at least one overt act was performed after that date); United States v. Dynalectric Co., 859 F.2d 1559, 1564 n.6 (11th Cir. 1988) (stating if an overt act is necessary for the commission of the conspiracy, then "the indictment must charge and the evidence at trial must show that an overt act in furtherance of the conspiracy was made within the limitations period").

By contrast, for "conspiracy statutes that do not require proof of an overt act, the indictment satisfies the requirements of the statute of limitations if the conspiracy is alleged to have continued into the limitations period." United States v. Gonzalez, 921 F.2d 1530, 1548 (11th Cir. 1991) (citation and quotation marks omitted) (determining RICO conspiracy statute, unlike the general federal conspiracy statute, does not require an overt act). Unlike conspiracy statutes that do not require proof of an overt act,[89] the conspiracy statute PUGH was charged under, 18 U.S.C. § 371, does require proof of an overt act. See 18 U.S.C. § 371 (requiring that "one or more [co-conspirators] do any act to effect the object of the conspiracy").

As recounted above, Wilson solicited the bribe to help pay his son's college

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[89]For example, neither a drug conspiracy under 21 U.S.C. § 846 nor a RICO conspiracy under 18 U.S.C. § 1962(d) requires proof of an overt act. See United States v. Terzado-Madruga, 897 F.2d 1099, 1121 (11th Cir. 1990) (drug conspiracy); United States v. Coia, 719 F.2d 1120, 1124 (11th Cir. 1983) (RICO conspiracy).

expenses in mid-1999, and Grady Pugh mailed a $4,500 check to UAB on August 24, 1999. Because the tuition had already been paid by FWDE, Wilson did not actually receive the full benefit of the $4,500 check until UAB disbursed the final installment to Wilson's son in June 2000. The money disbursed to the son was a benefit to Wilson because he would otherwise have paid his son's expenses himself. Furthermore, where enrichment is an object of a conspiracy, the conspiracy continues until the conspirators receive the full economic benefits anticipated by their scheme, and a conspirator's receipt of a benefit can be considered an overt act. See United States v. Anderson, 326 F.3d 1319, 1328 (11th Cir. 2003); United States v. Girard, 744 F.2d 1170, 1171-74 (5th Cir. 1984). For example, in Anderson, the defendants conspired to obtain contracts by rigging bids in violation of antitrust laws and § 371. Id. at 1323. Although the bid-rigging contracts were beyond the limitations period, the final payment on one of the contracts came within it. Id. at 1328. The defendant Anderson contended that the final "payment was not an overt act in furtherance of the conspiracy but merely the result of the conspiracy." Id. This Court held that a conspirator's acceptance of payment on the illegally obtained contract constituted an overt act in furtherance of the conspiracy and brought the conspiracy within the statute of limitations. Id.

Although acceptance or receipt of a benefit can be an overt act, that overt act

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must be an act that is knowingly committed. See United States v. Hogue, 812 F.2d 1568, 1579 (11th Cir. 1987) (stating as an "essential element[]" of a § 371 offense that "the overt act was knowingly committed"); Eleventh Circuit Pattern Jury Instructions (Criminal Cases) at 137 (2003) ("An 'overt act' [under § 371] is any transaction or event . . . which is knowingly committed by a conspirator in an effort to accomplish some object of the conspiracy."). The jury in the *Wilson* trial was correctly instructed on this point.

The problem for the government is the last two disbursements in 2000 were from a non-conspirator (UAB) to another non-conspirator (the son), and the government presented no evidence that defendant PUGH (through Grady Pugh) or Wilson knew that Wilson was receiving part of the benefit of the $4,500 in March or June 2000, rather than all at once in August 1999. There is also no evidence that Grady Pugh or Wilson gave any direction to UAB after August 24, 1999. At trial, Grady Pugh testified he was unaware of UAB's disbursement arrangements, and no evidence contradicted him on that point. Likewise, there was no evidence that Wilson was aware of the timing of the disbursements or that Wilson had any communications at all with UAB after the $4,500 check was sent on August 24, 1999. Accordingly, Wilson's receipt of the benefit of the March and June 2000 disbursements cannot be considered "overt acts" knowingly committed by him,

and the bribery conspiracy in Count 75 was beyond the statute of limitations.[90]

For these reasons, we reverse PUGH's conviction on Count 75.

XI. WHARTON'S RULE

Defendants argue they cannot be charged, convicted, or sentenced on both conspiracy to commit § 666 bribery and the substantive § 666 offenses, and thus their convictions violate Wharton's Rule. Roland Pugh additionally claims his sole conviction on Count 1 is barred by Wharton's Rule.

As the Supreme Court noted in Iannelli v. United States, 420 U.S. 770, 95 S. Ct. 1284 (1975), ordinarily a defendant can be convicted of both conspiracy to commit a crime and the substantive crime itself. Id. at 777, 95 S. Ct. at 1289-90. Historically, Wharton's Rule was only a narrow common law exception that provided that a defendant cannot be punished for conspiracy and a substantive offense if the substantive offense itself requires the participation of two persons. See Iannelli, 420 U.S. at 773, 95 S. Ct. at 1288. "The basic idea of Wharton's Rule is that where a [substantive] crime requires a plurality of agents for its commission, a charge of conspiracy cannot be used to impose a heavier penalty." United States

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[90]The knowledge requirement was not at issue in Anderson, where the conspirator received the last payment or benefit directly. Anderson, 326 F.3d at 1328. While a third party can receive the payment on behalf of a conspirator (for example to disguise the payment), the conspirator must at least be aware of it. There was simply no evidence that Grady Pugh or Wilson was aware of how UAB applied and disbursed the money in 2000.

v. Collins, 779 F.2d 1520, 1527-28 (11th Cir. 1986).

Wharton's Rule reflects an era where conspiracy law was still developing, and it traditionally applied to offenses such as adultery, incest, bigamy, and dueling that were "characterized by the general congruence of the agreement and the completed substantive offense. . . ." Iannelli, 420 U.S. at 782, 95 S. Ct. at 1292. Wharton's Rule, however, is not grounded in the Constitution or in double jeopardy law and "has 'current vitality only as a judicial presumption, to be applied in the absence of legislative intent to the contrary.'" Collins, 779 F.2d at 1528 (quoting Iannelli, 420 U.S. at 782, 95 S. Ct. at 1292); accord Curtis v. United States, 546 F.2d 1188, 1190 (5th Cir. 1977). "The former Fifth Circuit did not generally favor Wharton's Rule, and it expressed doubt that it could ever be applicable to a conspiracy to distribute narcotics." Collins, 779 F.2d at 1528 (citing Curtis, 546 F.2d at 1190); see United States v. Previte, 648 F.2d 73, 77 (1st Cir. 1981) (stating "Wharton's Rule is, to some extent a relic of the discredited merger doctrine and should be interpreted narrowly" and explaining "the Rule does not forbid charging both a conspiracy and the substantive offense, even when it applies" as it "merely forbids sentencing on both counts").

In Iannelli, the Supreme Court held that Wharton's Rule did not apply to an illegal gambling statute, 18 U.S.C. § 1955. Iannelli, 420 U.S. at 791, 95 S. Ct.

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1296. The Supreme Court determined Congress intended that conspiracy to violate § 1955 and the substantive § 1955 offense should be separate crimes, stating, "[h]ad Congress intended to foreclose the possibility of prosecuting conspiracy offenses under § 371 by merging them into prosecutions under § 1955, we think it would have so indicated explicitly." Id. at 789, 95 S. Ct. at 1296.

We have already rejected, albeit without discussion, a Wharton's Rule challenge to a conviction for conspiracy to commit § 201 bribery. United States v. Evans, 344 F.3d 1131, 1133 & n.2 (11th Cir. 2003); see United States v. Finazzo, 704 F.2d 300, 306 (6th Cir. 1983) (holding Wharton's Rule does not apply to a § 371 conspiracy to commit § 201 bribery, noting "the consequences of bribery not only affect the parties to the crime but have a negative effect on society at large," and pointing out "the agreement connected with the substantive offense of bribery . . . poses 'the distinct kinds of threats to society that the law of conspiracy seeks to avert'") (quoting Iannelli, 420 U.S. at 783, 95 S. Ct. at 1292).

Other circuits have concluded Wharton's Rule does not preclude a conviction for conspiracy to violate § 666(a)(1)(B). See United States v. Bornman, 559 F.3d 150, 156 (3d Cir. 2009); United States v. Hines, 541 F.3d 833, 838 (8th Cir. 2008), cert. denied, 129 S. Ct. 1385 (2009).

We now hold Wharton's Rule does not apply to § 666 crimes for two

reasons, either one of which is sufficient alone. For starters, Congress has not expressed any intent that § 666 crimes and § 371 crimes for conspiracy to violate § 666 should merge. If Congress had intended to foreclose prosecuting § 371 conspiracy offenses in § 666 crimes, it could have said so or merged the offenses. Defendants point to nothing in the legislative history that suggests any intent to depart from the established general rule that a court can impose separate sentences for conspiracy to commit bribery and the substantive offense itself.

Second, the effect of the crime of § 666 bribery is not limited to the bribe-payor and recipient, as the crime involves public corruption, which harms society as a whole. "The purpose of § 666, to protect the integrity of federal funds, indicates that the immediate consequences of the behavior it proscribes rest on society at large," in this case, on the federal government and the people of Jefferson County. Hines, 541 F.3d at 838 (quotation marks omitted). Accordingly, we reject defendants' claims based on Wharton's Rule.[91]

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[91]The defendant-appellants raise these additional conviction-related issues. Swann argues that (1) there was a material variance as to the conspiracy charged in the Indictment and any conspiracy proven, (2) the district court erred by failing to instruct the jury on multiple conspiracies, (3) the district court erred in not giving his proposed good faith instruction, (4) the district court should have severed his case alone for trial and apart from the contractor-defendants who bribed him, and (5) the district court committed cumulative error.

Roland Pugh and PUGH argue that (1) the district court erred in not giving a proposed instruction defining goodwill gifts and legal gratuities, (2) Count 15 as to PUGH should have been dismissed as "duplicitous," (3) there was a material variance as to their convictions for bribery conspiracy, (4) their involvement at most consisted of one-time buyer-seller transactions insufficient to sustain a conspiracy conviction, and (5) the district court committed cumulative

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XII. MCNAIR'S SENTENCE[92]

McNair was sentenced to concurrent 60-month sentences on one bribery conspiracy count (Count 1) and ten substantive bribery counts (Counts 2-3, 5-12) from the *McNair* trial and one bribery conspiracy count from the *USI* case (Count 32).[93] The district court ordered McNair to pay restitution of $851,927 to the Jefferson County Commission and a special assessment of $1,200 but no fine. This restitution represented $376,927 in bribes to McNair by Dawson and the Pugh, Rast, and Dougherty defendants, and $475,000 in bribes to McNair by the USI contractors.[94] On appeal, McNair challenges only the restitution part of his

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error. As noted before, McNair, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty adopt all arguments of all defendants as to all issues. In his cumulative error claims, Swann adopts all arguments of all defendants as to all issues.

After review and oral argument, we conclude there is no reversible error as to any of these listed issues or as to any other conviction-related issues raised by any defendants.

[92]Defendants McNair, Swann, and PUGH appeal their sentences. Defendants Roland Pugh, RAST, Bobby Rast, Danny Rast, FWDE, and Dougherty do not appeal their sentences.

[93]McNair pled guilty to Count 32 in the *USI* case. In his plea agreement, he waived the right to "challenge any sentence so imposed or the manner in which the sentence was determined." Thus, McNair waived his right to challenge his sentence as to Count 32. See United States v. Johnson, 541 F.3d 1064, 1067 (11th Cir. 2008), cert. denied, 129 S. Ct. 2792 (2009) ("[A] waiver of the right to appeal a sentence necessarily includes a waiver of the right to appeal the restitution imposed."). Accordingly, we consider McNair's sentence on only Counts 1, 2-3, 5-12 in the *McNair* case. The district court did not tie or link the restitution to Count 32 so we reject the government's argument that McNair has waived his right to challenge the restitution.

[94]This $851,927 consisted of:

(1) $142,921 from PUGH ($11,709 for concrete work; three $20,000 payments; $4,820 carpet purchase; $17,200 in handrails; $5,000 retirement payment; and $44,192 check to George Word for McNair's Arkansas home);

(2) $84,566 from RAST ($52,990 in construction work by Mosley; $5,866 for security

sentence.[95]

A. Presentence Report

McNair's presentence investigation report ("PSI"): (1) assigned McNair a base offense level of 10, pursuant to U.S.S.G. § 2C1.1 (2001); (2) added 2 levels because McNair's conduct involved more than one bribe, pursuant to § 2C1.1(b)(1); and (3) added 24 levels because the net profit or benefit ($67,980,043)[96] to the contractors in connection with their bribes of McNair was

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gate; $5,300 in carpet installation by Gilley; $5,500 in landscaping by Bailey & Sons; $1,775 in plumbing by Buchanan; $5,000 retirement payment; and $8,135 for Alaskan cruise);

(3) $133,040 from FWDE ($74,220 to Bailey for supervision; $5,000 retirement payment; $50,000 check to George Word for Arkansas home; and $3,820 for construction work on guard shack);

(4) $16,400 from Dawson for an audio visual system; and

(5) $475,000 from USI ($335,000 in cash and $140,000 paid on bogus invoices).

In the restitution amount, the district court included bribe amounts from some of the counts either that were not submitted to the jury (such as counts involving the Arkansas home and the three $5,000 payments after McNair's retirement) or on which McNair was acquitted (such as cash bribes).

In our earlier recitation of the jury's verdict, we used the amount of the bribe listed in the Indictment. During trial or at sentencing, the government proved that some bribe amounts actually were higher. For example, the Indictment as to Swann alleged the amount paid to Stanger was $24,176, but the ultimate amount proved was $28,839. The Indictment as to McNair alleged the amount paid to Bailey was $27,434, but the ultimate amount proved was $74,220.

[95]This Court reviews de novo "the legality of an order of restitution," and reviews for an abuse of discretion the determination of the restitution "value" of lost or destroyed property. United States v. Robertson, 493 F.3d 1322, 1330 (11th Cir. 2007). This Court reviews for clear error "factual findings underlying a restitution order." Id.

[96]McNair's PSI calculated this $67,980,043 as follows: (1) from July 2000 to October 2002, RAST received $82,668,465 through County contracts and earned an average profit of 17.5%, yielding $14,466,981 in profit; (2) from October 1999 to November 2002, FWDE received $19,647,100 in County contracts and earned an average profit of 12%, yielding $2,357,652 in profit; (3) from August 1999 to March 2002, PUGH received $109,015,665 in

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between $50 million and $100 million, pursuant to §§ 2B1.1(b)(1)(M) and 2C1.1(b)(2)(A).[97] A total offense level of 36 and a criminal history category of I yielded an advisory guidelines range of 188-235 months' imprisonment.

The PSI pointed out the total value of the bribes received by McNair was $889,962 and that restitution was mandatory, "pursuant to 18 U.S.C. § 3663A(a)(1)." The PSI reviewed McNair's financial records and determined his net worth was $497,163, calculated as follows:

Assets	
Cash Assets	
* Checking Accounts	$379.00
Insurance, Cash Surrender Value	$10,521.00
Subtotal:	$10,900.00
Unencumbered Assets	
Motor Vehicles	$22,500.00
Subtotal:	$22,500.00
Equity in Other Assets	
* Residence	$96,000.00
McNair Investments (McNair Studio Bldg.)	$379,455.00
Subtotal:	$475,455.00

County contracts and earned an average profit of 43.61%, yielding $47,541,731 in profit; (4) from November 2000 to March 2001, Dawson Engineering received $2,108,283 in County contracts and earned an average profit of 12%, yielding $252,993 in profit; and (5) from February 1999 to February 2002, USI received $28,005,724 in County contracts and earned an average profit of 12%, yielding $3,360,686 in profit.

[97]The PSI for McNair used the November 1, 2001 edition of the United States Sentencing Commission Guidelines Manual (the "Sentencing Manual").

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Total Assets	$508,855.00
Unsecured Debts	
* Credit Card Debt	$11,242.00
* Internal Revenue Service	$450.00
Total Unsecured Debts	$11,692.00
Net Worth	$497,163.00[[98]]

Notably, McNair's net worth is largely due to his equity of $379,455 in McNair's studio building that was improved with the bribe money.[99]

The PSI stated that McNair's monthly household income was $5,850, with monthly expenses of $4,109, resulting in net monthly cash flow of $1,741, calculated as follows:

Income	
Defendant's Social Security	$1,779.00
Defendant's Jefferson County Retirement	$1,794.00
Spouse's Social Security	$826.00
Spouse's Teachers Retirement	$1,451.00
Total Income:	$5,850.00

Necessary Living Expenses

[98]The PSI states: "Items marked with an asterisk (*) represent [McNair's] half of assets or obligations shared jointly with his spouse."

[99]The PSI's net worth calculation does not include McNair's partial ownership of certain Arkansas property, which the PSI described as follows:

> In addition to the above, the defendant indicated that he owns a one-twelfth share (along with his siblings) of his parents' home-place in Fordice, AR. The property includes 50 acres, the parents' original home, and a dwelling built in 2001. He indicated that the value of the property is approximately $300,000, so his share would be approximately $25,000. However, the property would be difficult to sell due to its joint ownership.

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Home Mortgage	$1,990.00
Groceries, Supplies	$377.00
Utilities	$664.00
Telephone	$62.00
Transportation	$240.00
Auto Insurance	$89.00
Clothing	$53.00
Medical	$200.00
Credit Card Minimum Payments	$434.00
Total Expenses:	$4,109.00
Net Monthly Cash Flow	$1,741.00

McNair filed three sets of written objections to parts of the PSI, and the PSI was revised twice, resolving some objections. McNair's main unresolved objections were his claims that the government failed to show: (1) that there was any victim owed restitution; and (2) that $889,962 was the amount of loss incurred by Jefferson County. In his written objections, however, McNair did not claim that he lacked the financial ability to pay restitution at all or in the amount of $889,962.[100]

B. Sentencing Hearing

At sentencing, McNair again claimed the government failed to identify any victim and failed to show any identifiable losses by Jefferson County or any connection between the bribes and the County's losses. McNair ultimately

[100]McNair filed no objection to ¶¶ 154-157 of the PSI that set forth all of this financial information.

conceded he had received $851,927 in things of value but only for purposes of the guidelines imprisonment calculations.[101]

McNair maintained that no restitution should be awarded, because the government had not shown the County suffered a loss in that $851,927 amount or any amount for that matter. McNair's counsel argued that under "Title 18, 3663, the Mandatory Victims Restitution Act, that the Government is required to show losses connected to victims, and that the amount of bribes paid to Mr. McNair does not constitute losses to victims, and that there's been no showing of that. . . ." McNair contended "the amount of bribes paid to us is in no way connected to whatever losses these victims may or may not have sustained." McNair claimed there was no showing that $851,927 was the loss to the County. Citing "3663(B)(ii)" twice, McNair also argued the district court should not order restitution because the complexity and prolongation of the sentencing process in identifying victims and determining the amount of losses attributed to those victims outweighed the need to provide restitution. We pause to point out here that 18 U.S.C. § 3663 is the Victim & Witness Protection Act ("VWPA"), not the

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[101]Contrary to the government's arguments, McNair's counsel repeatedly objected to the victims' identities and loss amounts for the basis of restitution. For example, McNair's counsel stated: "We have agreed, for guidelines calculations, concerning that amount, but we do not believe that that is an appropriate figure or that there is any appropriate figure for restitution in this case. And there is no basis legally to — for the Court to impose that kind of restitution order in this matter."

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Mandatory Victims Restitution Act ("MVRA"), and the substance of McNair's argument comes from the VWPA.[102] And as discussed later, the district court's judgment effectively refers to the VWPA.

During the sentencing hearing, McNair again did not claim he lacked the financial ability to pay restitution at all or in the amount of $889,962 referenced in the PSI. Ultimately, the district court found the Jefferson County Commission was the identifiable victim and found the amount of loss suffered was $851,927, reasoning:

> [C]ommon sense seems to me that, in any business, it doesn't intentionally go into business for the purpose of losing money; that the evidence in all of these cases clearly shows that there was a great deal of profit to be earned from these sewer contracts. And it seems to me, commonsensically, that if you pay a certain amount of money as bribe money, whether it's cash or for services performed, you're going to add that back into the contracts or the bills submitted to the Jefferson County Commission which pays the bills, in the first instance.
>
> It is how they do business. Stated more clearly, it is a cost of business, a direct cost of business that it paid and made up for, at some point, by the Jefferson County Commission directly, and then indirectly to the rate payers of Jefferson County.[[103]]

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[102]Section 3663(a)(1)(B)(ii) is part of the VWPA and provides:

> (ii) To the extent that the court determines that the complication and prolongation of the sentencing process resulting from the fashioning of an order of restitution under this section outweighs the need to provide restitution to any victims, the court may decline to make such an order.

18 U.S.C. § 3663(a)(1)(B)(ii). Although citing "3663(B)(ii)," McNair's counsel argued the substance of § 3663(a)(1)(B)(ii).

[103]Judge C. Linwood Smith sentenced McNair after Judge Robert B. Propst conducted the

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Recognizing the sewer construction contracts were awarded through a bidding process, the district court found that "the benefit to the bribe payors did not necessarily accrue in the awarding of those contracts in the first instance, but, rather, the benefit accrued during the performance phase of the work that they were engaged to perform through change orders, through agreements to additional payments due to change orders, and things of that nature." The district court also found, "[a]t some point, any direct cost of business is going to be added back by the bribe payors in the bills, the padded bills, that are submitted to the Jefferson County Commission," and "therefore, the Jefferson County Commission, in the first instance, which paid those bids, is an identifiable victim."

The district court reduced McNair's total offense level by 10 levels from 36 in the PSI to 26. Specifically, the district court reduced the 24-level enhancement in the PSI to a 14-level enhancement under §§ 2C1.1(b)(2)(A) and 2B1.1(b)(1)(H). For the § 2C1.1(b)(2)(A) calculation, the district court used the $851,927 in bribes the contractors made to McNair, not the $67,980,043 in net profits or benefits the contractors received.[104] After determining McNair's offense level was 26 and

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McNair trial.

[104]The guidelines provide that for an offense where the benefit received or loss to the government is more than $400,000 but not more than $1 million, a defendant's offense level will increase 14 levels. U.S.S.G. §§ 2C1.1(b)(2)(A), 2B1.1(b)(1)(H) (2001). Section 2C1.1 governs the offense level for bribery of public officials but also uses, in part, the theft table in § 2B1.1.

criminal history category was I, the district court determined that the advisory guidelines range was 63 to 70 months' imprisonment.[105]

The district court sentenced McNair to 60 months' imprisonment for each count, to run concurrently, followed by two years' supervised release, and ordered restitution of $851,927 to the Jefferson County Commission and a special assessment of $1,200. Although the advisory guidelines fine range was $20,000 to $135,960,086, the district court did not impose any fine. After noting its review of the PSI's financial information, the district court stated it imposed restitution but no fine, as follows:

> I reviewed the financial information provided in your presentence investigation. And in reliance upon that information, I find that you do not have the financial ability to pay even a minimum guideline fine. Further, the imposition of such a fine would unduly burden your wife, who is totally dependent upon you for not just physical and spiritual, but financial support. Therefore, no fine will be imposed.
>
> I do order, however, as I must order, that you pay to the United States a special assessment in the aggregate amount of $1,200. You also are ordered to pay restitution in the amount of $851,927. That is due to the Jefferson County Commission at the address shown in paragraph 172 of your presentence report.

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[105]McNair objected to the PSI's failure to accord McNair a reduction for acceptance of responsibility. The district court overruled that objection. McNair does not appeal the district court's calculation of his advisory guidelines range as 63 to 70 months' imprisonment.

In addition, the government has not challenged the district court's use of the bribe amounts, as opposed to the net profits amounts, as the basis for the enhancement calculation under § 2C1.1(b)(2)(A), nor McNair's advisory guidelines range. So we assume for present purposes that the use of the bribe amounts and the guidelines range were proper.

At sentencing, the district court did not expressly state the statutory basis for its order of restitution. However, the district court's judgment states that, "pursuant to the Victim & Witness Restitution Act," the court finds the Jefferson County Commission is a victim of McNair's criminal conduct, has sustained a loss in the amount of $851,927, and orders restitution in the amount of $851,927.[106]

C. Restitution for Victim's Loss

The VWPA, 18 U.S.C. § 3663, provides that:

> The court, when sentencing a defendant convicted of an offense under [Title 18] . . . other than an offense described in section 3663A(c),[[107]] may order . . . that the defendant make restitution to any victim of such offense, . . .
>
> (B)(i) The court, in determining whether to order restitution under this section, shall consider–
> (I) the amount of the loss sustained by each victim as a result of the offense; and

[106]We reject the government's argument that the district court imposed restitution under the MVRA. The PSI recommended the district court order restitution under "18 U.S.C. § 3663A(a)(1)," which is the MVRA. Although referring to the MVRA, McNair's attorney (in the sentencing hearing) cited sections in the VWPA and made arguments premised on the substance of the VWPA (§ 3663). And the district court's judgment references the "Victim & Witness Restitution Act." Although this reference used "Restitution" instead of Victim & Witness Protection Act, it more closely resembles the VWPA than the MVRA. The government never objected to that reference and never moved to correct it. Thus, we conclude the district court imposed restitution under the VWPA.

[107]The VWPA, under which restitution is discretionary, excepts offenses in § 3663A(c), which is the MVRA, under which restitution is mandatory. We sua sponte note there is a potential issue of whether bribery is "an offense against property" covered by § 3663A(c) and whether the MVRA applies to bribery crimes. 18 U.S.C. § 3663A(c). Nothing herein should be read as implying the answer to that question. We review the VWPA only because that is the only thing the district court referenced in McNair's sentence.

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> (II) the financial resources of the defendant, the financial needs and earning ability of the defendant and the defendant's dependents, and such other factors as the court deems appropriate. . . .
>
> (2) For the purposes of this section, the term "victim" means a person directly and proximately harmed as a result of the commission of an offense for which restitution may be ordered including, in the case of an offense that involves as an element a scheme, conspiracy, or pattern of criminal activity, any person directly harmed by the defendant's criminal conduct in the course of the scheme, conspiracy, or pattern.

18 U.S.C. § 3663. "The government bears the burden of demonstrating the amount of the victim's loss by a preponderance of the evidence." United States v. Futrell, 209 F.3d 1286, 1290 (11th Cir. 2000) (citing 18 U.S.C. § 3664(e), which states, "Any dispute as to the proper amount or type of restitution shall be resolved by the court by the preponderance of the evidence."). However, "[t]he burden of demonstrating the financial resources of the defendant and the financial needs of the defendant's dependents shall be on the defendant." 18 U.S.C. § 3664(e); see United States v. Twitty, 107 F.3d 1482, 1494 n.14 (11th Cir. 1997) (stating the burden rests on the defendant to demonstrate lack of financial resources by a preponderance of the evidence).

D. County's Losses

McNair argues that the government failed to prove any losses suffered by the County. We disagree. For starters, the evidence showed McNair received $851,927 in goods, services, labor, materials, and money as a result of the bribery

scheme. Further, during the same time period, the contractor-defendants received hundreds of millions of dollars in payments under their County contracts and made millions of dollars in profits.[108]

And the district court did not clearly err in finding that the contractors essentially recouped their bribe money by adding it back to their sewer and engineering contract bills as a cost of doing business with the County. See United States v. DeVegter, 439 F.3d 1299, 1303 (11th Cir. 2006) ("Assuming the bribe achieves its intended result, the benefit would usually exceed the bribe."); see also Futrell, 209 F.3d at 1292 (concluding the district court did not abuse its discretion in ordering restitution under the MVRA based on "approximation" of loss resulting from defendants' fraud).

The district court's determination is consistent with Supreme Court precedent stating that when a public official acquires an ill-gotten benefit as a result of his office, the government suffers losses in that amount. See United States v. Carter, 217 U.S. 286, 305-06, 30 S. Ct. 515, 520 (1910).[109]

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[108]See supra note 96.

[109]In Carter, the Supreme Court stated:

> It is not enough for one occupying a confidential relation to another, who is shown to have secretly received a benefit from the opposite party, to say, ". . . you cannot show that you have sustained any loss by my conduct." Such an agent has the power to conceal his fraud and hide the injury done his principal. It would be a dangerous precedent to lay down as law that unless some affirmative fraud or loss can be shown, the agent may hold on to any secret benefit he may be able to make out of his

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McNair next contends the district court erred by failing to consider his financial ability to pay restitution and by not making an explicit finding that he had the financial ability to pay restitution of $851,927. We can locate no place in this voluminous record where McNair claimed in the district court that he lacked the financial ability to pay restitution or the $889,962 amount of restitution recommended in the PSI and sought by the government. See Jones, 289 F.3d at 1265. Because McNair raises this issue for the first time on appeal, we review it only for plain error. United States v. Rodriguez, 398 F.3d 1291, 1298 (11th Cir. 2005). We may not correct an error the appellant failed to raise in the district court unless there is: "'(1) error, (2) that is plain, and (3) that affects substantial rights.'" Id. (quoting United States v. Cotton, 535 U.S. 625, 631, 122 S. Ct. 1781, 1785 (2002)). If the preceding three conditions are met, we may exercise discretion to correct a forfeited error, but only if "(4) the error seriously affects the fairness, integrity, or public reputation of judicial proceedings." Id. (quotation marks omitted).

> agency. The larger interests of public justice will not tolerate, under any circumstances, that a public official shall retain any profit or advantage which he may realize through the acquirement of an interest in conflict with his fidelity as an agent. If he takes any gift, gratuity, or benefit in violation of his duty, or acquires any interest adverse to his principal, without a full disclosure, it is a betrayal of his trust and a breach of confidence, and he must account to his principal for all he has received.

Carter, 217 U.S. at 305-06, 30 S. Ct. at 520.

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McNair has not shown plain error for several reasons. First, "[d]istrict courts are not obliged to make explicit factual findings of a defendant's ability to pay restitution if the record provides an adequate basis for review." United States v. Dabbs, 134 F.3d 1071, 1084 (11th Cir. 1998) (quoting Twitty, 107 F.3d at 1493); accord United States v. Fuentes, 107 F.3d 1515, 1529 n.27 (11th Cir. 1997); United States v. Remillong, 55 F.3d 572, 574-78 (11th Cir. 1995); United States v. Hairston, 888 F.2d 1349, 1353 (11th Cir. 1989) (stating, "[i]f the record provides an adequate basis for . . . review, the court need not assign specific reasons for its decision to order full restitution. If the record is insufficient, reasons must be assigned.") (quotation marks omitted).[110] "'In order to warrant a reversal of the restitution order, the challenging party must show that the record is devoid of any evidence that the defendant is able to satisfy the restitution order.'" Dabbs, 134 F.3d at 1084 (quoting United States v. Davis, 117 F.3d 459, 463 (11th Cir. 1997)). However, "we will not uphold the district court's exercise of discretion if the record is devoid of any evidence that the defendant is able to satisfy the restitution order." Remillong, 55 F.3d at 574.

Second, the record is not devoid of any evidence of McNair's ability to

[110]Since 1989 this Court has agreed "with the courts that have declined to adopt a rigid rule requiring district courts to make findings of fact whenever they impose an order of restitution under the VWPA." Hairston, 888 F.2d at 1352.

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satisfy the restitution order. The PSI set forth McNair's finances in detail, the district court said it had reviewed that financial information, and McNair did not contest the facts as to his finances. There is no dispute that McNair has equity of $379,455 in his studio building, which was built in part using the bribe money. The studio value could reduce the restitution from $851,927 to $472,472.

In addition, McNair has a net cash flow of $1,741 per month, which is about the size of his monthly Jefferson County retirement check of $1,794. That retirement check alone permits McNair to pay $21,528 annually toward the restitution. Five years of $21,528 payments annually would equal over $100,000 in restitution. The unique problem in this case, however, is that McNair is now 84 years old.[111] Although the PSI states McNair "reports no current medical problems or prescription medications taken on a regular basis," it would take McNair 21.94 years at $21,528 per year to pay the remaining $472,472 left in restitution. Therefore, the record does not necessarily show that McNair has the financial ability to pay the full $851,927 in restitution.

Nonetheless, under the fourth prong of plain error review, we conclude any error does not seriously affect the fairness, integrity, or public reputation of judicial proceedings because (1) McNair, not the government, has the burden to prove lack

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[111]The PSI states McNair's date of birth is November 22, 1925.

of financial ability to pay the restitution in full; (2) the district court did not impose any fine but only restitution; (3) McNair does not dispute that he received $851,927 in goods, services, materials, labor, and other things of value; (4) no one, not even the district court if we remanded for further findings, knows how long McNair will live and continue to receive his monthly Jefferson County pension and thus be able to pay some restitution each month; and (5) the party owed this restitution is the same party currently paying McNair $1,749 per month, making it eminently fair to recapture these payments as restitution for as long as they are made. Given all of the unique circumstances in this case, McNair has not shown plain error in the district court's restitution order.

McNair also challenges the restitution order on the ground that United States v. Booker, 543 U.S. 220, 125 S. Ct. 738 (2005), requires that the factual predicate for restitution be found by a jury beyond a reasonable doubt. McNair's Booker challenge is foreclosed by our precedent. United States v. Williams, 445 F.3d 1302, 1310 (11th Cir. 2006) ("Booker does not apply to restitution orders."), abrogated on other grounds by United States v. Lewis, 492 F.3d 1219, 1222 (11th Cir. 2007). We thus reject this argument.[112]

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[112]McNair objected to this statement in the PSI: "Theo Lawson, County Attorney for Jefferson County, AL, appeared at the sentencing in U.S. v. Dougherty, (05-61, 05-544) and indicated that the county requests restitution in each of these cases on the amount of the bribes." On appeal McNair claims the PSI's inclusion of this "testimony" violated his right to

For the first time on appeal, McNair also claims the district court erred in ordering any restitution because co-defendant Roland Pugh was not ordered to pay restitution. We review this claim for plain error. See United States v. Rodriguez, 398 F.3d 1291, 1298 (11th Cir. 2005). Seven of McNair's co-defendants were ordered to pay restitution, to wit: PUGH ($239,652), Bobby Rast ($141,000), Danny Rast ($141,000), RAST ($141,000), Swann ($355,533), FWDE ($225,149), and Dougherty ($225,149). McNair has shown no plain error in this regard.[113]

For all these reasons, we affirm the restitution order as to McNair.

XIII. SWANN'S SENTENCE

Swann was sentenced to 102 months' imprisonment, followed by three years' supervised release, on one bribery conspiracy count (Count 51), six substantive bribery counts (Counts 52-54, 57, 58, and 60), and eleven counts of honest services mail fraud (Counts 90-100). The district court ordered Swann to pay restitution of $355,533 and a fine of $250,000. On appeal, Swann challenges

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confrontation in the Sixth Amendment. We disagree. The district court never mentioned Lawson, let alone relied on his statement as the basis for restitution. In any event, this Court has held that "Crawford dealt with trial rights and we see no reason to extend Crawford to sentencing proceedings. The right to confrontation is not a sentencing right." United States v. Cantellano, 430 F.3d 1142, 1146 (11th Cir. 2005).

[113]McNair received no fine while some co-defendants had significant fines, such as Roland Pugh ($250,000), PUGH ($19.4 million), Bobby Rast ($2.5 million), Danny Rast ($1 million), RAST ($1,702,500), Swann ($250,000), FWDE ($3,830,760), and Dougherty ($750,000).

the imprisonment and his fine but not the restitution.

A. Presentence Report

The PSI: (1) assigned Swann a base offense level of 10, pursuant to U.S.S.G. § 2C1.1 (2003); (2) added 2 levels because Swann's conduct involved more than one bribe, pursuant to § 2C1.1(b)(1); (3) added 22 levels because the net profit or benefit ($42,460,880)[114] to the contractors in connection with their bribes of Swann was between $20 million and $50 million, pursuant to §§ 2C1.1(b)(2)(A) and 2B1.1(b)(1)(L); and (4) added 2 levels for obstruction of justice, pursuant to § 3C1.1.[115] A total offense level of 36 and a criminal history category of I yielded an advisory guidelines range of 188 to 235 months' imprisonment.

The PSI provided a detailed financial analysis of Swann's assets, including his cash, checking and savings accounts, savings bonds, deferred compensation account, debt, investments, income, and living expenses. The PSI reported Swann had $118,194 in assets, including $109,380 in deferred compensation, $95,000 in

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[114]Swann's PSI calculated this $42,460,880 in profit as follows: (1) from September 1998 to October 2002, RAST received $127,182,375 through County contracts and earned an average profit of 17.5%, yielding $22,256,740 in profit; (2) from September 1998 to November 2002, FWDE received $23,884,498 through County contracts and earned an average profit of 12%, yielding $2,866,139 in profit; and (3) PUGH's total profits for 2001 and 2002 amounted to $17,338,000.

We recognize that McNair's PSI showed total contractor profits of $67,980,043, but McNair's PSI included $3,360,686 in USI profits and $47,541,731 in PUGH profits (based on a longer time span of almost four years from August 1999 to March 2002). See supra note 96.

[115]The PSI for Swann used the November 1, 2003 edition of the Sentencing Manual.

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debt (taxes and attorneys' fees), and a net worth of $23,194. The PSI stated Swann's monthly income was $6,729 ($6,604 in Jefferson County pension and $125 salary for niece's trust fund). Thus, at the time of the PSI, Swann had an annual income of $80,748.

The PSI reported that Swann's total monthly expenses were $6,971, calculated as follows:

Necessary Living Expenses	
Home Mortgage/Equity Line (645 Winwood)	$2,321.00
Home Mortgage/Equity Line (641 Winwood)	$1,201.00
Groceries/Supplies/Transportation (Includes all credit card purchases other than non-copay medical expenses.)	$1,435.00
Utilities	$452.00
Telephone	$118.00
Auto Insurance	$122.00
Life Insurance	$395.00
Home Maintenance Insurance	$36.00
Clothing	$20.00
Medical	$488.00
Printing/Copying/Postage	$60.00
Dry Cleaning	$10.00
Pest Control/Termite Bond	$48.00
OTC Medications/Personal Grooming	$122.00
Lawn Maintenance	$120.00
Internet Service	$23.00
Total Expenses:	**$6,971.00**[[116]]

The PSI noted (1) Swann's wife was retired from Bellsouth, (2) their newly

[116]Swann also submitted other expenses as "necessary," which the PSI did not include in the above calculations as "necessary": meals out $75; entertainment $30; and newspaper $12.40.

remodeled home at 645 Winwood Drive was in her name, and (3) she owned their former home, at 641 Winwood Drive two doors down, jointly with her mother and paid that mortgage.[117] According to the PSI, Swann's wife had refused to provide any additional financial information for the PSI. Swann claimed he had no knowledge of the value of his wife's investments, nor of the income generated from her investments or retirement.

In calculating Swann's fine under 18 U.S.C. § 3571(d),[118] the PSI stated the "gross loss" amount was the $42,460,880 benefit the contractors received. Based on this information, the PSI determined the guidelines fine range was $20,000 to $84,921,760 (i.e., double the gross loss amount pursuant to U.S.S.G. § 5E1.2). The PSI stated: "Based on his financial condition it appears that the defendant [Swann] could pay a fine within the guideline range or make a lump-sum payment toward restitution shortly after sentencing through use of liquid assets." The PSI noted that Swann's "future ability to make payments on an installment basis will

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[117]Swann filed no objections to ¶¶ 153-159 of the PSI that set forth all of this financial information.

[118]Section 3571(d) provides:

> If any person derives pecuniary gain from the offense, or if the offense results in pecuniary loss to a person other than the defendant, the defendant may be fined not more than the greater of twice the gross gain or twice the gross loss, unless imposition of a fine under this subsection would unduly complicate or prolong the sentencing process.

18 U.S.C. § 3571(d).

be dependant [sic] on several factors including the sentence in this case, his family situation, and his ability to contain monthly expenses."

The PSI stated that restitution was mandatory under 18 U.S.C. § 3663A(a)(1) (the MVRA) and that the County had requested restitution.

Swann objected to the 22-level increase to his offense level under U.S.S.G. § 2C1.1(b)(2)(A), arguing his offense level should be based on the amount of bribes ($355,533) rather than the net profits or benefits ($42,460,880) the contractors received. Section 2C1.1(b)(2)(A) provides:

> If the value of the payment, the benefit received or to be received in return for the payment, or the loss to the government from the offense, whichever is greatest (i) exceeded $2,000 but did not exceed $5,000, increase by 1 level; or (ii) exceeded $5,000, increase by the number of levels from the table in §2B1.1 (Theft, Property Destruction, and Fraud) corresponding to that amount.

U.S.S.G. § 2C1.1(b)(2)(A) (2003).[119] Swann argued there was no evidence of a causal connection linking any bribe to the award of any contract, and therefore, the 22-level adjustment under § 2C1.1(b)(2)(A) was improper. Even if a *quid pro quo* is not required for a § 666 conviction, Swann claimed evidence of a *quid pro quo* was necessary under § 2C1.1(b)(2)(A) to increase his offense level.

B. Sentencing Hearing

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[119]The guidelines provide that for an offense where the benefit received or loss to the government is more than $20 million but not more than $50 million, a defendant's offense level will increase by 22 levels. U.S.S.G. §§ 2C1.1(b)(2)(A), 2B1.1(b)(1)(L).

At sentencing, Swann objected to the PSI on the ground that co-defendants RAST, Bobby Rast, and Danny Rast's offense levels were based on the amount of bribes given, not the financial benefit or profit to them. Swann also objected to any obstruction of justice enhancement. The district court sustained Swann's objection to the obstruction enhancement.[120]

The district court, however, concluded the benefit, not bribe, amount should be used under § 2C1.1(b)(2)(A) and found the evidence was "absolutely clear that there is at least 20 million dollars that was benefit" to the bribe-payor contractors. As support for the $20 million figure, the district court cited instances where Swann (1) decided not to invoke the performance bond against RAST, (2) allowed RAST to rebid the Valley Creek job for an additional $23.927 million, and (3) was involved in granting RAST a $2.677 million change order when RAST's boring machine became stuck. The district court found that a preponderance of the evidence established that the $20 million benefit to the bribe-payors "was a direct result of that influence of [RAST's] bribes." The court also pointed out that Swann

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[120]Because some of Swann's co-defendants were sentenced under an earlier guidelines edition and that edition would result in a lower guidelines range for him, Swann urged the court to use the earlier edition to avoid a sentencing disparity with his co-defendants. The district court overruled that objection.

On appeal Swann does not challenge the applicability of the 2003 guidelines edition to the calculations of his advisory guidelines range. Rather, as discussed later, Swann claims his sentence is substantively unreasonable because the use of different editions as to co-defendants caused disparities in his and his co-defendants' sentences that are unwarranted. We address that issue later.

granted PUGH's joint venture a 180-day extension just days after PUGH's Yessick hired a landscaper for Swann's property, saving PUGH's joint venture $180,000 in liquidated damages. At sentencing, the district court expressly found a direct connection between the bribes to Swann and the financial benefit to the bribe-payor contractors, stating:

> I think it is absolutely clear that there is at least 20 million dollars that was benefit, for instance, to [RAST], two change orders being 2.677 million of the digging out of the boring machine and pulling out a boring machine and rebid of that job, 23.927 million. The testimony as I recall it at trial and the testimony that was presented today, I conclude, based on the burden of proof that's required, not beyond a reasonable doubt but by a preponderance of the evidence, that that is due to be calculated at 2B1.1 as a gain of over 20 million dollars, that because of the decision by Mr. Swann that I believe was a result of the bribes and stuff that was provided him by RAST, I think that that was a direct result of that influence of those bribes. And I am not going to go through the others. Like for instance, the extensions, just one example is with regard to exhibit 36, the 180 extension that was granted to PUGH. A thousand dollars a day is what I recall the evidence to be that it would have been if they weren't granted that extension and that's $180,000. I am not even necessarily having to go to the aspect of whether or not because Mr. Swann was Mr. Wilson's supervisor the effect of the contracts or the approval of the committee because I find I am going to, for calculation of fine purposes, set that amount at 20 million and one dollars. More than 20 million, I am going to set it at 20 million and one dollars as clearly – in fact, actually I think I figured it at 26 million at the bottom end, but I am going to set it at 20 million and one dollars for the purpose of calculating the fine range, and I will ask him that you do that for me, and we'll need to recalculate the other.

The district court found that Swann's base offense level was 10, added 2 levels because Swann's offenses involved multiple bribes, and added 22 levels

because the benefit to the bribe-payor contractors was between $20 million and $50 million, resulting in a total offense level of 34. See U.S.S.G. §§ 2C1.1(b)(2)(A), 2B1.1(b)(1). This total offense level of 34 and a criminal history category of I yielded an advisory guidelines range of 151 to 188 months' imprisonment.

In considering the § 3553 factors, the district court found that Swann (1) was not credible in stating his wife was the one responsible and he did not know that these contractors were doing the work and what was going on, (2) had "not indicated any remorse whatsoever," and (3) refused to accept responsibility. The district court also considered that it was "bribery on a large scale of a public official" that had affected many people. The court noted "the need to reflect the seriousness of this offense and to promote respect for the law and to provide just punishment for this offense." The court also commented that, because Swann held a position of public trust, he was different than the contractor-defendants that were bribing him. The district court stated it had considered all of the § 3553 factors. Citing Swann's "history" and "character," the district court varied downward from the 151 to 188 months' range and imposed a sentence of 102 months' imprisonment, followed by 3 years' supervised release.[121]

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[121]As to Counts 51 and 90 to 100, the district court imposed a sentence of 60 months' imprisonment, to run concurrently. As to Counts 52, 53, 54, 57, 58, and 60, the district court

Importantly, the district court also stated that, even if it had adopted Swann's view that the U.S.S.G. § 2C1.1(b)(2)(A) calculation should be based on the bribe amount Swann received (instead of the net benefit to the contractors) and even if Swann's total offense level was 24 and his guidelines range was 51 to 63 months, it would nonetheless vary upward on Swann's sentence, explaining:

> [C]ounsel has urged me to utilize the guideline range that would result from considering the bribes of $355,533 in calculating your sentencing range and indicated that if I used that, it would result in a guideline offense level, criminal offense level of 24 when combined with a criminal history category of roman numeral one would result in imprisonment range of 51 to 63 months. I am going to state for the record that if I used that, I would nonetheless vary upward because I would believe that would not be sufficient to account for the other factors in [18 U.S.C. § 3553] that I am charged with the responsibility of weighing, including the nature and circumstances of this particular offense, as well as the need to reflect the seriousness of the offense, provide respect for law. I would have varied upwards, in other words, on that sentence. So if the Eleventh Circuit has any question about that when they get this on appeal which I suppose they will, if they ask or wonder what I would have done had I went that way, that's what I would have done. I believe that's appropriate and I have given that weight. I have actually considered that, and I started to just go ahead and do that. But I thought it appropriate in this instance because I think it is very clear that at least the 23 million dollars that I discussed earlier was a correct calculation.

(Emphasis added). Although the district court did not say the precise words — "I would impose the same 102 months sentence" — the record is patently clear that is

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imposed a sentence of 102 months' imprisonment, to run concurrently. The sentences for all 18 counts thus run concurrently.

what the district court meant.

As to restitution, Swann disputed that the amount of the bribes paid was $355,533, but conceded that, if restitution was owed, it should be based on the amount of bribes paid. Based on the evidence, the district court found the total bribe amount Swann received was $355,533. The district court rejected Swann's argument that restitution should be only the total $93,680 bribe amount referenced in the conviction counts (Counts 52-54, 57-58, 60, 90-100) that the jury found Swann received beyond a reasonable doubt. The district court ordered Swann to pay restitution of $355,533[122] to the "Jefferson County Commission."

As to the fine, Swann pointed out he "has no money," that his house was transferred to his wife's name before he became aware of the subpoenas in the investigation, and that he lost the respect of his community and thereby lost his ability to earn a living. Swann argued for a reduced fine but did not propose any specific fine amount.

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[122]This $355,533 consisted of:

(1) $149,102 from PUGH ($7,422 for waterfall and koi pond, $1,000 in gift certificates to Alabama Book Smith, and $140,680 in landscaping by Guthrie);

(2) $55,885 from RAST ($4,441 for concrete work; $3,535 for flooring; $1,054 in brick work; $8,940 in plumbing; $9,733 for painting; $6,300 to Derek Houston for supervision; $18,867 in labor for miscellaneous employees; and $3,015 for Swann's trip to England and Scotland); and

(3) $150,929 from FWDE ($28,839 to Stanger for supervision; $94,090 to Hendon for supervision; and $28,000 to Dudley Davis for framing). The sentencing court and its judgment use $355,533, and we do too. But these amounts total $355,933.

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After determining the advisory guidelines fine range was $17,500 to $40,000,002, the court imposed a $250,000 fine and a $1,800 special assessment. As to the $250,000 fine, the district court stated:

> You are ordered to pay a fine in the amount of $250,000. I don't know whether that's collectable or not. I don't think it is, but I think it's appropriate considering the circumstances.

C. Guidelines Range Calculations

On appeal Swann claims the district court improperly calculated his guidelines range because "[t]he court utilized a 'net benefit' approach instead of the amount of the alleged bribes in calculating the base offense level." This is a challenge to the procedural reasonableness of Swann's 102 months' imprisonment sentence.[123]

As noted earlier, the bribery offense level is calculated using *the greater* of the value of the bribe payment or the benefit received in return. See U.S.S.G. § 2C1.1(b)(2)(A). "The value of 'the benefit received or to be received' means the

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[123]In reviewing the reasonableness of a sentence, we apply an abuse-of-discretion standard using a two-step process. United States v. Pugh, 515 F.3d 1179, 1189-90 (11th Cir. 2008) (relying on Gall v. United States, 552 U.S. 38, 51, 128 S. Ct. 586, 597 (2007)). First, we look at whether the district court committed any significant procedural error, such as miscalculating the advisory guidelines range, treating the guidelines as mandatory, failing to consider the 18 U.S.C. § 3553(a) factors, selecting a sentence based on clearly erroneous facts, or failing to explain adequately the sentence. Pugh, 515 F.3d at 1190. Then we look at whether the sentence is substantively reasonable under the totality of the circumstances. Id.

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net value of such benefit." § 2C1.1 cmt. n.2.[124] "The net value of the improper benefit need only be estimated, and the bribe amount should be used only when the net value cannot be estimated." DeVegter, 439 F.3d at 1303. The net value "need only be a reasonable estimate given the information available to the government." United States v. Cabrera, 172 F.3d 1287, 1292 (11th Cir. 1999).[125]

On appeal Swann does not claim that the bribe amount ($355,533) he received was greater than the net benefit amount (over $20 million) the contractor-defendants received.[126] Rather, Swann argues that, to use the net benefit approach, the government first must show a connection (i.e., a *quid pro quo*) between a

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[124]The Commentary to § 2C1.1 gives the following examples of net value: "(1) A government employee, in return for a $500 bribe, reduces the price of a piece of surplus property offered for sale by the government from $10,000 to $2,000; the value of the benefit received is $8,000. (2) A $150,000 contract on which $20,000 profit was made was awarded in return for a bribe; the value of the benefit received is $20,000." U.S.S.G. § 2C1.1 cmt. n.2.

The Commentary to § 2C1.1 also provides: "[F]or deterrence purposes, the punishment should be commensurate with the gain to the payer or the recipient of the bribe, whichever is higher." Id. cmt. Background.

[125]In United States v. DeVegter, 439 F.3d at 1304, this Court adopted the Fifth Circuit's approach to calculating net value under § 2C1.1 as set forth in United States v. Landers, 68 F.3d 882 (5th Cir. 1995). The Fifth Circuit in Landers concluded that the profit on a contract, not the gross revenue or value, is to be used to determine net value. We stated in DeVegter, "[w]e agree with the Fifth Circuit's approach [in Landers] which subtracts direct costs, but not indirect costs, from profits to determine the net improper benefit." DeVegter, 439 F.3d at 1304.

[126]Swann's appeal brief refers to the $20 million as the "net benefit" and does not argue that the district court erred by using $20 million in its calculation of net benefit. Although the district court's finding that the benefit was $20 million to the contractor-defendants appears to be based on gross revenue received by the contractor-defendants and not their net profit, other portions of the trial record amply support total profits in excess of $20 million to the contractor-defendants RAST, PUGH, and FWDE, and thus a net benefit in excess of $20 million. This may be why no remand was requested on this issue.

particular bribe and a particular contract or action by a public official. Swann claims the government's evidence failed to show the requisite causal connection.

In this regard, Swann first argues there is no connection between the bribes he received and the contractors' revenue because he had no authority to award the sewer or engineering contracts. Alternatively, Swann claims, "there was no tie or connection of any kind between any alleged bribe and any contract awarded even if Appellant Swann could have influenced the award of the contract." Therefore, Swann says, "the proper loss amount to be utilized under § 2C1.1 was the amount of the alleged bribes paid to Appellant Swann and the court erred in failing to utilize said amount." Swann points out that had the $355,533 bribe amount been used (as opposed to the $20 million benefit amount), the district court would have added only 12 levels (not 22) under § 2C1.1, resulting in a total adjusted offense level of 24 (not 34).

This Court has not addressed what type of connection under § 2C1.1(b)(2)(A) the government must establish between the bribe given and the benefit received. Section 2C1.1(b)(2)(A) does speak in terms of "the value of . . . the benefit received or to be received in return for the payment . . . ." U.S.S.G. § 2C1.1(b)(2)(A). Other circuits have held that the threshold for establishing a causal connection under § 2C1.1(b)(2)(A) is low. See United States v. Sapoznik,

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161 F.3d 1117, 1119 (7th Cir. 1998) (concluding that "[t]o show that the bribes benefitted the people paying them [the bar owners/illegal gambling], . . . it is enough for the government to show that the bribes facilitated the gambling operations"); United States v. Kinter, 235 F.3d 192, 198 (4th Cir. 2000) (stating "[t]he threshold for the causation inquiry for § 2C1.1 calculations is relatively low"). In Sapoznik, the Seventh Circuit explained that the question of causation between the bribe and the benefit is different from the question of quantification of the actual benefit received, concluding the government had established a causal connection between the bribe and the benefit even though it had not shown the precise amount of the benefit to the bribe-payor. Sapoznik, 161 F.3d at 1119. And the bribes need only contribute or facilitate the business activity involved. Id.

Here, given the wealth of evidence in the record, we readily conclude the district court did not clearly err in finding that the benefits the contractors received (such as the RAST revenue from the $2.6 million change order, the RAST job rebid for an additional $23,837,350, and the PUGH time extension on the Vestavia Trunk Sewer Replacement project) were a result of the corrupt bribes to Swann. This amply satisfies any causal connection requirement in § 2C1.1(b)(2)(A).[127]

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[127]We review the district court's findings of fact in sentencing for clear error. DeVegter, 439 F.3d at 1303. We do not find clear error unless "'we are left with a definite and firm conviction that a mistake has been committed. . . . [T]he clear error standard is purposefully deferential to the district court, . . . [but r]eview for clear error does not mean no review.'" Id.

Accordingly, we find no reversible error in the district court's calculations adding 22 levels under § 2C1.1(b)(2)(A) to Swann's offense level.

The district court alternatively stated that even if it used the bribe amount approach and not the net benefit approach, it would vary upward from the lower range (51 to 63 months) urged by Swann based on "other factors in 18 USC Section 3553 that I am charged with the responsibility of weighing." Therefore, we also conclude any error in the guidelines calculations as to Swann was harmless. See United States v. Barner, 572 F.3d 1239, 1248 (11th Cir. 2009) ("Where a district judge clearly states that he would impose the same sentence, even if he erred in calculating the guidelines, then any error in the calculation is harmless."); United States v. Dean, 517 F.3d 1224, 1232 (11th Cir. 2008), aff'd, Dean v. United States, 129 S. Ct. 1849 (2009); United States v. Keene, 470 F.3d 1347, 1348-49 (11th Cir. 2006).

D. Substantive Reasonableness

Swann also argues his 102-month sentence was substantively unreasonable because the district court impermissibly considered that (1) Swann showed no remorse, and (2) because he was a public official, Swann was more culpable than the contractors and, without his conduct, the bribe-payors could not have

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(quoting United States v. Crawford, 407 F.3d 1174, 1177 (11th Cir. 2005)). We review questions of law arising under the federal Sentencing Guidelines de novo. Id.

committed the crime.[128]

This Court considers the substantive reasonableness of the sentence imposed by inquiring whether the sentence is supported by the 18 U.S.C. § 3553(a) factors. Gall v. United States, 552 U.S. 38, 56, 128 S. Ct. 586, 600 (2007).[129]

The district court need not discuss each of the § 3553(a) factors. United States v. Talley, 431 F.3d 784, 786 (11th Cir. 2005) ("[N]othing in Booker or elsewhere requires the district court to state on the record that it has explicitly considered each of the section 3553(a) factors or to discuss each of the section 3553(a) factors.") (quotation marks omitted). The district court's acknowledgment that it considered the defendant's arguments and the factors in § 3553(a) is sufficient. Id.

The district court's consideration of Swann's lack of remorse was not improper. A district court is permitted to consider lack of remorse in its § 3553(a)

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[128]Swann claims these were improper factors (1) for not varying even lower than 102 months from the 151 to 188 months guidelines range and alternatively (2) for varying upward to 102 months from the 51 to 63 months guidelines range.

[129]The § 3553(a) factors are: (1) the nature and circumstances of the offense and the history and characteristics of the defendant; (2) the need to reflect the seriousness of the offense, to promote respect for the law, and to provide just punishment for the offense; (3) the need for deterrence; (4) the need to protect the public; (5) the need to provide the defendant with needed educational or vocational training or medical care; (6) the kinds of sentences available; (7) the Sentencing Guidelines range; (8) pertinent policy statements of the Sentencing Commission; (9) the need to avoid unwanted sentencing disparities; and (10) the need to provide restitution to victims. 18 U.S.C. § 3553(a). We review de novo whether the district court considered an impermissible factor. United States v. Velasquez Velasquez, 524 F.3d 1248, 1252 (11th Cir. 2008).

analysis as to several factors, such as the characteristics of a defendant, the need to promote respect for the law, and the need to protect society. See United States v. Kapordelis, 569 F.3d 1291, 1318 (11th Cir. 2009) (stating "district court did not abuse its discretion by considering . . . [defendant's] lack of remorse" and affirming where district court found "upward variance was necessary to protect society because it was unlikely that [the defendant] would be rehabilitated given his attitude and lack of remorse"), cert. denied, 130 S. Ct. 1315 (2010); United States v. Cruzado-Laureano, 527 F.3d 231, 236-37 (1st Cir. 2008) (upholding consideration of lack of remorse as a permissible factor under § 3553(a)(1) as to the characteristics of a defendant, under § 3553(a)(2)(A) to promote respect for the law, and under § 3553(a)(2)(C) to protect the public from future crimes of the defendant). The district court also did not err in considering Swann was a public official, another characteristic of the defendant. See 18 U.S.C. § 3553(a)(1).

Swann further argues there was an unwarranted disparity between his 102-month sentence and those of his co-defendants Bobby Rast (51 months), Danny Rast (41 months), and Dougherty (51 months). Swann claims Bobby and Danny Rast received lower sentences because the district court sentenced them using the bribe amount (not the net benefit amount) in calculating their guidelines ranges

under § 2C1.1.[130] Swann argues that in using the net benefit in his case, the district court created sentencing disparity with similarly situated co-defendants because it had utilized different methods to calculate the guidelines range for various co-defendants. This ignores a number of factors that differentiate Swann from these particular co-defendants: (1) Swann was a public official and the private contractors were not, (2) Swann took bribes not just from the Rast defendants but also from the Pugh and Dougherty defendants, (3) the district court found Swann not credible in stating he did not understand the home remodeling work was intended to influence him, and (4) Swann showed a lack of remorse. Simply put, Swann has not proved he and these particular co-defendants are similarly situated.

As to FWDE and Dougherty, Swann also argues they received lower sentences because the district court applied an earlier edition of the sentencing guidelines. As to FWDE, Swann is incorrect because the PSI and the district court applied the 2003 guidelines to calculate FWDE's sentence. As to Dougherty, the 2000 guidelines were used. Under the 2000 guidelines, a $20 million net benefit resulted in a 16-level increase, rather than the 22-level increase in the 2003 version. Compare U.S.S.G. § 2F1.1(b)(1)(Q), (R) (2000) with § 2B1.1(b)(1)(L),

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[130]Judge L. Scott Coogler conducted the *Swann* and *Wilson* trials and sentenced Swann on March 30, 2007, the Rast defendants on March 29, 2007, and the Dougherty defendants on March 28, 2007. Different judges sentenced McNair and PUGH.

(M) (2003).[131] That a district court may have used the wrong version of the guidelines in a co-defendant's separate sentencing (to the benefit of a defendant) does not make another defendant's sentence under the correct version unreasonable in any way. In addition, the Dougherty defendants' profits were much lower than the Pugh and Rast defendants, who also gave bribes to Swann. Also, Swann ignores the fact that the district court granted a downward variance to 102 months from his advisory guidelines range of 151-188 months. Swann has shown no reversible error in his 102-month sentence based on disparity with his co-defendants.

E. Swann's Fine

The district court ordered that Swann pay a fine of $250,000, based on a fine guidelines range of $20,000 to approximately $84 million. See U.S.S.G. § 5E1.2. Swann argues that the district court erred in not considering any of the fine guidelines factors, including Swann's ability to pay.

The sentencing guidelines require courts to "impose a fine in all cases, except where the defendant establishes he is unable to pay and is not likely to become able to pay any fine." U.S.S.G. § 5E1.2(a). The defendant has the burden

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[131]With a 16-level increase, Swann's total offense level would be 28, which, with a criminal history category of I, would yield an advisory guidelines range of 78 to 97 months under the 2000 guidelines. For Dougherty, the PSI used the 2000 edition, and, apparently, there was no objection by the government.

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of proving inability to pay a fine. United States v. McGuinness, 451 F.3d 1302, 1307 (11th Cir. 2006).[132]

After determining a fine is appropriate, the district court shall consider these factors in fixing the amount of the fine:

> (1) the need for the combined sentence to reflect the seriousness of the offense (including the harm or loss to the victim and the gain to the defendant), to promote respect for the law, to provide just punishment and to afford adequate deterrence;
> (2) any evidence presented as to the defendant's ability to pay the fine (including the ability to pay over a period of time) in light of his earning capacity and financial resources;
> (3) the burden that the fine places on the defendant and his dependents relative to alternative punishments;
> (4) any restitution or reparation that the defendant has made or is obligated to make;
> (5) any collateral consequences of conviction, including civil obligations arising from the defendant's conduct;
> (6) whether the defendant previously has been fined for a similar offense;
> (7) the expected costs to the government of any term of probation, or term of imprisonment and term of supervised release imposed; and
> (8) any other pertinent equitable considerations.

U.S.S.G. § 5E1.2(d).

"While some circuits require that the district court make specific findings, we have adopted the less rigid approach, and do not require the sentencing court to make specific findings of fact with respect to the Sentencing Guideline factors as

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[132]This Court reviews a district court's decision that a defendant can pay a fine for clear error. United States v. Gonzalez, 541 F.3d 1250, 1255 (11th Cir. 2008).

long as the record reflects the district court's consideration of the pertinent factors prior to imposing the fine." United States v. Hernandez, 160 F.3d 661, 665-66 (11th Cir. 1998) (citations and quotation marks omitted); see United States v. Lombardo, 35 F.3d 526, 530 (11th Cir. 1994) (holding that where the record contains sufficient information with respect to the factors to permit us to find that the district court did not clearly err in imposing or in setting the amount of the fine, we will not reverse merely because the district court failed to make specific findings on each of the factors). "Explicit findings on these factors are not required . . . ." United States v. Khawaja, 118 F.3d 1454, 1459 (11th Cir. 1997). We have applied this rule to uphold a fine where the district court did not make explicit findings of fact as to the defendant's ability to pay. United States v. Long, 122 F.3d 1360, 1367 (11th Cir. 1997). However, "[i]f the record does not reflect the district court's reasoned basis for imposing a fine, we must remand the case so that the necessary factual findings can be made." United States v. Gonzalez, 541 F.3d 1250, 1256 (11th Cir. 2008) (quotation marks omitted).

Swann claims the PSI said Swann could pay a fine within the guidelines range or make a lump-sum restitution but not both. That is not correct. We quoted the PSI earlier as it (1) says that Swann could pay a fine or make a lump-sum payment toward restitution shortly after sentencing with liquid assets, and then (2)

states it does not determine Swann's future ability to pay a fine or further restitution on an installment basis.

Furthermore, the district court adopted the factual findings in the PSI, which included numerous findings relevant to Swann's current income and future earning capacity. The PSI set forth Swann's net worth, educational background, work history, and monthly income of $6,729, yielding $80,748 annually. Swann holds two bachelors degrees, one in civil engineering and one in textile management, and a masters degree in sanitary engineering. Swann has retired from Jefferson County but submitted no evidence to show he had tried and failed to gain employment. Swann already has an annual retirement income of $80,748 even without social security or future wages from working.[133]

Although Swann makes two mortgage payments on the two Winwood Drive residences and pays over $658 in monthly home utility, lawn, pest control, and maintenance expenses, the homes are in his wife's name and she lives there too. The record shows Swann can pay at least some fine. The record also shows Swann's counsel argued for a reduced fine and the district court considered the pertinent factors. As the district court reviewed the PSI before imposing the fine and heard argument of counsel about the fine, "we infer without hesitation that the

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[133]The PSI, dated February 5, 2007, did not show Swann drawing any social security. In 2010, Swann is now 64.

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district court considered the pertinent factors prior to imposing the fine." Khawaja, 118 F.3d at 1459.

Although Swann has shown no clear error in the district court's imposition of some fine, the record is not sufficient to permit us to say there is no error in the amount of the fine. As to the $250,000 amount, the district court remarked: "I don't know whether that's collectable or not. I don't think it is . . . ." We cannot glean from the record the basis for this statement or how the court determined that the fine should be $250,000 as opposed to $150,000 or $750,000, especially given the fine guidelines range goes up to $84 million. Thus, we vacate and remand as to the amount of the fine. See Khawaja, 118 F.3d at 1459-60 (requiring remand where record does not reflect court's reasoned basis for amount of $175,000 fine).

XIV. PUGH'S SENTENCE

PUGH was sentenced to 60 months' probation on four bribery conspiracy counts (Counts 1 involving McNair, 51 involving Swann, 75 involving Wilson, and 78 involving Barber), nine substantive bribery counts (Counts 15, 61-63, 71, 83-86), and eleven counts of honest services mail fraud (Counts 90-100). The district court ordered PUGH to pay a $19.4 million fine, a special assessment of $9,600, and $239,652 in restitution to the Jefferson County Commission. On appeal, PUGH challenges only the fine.

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A. Presentence Report

The PSI stated that PUGH performed nearly $200 million worth of construction work for sewer projects for Jefferson County between 1997 and 2003 and that a majority of this work was for JCESD-related projects. The PSI listed bribes given by PUGH to McNair, Swann, Chandler, Barber, and Wilson, totaling $395,514.[134] The PSI stated that PUGH had this net income: $19.09 million in 2001, $15.32 million in 2002, $9.10 million in 2003, $2.94 million in 2004, and $3.67 million in 2005. PUGH's federal tax returns reported net income of $17.89 million in 2001, $14.95 million in 2002, $8.10 million in 2003, $3 million in 2004, and $3.97 million in 2005.

According to the PSI, PUGH received more than $109 million in JCESD contracts related to the bribery conspiracy from August 1999 to June 2003. This $109 million reflected only PUGH's portion of its joint venture work for Jefferson County. The PSI determined that from 1999 to 2002 PUGH earned an average

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[134]This $395,514 in restitution consists of PUGH's payments of:

(1) $192,000 to McNair ($175,000 for construction, remodeling, and cash for his studio and $17,200 installation of hand railings for his studio);

(2) $149,102 to Swann ($140,680 for Guthrie Landscaping, $7,422 for installation of waterfall and pond, and $1,000 in gift certificates to Alabama Book Smith);

(3) $610 to Chandler for condominium rental at Pelican Beach Condominiums;

(4) $49,102 to Barber ($47,927 for McCalla, Alabama land, $148 for casino trip to Vicksburg, Mississippi, $546 resort trip to Biloxi, Mississippi, and $481 trip to Gulf Shores, Alabama); and

(5) $4,500 to Wilson (UAB scholarship).

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profit of 43.61% and that PUGH's profit from County contracts was $47.92 million.[135]

The PSI: (1) assigned PUGH a base offense level of 10, pursuant to U.S.S.G. § 2C1.1(a) (2003); (2) added 2 levels because the offense involved more than one bribe, pursuant to § 2C1.1(b)(1); and (3) added 22 levels because the net profit to PUGH was between $20 million and $50 million, pursuant to §§ 2C1.1(b)(2)(A) and 2B1.1(b)(1)(L),[136] yielding a total offense level of 34.[137] Under the § 8C2.4(d) table, this total offense level of 34 required a base fine amount of $28.5 million.

However, the PSI determined PUGH's pecuniary gain under § 8C2.4(a)(2) was its $47.92 million profit from the County contracts. Under § 8C2.4(a), the base fine amount became $47.92 million, because PUGH's $47.92 million pecuniary gain was greater than the $28.5 million amount from the § 8C2.4(d) fine table and greater than the pecuniary loss of $319,425 suffered by the victim

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[135]PUGH later filed for Chapter 11 bankruptcy. At the time PUGH's PSI was prepared, the bankruptcy case was pending. In April 2008, the bankruptcy court confirmed PUGH's proposed plan of liquidation. See In re Roland Pugh Constr., Inc., No. Bk-06-71769-CMS-11, 2007 WL 509225 (Bankr. N.D. Ala. Feb. 12, 2007). The bankruptcy court ordered PUGH to establish a trust account in the amount of $19,409,600, which would be used to pay the federal criminal fine assessed in the present case. In re Roland Pugh Constr., Inc., No. Bk-06-71769-CMS-11 (Bankr. N.D. Ala. Apr. 21, 2008).

[136]The PSI listed the table section as "§ 2B1.1(b)(1)(M)" but applied the enhancement listed in § 2B1.1(b)(1)(L) of that table, which provides a 22-level enhancement for amounts between $20 million and $50 million.

[137]The PSI for PUGH used the November 1, 2003 edition of the Sentencing Manual.

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County.

The PSI determined PUGH's culpability score was 7 under § 8C2.5, because (1) PUGH had 50 or more employees and (2) individuals with substantial authority (Board Chairman Roland Pugh, CEO Grady Pugh, and President Yessick) participated in the offenses. This culpability score of 7 resulted in a minimum fine multiplier of 1.4 and a maximum multiplier of 2.8, under § 8C2.6. Based on these multipliers and the base fine of approximately $47.92 million, the PSI calculated the guidelines fine range to be $67,089,446.48 to $134,178,892.96.

The statutory maximum fine was $95,842,066, pursuant to 18 U.S.C. § 3571(b), (d) (i.e., double the pecuniary gain of $47.92 million). Thus, the PSI concluded PUGH's advisory guidelines fine range was $67,089,446 to $95,842,066.

The PSI stated PUGH appeared unable to pay a fine within that $67 million to $95 million guidelines range and recommended the district court reduce the fine if it determined PUGH was unable to pay the minimum fine amount. The PSI noted that, under § 8C3.4, the guidelines fine could be offset by 67.75%, because (1) PUGH was a closely held organization, (2) three of PUGH's owners (Roland Pugh, Yessick, and Grady Pugh) whose total interests amounted to 67.75% had already been fined for the same offense conduct, and (3) one owner (Andy Pugh)

had a 32.25% interest and was not convicted in the bribery scheme.

PUGH objected to the PSI's calculation of profits or pecuniary gain. PUGH argued there was no evidence that PUGH obtained any contracts, or the $47.92 million in profits, because of its bribes. PUGH contended its base offense level should be based on the $129,138.81 amount of bribes PUGH paid, which would result in a total offense level of 22 and a base fine of $1.2 million.[138]

B. Supplemental Briefing Before Sentencing

The district court ordered briefs addressing the fine amount. PUGH's brief reiterated its challenge to the PSI's calculations, arguing there was no evidence the County suffered any pecuniary loss from the bribery scheme.

The government recalculated PUGH's pecuniary gain based on a job-by-job analysis of PUGH's contracts with the County. The government submitted a list of bribery and post-bribery jobs, which showed the revenue earned, gross profit, gross profit percentage, and "improper gain" for each job. The government calculated an average unit price for items used by PUGH in eight of its projects over a 20-month period from 2001 to 2002 and then compared those prices for this time period to the average unit price PUGH charged the County for these items during the bribery

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[138]PUGH's total did not use certain amounts that were included in the PSI, such as (1) $60,696 that PUGH claimed Swann repaid to PUGH, (2) $37,000 worth of unperformed work on Swann's home that PUGH paid Guthrie for, and (3) $167,679 in items PUGH gave to McNair.

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period of 1997 to 2001. The government determined PUGH's improper gain was $24.667 million, while PUGH made about $20 million in "normal profit." Based on the improper gain of $24.667 million and applicable multipliers, the government concluded PUGH's guidelines fine range was $34.533 million to $69.067 million.[139]

PUGH's reply brief then challenged the government's recalculation for failing to account for a price increase that occurred in 2003 and for using artificially low post-bribery prices in 2001 and 2002. PUGH claims this skewed the government's analysis of PUGH's profits to reflect greater profits during the bribery period. PUGH also claimed that, to prove PUGH profited from the bribery scheme, the government had to show that PUGH's bribes caused the PRC to limit the number of cured-in-place contracts.

C. Sentencing Hearing

The district court conducted a lengthy sentencing hearing, including two days of evidence and a partial day of argument on evidence assessment and factual

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[139]When comparing the unit prices of bribery-period and post-bribery jobs, the government's analysis used only PUGH's sewer rehab jobs — and not other jobs such as wastewater treatments, trunk sewer jobs, and annual contracts — so that the analysis would reflect an "apples-to-apples" comparison. FBI Agent Tom Mayhall stated PUGH earned about $55 million from other work from the County, which was not included in the improper gain calculation.

Although the government points out PUGH continued to make some bribes in 2001 and well into 2002, the majority of PUGH's bribes were given prior to December 31, 2000, and the government thus compared the profit before the end of 2000 with that in 2001-02.

determinations. The government presented evidence as to the bribes PUGH paid and the revenue and profits PUGH earned from its County contracts during the bribery scheme. For example, FBI Agent Tom Mayhall calculated PUGH's improper gains by comparing (1) the average unit price of items on invoices for sewer rehab jobs PUGH submitted to the County during the bribery scheme through the end of 2000 with (2) the average unit price of items on eight sewer rehab jobs PUGH performed in 2001 and 2002. Based on this comparison, Agent Mayhall concluded PUGH's improper gain was approximately $24.667 million.[140] Agent Mayhall testified about PUGH's bribes to County employees and the benefits PUGH received from its County contracts and as a result of the PRC's decisions. PUGH maintained that the increase in profits was not substantial and was based on areas of PUGH's business other than its work for the County.

The district court rejected the government's pricing analysis, finding that the evidence failed to show the line items in PUGH's contracts were affected by the bribes PUGH paid. The court found PUGH paid bribes to County employees because PUGH was "afraid of what might happen if [it] did not do so" and that

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[140]Agent Mayhall testified PUGH made about $44.536 million total gross profit on about $109 million in revenue on JCESD rehab jobs during the bribery period. Mayhall testified that of this $44.536 million total gross profit, about $19.869 million was a result of PUGH's normal profit margin, and the remaining $24.667 million was therefore improper gain. Mayhall added that PUGH had about $22 million in cash on hand, which earned about $77,000 per month in interest, and bankruptcy creditors claimed less than $200,000 of that cash.

"what might have happened is that [PUGH] might have lost all its contracts, those current and future, with the County and the profits associated with those contracts."[141] The court further found, for example, "that the Swann bribes . . . were designed to ensure that [PUGH] stayed in good favor with Mr. Swann so that [PUGH] would have and continue to have the opportunity to receive contracts and be paid on contracts from Jefferson County." The court later stated "there [was] an expectation that if you do business with the County, you're expected to do this. And I think that the reason [PUGH] did it was because others were doing it and it wanted to protect the contracts it had."

The court also found that, beginning in August 1999, PUGH started making bribes "in order to maintain its standing in the revenues and profits realized in the contracts awarded by Jefferson County; and, indeed, they became extremely high profits during that bribe period."

The district court found that PUGH made its first bribe in August 1999 and its final bribe in September 2002. The court found that (1) from September 1, 1999 to December 31, 2002, PUGH benefitted from the bribes, (2) during this 1999-2002 period PUGH generated from its County contracts a total profit of

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[141] Judge David R. Proctor conducted the *Barber* trial and sentenced the Pugh defendants.

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$43,985,869,[142] and (3) given PUGH's $107,887,832 in revenues, this $43,985,869 profit was a 40.77% profit margin during that period. Using that profit to calculate the base fine amount, the district court determined the guidelines fine range was $61,580,216 to $87,971,738. See U.S.S.G. §§ 8C2.5, 8C2.7. After considering PUGH's ability to pay, the district court reduced the fine to $21 million. The district court then gave a $1.6 million offset for fines paid by individuals who owned at least 5% of PUGH, which resulted in a final fine of $19.4 million.

D. Challenges to $19.4 Million Fine

On appeal, PUGH primarily raises objections to the manner in which the district court arrived at the $19.4 million fine, but none of them has merit. The PSI contained extensive financial information about PUGH's revenue and profits. The district court's fact-findings are supported by the record and undisputed facts in the PSI, and PUGH has shown no clear error in any of them. PUGH also has shown no legal error in any of the district court's calculations regarding the advisory guidelines fine range or in any other matters under the sentencing guidelines.

PUGH's brief as to the fine mainly resorts to claiming PUGH did not have

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[142]The court found, "[t]he September 1, '99 date signifies the first contract awarded to Pugh by the County after the August 1999 concrete work was done for McNair." The court stated: "I have not attributed any profits made by Pugh in 2003, although the government may well have a good argument that profits in 2003 and revenues in 2003 continued to be effected [sic] because of the bribes paid in '99, 2000, 2001 and 2002." The court added: "Likewise, I have not attributed any pre-September 1999 gain to Pugh Construction based upon the bribe scheme that was in place and paid by other contractors."

adequate notice of certain arguments or adequate opportunity to respond. The record refutes those claims too. The parties submitted numerous sentencing briefs and offered a substantial amount of evidence as to PUGH's revenue and profits. PUGH claims it did not know the district court would consider that the bribes were paid out of fear of losing contracts or future payments thereon. However, PUGH's counsel, in arguing that the bribes were unrelated to the PRC, relied on the fact that the contractors feared what would happen if they did not pay bribes:

> [L]et me explain to [the court] why I think the contractors make such payments to public officials.
> . . . .
> [T]he best testimony that I heard about that was from Mr. William Dawson. Mr. Dawson was an engineer, independent, who was doing work for Jefferson County. . . . Mr. McNair invited him to come by the studio. And when he got there, Mr. McNair said, Mr. Dawson I've never asked you for anything before, but what I would like is for you to buy me an audio-visual equipment, some sort of a projector or something of that nature, and he had a book. And he said this is the model and this is what I would like to have. Well, Mr. Dawson didn't want to do that. And he went home and he thought about it and finally he did it. And he did it because he was afraid of what Chris McNair would do to him if he didn't.
>
> So when these people come and put the touch on a contractor or someone, I think it's the fear of the unknown.

In closing arguments, PUGH's trial counsel maintained that any benefits PUGH provided to the County employees were given purely out of friendship. PUGH cannot now claim it had an inadequate opportunity to explain its motivation in

paying bribes or to prepare for the ultimate approach the district court took in deciding on the amount of the fine. If anything, counsel's argument succeeded in reducing the amount of the fine imposed to well below the advisory guidelines range of $61,580,216 to $87,971,738. PUGH has shown no reversible error in any procedural aspects of the sentencing proceedings before the district court in PUGH's case.

XV. CONCLUSION

We affirm all of the defendant-appellants' convictions except PUGH's conviction on Count 75, which we reverse. We affirm McNair's sentence. We affirm Swann's sentence except as to the amount of the fine. While there was no legal error in the imposition of some fine for Swann, we vacate and remand as to the amount of the fine. As to PUGH's sentence, we (1) affirm the district court's findings of fact as supported by the record; and (2) conclude there was no error in the district court's calculations under the sentencing guidelines; but (3) in light of the reversal of its Count 75 conviction, we vacate PUGH's sentence and remand for resentencing without Count 75.[143]

AFFIRMED IN PART, REVERSED IN PART, VACATED AND

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[143]PUGH was convicted and sentenced on 24 counts of conviction, and the reversal on Count 75 does not appear to impact its overall sentence. However, in an abundance of caution, we vacate PUGH's sentence and remand for resentencing by the district court because, at a minimum, Count 75 must be removed.

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REMANDED IN PART.

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[PUBLISH]

IN THE UNITED STATES COURT OF APPEALS

FOR THE ELEVENTH CIRCUIT

FILED
U.S. COURT OF APPEALS
ELEVENTH CIRCUIT
AUGUST 5, 2011
JOHN LEY
CLERK

No. 10-11076

D.C. Docket No. 7:08-cr-00245-LSC-PWG-1

UNITED STATES OF AMERICA,

Plaintiff - Appellee,

versus

LARRY P. LANGFORD,

Defendant - Appellant.

Appeal from the United States District Court
for the Northern District of Alabama

(August 5, 2011)

Before MARCUS and ANDERSON, Circuit Judges, and MILLS,* District Judge.

MARCUS, Circuit Judge:

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* Honorable Richard Mills, United States District Judge for the Central District of Illinois, sitting by designation.

In this political corruption case, Larry P. Langford, formerly a Commissioner for Jefferson County, Alabama and Mayor of Birmingham, Alabama, appeals following his convictions for multiple counts of bribery, conspiracy, money laundering, mail and wire fraud, tax fraud, and criminal forfeiture. Langford broadly argues that: (1) the evidence was insufficient to support his convictions for mail and wire fraud; (2) the district court fatally erred in some of its evidentiary rulings; (3) the district court wrongfully charged the jury about the bribery statute; and, finally, (4) the district court mistakenly denied his post-voir-dire motion for a change of venue. After thorough review, we affirm.

I.

In November 2008, a federal grand jury sitting in the Northern District of Alabama returned a 101-count superseding indictment against Larry P. Langford, William B. Blount, and Albert W. LaPierre. Langford was charged in 61 of those counts, involving bribery, 18 U.S.C. § 666(a)(1)(B) (Counts 1, 7, and 10-36); conspiracy, 18 U.S.C. § 371 (Count 6); money laundering, 18 U.S.C. § 1957 (Counts 3, 4, 5, and 9); mail fraud, 18 U.S.C. §§ 1341, 1346, and 2 (Counts 64-68); wire fraud, 18 U.S.C. §§ 1343, 1346, and 2 (Counts 69-86); filing false personal income tax returns, 26 U.S.C. § 7206(1) (Counts 87-89); and criminal forfeiture (Count 99). The charges all arose out of the basic allegation that, while

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Langford was serving as an elected member of the Jefferson County Commission, and as the President of that body, he received more than $240,000 in cash, clothing, and jewelry from Blount (often through an intermediary, LaPierre), in exchange for ensuring that Blount's investment firm was awarded a series of profitable contracts with Jefferson County. Blount pled guilty to conspiracy and bribery charges, and LaPierre pled guilty to conspiracy and tax fraud charges. They both became government witnesses. Langford, however, went to trial.

Before trial, Langford moved for a change of venue from the Southern Division of Alabama's Northern District, in Birmingham, to the Western Division of Alabama's Northern District, in Tuscaloosa. He based his request on "extensive" publicity, claiming that "[t]he primary print media in the Southern Division, the Birmingham News, has printed numerous articles about this case from well before the indictment to the present." Without objection from the government, the district court granted the motion and moved the trial, in accordance with Langford's request, to Tuscaloosa.

At the conclusion of extensive voir dire, Langford requested still another change of venue, arguing this time that based on the responses of the venire panel, a small number of whom admitted to hearing about the case before trial, he wanted to move the trial to "some place where they haven't heard about this at all." The

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district court denied the motion, and Langford proceeded to trial in Tuscaloosa. Thereafter, he was convicted on all counts.

The essential facts adduced at trial were these. Larry Langford took office as a County Commissioner for Jefferson County, Alabama in the fall of 2002. Soon thereafter, he was selected by his fellow commissioners as President of the Commission and, in that capacity, served as head of the Finance Committee. He remained in that role until he was elected Mayor of Birmingham in the fall of 2007.

William Blount had at one time been the Chairman of the Alabama Democratic Party, and had known Langford for twenty-five to thirty years, since Langford was first elected to the City Council in the City of Birmingham. Blount assisted in Langford's campaign for election as a County Commissioner. Blount also was a partner in Blount-Parrish & Company ("Blount-Parrish"), an investment banking firm that specialized in the underwriting and marketing of municipal bonds. An underwriter buys bonds from the municipality and then sells them to the market.

Blount-Parrish did some work for Jefferson County prior to 1998, but did not participate in any Jefferson County bond offerings from about 1998 to 2002. However, soon after Langford took office as a County Commissioner, a meeting

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was held in January, 2003 between Langford, Blount, Norm Davis (an individual Langford identified as the County's financial advisor), and Steve Sayler (Director of Finance for Jefferson County before and during Langford's term as President of the County Commission). According to Sayler, the defendant Langford introduced Davis and Blount as "the two individuals that he would be taking a lot of advice from for financial transactions at the County."

The policy in Jefferson County was that County Commissioners could pick the firms to participate in the County's financial transactions. Blount sought out Jefferson County work for his investment banking firm, Blount-Parrish, from Langford. Langford, in turn, selected Blount-Parrish to participate in many of the County's financial transactions. In fact, during Langford's term as President of the County Commission (2002-2007), Blount-Parrish: (1) underwrote a series of bonds issued by the Jefferson County Commission, some of which were general obligation and some sewer revenue;[1] (2) worked on interest rate swap deals; (3) worked on privatizing landfills owned by the County; (4) worked on remarketing several weekly rate reset bonds for the County; (5) assisted with the financing for

[1] "General obligation" bonds require that all of the County's revenues and resources are obligated to pay back the debt, while "sewer revenue" bonds require only that revenue of the sewer system is obligated to pay back the debt.

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passing a sales tax for the County; and (6) worked on the attempted acquisition of other sewer systems.

Thus, for example, on January 28, 2003, the Commission had scheduled on its agenda the need to establish a "financing team" for the issuance of "general obligation warrants of the County."[2] Blount-Parrish was designated the "senior underwriter" of the deal, receiving 45 percent of "the underwriting liability." In March, the deal (a $94 million transaction) was officially approved by the Commission. For its part, Blount-Parrish received $282,000 in fees.

Blount-Parrish was included in the County's next major financial transaction, a $1.17 billion sewer rate interest swap and bond refinancing that closed on May 1, 2003. Blount solicited County Commissioner Langford to keep Blount-Parrish as the remarketing agent in these transactions; soon thereafter Langford and other Jefferson County Commissioners voted, on April 22, 2003, to approve a resolution authorizing these bonds. Blount-Parrish was included in at least five other Jefferson County interest rate swap transactions in 2003 and 2004.[3] For these transactions, Blount-Parrish received fees of $2,600,000, $225,000, $728,500, $842,000, and $842,000, respectively. All told, Blount-Parrish was

[2] A "warrant" is another name for a debt obligation, like a bond.

[3] Blount-Parrish participated in Jefferson County interest rate swap transactions in July 2003 and in November 2003, and in three swap transactions in June 2004.

paid some $7 million in fees related to transactions involving Jefferson County, which, according to Langford's Presentence Investigation Report ("PSI"), yielded a "net benefit" to Blount-Parrish of about $5.5 million.

Blount-Parrish's fees for these transactions with the County were disclosed some of the time only to Commissioner Langford. For example, on March 27, 2003, the Commission approved "the issue of about one billion dollars worth of sewer revenue refunding warrants to pay off old sewer debt." An agreement between JPMorgan Chase Bank and the County regarding the deal is dated March 28, 2003. It was signed by Langford on behalf of the County and purported to list the "fees" paid to various entities as a result of the transaction. Notably, Blount-Parrish was not listed as one of those entities. Instead, a separate letter was sent to Langford alone disclosing that Goldman Sachs -- another participant in the transaction -- "intends to pay [an unspecified amount of] consulting fees in connection with [the] swap to Blount Parrish." This method of "disclosure" -- whereby fees Blount-Parrish received from the County were "disclosed" in a separate letter addressed solely to Commissioner Langford, referred to as a "side letter" -- was the favored method of doing business for many of the deals. Indeed in one deal that generated $2,600,000 for Blount-Parrish, the firm's fees were "disclosed" only in a "side letter."

On still another occasion in 2003, James Lister of Lehman Brothers talked with Blount to discuss potential business with the County. Blount told Lister he had "a very good relationship with [Commissioner Langford] and . . . something to the effect . . . that he had or controlled three votes on the commission." When the issue of fee disclosure came up later, however, Lister explained his firm's policy that any fees paid to a third-party "had to be disclosed in the documentation." Blount said "he had to check with [Commissioner Langford] to find out whether that policy would be acceptable." Blount subsequently inquired whether "what he described as a side letter, something that would not be actually in the documentation but would be signed by [Commissioner Langford] acknowledging the fee, whether that would be satisfactory." After Lister said no, he had no further communication with Blount.

During Langford's term as President of the Jefferson County Commission, William Blount gave Langford approximately $150,000 in cash and more than $90,000 worth of clothing and jewelry. As for the jewelry and clothing, Blount would purchase items for Langford that caught the Commissioner's eye while he was shopping. Among other things, Blount bought Langford a $1,600 suit from Oxxford Clothing store in New York on July 25, 2003; over $14,800 worth of jewelry from Bromberg's jewelry store on October 1, 2003 and December 29,

2004; a $1,110 sweater from Turnbull and Asser in New York on December 10, 2003; a nearly $12,000 watch from Tourneau in New York on November 9, 2004; and nearly $8,000 worth of clothing in New York from Ermenegildo Zegna on April 14, 2004, Ferragamo on July 11, 2004 and November 7, 2004, and Century 21 on July 13, 2004. Whenever Langford wanted an item while shopping with Blount, he would pick it out and place it on the table, whereupon Blount would buy it for him. Blount made some of these purchases when he and Langford were traveling in New York for Langford to meet with bankers, lawyers, and other public financial professionals involved in county bond business. The items were then shipped from the New York stores to Langford's Jefferson County office.[4]

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[4] As part of the mail fraud counts, Count 64 involved the shipment from New York of the $1,110 sweater from Turnbull and Asser in December 2003; Count 65 involved the shipment from New York of $3,290 in clothing from Zegna in April 2004; Count 66 involved the shipment from New York of $2,796 in clothing from Ferragamo in July 2004; Count 67 involved the shipment from New York of $1,854.96 in clothing from Century 21 in July 2004; and Count 68 involved the shipment from New York of the approximately $12,000 watch from Tourneau in November 2004. As part of the wire fraud counts, Counts 69-86 related to the payments Blount or LaPierre made with an American Express credit card on Langford's behalf at Remon's Clothiers or Bromberg's jewelry store in Birmingham on April 29, 2004 in the amount of $2,133; on May 26, 2004 in the amount of $2,707.56; on September 8, 2004 in the amount of $4,050; on October 13, 2004 in the amount of $4,250; on November 19, 2004 in the amount of $1,662.60; on December 29, 2004 in the amount of $11,750.40; on June 30, 2005 in the amount of $3,547; on October 5, 2005 in the amount of $2,000; on October 6, 2005 in the amount of $5,000; on October 26, 2005 in the amount of $ 2,500; on December 21, 2005 in the amounts of $1,800 and $2,300; on March 8, 2006 in the amount of $1,876; on May 25, 2006 in the amount of $1,000; on June 20, 2006 in the amount of $1,047.96; on September 13, 2006 in the amount of $1,500; on December 8, 2006 in the amount of $1,000; and on May 17, 2007 in the amount of $7,536.

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The cash transfers were typically made through an intermediary, Al LaPierre. LaPierre was a long-time associate of both Langford's and Blount's, had been the executive director of the Alabama Democratic Party, and was working at all relevant times as a lobbyist in Jefferson County. In fact, Blount had hired LaPierre to be Blount's "eyes and ears" in Jefferson County. Whenever Langford needed money, he would alert LaPierre, who would, in turn, tell Blount. Thus, for example, in 2002, Al LaPierre informed Blount that Langford was "in very dire need of money to pay off some clothing bills," and that Langford had asked LaPierre to arrange a loan for him. Langford had made a number of unsuccessful efforts to obtain a loan on his own. Blount and Langford also discussed the issue directly. Blount then "talked to Caryn Cope, a friend of [his], who was the Chief Credit Officer at Colonial Bank at the time, and asked if they would be willing to consider making the loan to Commissioner Langford." Despite Langford's "lower credit score," Cope approved the loan because "Bill Blount made [her] feel comfortable" about it. It was a six-month loan for $50,000.

In early 2003, after Langford's Colonial Bank loan came due, Commissioner Langford went to LaPierre for more financial help because Langford was late on repaying the $50,000 Colonial Bank loan. LaPierre explained to Langford that he did not have "that type of money," but would make

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a call. LaPierre in turn called Blount, who arranged for LaPierre to take out a loan for $50,000 from Colonial Bank in LaPierre's name in order to pay off the initial $50,000 loan Langford had taken from Colonial Bank. Blount then sent LaPierre a check for $50,000, which LaPierre used to pay off his loan. When Blount was asked why he did not pay off Langford's loan himself, Blount testified, "I knew I could not do it because I was either going to be doing work for Jefferson County or perhaps already had."

In another instance, in June 2003, County Commissioner Langford went to LaPierre seeking still more financial help to pay off $69,000 in accumulated debt -- which Langford owed for dental work, as well as for other bills. LaPierre promptly called Blount and, shortly thereafter, Blount sent LaPierre a check for $69,000; LaPierre turned around and wrote Langford a check for the same amount. Even though LaPierre did not expect the money ever to be repaid, he wrote the word "loan" on the memo line of the check. In August 2004, Blount wrote yet another check to LaPierre for $30,000 to help Langford with an "income tax problem that had to be paid." Blount wrote on the check that this too was for loan proceeds, even though it was not a loan. On August 12, 2004, LaPierre in turn wrote a check to Langford in the amount of $30,000. LaPierre falsely identified the transfer as a "loan" on the check itself.

In connection with these so-called "loans," Blount asked a lawyer he knew to draft promissory notes that LaPierre had Langford sign. Three notes were made to appear as if there were in fact three "loans" that LaPierre had extended to Langford.[5] The notes were prepared, according to Blount, "because we didn't want to -- we did not want it to appear as though money was being given directly from Mr. LaPierre to [Commissioner] Langford." Just like the testimony offered by LaPierre, Blount testified at trial that despite the written notes, these transactions were not really loans -- "they [were not] notes anybody expected to have paid back." There was no expectation that the Commissioner would ever repay them. Out of all the cash Langford received from Blount through LaPierre (a total of approximately $150,000, paid out between early 2003 and August 2004), Langford returned $5,000 in May 2008.

Blount unambiguously testified that he paid the cash and gave valuable clothing and jewelry to Langford as a series of bribes to a public official. Specifically, he said, he bribed Commissioner Langford "by providing funds to Al

[5] According to Blount's testimony, the first note related to the $50,000 that LaPierre had paid to Langford for Langford to pay off his Colonial Bank loan; the second related to the $69,000 that LaPierre had paid to Langford for Langford to pay off dental and other bills; and the third related to the $30,000 that LaPierre had paid to Langford in order to help Langford pay his income taxes. While the original notes did not mention any property as collateral, the notes were later amended to reflect that Langford had an interest in property that was being pledged as collateral for the notes.

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LaPierre, who gave them to [Commissioner] Langford, and by buying a number of gifts, jewelry, clothing for [Commissioner] Langford." As for why he did it, Blount bluntly explained that "I wanted to make absolutely certain that Blount-Parrish was involved in as many bond issues and swap and financial transactions in Jefferson County as I possibly could."

While both Blount and LaPierre testified that they had not specifically told Langford that Blount was the source of the loan money, they explained that they had not done so because he had not asked, and they both were convinced he knew. Indeed, Langford had directly discussed with Blount Langford's need for the initial Colonial Bank loan, and Blount assisted him in obtaining it. When Langford made a subsequent request for money, LaPierre said he did not have the money but would make a call. And Blount himself made many of Langford's clothing and jewelry purchases in Langford's presence. In addition, after Langford testified at a hearing conducted by the Securities & Exchange Commission ("SEC") on June 21, 2007, Langford, LaPierre, and Blount met to sign updated promissory notes purportedly representing the "loans" that had been extended by LaPierre to Langford. Both LaPierre and Blount testified that Langford was not at all surprised that Blount was there.

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Following an eight-day trial, the jury convicted Langford on all counts. The district court, thereafter, sentenced Langford to serve a total term of 180 months of imprisonment, and a supervised release term of 36 months. Langford was also required to pay a special assessment of $6,000, make restitution to the IRS in the amount of $119,985, and criminally forfeit $241,843.65. This timely appeal followed.

II.

We review the sufficiency of the evidence de novo, taking the evidence in the light most favorable to the government and drawing all reasonable inferences in favor of the jury's verdict. United States v. Klopf, 423 F.3d 1228, 1236 (11th Cir. 2005). We review the trial court's evidentiary rulings for clear abuse of discretion. United States v. Dodds, 347 F.3d 893, 897 (11th Cir. 2003). If, however, the objection raises the right to confront witnesses, we review it de novo. United States v. Yates, 438 F.3d 1307, 1311 (11th Cir. 2006). Finally, we "review a district court's denial of a Rule 21 motion for change of venue for an abuse of discretion." United States v. Campa, 459 F.3d 1121, 1143 (11th Cir. 2006) (en banc).

First, we are unpersuaded by Langford's claim that the evidence was insufficient to support his convictions for mail and wire fraud. At issue is whether

a reasonable fact-finder could have determined that the evidence proved the defendant's guilt beyond a reasonable doubt. United States v. Smith, 459 F.3d 1276, 1286 (11th Cir. 2006). In other words, we will not disturb the verdict unless no reasonable trier of fact could find guilt beyond a reasonable doubt. United States v. Lee, 603 F.3d 904, 912 (11th Cir.), cert. denied, 131 S. Ct. 437 (2010). Moreover, circumstantial evidence may be used to establish an element of a crime, even if the jury could draw more than one reasonable inference from the circumstantial evidence, and in judging sufficiency of the evidence, we apply the same standard whether the evidence is direct or circumstantial. United States v. Hersh, 297 F.3d 1233, 1254 n.31 (11th Cir. 2002).

As for the mail fraud counts, the government charged County Commissioner Langford with having caused the use of the mails on five occasions when packages containing merchandise purchased for him in New York by Blount were mailed to Langford's office in Alabama. The mailings were designed, among other things, to execute a scheme to defraud Jefferson County and its citizens of the right to Commissioner Langford's honest services. As for the wire fraud counts, the government similarly charged Langford with having caused the use of the wires when Blount or LaPierre used an American Express card to make purchases or to pay an account on Langford's behalf, again for the purpose of

executing a scheme to defraud Jefferson County and its citizens of the right to Commissioner Langford's honest services.

Langford claims that there was no evidence the defendant "obtained or schemed to obtain the alleged property by the use of false or fraudulent pretenses, representations or promises, an essential element under the mail and wire fraud statutes." Blue Br. at 32. Aside from the means by which the fraud has been executed, the elements of mail fraud, 18 U.S.C. § 1341, and wire fraud, 18 U.S.C. § 1343, are the same. United States v. Ward, 486 F.3d 1212, 1221 (11th Cir. 2007). "Both offenses require that a person (1) intentionally participates in a scheme or artifice to defraud another of money or property, and (2) uses or 'causes' the use of the mails or wires for the purpose of executing the scheme or artifice." Id. at 1222.

The mail and wire fraud counts Langford challenges alleged not only traditional mail and wire fraud, but also "honest services" mail or wire fraud. To prove "honest services" mail or wire fraud, the government must prove beyond a reasonable doubt that the defendant intentionally participated in a scheme or artifice to deprive the persons to whom the defendant owed a fiduciary duty of the intangible right of honest services, and used the United States mails or wires to carry out that scheme or artifice. See 18 U.S.C. § 1346 (defining "scheme or

artifice to defraud" to include a "scheme or artifice to deprive another of the intangible right of honest services").[6] The term "honest services" is not defined in the statute, but we have found that when a public official "uses his office for

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[6] Specifically, the mail fraud section of the statute provides:

> Whoever, having devised or intending to devise any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises, . . . for the purpose of executing such scheme or artifice or attempting so to do, places in any post office or authorized depository for mail matter, any matter or thing whatever to be sent or delivered by the Postal Service, or deposits or causes to be deposited any matter or thing whatever to be sent or delivered by any private or commercial interstate carrier, or takes or receives therefrom, any such matter or thing, or knowingly causes to be delivered by mail or such carrier according to the direction thereon, or at the place at which it is directed to be delivered by the person to whom it is addressed, any such matter or thing, shall be fined under this title or imprisoned not more than 20 years, or both.

18 U.S.C. § 1341.

Similarly, the wire fraud section provides:

> Whoever, having devised or intending to devise any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises, transmits or causes to be transmitted by means of wire . . . any writings, signs, signals, pictures, or sounds for the purpose of executing such scheme or artifice, shall be fined under this title or imprisoned not more than 20 years, or both.

18 U.S.C. § 1343.

The statute further provides:

> For the purposes of this chapter [relating to mail and wire fraud], the term "scheme or artifice to defraud" includes a scheme or artifice to deprive another of the intangible right of honest services.

18 U.S.C. § 1346.

personal gain, he deprives his constituents of their right to have him perform his official duties in their best interest." United States v. Lopez-Lukis, 102 F.3d 1164, 1169 (11th Cir. 1997).

We have not expressly explored at length what manner of concealment, if any, is necessary to prove honest services mail or wire fraud. However, we have said that honest services fraud "may be proved through the defendant's non-action or non-disclosure of material facts intended to create a false and fraudulent representation." United States v. Waymer, 55 F.3d 564, 571 (11th Cir. 1995); see also United States v. Browne, 505 F.3d 1229, 1265 (11th Cir. 2007) ("[A] defendant's non-action or non-disclosure of material facts intended to create a false and fraudulent representation may constitute a violation of the mail fraud statute where the defendant had a duty, explicit or implicit, to disclose material information."). Not surprisingly, we have held that because "[e]lected officials generally owe a fiduciary duty to the electorate," when a public official "secretly makes his decision based on his own personal interests -- as when an official accepts a bribe or personally benefits from an undisclosed conflict of interest -- the official has defrauded the public of his honest services." Lopez-Lukis, 102 F.3d at 1169 (emphases added). As we explained in United States v. deVegter, 198 F.3d 1324, 1328 (11th Cir. 1999):

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Public officials inherently owe a fiduciary duty to the public to make governmental decisions in the public's best interest. . . . [I]n a democracy, citizens elect public officials to act for the common good. When official action is corrupted by secret bribes or kickbacks, the essence of the political contract is violated. Illicit personal gain by a government official deprives the public of its intangible right to the honest services of the official.

Id. (citations and quotations omitted).

In short, the "paradigm case of honest services fraud is the bribery of a public official." Id. at 1327-28. Thus, in order to prove that Langford defrauded the public of his honest services, the government had to prove beyond a reasonable doubt that Langford was in fact a public official and that he accepted bribes that he did not disclose to the public.[7] Indeed, in Lopez-Lukis, the indictment alleged that a lobbyist had paid a county commissioner in order to influence her actions as a county commissioner and that, in order to facilitate their scheme, the defendants concealed their "monetary and intimate relationship" from the public. 102 F.3d at 1166. The defendants conceded that the indictment was sufficient with respect to the allegation that the county commissioner had committed honest services fraud by selling her vote. We agreed, and went on to

[7] In his reply brief, Langford cites United States v. Maxwell, 579 F.3d 1282, 1299 (11th Cir. 2009), for the proposition that "[a] scheme to defraud requires proof of a material misrepresentation, or the omission or concealment of a material fact calculated to deceive another out of money or property." However, Maxwell was not an honest services case; again, in honest services cases, the scheme to defraud the public of honest services can be proven when a public official accepts a bribe and fails to disclose it to the public.

hold further that on these facts, the county commissioner had also committed honest services fraud by taking steps to ensure that a majority of commissioners voted with her. Id. at 1169.[8]

As the trial record before us amply shows, the government established that Langford was President of the Jefferson County Commission, that he was conferred with public authority to choose, and did select Blount-Parrish to participate in and obtain payments amounting to millions of dollars in fees relating to Jefferson County financial transactions, including the issuance of bonds. In exchange, Langford received, among other things, thousands of dollars' worth of clothing and jewelry from Blount, a partner in Blount-Parrish, along with large cash payments in the form of bogus "loans." In receiving the valuable items, Langford caused the use of the mails and wires. What's more, Langford did not disclose that he had received these valuables from Blount either to the public, the

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[8] We have affirmed honest services convictions in other cases involving similar types of conduct by public officials, and notably, where the concealment was generalized. See Waymer, 55 F.3d at 572 (affirming honest services mail fraud conviction where a defendant school board member failed to apprise the board that he was "receiving a direct and substantial cut from a vendor's contract with the school system in exchange for the performance of virtually no services"); United States v. Walker, 490 F.3d 1282, 1296-98 (11th Cir. 2007) (affirming honest services mail fraud conviction where a state legislator failed to properly disclose his financial dealings with a hospital in his annual financial disclosure statements); United States v. McNair, 605 F.3d 1152, 1200 (11th Cir. 2010) (affirming honest services mail fraud conviction where the director of a county's environmental services division took steps to conceal that he had received approximately $105,000 in landscaping and lawn maintenance from a contractor that the official had the power to favor in a sewer rehabilitation program).

IRS, or, as far as the record reveals, to anyone else. Langford also received letters from JPMorgan disclosing the fees paid to Blount-Parrish, but those fees were never disclosed in letters sent to the County generally.

Thus, beyond proving that Langford failed to disclose the receipt of these bribes to the public -- all that is required under Lopez-Lukis -- the evidence established that Langford engaged in a series of elaborate steps of concealment by failing to disclose these valuables as income to the IRS, and in failing to disclose the Blount-Parrish fees to the County. In short, there is more than enough evidence to have enabled the jury to find beyond a reasonable doubt that Langford engaged in concealment, that he did so to deprive the County of his honest services, and that the mails and wires were used to execute the scheme to defraud.[9]

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[9] The Supreme Court has recently cut back on what constitutes honest services fraud in Skilling v. United States, 130 S. Ct. 2896 (2010), but Skilling does not affect our decision in any way. In Skilling, the Supreme Court considered the scope and constitutionality of the honest services statute, and determined that "[t]o preserve the statute without transgressing constitutional limitations," § 1346 criminalizes only "fraudulent schemes to deprive another of honest services through bribes or kickbacks." Id. at 2928-29, 2931. The Supreme Court rejected the government's argument that § 1346 should also encompass "undisclosed self-dealing by a public official or private employee -- i.e., the taking of official action by the employee [or official] that furthers his own undisclosed financial interests while purporting to act in the interests of those to whom he owes a fiduciary duty." Id. at 2932 (quotation omitted). Because the government in Skilling alleged that Skilling, an executive of a private corporation, engaged in self-dealing -- and did not allege that Skilling accepted bribes or kickbacks, nor that Skilling solicited or accepted side payments from a third party in exchange for making misrepresentations to his company's shareholders about the company's fiscal health -- the Supreme Court determined that Skilling's honest services fraud conviction was flawed and vacated the Fifth Circuit's affirmance of Skilling's conspiracy conviction. Id. at 2934-35. Here, however, in sharp contrast, there is no doubt that the government charged Langford with accepting bribes as a

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Langford also claims that there was insufficient evidence to support his use of the mails for the five mail fraud counts, which were based on the shipment of valuables that Blount had purchased in New York and were mailed to Langford's office in Jefferson County, Alabama. As the record amply established, Blount and Langford had gone on numerous trips to New York for Langford to meet with bankers, lawyers, and other public financial professionals involved in county business. During those trips, Blount purchased for Langford items from five stores (Turnbull in December 2003, Zegna in April 2004, Ferragamo in July 2004, Century 21 in July 2004, and Tourneau in November 2004). These mailings formed the core of the five mail fraud counts.

Langford argues, nevertheless, that he did not "use the mails" because the items belonged to Langford at the time Blount purchased them, and therefore, the subsequent mailings were not done "in furtherance" of any scheme. This claim is without any merit. In a bribery scheme, receipt of a valuable which constitutes the bribe undeniably furthers the scheme, and the jury could have found on this ample record that Langford used the United States mails to receive the proceeds of the bribes. See Ward, 486 F.3d at 1222 ("[A] person causes the mails to be used within the meaning of 18 U.S.C. § 1341 . . . when he acts with knowledge that the

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public official -- classic honest services fraud that existed before, and after, Skilling.

use of the mails . . . will follow in the ordinary course of business, or where such use can reasonably be foreseen, even though not actually intended.") (quotation omitted).

III.

We are also unpersuaded by Langford's claim that the district court erred in making various evidentiary rulings at trial. Typically, "[a]ll relevant evidence is admissible" at trial. Fed. R. Evid. 402. Evidence is relevant if it has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed. R. Evid. 401. Rule 403 of the Federal Rules of Evidence provides: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." Fed. R. Evid. 403. Moreover, even if an evidentiary ruling is erroneous, "it will not result in a reversal of the conviction if the error was harmless." United States v. Docampo, 573 F.3d 1091, 1096 (11th Cir. 2009). "An error is harmless unless there is a reasonable likelihood that it affected the defendant's substantial rights." United States v. Hands, 184 F.3d 1322, 1329 (11th Cir. 1999) (quotation and brackets

omitted). "No reversal will result if sufficient evidence uninfected by any error supports the verdict, and the error did not have a substantial influence on the outcome of the case." United States v. Khanani, 502 F.3d 1281, 1292 (11th Cir. 2007) (quotation omitted).

A. Tax Returns Listing Gambling Winnings

First, Langford argues that the district court abused its discretion in admitting his personal income tax returns, which listed "eye-catching" gambling winnings, in their entirety. Specifically, his tax return for 2003 listed gambling winnings of $28,040; his tax return for 2004 listed gambling winnings of $4,200; and his tax return for 2005 listed gambling winnings of $80,510. The tax returns also revealed that Langford did not report as income any of the cash, clothing or jewelry he received from Blount for the taxable years 2003, 2004, and 2005.

Indisputably, the returns were relevant, in fact they were essential to the tax-fraud charges. Each of those counts charged Langford with filing a false tax return based on his failure to report income -- the cash, clothing, and jewelry he received from Blount and LaPierre. The returns, signed by Langford under penalty of perjury, were the best evidence supporting those charges. Indeed, they were the very corpus delicti of the criminal tax charges: the grand jury alleged that he violated 26 U.S.C. § 7206(1) by filing false personal income tax returns in the

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taxable years 2003, 2004, and 2005. And, although Langford argues that he offered to stipulate "that the loans and gifts were not reported in the returns," Blue Br. at 23, the government was not obliged to accept the stipulation. See Old Chief v. United States, 519 U.S. 172, 186-87, 189 (1997) (recognizing that, outside the unique context of a prior conviction,"the accepted rule that the prosecution is entitled to prove its case free from any defendant's option to stipulate the evidence away rests on good sense" and "a criminal defendant may not stipulate or admit his way out of the full evidentiary force of the case as the Government chooses to present it").

Langford argues in the alternative that, even if the tax returns were properly admitted, the district court still abused its discretion in declining to redact the references to Langford's gambling income. The district court rejected the request because Langford's gambling was not illegal, from the voir dire examination it was evident that the vast majority of the jury pool had gambled before and did not oppose it, and striking the references to gambling would have left the jury to speculate about what had been hidden from them.[10] Indeed, Langford did not

[10] In his reply brief, Langford claims that the district court made a legal error by refusing to exclude the gambling evidence on the ground that gambling is legal and therefore could not be prejudicial. While Langford is right that the law does not require activity to be illegal for it to be prejudicial, the district court did not base its ruling on a misconception of the law. That something is illegal may make it more prejudicial, but in any event, the district court found the gambling evidence non-prejudicial not simply because it was legal, but because this particular

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engage in any illegal activity through his gambling, and what's more, dutifully reported his winnings to the IRS, affording the inference that he was a law-abiding citizen. While three members of the venire had heard in the news that Langford had allegedly benefitted from rigged gambling machines, the record is clear that the two who indicated that this might affect their judgment were removed from the jury pool. Langford's suggestion that evidence of his gambling winnings would somehow tell the jury that he was paid bribes in the form of rigged winnings or might have been received negatively by those jurors who were unlucky in casinos, amounts to rank speculation. No evidence from this record supports the claim. Moreover, redactions of the defendant's personal income tax returns well might have led the jurors to theorize that something far more prejudicial than evidence of gambling had been removed from Langford's tax returns. The district court acted well within its discretion in declining to redact the tax returns.

B. Evidence of a Relationship Between Langford and Gambling-Establishment Owner Milton McGregor

Next, Langford claims that the district court erred by admitting evidence purportedly relating to a gambling-establishment owner, Milton McGregor. The defendant says that the government "worked hard" at "efforts to emphasize Milton

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jury pool in voir dire had not evinced any prejudice about it. In short, the district court made no legal error in this ruling.

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McGregor's position as a gambling magnate and his relationship to Mr. Langford." Blue Br. at 24. This characterization of the evidence is not supported by the record. McGregor's name came up in the context of two loans involving Langford. First, in the summer of 2002, Blount arranged for Langford to get a $50,000 loan at Colonial Bank through Caryn Cope, a Colonial Bank employee Blount was dating at the time. Langford got the loan, but, when it came due, he was unable to pay it off. So, to help Langford, Al LaPierre got a loan for the purpose of paying off Langford's loan. On his application for credit LaPierre listed Milton McGregor as a reference. In that context, a bank employee was asked at trial if she knew "who Milton McGregor is?" She responded: "He is the owner of one of the race horse places, I'm sorry, I can't think of the name of it." Langford's counsel did <u>not</u> object to this question or answer.

McGregor's name came up once more in the context of another loan Blount attempted to secure for Langford. In June 2003, Blount again called Caryn Cope "about a $75,000 loan request for Mr. Langford." Cope told Blount that her boss, Robert Lowder, would have to approve that request. According to Cope, "Bill Blount suggested that Milton McGregor, who knew all the parties involved, and my boss, Bobby Lo[w]der, that he could talk to him about it and make him comfortable with the [$]75,000 loan request." Cope described McGregor as a

board member of Colonial Bank, not as Langford claims, a "gambling magnate." The gist of the discussions, Cope said, concerned an attempt to get McGregor to "say hey, I will personally stand good on this loan, that it will personally be paid by Mr. Langford." Ultimately, however, the loan request was not approved.

On this record, we cannot say that the district court abused its discretion, much less committed plain error, in permitting this testimony relating to Milton McGregor.[11] The two discussions highlighted above -- which mentioned McGregor's name on five pages of a 1900-plus-paged transcript for an eight-day trial -- were the extent of the evidence relating to Milton McGregor. There is no support for the claim that the government made "efforts to emphasize Milton McGregor's position as a gambling magnate and his relationship to Mr. Langford." A single witness describing McGregor as "the owner of one of the race horse places" does not match that description. Moreover, we cannot deny

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[11] For this evidentiary challenge, plain error review applies in part, since Langford's counsel did not specifically object to the testimony of the government's witness that McGregor owned a "race horse place[]." "To preserve an issue for appeal, a general objection or an objection on other grounds will not suffice." United States v. Gallo-Chamorro, 48 F.3d 502, 507 (11th Cir. 1995). By failing to object to the admission of evidence on a particular ground, a defendant "denies the trial court an opportunity to cure immediately any error created by the admission." United States v. Chilcote, 724 F.2d 1498, 1503 (11th Cir. 1984). If an error was not preserved, we do not apply the usual abuse of discretion standard of review but rather review for plain error. Id. Under the plain-error standard, we will not correct an error raised for the first time on appeal unless there is (1) error, (2) that is plain, (3) that affects substantial rights, and (4) seriously affects the fairness, integrity, or public reputation of judicial proceedings. See United States v. Rodriguez, 398 F.3d 1291, 1298 (11th Cir. 2005).

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that because of Blount's efforts to utilize McGregor's position as a member of the board of Colonial Bank to secure a loan for the defendant, the testimony mentioning McGregor was plainly relevant.

C. Records Relating to Langford's NBC Credit Card

Langford also complains that certain bank records related to his credit card at NBC Bank were improperly admitted. These records showed further special treatment that Langford received in exchange for county business. Specifically, Commissioner Langford caused the County to hire NBC Bank in February 2003 as its "financial advisor" for the bond transactions. Sometime later, Langford applied for a credit card from NBC Bank, and the bank issued one even though Langford's credit rating did not meet the bank's standards. Langford later applied for and was granted increases to his credit limit, even though his payment history was poor and the unpaid debt on the card was rising. The government argued that the records relating to the credit card were relevant under Federal Rule of Evidence 404(b) as evidence of "other . . . acts" probative of intent -- in that Langford solicited, and the bank gave him, the card and extensions of credit as bribes to keep the County's business.

Langford admits that the bank records were "possibly relevant," but argues that the records should have been excluded because they constituted inadmissible

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hearsay. The district court admitted them under the business records exception to the hearsay rule set forth in Rule 803(6) of the Federal Rules of Evidence.

Under the business-records exception, the following documents are admissible:

> A memorandum, report, record, or data compilation, in any form, of acts, events, conditions, opinions, or diagnoses, made at or near the time by, or from information transmitted by, a person with knowledge, if kept in the course of a regularly conducted business activity, and if it was the regular practice of that business activity to make the memorandum, report, record or data compilation, all as shown by the testimony of the custodian or other qualified witness, . . . unless the source of information or the method or circumstances of preparation indicate lack of trustworthiness.

Fed. R. Evid. 803(6). Langford argues that the records were improperly admitted because the proffered custodial witness, NBC Bank employee Kelly O'Donnell, who served on NBC's Financial Advisory Team, did not have personal knowledge of each of the records and therefore was not qualified as a "custodian or other qualified witness" under the Rule.

We are unpersuaded. The advisory committee note to Rule 803(6), as clarified by the 1974 amendment, makes this point clear:

> It is the understanding of the committee that the use of the phrase "person with knowledge" is not intended to imply that the party seeking to introduce the memorandum, report, record, or data compilation must be able to produce, or even identify, the specific individual upon whose first-hand knowledge the memorandum, report, record or data

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compilation was based. A sufficient foundation for the introduction of such evidence will be laid if the party seeking to introduce the evidence is able to show that it was the regular practice of the activity to base such memorandums, reports, records, or data compilations upon a transmission from a person with knowledge . . . .

Fed. R. Evid. 803 advisory committee's note. "To satisfy Rule 803(6), . . . the proponent must establish that it was the business practice of the recording entity to obtain such information from persons with personal knowledge and the business practice of the proponent to maintain the records produced by the recording entity." United States v. Bueno-Sierra, 99 F.3d 375, 379 (11th Cir. 1996).

Here, the government laid the following foundation:

[AUSA]: Ms. O'Donnell, did the bank designate you as the custodian of records for these documents that are in front of you?

A: Yes.

[AUSA]: And to be clear, you don't have personal knowledge of the content of those documents?

A: Correct.

[AUSA]: But do you have personal knowledge of the process that was involved with gathering those documents?

A: Yes.

[AUSA]: And were these documents gathered from businesses at the bank, ongoing businesses?

A: They were.

> [AUSA]: And these are documents that were made at or around the time, they were not made in response to a grand jury subpoena, the documents were not created in response to a grand jury subpoena?
>
> A: No. They were part of or appear to be part of documents routinely held in the normal course of business.

We have said that "[t]he touchstone of admissibility under the business records exception to the hearsay rule is reliability, and a trial judge has broad discretion to determine the admissibility of such evidence." Bueno-Sierra, 99 F.3d at 378. So, in United States v. Atchley, 699 F.2d 1055, 1058 (11th Cir. 1983), we found that a proper foundation for a business record had been laid where "Ms. McCook identified each exhibit and testified under oath that these records were kept in the ordinary course of business, that it was the ordinary course of her business to make and keep such records, that the records were made on or about the time of the transactions reflected in the records, and that she was the custodian of those records." We explained: "It is not essential that the offering witness be the recorder or even be certain of who recorded the item. It is sufficient that the witness be able to identify the record as authentic and specify that it was made and preserved in the regular course of business." Id. (quotation omitted).

Similar testimony was elicited here -- O'Donnell testified that she was the custodian of the records, that she had personal knowledge of the process involved

in gathering the documents, that the documents had been gathered from ongoing businesses at the bank, that the documents were not made in response to a subpoena, and that the documents were part of, or appeared to be part of, documents routinely held in the normal course of business. Moreover, defense counsel admitted that they did not challenge the authenticity of the documents. The district court did not abuse its discretion in admitting this evidence as a business record.[12]

D. A Loan Officer's Testimony About a $50,000 Loan to Langford

Langford also claims that the district court erred in allowing a bank employee to testify that when she evaluated a loan application made by the defendant she learned that Langford was already a customer of the bank, albeit at a branch thirteen miles away from the employee's branch. The defendant says that this was hearsay, and that it was prejudicial because somehow it suggested that Langford was trying to hide his activity from those with whom he normally did business.

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[12] Langford also makes a passing reference to a Confrontation Clause violation, based on the introduction of these business records, but business records are not considered testimonial -- a necessary element of a Confrontation Clause violation. See United States v. Naranjo, 634 F.3d 1198, 1213-14 (11th Cir. 2011) (holding that the Confrontation Clause does not apply to business records because they are not testimonial and the Confrontation Clause only provides a right to cross-examination of testimonial statements) (citing Crawford v. Washington, 541 U.S. 36, 56 (2004) (discussing "statements that by their nature were not testimonial -- for example, business records")).

The challenged testimony was elicited in connection with the $50,000 loan for Langford that Blount helped to arrange through his girlfriend and Colonial Bank employee, Caryn Cope. Cope -- who headed Colonial Bank's credit department for the State of Alabama -- contacted Yvette Campbell, the Roebuck Branch Manager of Colonial Bank, to tell her that the $50,000 loan for Langford had been approved. According to Campbell, "when we do the loan, we have to pull up to see if the customer already has a profile on file," i.e., to determine if the loan applicant is already a customer of Colonial Bank. Campbell testified that she discovered Langford was a bank customer at the Shades Valley Location, which, Campbell explained was thirteen miles away from her branch.

The government does not claim that Campbell's testimony -- based on her review of business records not introduced into evidence -- was not hearsay. However, it argues, and we agree, that Langford's assertion of prejudice is belied by the testimony of the other bank employee, Caryn Cope. Specifically, Cope testified that typically she was not involved in these kinds of loans, but she approved this one "because Bill Blount had called me and asked me about it." She did so despite the fact that Langford had a "lower credit score." She further testified that she had decided to call Campbell and send Langford to Roebuck because Cope "had worked with [Campbell] for a long time." Thus, the jury

learned from Cope that Langford had gone to the Roebuck branch not because he wanted to conceal his activities, but because Cope had sent him there based on her personal relationship with the manager of the Roebuck branch. We can discern no way that Campbell's testimony affected Langford's substantial rights, and thus conclude that the admission of this testimony, even if it was hearsay, caused the defendant no prejudice. Hands, 184 F.3d at 1329.

We add that the evidence of Langford's guilt in accepting many bribes -- including testimony by Blount, corroborated by extensive documentation, that he paid Langford $240,000 in cash, clothing and jewelry so that Blount's investment-banking firm would receive millions of dollars' worth of fees from financial transactions in Jefferson County -- was overwhelming. Thus, even if the challenged evidence taken in concert -- about Langford's gambling winnings, his purported relationship with McGregor, special treatment in receiving an NBC credit card (which was not tied to any charges, but used to show Langford's intent to be bribed in his interactions with Blount), or his efforts to obtain a loan from a different bank branch -- was erroneously admitted (and none of it was), we could not find any basis for concluding that this evidence affected Langford's substantial rights. See id.

E. Langford's Clothes Donations

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Langford next says that the district court abused its discretion in generally refusing to allow him to offer testimony that Langford had donated clothing on a number of occasions to Pastor Ocie Oden. While the district court permitted Langford to introduce testimony that on one occasion Langford had given Pastor Oden an Oxxford suit, the same suit brand Blount had purchased for Langford, it would not permit additional testimony that Langford had given the Pastor a large number of other suits. The district court had rejected this evidence as improper character evidence.

Langford does not argue that this proffered evidence was anything more than an attempt to introduce evidence of his generous and philanthropic character. At no point, however, did Langford argue, or even suggest, that his purported philanthropy bore in any way on his veracity or law-abidingness. As the district court recognized, "[w]hat [Langford] planned on doing with the items he received from Mr. Blount was not the issue. The issue was whether [Langford] was influenced by receipt of the items." Langford's argument that his donation of clothes suggests that he placed a low subjective value on the payments from Blount is highly speculative -- instead, he could obtain just as much value from donating them as from keeping them. Quite simply, the district court did not abuse its discretion in ruling that this evidence was inadmissible character

evidence under Fed. R. Evid. 404(a), which, after all only permits evidence of a defendant's character trait where it is "pertinent." And in any event, the district court did allow other, more relevant evidence of Langford's "generosity," since the Pastor was permitted to testify that Langford gave him "an Oxxford" suit, the same brand given to Langford by Blount. Moreover, Blount also testified that Langford had given him gifts too.

F. Langford's Payments During Shopping Trips

Langford also complains that the district court improperly excluded evidence that he made some purchases on his own during shopping trips with Blount in New York. He argues that, by showing that Blount did not purchase everything Langford obtained on their shopping jaunts, this would place a different light on the purchases Blount made. The district court refused to admit the evidence, finding it was not relevant. As far as we can tell, Langford has not shown the relevance of any of these purchases, or even what different light they would have shone on Blount's purchases. Whether the jury believed that Langford made some purchases on his own from time to time during shopping trips with Blount has no bearing on the undisputed fact that he accepted more than $240,000 in cash, clothing and jewelry from Blount. It is not necessary for a

corrupter to meet all the needs of a corrupt public official in order to commit the crime of bribery.

G. Danforah's Past Activity

In addition, Langford argues that the district court abused its discretion in refusing to admit evidence of prior bad acts to impeach the credibility of Remon Danforah, a clothing store owner who testified that he received more than $50,000 in payment for clothing Blount and LaPierre had purchased for Langford. Most of the time, Langford would pick out his clothes and run up a tab at Danforah's. LaPierre and Blount would then pay down that tab. At trial, Langford argued that "Danforah was scamming Mr. Blount and getting paid for clothing Mr. Langford never acquired." Blue Br. at 29-30. In support of this theory, defense counsel impeached Danforah on his sloppy bookkeeping practices. Langford, however, sought to go further, with evidence that in the late eighties (long before the transactions at issue in this case), Danforah got together with his relatives at a hotel every Wednesday night to gather money to send to Yassir Arafat, formerly the head of the Palestine Liberation Organization. The district court excluded the evidence because it was not based on any convicted criminal conduct, and although it was arguably an uncharged prior wrong, it did not bear on the "credibility of the witness," "would be highly prejudicial," and "the probative

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value would be outweighed by the prejudice or impact regardless." The district court added that defense counsel had done "an excellent job of impeaching the witness' bookkeeping ability," so that nobody "on the jury . . . thinks he has kept any records correctly in his store."

The district court did not abuse its discretion. The proffered testimony had precious little, if any probative value, and there was real danger of unfair prejudice. We cannot say the district court abused its discretion in weighing the probative value of the evidence against the danger of unfair prejudice, and refusing to admit this evidence. See Fed. R. Evid. 403.

H. Langford's SEC Testimony

Finally, Langford argues that the district court abused its discretion in refusing to admit portions of Langford's testimony to the Securities and Exchange Commission, while allowing other parts of his SEC testimony to be read to the jury. Langford had been deposed in 2007 by the SEC during an investigation of bond transactions in Jefferson County. The government introduced portions of Langford's testimony concerning how LaPierre had given the defendant what he termed two "loans," how he had traveled to New York for Jefferson County and went shopping with Blount but made his own purchases, how he and Blount had exchanged gifts but Langford purportedly had given Blount more than Blount had

ever given Langford, and how the Jefferson County Commissioners were each allowed to choose whichever investment firms they thought should be involved in Jefferson County's financial transactions. Langford then sought to introduce other parts of his SEC testimony.

Under Federal Rule of Evidence 106:

> When a writing or recorded statement or part thereof is introduced by a party, an adverse party may require the introduction at that time of any other part or any other writing or recorded statement which ought in fairness to be considered contemporaneously with it.

Fed. R. Evid. 106. "Once a part of a document can be said to have been introduced, Rule 106 does not automatically make the entire document admissible." United States v. Pendas-Martinez, 845 F.2d 938, 944 (11th Cir. 1988). Rather, "the rule permits introduction only of additional material that is relevant and is necessary to qualify, explain, or place into context the portion already introduced." Id. As the record shows, the district court carefully examined all of the proffered SEC testimony with Langford's defense counsel, line by line, to determine if additional material was necessary "to qualify, explain, or place into context the portion already introduced." Id. It determined that none of the additional testimony Langford sought to introduce satisfied this burden.

In his brief to this Court, Langford generally says that he wanted to introduce still other portions of his SEC testimony because they bore on his "intent," and explained how he had a property interest that he intended to sell to pay off the LaPierre "loans." Moreover, he claimed, the proffered testimony showed that he never talked to Blount about the LaPierre "loans," and that he was unaware of any discussions between Blount and LaPierre regarding the loans or of any money Blount gave to LaPierre, and explained why he did not report the "loans" on his ethics reports. The testimony also would have explained why Blount was chosen as a financial consultant, and why the New York trips were necessary.

Langford has not identified for this Court, however, which specific portions of his SEC testimony he sought to introduce, nor has he explained how the additional testimony was necessary. To the extent Langford suggests that we can find explanations in the trial court record, we have rejected "the practice of incorporating by reference arguments made to district courts." Four Seasons Hotels & Resorts, B.V. v. Consorcio Barr S.A., 377 F.3d 1164, 1167 n.4 (11th Cir. 2004). At a minimum, he was obliged to cite us to the specific portions of SEC testimony he sought to introduce, and to explain in particular how each piece was relevant. See id.; see also NLRB v. McClain of Georgia, Inc., 138 F.3d 1418,

1422 (11th Cir. 1998) ("Issues raised in a perfunctory manner, without supporting arguments and citation to authorities, are generally deemed to be waived.").

But even if we were to undertake our own review of Langford's entire SEC testimony, we cannot discern how the omitted excerpts were necessary. Indeed, the testimony introduced already discussed the property interest he intended to use to repay the loans, explained why he chose Blount-Parrish for Jefferson County's transactions, and relayed why he went on the New York trips. Moreover, the testimony admitted did not mention Blount's role in orchestrating LaPierre's loans, nor whether Langford thought anyone besides LaPierre was behind the loans. Nor, finally, did the admitted portions say anything about whether Langford had reported the "loans" on his ethics reports. In short, even if we were hunt through all of the SEC testimony ourselves, he still has not shown how the proffered testimony was "necessary to qualify, explain, or place into context the portion already introduced." Pendas-Martinez, 845 F.2d at 944. We see no abuse of discretion here either.

IV.

There is also no merit to Langford's challenges to the jury instructions and to the conspiracy count charging bribery. As Langford fully recognizes, these arguments are precluded by our case law. As for his argument that the district

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court should have instructed the jury that a specific quid pro quo was required under the bribery statute, we have "expressly h[e]ld there is no requirement in [18 U.S.C.] § 666(a)(1)(B) or (a)(2) that the government allege or prove an intent that a specific payment was solicited, received, or given in exchange for a specific official act, termed a quid pro quo." United States v. McNair, 605 F.3d 1152, 1188 (11th Cir. 2010) (squarely rejecting the argument that 18 U.S.C. § 666(a)(1)(B) or (a)(2) requires a quid pro quo), cert. denied, 131 S. Ct. 1600 (2011). Similarly, as for his argument that portions of the conspiracy count should have been dismissed under Wharton's Rule, we have held that Wharton's Rule -- a narrow common law exception providing that a defendant cannot be punished for conspiracy and a substantive offense if the substantive offense itself requires the participation of two persons -- does not apply to § 666 offenses. Id. at 1216. This is so for two reasons: (1) "Congress has not expressed any intent that § 666 crimes and § 371 crimes for conspiracy to violate § 666 should merge"; and (2) "the effect of the crime of § 666 bribery is not limited to the bribe-payor and recipient, as the crime involves public corruption, which harms society as a whole." Id. Because Langford's arguments are foreclosed by McNair, we do not revisit them today.

V.

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Finally, we are unpersuaded by his claim that the district court abused its discretion in denying Langford's post-voir dire motion for a change of venue. "The Sixth Amendment secures to criminal defendants the right to trial by an impartial jury." Skilling, 130 S. Ct. at 2912-13. That trial occurs "in the State where the . . . Crimes . . . have been committed." Id. at 2913 (quoting U.S. Const. art. III, § 2, cl. 3) (alterations in original). However, a proceeding may be transferred "to a different district at the defendant's request if extraordinary local prejudice will prevent a fair trial." Id.

Federal Rule of Criminal Procedure 21 governs venue transfers, and instructs that a "court must transfer the proceeding . . . to another district if the court is satisfied that so great a prejudice against the defendant exists in the transferring district that the defendant cannot obtain a fair and impartial trial there." Fed. R. Crim. P. 21(a). "As the language of the Rule suggests, district-court calls on the necessity of transfer are granted a healthy measure of appellate-court respect." Skilling, 130 S. Ct. at 2913 n.11.

We have explained:

> A defendant is entitled to a change of venue if he can demonstrate either "actual prejudice" or "presumed prejudice." To find the existence of actual prejudice, two basic prerequisites must be satisfied. First, it must be shown that one or more jurors who decided the case entertained an opinion, before hearing the evidence adduced at trial, that the defendant

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> was guilty. Second, these jurors, it must be determined, could not have laid aside these preformed opinions and rendered a verdict based on the evidence presented in court. If a defendant cannot show actual prejudice, then he must meet the demanding presumed prejudice standard.
>
> Prejudice is presumed from pretrial publicity when pretrial publicity is sufficiently prejudicial and inflammatory and the prejudicial pretrial publicity saturated the community where the trials were held. The presumed prejudice principle is rarely applicable, and is reserved for an extreme situation. Where a petitioner adduces evidence of inflammatory, prejudicial pretrial publicity that so pervades or saturates the community as to render virtually impossible a fair trial by an impartial jury drawn from the community, jury prejudice is presumed and there is no further duty to establish bias.

Gaskin v. Sec'y, Dep't of Corr., 494 F.3d 997, 1004-05 (11th Cir. 2007) (quotation and emphasis omitted).

A review of the record refutes any claim of actual or presumptive prejudice. To begin, Langford's trial did not take place in Birmingham or Jefferson County, where he had been a County Commissioner when the crimes charged had been committed, and later, mayor. Rather, upon defense counsel's specific request, the district court moved the trial sixty miles from Birmingham, to Tuscaloosa County. Moreover, the record of voir dire fails to show any kind of prejudice arising in Tuscaloosa. Of the fifty-five potential jurors who served on Langford's venire, only eight responded affirmatively when asked during voir dire about exposure to publicity and "any details of the case." Only four of those eight indicated that

their previous knowledge of the case might interfere with their ability to be fair, and all four were subsequently removed for cause. As for the other four who had some previous knowledge of the case, they stated that, despite what they had heard previously, they would be able to set that information aside and decide the case fairly based on the facts presented in the courtroom. The district court accepted these representations, and they were sufficient to preserve Langford's right to a fair trial. See Skilling, 130 S. Ct. at 2925 ("It is sufficient if the jurors can lay aside their impressions or opinions and render a verdict based on the evidence presented in court.") (quotation and brackets omitted).

Langford also claims that the prejudice he suffered was evident because several members of the jury pool, prior to reporting for jury duty, had been encouraged by others -- friends, family, or co-workers -- to find Langford guilty. However, only three of the fifty-five potential jurors called to serve had such an experience. Of those three, just one said that her family's opinion of Langford's guilt might have an influence on her consideration of the case; she was removed for cause. Indeed, contrary to Langford's claim, only five percent of the potential jurors were exposed to the opinions of others. Whatever else this may suggest it does not show rampant pretrial publicity or prejudice in Tuscaloosa County.

Nor does the fact that three members of the venire had heard in the news that Langford had allegedly benefitted from rigged gambling machines support the general claim that Langford's trial in Tuscaloosa was unfair. Only three of the fifty-five potential jurors (approximately five percent) had heard anything about Langford's purported connection to gambling, and, as we've mentioned already, the record is clear that the two who indicated that this might affect their judgment in some way were removed from the jury. While eleven potential jurors indicated that they "disapproved of legalized gambling," a generalized opposition to gambling will likely be found among a certain percentage of the population anywhere, not just in Tuscaloosa County. Thus, moving the trial elsewhere would have had no apparent effect on that issue. In any event, no data or evidence was offered on this point.

Moreover, the record further reveals that, although eleven potential jurors were opposed to legalized gambling, forty-four were not. When Langford's counsel asked how many people "don't object to legalized gambling," the district court requested defense counsel to limit the question. When counsel narrowed the question, asking how many people had themselves gambled in the last five years, the show of hands caused defense counsel to exclaim, "Good Lord," before withdrawing the question. In the face of a trial record that was virtually barren of

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any reference to gambling, we can hardly find a basis for the claim that the district court abused its considerable discretion in denying Langford's post-voir dire motion for change of venue.

Finally, Langford argues that the public was "well aware that after his first SEC deposition, the SEC brought him back and he took the 'fifth' numerous times." Blue Br. at 37. Yet not a single member of the venire indicated any awareness of Langford's SEC deposition, let alone that he invoked his Fifth Amendment privilege against self-incrimination. And, a single cartoon Langford relies upon to support his claim that the SEC matter was well-publicized was printed in the Birmingham paper; Langford was tried in Tuscaloosa. There is no record evidence that the Tuscaloosa venire knew anything about Langford's testimony before the SEC. As the Supreme Court has cautioned, it "may come as a surprise to lawyers and judges, but it is simply a fact of life that matters which interest them may be less fascinating to the public generally." Skilling, 130 S. Ct. at 2920 n.28 (quotation omitted). Langford has not shown any actual or presumptive prejudice.

AFFIRMED.

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[PUBLISH]

IN THE UNITED STATES COURT OF APPEALS

FOR THE ELEVENTH CIRCUIT

FILED
U.S. COURT OF APPEALS
ELEVENTH CIRCUIT
NOVEMBER 29, 2011
JOHN LEY
CLERK

No. 10-13654

D.C. Docket No. 7:07-cr-00448-LSC-HGD-1

UNITED STATES OF AMERICA,

Plaintiff - Appellee,

versus

GARY L. WHITE,

Defendant - Appellant.

Appeal from the United States District Court
for the Northern District of Alabama

(November 29, 2011)

Before TJOFLAT and CARNES, Circuit Judges, and MICKLE,* District Judge.

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* Honorable Stephan P. Mickle, United States District Judge for the Northern District of Florida, sitting by designation.

CARNES, Circuit Judge:

"Kleptocracy" is a term used to describe "[a] government characterized by rampant greed and corruption." The American Heritage Dictionary of the English Language 968 (4th ed. 2000); see also New Oxford American Dictionary 963 (3d ed. 2010); Random House Webster's College Dictionary 724 (2d ed. 1998). To that definition dictionaries might add, as a helpful illustration: "See, for example, Alabama's Jefferson County Commission in the period from 1998 to 2008." During those years, five members or former members of the commission that governs Alabama's most populous county committed crimes involving their "service" in office for which they were later convicted in federal court. And the commission has only five members. One of those five former commissioners who was convicted did not appeal.[1] We have affirmed the convictions of three others who did.[2] This is the appeal of the fifth one.

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[1]Judgment, United States v. Buckelew, No. CR 08-J-357-S (N.D. Ala. Nov. 20, 2009) (Mary Buckelew's conviction for obstructing an official proceeding).

[2]See United States v. Langford, 647 F.3d 1309 (11th Cir. 2011) (Larry Langford's convictions for bribery, conspiracy, money laundering, mail fraud, wire fraud, tax fraud, and criminal forfeiture); United States v. McNair, 605 F.3d 1152 (11th Cir. 2010) (Chris McNair's convictions for conspiracy and bribery); United States v. Germany, 296 F. App'x 852 (11th Cir. 2008) (Jeff Germany's convictions for conspiracy and misapplication of government funds).

Another former member of the county commission was convicted in federal court for stealing money that the county, among others, gave to a charity he ran ostensibly to help underprivileged children. See United States v. Katopodis, 428 F. App'x 902 (11th Cir. 2011) (John Katopodis' convictions for mail fraud and wire fraud). Even though he committed those

I.

Jefferson County consists of five districts, each represented by an elected commissioner who serves as the head of a county department. Gary White was elected as a Jefferson County commissioner for four four-year terms beginning in 1990. He held different positions at various times, including president of the commission and head of its General Services Department and of its Road and Transportation Department. So far as the record shows, however, it was not until White became the commissioner in charge of the Environmental Services Department in November 2002 that his corrupt conduct commenced.

His corruption, like that of some of his fellow commissioners, grew out of the county's sewage problem. In 1996 Jefferson County and the United States Environmental Protection Agency entered into a consent decree, settling a Clean Water Act lawsuit over untreated waste being released into the county's rivers and streams. The consent decree required the county to fix its sewer system, which was a mess. The cost of doing so was approximately $3 billion.

The county hired engineering firms to design the necessary repair-and-renovation projects. The Environmental Services Department supervised the

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crimes between 2001 and 2008, we have not counted him in the tally of convicted former commissioners because he left office in 1990.

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process of hiring those engineering firms. The design contracts were let on a no-bid basis, so typically either a commissioner or staff member selected the firm that would receive the contract. The staff then determined the scope of the work under the contract and negotiated pricing with the contractor. After the staff and the engineering firm agreed on the contract's terms, it would go to the director of the Environmental Services Department for approval and then to the county commissioner in charge of the department. If the commissioner approved the contract, it then went to the environmental services committee, which consisted of that commissioner and two others. They would decide whether to send the contract to the full commission, consisting of the three of them and the two other commissioners, for final approval.

The sewer system reconstruction project was lucrative for U.S. Infrastructure, an engineering firm owned by Sohan Singh. From 1996 to 2005, Singh's company and Jefferson County entered into approximately $50 million worth of contracts involving the sewer system work. Each contract required the county to pay U.S. Infrastructure for its expenses in performing the work plus a professional fee.

In getting contracts with Jefferson County, U.S. Infrastructure had a competitive advantage — bribes that Singh and others paid. Singh and Edward

Key, who was a U.S. Infrastructure vice president, began bribing the county's officials in 1999 in exchange for contracts. See United States v. U.S. Infrastructure, Inc., 576 F.3d 1195, 1202–03 (11th Cir. 2009). One of the officials who was bribed was Chris McNair, a former commissioner in charge of the Environmental Services Department.[3] Id. at 1203–06.

When White took over the duties of supervising the Environmental Services Department in November 2002, Singh did not want to squander the competitive advantage his company had gained by bribing McNair. So, Singh began meeting with White in 2003 and continued doing so through early 2005, which roughly coincided with the period White supervised the Environmental Services Department. At their meetings Singh gave White stacks of $100 bills in envelopes, with the amounts ranging from $1,000 to $4,000 each time. All told, Singh paid White at least $22,000 in cash between 2003 and 2005. Singh got what he paid for. From April 2003 to January 2005, while White was in charge of the Environmental Services Department, the county entered into 48 new contracts with U.S. Infrastructure, paying the firm $1,107,755.55 in professional fees.

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[3] McNair was not the only "public servant" convicted of corruption charges in connection with the sewer system contracts. Among the others were the Environmental Services Department's former director, its former assistant director, its former chief civil engineer, its former chief construction maintenance supervisor, one of its former engineers, and one of its former maintenance supervisors. See United States v. McNair, 605 F.3d 1152 (11th Cir. 2011).

A federal grand jury issued a superseding indictment that charged White with one count of conspiracy in violation 18 U.S.C. § 371 (Count 1), alleging that he conspired with Singh to commit federal-funds bribery in violation of 18 U.S.C. § 666(a)–(b), and with eight substantive counts of federal-funds bribery (Counts 2–9) for his acceptance of Singh's cash. It also charged White with one count of conspiracy (Count 10) and one count of federal-funds bribery (Count 11) for his acceptance of free architectural plans and hunting trips from an architect whose firm had entered into contracts with Jefferson County. Finally, the indictment included a forfeiture count (Count 12). See 18 U.S.C. § 981(a)(1)(C); 28 U.S.C. § 2461(c).

At trial White moved for a judgment of acquittal on all counts after the close of the government's case-in-chief. The district court denied his motion as to Counts 1–9 and 12 but granted it on Counts 10 and 11—the conspiracy and federal-funds bribery charges arising out of the free architectural plans and hunting trips. White did not present evidence, and the jury found him guilty on counts 1–9.[4]

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[4]There was a two-and-a-half year delay between the jury's verdict and sentencing, resulting from the district court entering an order setting aside the guilty verdicts on venue grounds, an order that we reversed. United States v. White, 590 F.3d 1210, 1213–15 (11th Cir. 2009).

The presentence investigation report recommended a guidelines range that was calculated based on White's conspiracy conviction. It did so because the base offense level for conspiracy is the base offense level of the substantive offense—here, federal-funds bribery—"plus any adjustments . . . for any intended offense conduct that can be established with reasonable certainty." United States Sentencing Guidelines § 2X1.1(a) (Nov. 2009). The base offense level for federal-funds bribery generally is 12 under § 2C1.1(a)(2), but because White was a "public official" the base offense level was increased to 14. See id. § 2C1.1(a)(1).

The PSR added 2 levels under § 2C1.1(b)(1) because the conspiracy involved more than one bribe and added 4 more levels under § 2C1.1(b)(3) because White was an "elected public official." Finally, the PSR added 16 levels under § 2C1.1(b)(2), determining that U.S. Infrastructure received $1,395,552 in professional fees on its 48 contracts between April 2003 and January 2005 and that those fees were "received in return for" Singh's cash payments to White. All of the adjustments added up to a total offense level of 36, which, combined with White's criminal history category of I, yielded a guidelines range of 188 to 235 months imprisonment. The maximum statutory prison term was 5 years for the conspiracy conviction, see 18 U.S.C. § 371, and 10 years for each federal-funds bribery conviction, see id. § 666(a).

White objected to the 4-level elected-public-official increase and to the 16-level benefit-of-the-bribe increase. At the sentence hearing, he asserted that the 4-level increase would be impermissible double counting because his base offense level was already being increased by 2 levels because he was a "public official." The court overruled that objection. About the 16-level increase, White did not contest the fact that U.S. Infrastructure received more than $1,000,000 in professional fees from the 48 contracts at issue. He did argue, though, that those fees were not in return for the envelopes full of cash that Singh gave him because most, if not all, of the contracts would have been awarded to the company anyway.

The government responded that the 16-level increase was proper because no Environmental Services Department contract was automatically awarded but instead had to be initially approved by people who were under White's direct supervision. It further contended that, given White's position as a commissioner and head of the department, he could have "put [his] foot down" and stopped U.S. Infrastructure from receiving a contract. The district court agreed with the government and overruled White's objection.

The court adopted the PSR as its findings, except that it decreased the amount of U.S. Infrastructure's professional fees from the $1,395,552 recommended in the PSR to $1,107,755.55. White requested a below-the-

guidelines sentence, arguing that he (otherwise?) had good character and stressing the relatively low sentences of others convicted of corruption, his poor medical condition, and "given his age [63] is what it is." The government requested a within-the-guidelines sentence based on the seriousness of White's public corruption, his lack of remorse, the need to deter corruption by public officials, and the widespread problem of corruption in Jefferson County. The district court sentenced White to 60 months imprisonment for the conspiracy conviction and 120 months imprisonment for each federal-funds bribery conviction, with all of the sentences to run concurrently. White's total prison sentence was 120 months, below the recommended guidelines range of 188 to 235 months. The court also imposed a 2-year term of supervised release and ordered $22,000 (the amount of the known cash payments to White) in restitution and forfeiture. White then filed this appeal, challenging the sufficiency of the evidence supporting his convictions and the reasonableness of his prison term.

II.

White contends that the government did not present sufficient evidence to support his convictions for eight counts of federal-funds bribery and one count of conspiracy. We review de novo the sufficiency of the evidence presented at trial, and "we will not disturb a guilty verdict unless, given the evidence in the record, no

trier of fact could have found guilt beyond a reasonable doubt." United States v. Hill, 643 F.3d 807, 856 (11th Cir. 2011) (quotation marks omitted). In reviewing the sufficiency of the evidence, "we look at the record in the light most favorable to the verdict and draw all reasonable inferences and resolve all questions of credibility in its favor." Id. (quotation marks omitted).

A.

White argues that the evidence was insufficient to prove that in accepting Singh's cash payments he acted with corrupt intent. It matters whether he did because the federal-funds bribery statute prohibits an agent of a local government from "corruptly . . . accept[ing] or agree[ing] to accept, anything of value from any person, intending to be influenced or rewarded in connection with any business, transaction, or series of transactions of such . . . government, . . . involving anything of value of $5,000 or more."[5] 18 U.S.C. § 666(a)(1)(B) (emphasis added). To prove that White committed federal-funds bribery, the government had to prove that he accepted the cash from Singh with the "corrupt intent" to be influenced or rewarded in connection with U.S. Infrastructure's contracts with Jefferson County. See United States v. McNair, 605 F.3d 1152, 1187–88 (11th Cir. 2010).

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[5] This statute applies if the local government for which the defendant is an agent accepts more than $10,000 in federal funds in any one-year period. See 18 U.S.C. § 666(b). No one disputes that Jefferson County fits that requirement.

The record contains ample evidence of White's corrupt intent to be influenced or rewarded. Singh paid White $22,000 during a period in which U.S. Infrastructure entered into 48 new contracts with Jefferson County. White was the commissioner in charge of the county department that selected U.S. Infrastructure for those contracts and negotiated their terms and pricing. He also had the authority to review and approve each contract before it was presented to the environmental services committee and ultimately to the full commission. White was a member of that committee and the commission, both of which had to approve a contract before it was binding.

At the time of this trial Singh himself had been convicted and sentenced for federal crimes in connection with other acts of corruption involving the Jefferson County sewer system project. See U.S. Infrastructure, 576 F.3d at 1202–03. He was a less than enthusiastic witness for the government against White. He insisted that his cash payments to White had nothing to do with U.S. Infrastructure's contracts with Jefferson County but instead were to compensate White for promoting the company to other municipalities. But Singh conceded that although he had never paid anyone else in cash for doing legitimate work for U.S. Infrastructure, cash was the only way that he ever paid White. Singh also testified that even though he had met White in 1996 or 1997, he did not begin giving him

the envelopes full of cash until six or seven years later, which was soon after White became the commissioner in charge of the Environmental Services Department, the department that played a critical role in the contracting process. And Singh also testified that he paid White to keep him happy with U.S. Infrastructure:

> Q: Mr. Singh, do you recall testifying before the grand jury in this case?
>
> A: I do.
>
> Q: Do you recall being asked why you gave [White] cash?
>
> A: It was <u>to keep him pretty much happy with [U.S. Infrastructure.]</u>
>
> Q: Was that true when you testified —
>
> A: Yes, sir.

(Emphasis added.)

There is also the undisputed fact that White kept Singh's cash payments secret. During White's term as president of the commission, he had signed an administrative order requiring every county official to submit to the county minute clerk a list of anyone with whom the official had "any form of employment or other relationship which results in any form of compensation or benefit." White did not report Singh's cash payments. And White did not mention to anyone during environmental services committee meetings that he was receiving cash from Singh. The corrupt usually don't advertise their corrupt ways, or as we noted in <u>McNair</u>, "the extent to which the parties . . . conceal their bribes is powerful evidence of

their corrupt intent." 605 F.3d at 1197; cf. John 3:20 (RSV) ("For every one who does evil hates the light, and does not come to the light, lest his deeds should be exposed."). There was enough evidence to convict White of the federal-funds bribery charges.[6]

B.

White contends that the evidence was insufficient to support his conspiracy conviction because it did not prove that he and Singh entered into an agreement to achieve an unlawful objective. To prove conspiracy, the government had to establish: (1) the existence of an agreement between White and Singh that White would commit federal-funds bribery; (2) White's knowing and voluntary

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[6] White also contends that 18 U.S.C. § 666 required the government to prove that he accepted specific payments from Singh in exchange for providing Singh with specific benefits. In other words, a quid pro quo. We rejected that interpretation of § 666 in McNair. See 605 F.3d at 1188. We have also rejected the argument that the decision in Skilling v. United States, __ U.S. __, 130 S.Ct. 2896 (2010), requires a different result. See United States v. Siegelman, 640 F.3d 1159, 1172 n.17 (11th Cir. 2011) ("Skilling did not deal with federal funds bribery under § 666 at all and, so, does not affect our consideration of these counts of conviction.").

The superseding indictment charged that White committed federal-funds bribery "on or about" eight different dates. White contends that language was not sufficiently specific to provide fair notice of the charges against him. He waived that issue by not raising it before trial. See Fed R. Crim. P. 12(e); United States v. Seher, 562 F.3d 1344, 1359 (11th Cir. 2009) ("Generally, a defendant must object before trial to defects in an indictment, and the failure to do so waives any alleged defects."). Even if he had not waived the issue, the superseding indictment was sufficient. Cf. United States v. Reed, 887 F.2d 1398, 1403 (11th Cir. 1989) (rejecting a variance argument on the ground that "[w]hen the government charges that an offense occurred 'on or about' a certain date, the defendant is on notice that the charge is not limited to the specific date or dates set out in the indictment").

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participation in the conspiracy; and (3) an overt act in furtherance of the conspiracy. See 18 U.S.C. § 371; McNair, 605 F.3d at 1195. Because "conspiracies are secretive by nature, the existence of an agreement and [White's] participation in the conspiracy may be proven entirely from circumstantial evidence." U.S. Infrastructure, 576 F.3d at 1203.

The same evidence that supports White's federal-funds bribery convictions supports his conspiracy conviction. As we have already recounted, that evidence established that (1) Singh paid White $22,000 in cash during a period in which U.S. Infrastructure entered into 48 new contracts with Jefferson County; (2) Singh paid White to "keep him pretty much happy with" U.S. Infrastructure; and (3) White kept those payments a secret. That evidence is enough to establish that Singh and White had an agreement for White to commit federal-funds bribery. Requiring direct evidence of the agreement "would allow [White] to escape liability . . . with winks and nods, even [though] the evidence as a whole proves that there" was agreement between White and Singh for White to commit federal-funds bribery. Id. at 1203 (quotation marks omitted).

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III.

We turn next to White's contention that his sentence is unreasonable. In reviewing a sentence we apply an abuse of discretion standard. United States v. Irey, 612 F.3d 1160, 1189–90 (11th Cir. 2010) (en banc). We first ensure that the district court committed no significant procedural error, such as improperly calculating the guidelines range. United States v. Shaw, 560 F.3d 1230, 1237 (11th Cir. 2009). If the sentence is not procedurally unreasonable, we then determine whether it is substantively reasonable. United States v. Gonzalez, 550 F.3d 1319, 1323–24 (11th Cir. 2008).

A.

The guidelines provide for a 16-level increase "[i]f the value of the payment, the benefit received or to be received in return for the payment, . . . whichever is greatest" exceeds $1,000,000. U.S.S.G. § 2C1.1(b)(2) (emphasis added); id. § 2B1.1(b)(1)(I). Because the $1,107,755.55 in professional fees that U.S. Infrastructure received from its White-era contracts with the county were greater than the $22,000 in cash payments that Singh gave White, the district court added 16 levels to White's offense level.

White argues that evidence established that U.S. Infrastructure's

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$1,107,755.55 in professional fees were not received "in return for" Singh's cash payments, as § 2C1.1(b)(2) requires. At trial Singh testified that U.S. Infrastructure had entered into approximately 150 sewer work contracts with the county before White became head of the Environmental Services Department. And Harry Chandler, the former assistant director of the department, testified that the work that the company had done was always satisfactory. At the sentence hearing Tom Mayhall, an FBI agent who investigated the case, testified that he did not know of any occasion where the commission itself had not approved a U.S. Infrastructure contract, either before or after White became head of the Environmental Services Department. He also said that the department may have had an unofficial practice of entering into new contracts with those firms with which it had previously contracted.

On the basis of that evidence, White argues that the evidence established that the county would have entered into the U.S. Infrastructure contracts regardless of the cash payments he received from Singh.[7] If so, he asserts that the district court erred in finding that the company's professional fees were "in return for" the

[7] Of course, one reason that the county entered into those 150 pre-White U.S. Infrastructure contracts may have been that U.S. Infrastructure had bribed Chris McNair when he was the commissioner in charge of the Environmental Services Department from 1998 to 2001. See U.S. Infrastructure, 576 F.3d at 1203–06.

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bribes. White argues that instead of the 16-level increase based on the more than $1,000,000 in professional fees to U.S. Infrastructure, he should have received only a 4-level increase based on the $22,000 in cash payments to him. See U.S.S.G. §§ 2B1.1(b)(1)(C), 2C1.1(b)(2). If so, his total offense level would have been 24 and his guidelines range would have been 51 to 63 months, well below the 188 to 235 month guidelines range and the 120-month sentence that he actually did receive.

When a defendant challenges the factual basis that the PSR sets forth for his sentence, the burden is on the government to prove the disputed facts by a preponderance of the evidence. United States v. Liss, 265 F.3d 1220, 1230 (11th Cir. 2001). The district court may base its findings of fact at sentencing on evidence presented at trial, undisputed statements in the PSR, and evidence presented at the sentence hearing. United States v. Polar, 369 F.3d 1248, 1255 (11th Cir. 2004). We review those findings only for clear error. McNair, 605 F.3d at 1230 n.127.

Other circuits have held that § 2C1.1(b)(2)'s "in return for" language requires that the government prove a causal connection between the bribes and the benefit received, see McNair, 605 F.3d at 1230, but they have also held that the causation threshold is a low one, United States v. Kinter, 235 F.3d 192, 198 (4th Cir. 2000) ("The threshold for the causation inquiry for § 2C1.1 calculations is

relatively low."), abrogated on other grounds by United States v. Booker, 543 U.S. 220, 125 S.Ct. 738 (2005); see also United States v. Sapoznik, 161 F.3d 1117, 1119 (7th Cir. 1998) (explaining that the bribes need only contribute to or facilitate the business activity involved).

Whatever the level of causation required under § 2C1.1(b)(2), the evidence presented at trial and at sentencing satisfied it. The evidence established that after sewer work contracts were approved by the Environmental Services Department's director, White had the responsibility for reviewing them and deciding whether to approve them for placement on the environmental services committee's agenda. White was himself a member of that committee and of the full commission, both of which had to vote to approve a contract. And Chandler testified that White sometimes directed him to contract with specific firms. Singh testified that he paid White only during a period in which U.S. Infrastructure entered into the 48 contracts at issue and that he did so to "keep him pretty much happy with" U.S. Infrastructure. Further, Mayhall testified at the sentence hearing that a contract could have been stopped at "any point along the way." White was at three points along the way to final approval. Mayhall also testified that White voted to approve 45 of the 48 contracts with U.S. Infrastructure, and that he believed that White was not present for the votes on the other three.

All of that evidence was enough to prove by a preponderance that Singh paid White to ensure that he did not prevent the county from approving any contract with U.S. Infrastructure, as he might have done. Under these circumstances, the district court did not clearly err by finding that the company's professional fees were a benefit "received in return for" Singh's cash payments. Application of the 16-level enhancement was not error.

B.

In addition to setting White's base offense level at 14, instead of 12, because he was a public official, see U.S.S.G. § 2C1.1(a), the district court also enhanced it 4 more levels under § 2C1.1(b)(3) because he was an elected public official. White contends that amounts to impermissible double counting. Which it does not. We have held that "[i]mpermissible double counting occurs only when one part of the Guidelines is applied to increase a defendant's punishment on account of a kind of harm that has already been fully accounted for by application of another part of the Guidelines." United States v. Dudley, 463 F.3d 1221, 1226–27 (11th Cir. 2006) (quotation marks omitted). Because of the critical importance of representative self-government, a guideline that applies to any public official who betrays the public trust does not "fully account[]" for the harm that is inflicted when the trust that the official betrays was conferred on him in an election. Being a bribe-taking

"elected public official" is different from being a run-of-the-mill, bribe-taking, non-elected "public official."

C.

Our substantive reasonableness review is guided by the factors in 18 U.S.C. § 3553(a). United States v. Pugh, 515 F.3d 1179, 1188–89 (11th Cir. 2008). The district court is required to impose a sentence that is "sufficient, but not greater than necessary, to comply with the purposes" listed in that statutory provision. 18 U.S.C. § 3553(a). Those purposes include the need to reflect the seriousness of the offense, promote respect for the law, provide just punishment of the offense, deter criminal conduct, protect the public from the defendant's future criminal conduct, and provide the defendant with needed educational or vocational training or medical care. Id. § 3553(a)(2). Among other factors, the district court must also consider the nature and circumstances of the offense, the history and characteristics of the defendant, the applicable guidelines range, and the need to avoid unwarranted sentencing disparities. See id. § 3553(a)(1), (4), (6).

We ordinarily "expect a sentence within the Guidelines range to be reasonable," United States v. Talley, 431 F.3d 784, 788 (11th Cir. 2005), and the burden of establishing that a sentence is unreasonable lies with the party

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challenging it, Pugh, 515 F.3d at 1189. We will vacate a sentence for substantive unreasonableness "if, but only if, we are left with the definite and firm conviction that the district court committed a clear error of judgment in weighing the § 3553(a) factors by arriving at a sentence that lies outside the range of reasonable sentences dictated by the facts of the case." Irey, 612 F.3d at 1190 (quotation marks omitted).

White's 120-month prison sentence is not unreasonable. It is below the applicable guidelines range of 188 to 235 months, and there was no abuse of discretion in the court's weighing of the § 3553(a) factors. As the district court explained in imposing the sentence:

> [M]y obligation in this case is to sentence you to a sentence which is sufficient but not more than necessary to accomplish the sentencing goals set forth in the federal statutes. And those goals are not just whether or not you personally will ever be able to accomplish this type of crime again; that's not the sole thing that I have to consider in determining the sentence. I also have to consider and find appropriate, in addition to the nature and circumstances of the offense and history and characteristics of you, Mr. White, which is demonstrated by the number of people that are here and all these letters that are written by folks that you have done a lot of admirable things in your life, that you have served your community. But also to reflect the seriousness of the offense and promote respect for the law, provide just punishment for you, and to afford adequate deterrence to criminal conduct.
>
> You see, when someone's elected to a position of trust as an elected official, they don't have the right . . . they don't have a right to have a bag . . . at all. It's not a function of how big the bag is, they just don't have a right to have a bag that they can carry around stuff they get from people that are

> involved with them in this process. And, so, I think a sentence which is 120 months total is appropriate.

Indeed.

AFFIRMED.

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE NORTHERN DISTRICT OF ALABAMA
SOUTHERN DIVISION

In re:	)	
	)	
JEFFERSON COUNTY, ALABAMA, a political subdivision of the State of Alabama,	)	**Case No. 11-05736-TBB**
	)	**Chapter 9**
	)	
Debtor.	)	

FOURTH PERIODIC STATUS REPORT
CONCERNING THE SEWER RATEMAKING PROCESS

Pursuant to the *Interim Order on Motion to Lift or Condition the Automatic Stay Filed by Financial Guaranty Insurance Company* [Docket No. 967] entered May 7, 2012 (the "Interim Order"), Jefferson County, Alabama (the "County"), the debtor in the above-captioned chapter 9 case, respectfully submits this Fourth Periodic Status Report Concerning the Sewer Ratemaking Process (the "Status Report").[1]

1. On October 29, 2012, the Administrative Services Committee (the "Committee") of the Jefferson County Commission (the "Commission") heard testimony and recommendations from Mr. Eric Rothstein, Mr. David Denard, and Dr. Stephanie Rauterkus (collectively, the "Witnesses") concerning the Commission's responsibility to make reasonable and nondiscriminatory rules and regulations fixing rates and charges in respect of the County's sanitary sewer system (the "System"). Specifically, the Witnesses reported on the work they have undertaken during and in connection with the public hearing process pursued by the Commission, including: (i) analysis of pertinent

[1] The County's *First Periodic Status Report Concerning the Sewer Ratemaking Process* [Docket No. 1070] (the "First Report") was filed June 18, 2012. The County's *Second Periodic Status Report Concerning the Sewer Ratemaking Process* [Docket No. 1190] (the "Second Report") was filed August 2, 2012. The County's *Third Periodic Status Report Concerning the Sewer Ratemaking Process* [Docket No. 1299] (the "Third Report") was filed September 12, 2012. The First, Second, and Third Reports are available free of charge at www.jeffcosewerhearings.org.

data from the Environmental Services Department ("ESD"); (ii) review of the testimony, evidence, materials, and public comments received during and in connection with the public hearing process (the "Record") – including, in particular, consideration of certain creditors' "'effort to correct a number of the County's current assumptions and conclusions about sewer bills and the impact on System customers,'" Third Report at 8 (quoting creditors' correspondence); (iii) design of a proposed new sewer rate structure and associated rates and charges; (iv) revisions to the ordinances that govern the System; and (v) consideration of an appropriate conservation program to help System users calibrate their water usage to their budget constraints.[2]

2. Following these presentations, the Committee voted to place a *Resolution of the Jefferson County Commission* (the "Proposed Resolution") on the agenda for the November 6, 2012 regular meeting of the full Commission.[3] The Proposed Resolution provides for, *inter alia*: (i) the repeal of the *Jefferson County Sewer Use/Pretreatment Ordinance* adopted May 11, 1982, including all amendments thereto; (ii) the repeal of the *Grease Control Program Ordinance* adopted October 3, 2006, including all amendments thereto; (iii) the repeal of *Resolution No. Feb-12-1997-Bess-1*, adopted February 12, 1997; (iv) the adoption of a new *Jefferson County Sewer Use Administrative Ordinance* (the "Proposed Administrative Ordinance")[4]; and (v) the adoption of a new *Jefferson County*

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[2] Copies of the presentation and handouts used during the Committee meeting are attached hereto as Exhibits A, B, C, and D, and are also available free of charge at www.jeffcosewerhearings.org.

[3] A copy of the Proposed Resolution is attached hereto as Exhibit E, and is also available free of charge at www.jeffcosewerhearings.org.

[4] A copy of the Proposed Administrative Ordinance is attached hereto as Exhibit F, and is also available free of charge at www.jeffcosewerhearings.org.

Sewer Use Charge Ordinance (the "Proposed Charge Ordinance").[5]

3. Consistent with Act 619, 1949 Ala. Acts 949, *et seq*. (approved Sept. 19, 1949) ("Act 619"), notice of the Proposed Resolution will be published on or before October 30, 2012 (*i.e.*, at least seven days prior to the November 6, 2012 public hearing on the Proposed Resolution, *see* Act 619 § 6(a)).

Respectfully submitted this 29th day of October, 2012.

By: /s/ J. Patrick Darby

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Counsel for Jefferson County, Alabama

[5] A copy of the Proposed Administrative Ordinance is attached hereto as Exhibit G, and is also available free of charge at www.jeffcosewerhearings.org.

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Proposed Sewer Rates and Charges

Jefferson County Commission
October 29, 2012

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Proposed Rate Objectives

- Correct fundamental flaws in current (unreasonable) structure
- Ensure all sewer rate components are:
  - **Reasonable**
  - **Fair and Non-discriminatory**
  - **Feasible**
- Consistent with industry best practices
- Limit revenue instability with structural changes in rates
  - Provide foundation for future rate setting

Proposed Sewer Rates and Charges: General Service

Base Charge*	**$10.00**
Residential** Volumetric Rates	Per CCF
Tier 1 Billed Sewer Flow: 0 – 3 CCF	$4.50
Tier 2 Billed Sewer Flow: 4 – 6 CCF	$7.00
Tier 3 Billed Sewer Flow: 7 & Above CCF	$8.00
Non- Residential Volumetric Rate	Per CCF
Uniform Volumetric Rate	$7.60

*** Scaled by meter size**
**** Residential customers are given a 15% discount for water that does not enter the customer's sewer lines at their home.**

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Proposed Sewer Rates and Charges: Septic Hauling and Industrial Waste^

Septic Hauling Charges*	Proposed
Septage	$60.00 / 1000g
Grease	$75.00 / 1000g

* Establishes new differential charge for grease handling reflecting higher cost of service

Industrial Waste ($ / LB)**	Proposed
Suspended Solids (TSS)	$0.2734
Biochemical Oxygen Demand (BOD)	$0.8284
Chemical Oxygen Demand (COD)	$0.4142
Fats, Oils & Grease (FOG)	$0.1715
Phosphorus	$3.2650

** Eliminates differential charge tiers based on concentrations of: TSS - 1000 mg/l, BOD – 1200 mg/l, COD – 3000 mg/l.

^ Correction of presented industrial waste charges correctly reflected in resolution and on slide #18

Reasons for Recommendation

- Fixed charges
  - Reflects costs to service account
  - Provides revenue stability
  - Avoids "free rider" problem
- Residential tiered rates
  - Insulates majority of users from large % bill impacts (given fixed charges)
    - Help assure affordability of levels of service required for health and safety
  - Higher marginal rates for exceptionally high use

Reasons for Recommendation

- Residential
  - Tier thresholds for **all** residential users:
    - Discount use required for health & sanitary needs
    - Higher rates at use above average or for high use
- Non-Residential
  - Tiers inappropriate – penalize large users for size, irrespective of efficiency
  - Fixed charges (by meter size) generate significant revenues and moderate uniform volume rate requirements
  - Industrial waste and septic hauler charges correct for historical subsidy, better aligned to cost

Billable Flow Determination

- **Issue:** Metered water use does not measure flows to sewer system
- Residential
  - JeffCo – 15% Irrigation credit
    - ***Validated with analysis of 2011 data***
  - Other options:
    - Summer only credit, Winter month average
- Non-residential
  - No general irrigation credit
  - Customer-specific exemptions
    - Example: Evaporative cooling towers

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Proposed Sewer Rates and Charges: General Service

Base Charge*	**$10.00**
Residential** Volumetric Rates	Per CCF
Tier 1 Billed Sewer Flow: 0 – 3 CCF	$4.50
Tier 2 Billed Sewer Flow: 4 – 6 CCF	$7.00
Tier 3 Billed Sewer Flow: 7 & Above CCF	$8.00
Non- Residential Volumetric Rate	Per CCF
Uniform Volumetric Rate	$7.60

*** Scaled by meter size**

**** Residential customers are given a 15% discount for water that does not enter the customer's sewer lines at their home.**

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Residential Customers Distribution of Usage Levels

Bill Distribution - All Residential

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Residential Bill Impacts

Projected Bills by Consumption Level

Residential Customer Class

$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$-

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Water Consumption Level (CCF)

Previous Bill — New Bill

Residential Bill Impacts

Projected Bill Impacts for Residential Customers

Monthly Bill Impacts, Residential Customer Class

Choose meter size: 5/8" ** assumes meter size is the same across all consumption levels for bill comparison*

Water Consumption (CCF)	0	1	2	3	4	5	6	7	8	9	10
Billed Volume Adjustment	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Billed WW Volume (CCF)	**0.00**	**0.85**	**1.70**	**2.55**	**3.40**	**4.25**	**5.10**	**5.95**	**6.80**	**7.65**	**8.50**
Previous Bill											
Volume Charge	$ -	$ 6.29	$ 12.58	$ 18.87	$ 25.16	$ 31.45	$ 37.74	$ 44.03	$ 50.32	$ 56.61	$ 62.90
Minimum Charge	2.00	-	-	-	-	-	-	-	-	-	-
Total Previous Bill	**$ 2.00**	**$ 6.29**	**$ 12.58**	**$ 18.87**	**$ 25.16**	**$ 31.45**	**$ 37.74**	**$ 44.03**	**$ 50.32**	**$ 56.61**	**$ 62.90**
New Bill											
Volume Charge	$ -	$ 3.83	$ 7.65	$ 11.48	$ 16.30	$ 22.25	$ 28.20	$ 34.15	$ 40.90	$ 47.70	$ 54.50
Meter Charge	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Total New Bill	**$ 10.00**	**$ 13.83**	**$ 17.65**	**$ 21.48**	**$ 26.30**	**$ 32.25**	**$ 38.20**	**$ 44.15**	**$ 50.90**	**$ 57.70**	**$ 64.50**
Difference	$ 8.00	$ 7.54	$ 5.07	$ 2.61	$ 1.14	$ 0.80	$ 0.46	$ 0.12	$ 0.58	$ 1.09	$ 1.60

Residential Bill Impacts (Continued)

Projected Bill Impacts for Residential Customers

Monthly Bill Impacts, Residential Customer Class										
Choose meter size:										
Water Consumption (CCF)	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Billed Volume Adjustment	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Billed WW Volume (CCF)	**9.35**	**10.20**	**11.05**	**11.90**	**12.75**	**13.60**	**14.45**	**15.30**	**16.15**	**17.00**
Previous Bill										
Volume Charge	$ 69.19	$ 75.48	$ 81.77	$ 88.06	$ 94.35	$ 100.64	$ 106.93	$ 113.22	$ 119.51	$ 125.80
Minimum Charge	-	-	-	-	-	-	-	-	-	-
Total Previous Bill	**$ 69.19**	**$ 75.48**	**$ 81.77**	**$ 88.06**	**$ 94.35**	**$ 100.64**	**$ 106.93**	**$ 113.22**	**$ 119.51**	**$ 125.80**
New Bill										
Volume Charge	$ 61.30	$ 68.10	$ 74.90	$ 81.70	$ 88.50	$ 95.30	$ 102.10	$ 108.90	$ 115.70	$ 122.50
Meter Charge	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Total New Bill	**$ 71.30**	**$ 78.10**	**$ 84.90**	**$ 91.70**	**$ 98.50**	**$ 105.30**	**$ 112.10**	**$ 118.90**	**$ 125.70**	**$ 132.50**
Difference	$ 2.11	$ 2.62	$ 3.13	$ 3.64	$ 4.15	$ 4.66	$ 5.17	$ 5.68	$ 6.19	$ 6.70

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Non-Residential Bill Impacts

Projected Bills by Consumption Level

Non-Residential Customer Class

$2,500.00
$2,000.00
$1,500.00
$1,000.00
$500.00
$-

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 100 150 200 250

Water Consumption Level (CCF)

Previous Bill — New Bill

Non-Residential Bill Impacts

Projected Bill Impacts for Non-Residential Customers

Monthly Bill Impacts, Non-Residential Customer Class

Choose meter size: 1.5" ** assumes meter size is the same across all consumption levels for bill comparison*

Consumption (CCF)	0	5	10	15	20	25	30	35	40	45	50
Previous Bill											
Volume Charge	$ -	$ 37.00	$ 74.00	$ 111.00	$ 148.00	$ 185.00	$ 222.00	$ 259.00	$ 296.00	$ 333.00	$ 370.00
Minimum Charge	9.00	-	-	-	-	-	-	-	-	-	-
Total Previous Bill	**$ 9.00**	**$ 37.00**	**$ 74.00**	**$ 111.00**	**$ 148.00**	**$ 185.00**	**$ 222.00**	**$ 259.00**	**$ 296.00**	**$ 333.00**	**$ 370.00**
New Bill											
Volume Charge	$ -	$ 38.00	$ 76.00	$ 114.00	$ 152.00	$ 190.00	$ 228.00	$ 266.00	$ 304.00	$ 342.00	$ 380.00
Meter Charge	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Total New Bill	**$ 18.00**	**$ 56.00**	**$ 94.00**	**$ 132.00**	**$ 170.00**	**$ 208.00**	**$ 246.00**	**$ 284.00**	**$ 322.00**	**$ 360.00**	**$ 398.00**
Difference	$ 9.00	$ 19.00	$ 20.00	$ 21.00	$ 22.00	$ 23.00	$ 24.00	$ 25.00	$ 26.00	$ 27.00	$ 28.00

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Non-Residential Bill Impacts (Continued)

Projected Bill Impacts for Non-Residential Customers

Monthly Bill Impacts, Non-Residential Customer Class										
Choose meter size:										
Consumption (CCF)	**55**	**60**	**65**	**70**	**75**	**80**	**100**	**150**	**200**	**250**
Previous Bill										
Volume Charge	$ 407.00	$ 444.00	$ 481.00	$ 518.00	$ 555.00	$ 592.00	$ 740.00	$ 1,110.00	$ 1,480.00	$ 1,850.00
Minimum Charge	-	-	-	-	-	-	-	-	-	-
Total Previous Bill	**$ 407.00**	**$ 444.00**	**$ 481.00**	**$ 518.00**	**$ 555.00**	**$ 592.00**	**$ 740.00**	**$ 1,110.00**	**$ 1,480.00**	**$ 1,850.00**
New Bill										
Volume Charge	$ 418.00	$ 456.00	$ 494.00	$ 532.00	$ 570.00	$ 608.00	$ 760.00	$ 1,140.00	$ 1,520.00	$ 1,900.00
Meter Charge	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Total New Bill	**$ 436.00**	**$ 474.00**	**$ 512.00**	**$ 550.00**	**$ 588.00**	**$ 626.00**	**$ 778.00**	**$ 1,158.00**	**$ 1,538.00**	**$ 1,918.00**
Difference	$ 29.00	$ 30.00	$ 31.00	$ 32.00	$ 33.00	$ 34.00	$ 38.00	$ 48.00	$ 58.00	$ 68.00

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Proposed Non-Residential Rate Changes

Minimum / Base Charges by Meter Size	Current Minimum Charge (If No Water Use)	Proposed Base Charge (Irrespective of Water Use)	Variance	
			Amount	Percent
5/8”	$2.00	$10.00	$8.00	400%
3/4”	$2.50	$11.00	$8.50	340%
1”	$5.00	$14.00	$9.00	180%
1.5”	$9.00	$18.00	$9.00	100%
2”	$14.00	$29.00	$15.00	107%
3”	$25.00	$110.00	$85.00	340%
4”	$45.00	$140.00	$95.00	211%
6”	$85.00	$210.00	$125.00	147%
8”	$200.00	$290.00	$90.00	45%
10”	$250.00	$370.00	$120.00	48%
Volume Rate ($ / CCF)	**Current Rate**	**Proposed Rate**	**Amount**	**Percent**
All Usage	$7.40	$7.60	$0.20	2.7%

Septage & Industrial Waste Surcharges

- Programs important for environmental stewardship
- Charges have not been adjusted since 1991
  - Historic subsidy
- Proposed charges:
  - 100% increase and paced increases to cost-based levels
  - Implement structural changes:
    - Simplify industrial surcharge categories
    - Septage charges with grease and septic components

Proposed Sewer Rates and Charges: Septic Hauling and Industrial Waste

Septic Hauling Charges*	Proposed
Septage	$60.00 / 1000g
Grease	$75.00 / 1000g

* Establishes new differential charge for grease handling reflecting higher cost of service

Industrial Waste ($ / LB)**	Proposed
Suspended Solids (TSS)	$0.2734
Biochemical Oxygen Demand (BOD)	$0.8284
Chemical Oxygen Demand (COD)	$0.4142
Fats, Oils & Grease (FOG)	$0.1715
Phosphorus	$3.2650

** Eliminates differential charge tiers based on concentrations of: TSS - 1000 mg/l, BOD – 1200 mg/l, COD – 3000 mg/l.

Mandatory Hook-Up

- Existing Health Department regulations address
  - Applies to new construction within proximity (100 feet) of sewer lines
- Consistent with industry practices
- NOT “Clean Water Fee” or “Non-User Fee”

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Proposed Sewer Rate Changes
Estimated % Changes in Revenues*

Residential Rate Structure Revisions**

Percentage Change in Revenues	**6.4%**

Non- Residential Rate Structure Revisions

Percentage Change in Revenues	**4.2%**

Septage & Industrial Waste Charge Revisions

Percentage Change in Revenues	**75%**

System-Wide Revisions in Rate & Fee Structures

Percentage Change in Revenues	**5.9%**

*** Revenue generation estimates assume price elasticity impacts of -0.25.**

**** Residential users charged based on 15% irrigation credit for metered water use.**

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Implementation Requirements

- Rate ordinance adoption
- Billing system requirements
  - Programming and parallel testing
  - Customer service training
  - Revised bill adjustment procedures
  - Financial reconciliation procedures
- Public information
  - Publish new ordinance on website
  - Communication program explaining rate structure changes

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Case 11-05736-TBB9 Doc 2216-12 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc
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Proposed Sewer Rates and Charges

Jefferson County Commission
October 29, 2012

2013 Jefferson County Sewer Rate Restructuring
Frequently Asked Questions

New Sewer Rates

Base Charge*
$10.00

Residential Sewer Volume Rates Per Hundred Cubic Feet (CCF)

0 – 3 CCF
$4.50
4 – 6 CCF
$7.00
7 CCF & Above
$8.00

Non-Residential Sewer Volume Rates

All CCF
$7.60

* Base charges graduated by meter size

Why is the County making these changes?
The County is making these changes so that sewer rates will more fairly charge customers for services provided based on the advice of its rate expert and following months of study and public hearings. Rates for sewer service have not been increased since 2008.

How are the rate changes related to the County's bankruptcy?
The filing of the County's bankruptcy blocked the power of John Young, the sewer receiver, to raise rates. However, the bankruptcy judge could allow the sewer receiver to take control of rates again if the Commission does not take necessary actions like this rate restructuring. The new rates provide a fair, reasonable rate structure so the Commission can move toward an exit from bankruptcy.

Is there a non-user fee or clean water charge?
No. There is no non-user fee or clean water charge.

How will my sewer bill change?
The box on the following page shows how much bills will increase for various levels of water use. For most residential customers, those increases will be less than $2 / month.

Will the 15 percent credit for residential water use still apply?
Yes. The credit still applies for residential users.

What is the new "Base Charge" and why is it being charged?
The Base Charge applies to all active sewer accounts. The amount of the Base Charge depends on the size of a customer's water meter (most residential customers have a 5/8" water meter, and will therefore have a $10 Base Charge). The Base Charge recovers a portion of the fixed costs of providing sewer service.

Do other utilities impose base charges?
Yes. Water, sewer and other utilities commonly impose base charges – largely because they are a fair way to recover costs for serving customers. For example, Birmingham Water Works Board's rates feature a $17.34 base charge for most residential users.

How do the rate blocks for residential users work?
Customers are charged for the volume of sewage they discharge to the sewer system. Usually, this volume is measured in units of one hundred cubic feet (CCF). Every residential user will pay $4.25 per CCF for the first three CCF of sewage discharged to the sewer system. If a residential customer discharges more than three CCF, the fourth, fifth, and sixth CCFs will each cost $7 per CCF. If a residential customer discharges seven CCFs or more, each additional CCF will cost $8 per CCF.

Monthly Effect on Residential Sewer Bills

Use	Monthly Effect
0 CCF	$8.00
1	$7.54
2	$5.07
3	$2.61
4	$1.14
5	$0.80
6	$0.46
7	$0.12
8	$0.58
9	$1.09
10	$1.60
11	$2.11
12	$2.62
13	$3.13
14	$3.64
15	$4.15
16	$4.66
17	$5.17
18	$5.68
19	$6.19
20	$6.70

How did you determine the amount of usage for each block?
The first block of water use is charged at the lowest rate because it is meant to cover basic human health and sanitary needs for a family of 4 persons. The second block includes the average level of discharge for residential customers in Jefferson County. The third block includes above-average use and recognizes the corresponding burdens on the system.

Why are industrial waste and septic hauler waste rates being increased?
Unlike charges for general sewer service, these charges have not been increased since 1991. Also, septage rates do not currently recover the costs to provide service. The increases correct these long-standing inequities and enable the County to more nearly recover its costs.

Will there be more sewer rate changes?
Yes. Water and sewer rates around the country have been increasing at roughly double the rate of inflation for years and are expected to continue to do so. Jefferson County's sewer system is not insulated from the factors that are driving these rate increases, including generally rising costs, stricter regulatory requirements, and the need to renew and rehabilitate aging infrastructure. The new rate structure is expected to generate a 5.8% overall revenue increase; however, the exact effect of this structure on revenues is not yet certain. These factors, along with any changes that may be appropriate in connection with the County's exit from bankruptcy, are likely to require future rate adjustments. Jefferson County is committed to working diligently to continue to impose fair, reasonable, and lawful rates for all the system's customers.

What Would The New Rates
Mean For Residential Customers?

Water Used	Current Bill	Proposed Bill	Difference
0 CCF	$2.00	$10.00	$8.00
1	$6.29	$13.83	$7.54
2	$12.58	$17.65	$5.07
3	$18.87	$21.48	$2.61
4	$25.16	$26.30	$1.14
5	$31.45	$32.25	$0.80
6	$37.74	$38.20	$0.46
7	$44.03	$44.15	$0.12
8	$50.32	$50.90	$0.58
9	$56.61	$57.70	$1.09
10	$62.90	$64.50	$1.60
11	$69.19	$71.30	$2.11
12	$75.48	$78.10	$2.62
13	$81.77	$84.90	$3.13
14	$88.06	$91.70	$3.64
15	$94.35	$98.50	$4.15
16	$100.64	$105.30	$4.66
17	$106.93	$112.10	$5.17
18	$113.22	$118.90	$5.68
19	$119.51	$125.70	$6.19
20	$125.80	$132.50	$6.70

These figures apply to residential customers without private water meters. Those with private water meters do not currently receive the 15% watering credit, nor will they under the new rate structure.

2013 Jefferson County Sewer Rate Restructuring

Existing Rates: Under existing rates, residential sewer customers are charged $7.40 per hundred cubic feet (CCF or 748.5 gallons) of metered water use less a 15 percent adjustment for water use that is not returned to the sewer system (e.g., irrigation). Non-residential users are charged the same rate with no adjustment. Customers that have no metered water use are charged $2.00 per month.

Restructured Rates: The proposed rate structure will include a base charge that varies by the size of the customer's water meter. Most residential users' base charge will be $10 per month. Sewer use rates will be graduated based on the volume of sewage discharged to the system. For the first 3 CCF, the charge will be $4.50 per CCF; for the next 3 CCF, the rate will be $7.00 per CCF; and 7 CCF and above will be charged $8.00 per CCF. The 15% credit for water that does not enter the sewer system is retained; therefore, for most residential users, volume of sewage discharged is 85% of total metered water use. Non-residential customers will also be charged a base charge that varies by meter size. These customers will be charged $7.60 per CCF for all metered water use. Rates for industrial waste contributions (which have not changed since 1991) will increase to market cost of service. The charge for septic tank haulers to dump 1,000 gallons of septage (the volume of a typical residential septic tank) into the system will increase $30.

Non-User Fee / Clean Water Charge: There is no non-user fee or clean water charge.

Restructured Rates are Fairer

- Customers are charged (through the base charge) the costs of having sewer service available.
- High water use is charged for above average sewage volume received.

Restructured Rates Limit Impacts on Typical Residential Users

- Most customers (between 4 and 10 CCF) will have bills increase by less than $2 per month
- Low volume users still pay less than $21.50 per month – which is less than for BWWB water service.

Restructured Rates Reduce Past Subsidies to Selected Users

- Base charge corrects for "free riders" not charged costs to make service available.
- Restructuring begins to correct subsidy of residential users by non-residential users.
- Industrial waste & septic changes end past practice of insulation from cost increase.

Restructured Rates Consistent with Industry and Legal Standards

- **The new rates are reasonable, fair, non-discriminatory, and feasible.**
- Restructuring to include a base charge, to adopt tiered usage blocks, and to preserve the irrigation adjustment reflects industry practice.

RESOLUTION OF THE JEFFERSON COUNTY COMMISSION

WHEREAS,

A. On November 15, 1948, the Constitution of the State of Alabama was amended by the Jefferson County Sewer Amendment ("Amendment 73"), *see* R-2067,[1] pertaining to the operation, repair, improvement, and management of the Jefferson County sanitary sewer system (the "System");

WHEREAS,

B. Amendment 73 vests "[t]he governing body of Jefferson county" with "full power and authority to manage, operate, control and administer" the System, "and, to that end, [to] make any reasonable and nondiscriminatory rules and regulations fixing rates and charges, providing for the payment, collection and enforcement thereof, and the protection of its property," R-2067;

WHEREAS,

C. The Jefferson County Commission (the "Commission") is the governing body of Jefferson County, Alabama (the "County") referenced in Amendment 73;

WHEREAS,

D. On September 19, 1949, Act Number 619, 1949 Ala. Acts 949, *et seq.* ("Act 619"), *see* R-2068-77, a supplement to Amendment 73, became effective by its terms;

WHEREAS,

E. Act 619 restates and confirms that the Commission has full "power to maintain and operate" the System and to levy and collect "sewer rentals or service charges" from "the persons and property whose [sewage] is disposed of or treated by the [System]," R-2069 (Act 619 §§ 2, 4);

WHEREAS,

F. Act 619 provides that the Commission "shall prescribe and from time to time when necessary revise a schedule of [sewer rates and charges] which shall . . . be such that the revenues derived therefrom will at all times be adequate but not in excess of amounts reasonably necessary [(i)] to pay all reasonable expenses of operation and maintenance of the [System], including reserves and insurance[; (ii)] to make any necessary or appropriate replacements, extensions or

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[1] Citations to "R-___" are to the consecutively paginated record (the "Record") on file in the Minute Clerk's office and available for public inspection and copying.

improvements [to the System; and (iii)] to pay punctually the principal of and interest on any bonds issued by the County pursuant to [Amendment 73]," R-2070-71 (Act 619 § 6(a));

WHEREAS,

G. Act 619 directs that sewer rates and charges "shall, as nearly as may be practicable and equitable, be uniform throughout the county for the same type, class and amount of use or service of the [S]ystem, and may be based or computed either on the consumption of water on or in connection with the real property served, making due allowance for commercial use of water or for water not entering the [S]ystem, or on the number and kind of water outlets on or in connection with such real property, or on the number and kind of plumbing or sewerage [*sic*] fixtures or facilities on or in connection with such real property, or on the number of persons residing or working on or otherwise connected or identified with such real property, or on the capacity of the improvements on or connected with such real property, or on any other factors determining the type, class and amount of use or service of the [S]ystem, or on any combination of any such factors, and may give weight to the characteristics of the sewerage [*sic*] and other wastes and any other special matter affecting the cost of treatment and disposal thereof . . . ," R-2070 (Act 619 § 5);

WHEREAS,

H. Act 619 creates a five-member Board of Arbitration, appointed by the Commission, with jurisdiction to hear and determine challenges to sewer rates "by any user of the [System]," R-2071-73 (Act 619 § 6(b));

WHEREAS,

I. All five seats on the Board of Arbitration are currently vacant, and are due to be filled by the Commission;

WHEREAS,

J. Although all bonded indebtedness authorized or contemplated by Amendment 73 and Act 619 has been fully repaid and is no longer outstanding, the Alabama Supreme Court has ruled that the powers vested in the Commission with respect to the System by Amendment 73 and Act 619 continue to apply notwithstanding such repayment and satisfaction of bonded indebtedness, *see Jefferson County v. City of Birmingham*, 55 So. 2d 196 (Ala. 1951); *Opinion of the Justices*, 251 So. 2d 755 (Ala. 1971); *Shell v. Jefferson County*, 454 So. 2d 1331 (Ala. 1984); *Jefferson County v. City of Leeds*, 675 So. 2d 353 (Ala. 1995);

WHEREAS,

K. On May 11, 1982, the Commission adopted the Jefferson County Sewer Use/Pretreatment Ordinance, which ordinance has been amended from time to

time thereafter, most recently on March 31, 2009 (as amended, the "Sewer Use and Pretreatment Ordinance"), R-1786-1834, and which ordinance (as well as the System generally) is administered on a day-to-day basis by the County's Environmental Services Department ("ESD");

WHEREAS,

L. On December 9, 1996, in a consolidated civil action styled *R. Allen Kipp, Jr., et al. v. Jefferson County, Alabama, et al.*, Case No. 93-G-2492-S (N.D. Ala.) (the "*Kipp* Litigation"), the United States District Court for the Northern District of Alabama entered a consent decree (the "Consent Decree") obligating the County to, *inter alia*, "eliminat[e] further bypasses and unpermitted discharges of untreated wastewater containing raw sewage to the Black Warrior and Cahaba River Basins," "eliminat[e] sewer system overflows," "achiev[e] full compliance with [the County's] NPDES permits," and "achiev[e] full compliance with the Clean Water Act," 33 U.S.C. §§ 1251, *et seq.* (the "Clean Water Act"); *see also* Michael D. Floyd, *A Brief History of the Jefferson County Sewer Crisis*, 40 CUMB. L. REV. 691, 693 (2009-2010) ("*Brief History*") (describing the *Kipp* Litigation and resulting Consent Decree as a "tectonic shift" for the County);

WHEREAS,

M. The Consent Decree required the incorporation of many formerly separate municipal sewer lines (collectively, the "*Kipp* Assets") into the System, with the County assuming full responsibility for the remediation of the *Kipp* Assets, *see id.* at 698; *see also In re Jefferson County*, 474 B.R. 228, 238 (Bankr. N.D. Ala. 2012) (the "Stay Ruling"), *on direct appeal sub nom. Assured Guaranty Municipal Corp., et al. v. Jefferson County*, Case No. 12-13654 (11th Cir.) (noting that the Consent Decree "shifted the costs of disrepair from the local governments and their inhabitants to the County and its inhabitants"); *id.* at 237 ("When the County acquired these sewer systems from the governments located in Jefferson County, it was without compensation by any of them and without investigation of the systems' conditions by the County.");

WHEREAS,

N. Notwithstanding that as an accounting matter (pursuant to GASB 34) the *Kipp* Assets are carried on the County's books at approximately $939 million, the County paid nothing for the *Kipp* Assets and the *Kipp* Assets have actually carried, and will continue to carry, significant liabilities exceeding the book value of the *Kipp* assets due to, *inter alia*, their poor condition and the attendant liabilities under the Consent Decree and the Clean Water Act;

WHEREAS,

O. On February 12, 1997, to finance the cost of complying with the Consent Decree, the Commission adopted a resolution and order that, *inter alia*, authorized the "President of the Commission to execute and deliver, for and in the name and on

behalf of the County, a Trust Indenture" (the "Original Indenture"), *see* R-0604-0715, pursuant to which all previously outstanding debt pertaining to System was fully refunded and repaid, and new debt was incurred;

WHEREAS,

P. The Original Indenture has been supplemented by eleven supplemental indentures (collectively and together with the Original Indenture, the "Indenture");

WHEREAS,

Q. Debt was issued under the Indenture in the form of warrants authorized by provisions of the Alabama Code that permit the County "to sell and issue warrants of the county for the purpose of paying costs of public facilities," ALA. CODE § 11-28-2;

WHEREAS,

R. As permitted by Alabama law, the warrants issued under the Indenture (the "Sewer Warrants") are not general obligation debt supported by the full faith and credit of the County; instead the Sewer Warrants are "limited obligation debt of the county payable solely from specified pledged funds," *id.*;

WHEREAS,

S. The "specified pledged funds" from which the Sewer Warrants are payable are defined in the Indenture as the "Pledged Revenues," R-0622, 0626-27 (Indenture §§ 1.1 & 2.1), and are alternatively sometimes referred to as the "Net Revenues," *see* Stay Ruling, 474 B.R. at 252; *see also The Bank of New York Mellon v. Jefferson County (In re Jefferson County)*, 474 B.R. 725 (Bankr. N.D. Ala. 2012) (the "Net Revenues Opinion"), *appeal filed but not yet docketed*;

WHEREAS,

T. Among other provisions, the Indenture provides that the County must "fix, revise and maintain such rates for services furnished by the System as shall be sufficient (i) to provide for the payment of the interest and premium (if any) on and the principal of the [Sewer Warrants], as and when the same become due and payable, (ii) to provide for the payment of the Operating Expenses and (iii) to enable the County to perform and comply with all of its covenants contained in the Indenture," *see* R-0682 (Indenture § 12.5(a));

WHEREAS,

U. Among other provisions, the Indenture contains a rate covenant (the "Rate Covenant"), which provides that "[t]he County will make from time to time, to the extent permitted by law, such increases and other changes in [sewer] rates and charges as may be necessary . . . to provide, in each Fiscal Year, Net Revenues

Available for Debt Service in an amount that shall result in compliance" with certain debt coverage formulas, *see* R-0682-83 (Indenture § 12.5(b)); *provided, however*, that non-compliance with the Rate Covenant will not be an event of default under the Indenture if "the County employs a utility system consultant to review the System and its existing rates and fees and makes a good faith effort to comply with the recommendations of such consultant," *see* R-0690 (Indenture § 13.1(b)(ii));

WHEREAS,

V. On February 12, 1997, the same day the Commission approved the Original Indenture, the Commission adopted a resolution (the "Automatic Rate Adjustment Resolution") amending the Sewer Use and Pretreatment Ordinance "to establish procedures that will result in periodic automatic increases in the rates and charges for the services provided by the System," such that sewer rates would automatically keep pace with debt service costs, regardless of how much money was borrowed under the Indenture, and without any further action of the Commission;

WHEREAS,

W. Compliance with the Consent Decree's requirements was "initially estimated [to] cost County ratepayers $1.2 to $1.5 billion over the next decade," *United States v. McNair*, 605 F.3d 1152, 1165 n.1 (11th Cir. 2010); *see also* Charles S. Wagner, *The Untold History of the Jefferson County Waste Water Treatment System: 1972 – Present*, 40 CUMB. L. REV. 797, 811 (2009-2010) ("Some estimates at the time placed the potential cost of the work at $1.5 billion, but these estimates were based on incomplete information."); James H. White, III, *Financing Plans for the Jefferson County Sewer System: Issues and Mistakes*, 40 CUMB. L. REV. 717, 719 (2009-2010) ("*Financing Plans*") ("The original estimate of the capital costs of complying with the consent decree was $250 million.");

WHEREAS,

X. The actual amount borrowed under the Indenture between 1997 and 2003 was approximately $3.6 billion – of which approximately $3.2 billion remains unpaid, *see* Stay Ruling, 474 B.R. at 237;

WHEREAS,

Y. Significantly more money was spent building and rehabilitating the System than was initially estimated, due in part to what the United States Court of Appeals for the Eleventh Circuit has characterized as a criminal "kleptocracy" – "a term used to describe 'a government characterized by rampant greed and corruption,'" R-2333 (*United States v. White*, 663 F.3d 1207, 1209, slip op. at 2 (11th Cir. 2011) (alterations omitted)) ("To that definition dictionaries might add, as a helpful illustration: 'See, for example, Alabama's Jefferson County Commission in the period from 1998 to 2008.' During those years, five members or former members

of the commission that governs Alabama's most populous county committed crimes involving their 'service' in office for which they were later convicted in federal court. And the commission has only five members."); *accord* Stay Ruling, 474 B.R. at 239-40 ("Not to be outdone by the public sector is the business sector. . . . Those involved in investment banking and municipal finance were not out of the loop when it came to dishonest or inappropriate conduct. Some of those involved in the development and sales of the types of financial instruments used in part by the County for its sewer system's needs have committed crimes related to what was sold to the County. Others have not been charged with crimes, but have entered settlements with the United States Securities and Exchange Commission where there is no admission of wrongdoing, but payments in the tens of millions of dollars have been made."); *see generally* R-2284-2331 (*United States v. Langford*, 647 F.3d 1309 (11th Cir. 2011));

WHEREAS,

Z. The System-related fraud ultimately resulted in hundred-plus-count federal criminal indictments charging dozens of defendants with crimes that included "conspiracy to commit bribery, honest services mail fraud, mail fraud, and obstruction of justice," R-2117 (*McNair*, 605 F.3d at 1164-65, slip op. at 2); *see also* Stay Ruling, 474 B.R. at 240 ("So far, the total of public and private persons and entities determined to have committed crimes related to the County's sewer system is somewhere in the low twenties.");

WHEREAS,

AA. The fraud reached the highest levels of decision-making authority in respect of the System, ultimately resulting in the criminal convictions of "the Environmental Services Department's former director, its former assistant director, its former chief civil engineer, its former chief construction maintenance supervisor, one of its former engineers, and one of its former maintenance supervisors," R-2336 (*White*, 663 F.3d at 1211 n.3, slip op. at 5); *see also* R-2189 (*McNair*, 605 F.3d at 1196, slip op. at 74 (describing "pervasive and entrenched corruption"));

WHEREAS,

BB. Much of the fraudulent activity concerned the design and construction of the System, and included, *inter alia*,

(i.) Creating made-up projects for bribe payers with nothing of value to offer ESD, *see, e.g.*, R-2098-99 (*United States v. US Infrastructure, Inc.*, 576 F.3d 1195, 1210, slip op. at 21-22 (11th Cir. 2009) ("*USI*")) (describing how the County Commissioner in charge of ESD received $10,000 in "free" electrical work, and in exchange asked ESD "'to see if we could develop a project that [the electrical engineer] could perform,'" notwithstanding that the engineer "was not able to do the work that [ESD] typically required");

(ii.) Distorting the bid process by limiting the pool of eligible bidders to only those who were willing to pay bribes, *see, e.g.*, R-2119 (*McNair*, 605 F.3d at 1165 n.2, slip op. at 4) (explaining how the 11-member technical committee tasked with finding qualified bidders for ESD projects included at least five criminals); R-2129 (*id.* at 1169-70, slip op. at 14) (describing how the technical committee "effectively limited the 'big jobs' to only three bidders" – all of whom paid substantial bribes); *see also* R-2157 (*id.* at 1181, slip op. at 42) ("When two non-local competitors finally qualified to join the bidding in 2001, prices [for rehabilitating sewer lines] quickly dropped from over $50 per linear foot to about $28."); *see also Brief History*, 40 CUMB. L. REV. at 700 (describing the County's strict "prequalification" process as "unusual for the utility industry");

(iii.) Increasing the profit margins of contractors who were willing to pay bribes, *see, e.g.*, R-2130 (*McNair*, 605 F.3d at 1170, slip op. at 15) ("In 1996 and 1997, at the sewer rehabilitation's outset, [Roland Pugh Construction, Inc.] made gross profits of 10%, and as the project continued and payments were made to [County] officials, the company's sewer rehabilitation profits increased to 50% in 1999, 40% in 2000, and 45% in 2001, making [Pugh] tens of millions of dollars in each of those years."); *see also* R-2129 (*id.*, slip op. at 14) (Pugh's CEO admitting that in exchange for providing "envelopes of cash" to the Commissioner in charge of ESD, "our company [went] from a normal struggling contracting company in the mid to late '90s, to a thriving, wealthy, strong construction company");

(iv.) Directly adding the costs of bribing government officials to the cost of working on the System, *e.g.*, R-2132-33 (*id.* at 1171, slip op. at 17-18) (describing how $52,990 worth of work at a Commissioner's private business was "coded . . . as expenses on a [County] sewer project"); R-2087 (*USI*, 576 F.3d at 1205, slip op. at 10) ("The evidence shows an extended plan or scheme by USI, a company that received $50 million in government contracts over a period of years, to pass nearly $140,000 through bogus invoice payments to the County Commissioner almost wholly responsible for that $50 million.");

(v.) Indirectly adding to the costs of the System by declining to enforce contract deadlines and other terms for which the County had paid valuable consideration, *see, e.g.*, R-2146 (*McNair*, 605 F.3d at 1177, slip op. at 31) ("Swann declined to invoke the performance bond against RAST, which would have guaranteed the project's completion at the original contract price of $27.8 million. Instead, RAST won a re-bid for an additional contract worth $23.8 million. Consequently, the County effectively paid RAST over $50 million for work RAST was obligated to perform under the original $27.8 million contract."); R-2193-94 (*id.* at 1198, slip op. at 78-79) (describing an instance in which a County official retroactively extended the completion deadline on a major project in exchange for a

$4,500 "scholarship" for the official's son, thereby relieving the contractor of more than $100,000 in liquidated damages);

(vi.) Defeating the checks and balances built into the contracting system, insofar as even the "independent consulting engineers, whose jobs were to make sure the contractors performed according to specifications and to sign off on payments and requests for change orders," R-2128-29 (*id.* at 1169, slip op. at 13-14), were corrupt; and

(vii.) Impeding the proper accounting of System assets by misclassifying fraudulent payments on some projects as payments on other projects to avoid specific dollar caps, *see, e.g.*, R-2161-62 (*id.* at 1183, slip op. at 46-47) (explaining how an emergency contract for replacing sewer pipes in the Paradise Lake subdivision was accounted for as part of an unrelated Cahaba River project to skirt the $50,000 limit for emergency projects; the contractor was paid $857,000, and made a 50% profit);

WHEREAS,

CC. Other corrupt and criminal behavior concerned the complex financing structure whereby approximately $3.6 billion was borrowed, including, *inter alia*,

(i.) Payment of bribes totaling "more than $240,000 in cash, clothing, and jewelry" to former Commission President Larry Langford from "Blount–Parrish & Company ('Blount–Parrish'), an investment banking firm that specialized in the underwriting and marketing of municipal bonds," R-2285-86 (*Langford*, 647 F.3d at 1314-15, slip op. at 2-3);

(ii.) Corrupt selection of "Blount–Parrish to participate in many of the County's financial transactions," including a series of disastrous interest rate swap deals, R-2288-89 (*id.* at 1315-16, slip op. at 5-6); *see also* R-2289-90 (*id.* at 1316, slip op. at 6-7) ("All told, Blount–Parrish was paid some $7 million in fees related to transactions involving Jefferson County, which . . . yielded a 'net benefit' to Blount–Parrish of about $5.5 million."); and

(iii.) Improper conduct warranting a cash penalty of $75 million – together with termination of $647 million of interest rate swap penalties – levied by the Securities and Exchange Commission ("SEC") against J.P. Morgan, *see Brief History*, 40 CUMB. L. REV. at 713-14; *cf. Financing Plans*, 40 CUMB. L. REV. at 735 ("For many years it was known in financial circles in New York and elsewhere that J.P. Morgan was abusing Jefferson County in interest rate swap transactions. The term 'abuse' understates the seriousness of J.P. Morgan's actions.");

WHEREAS,

DD. Although the precise scope and effect of the fraud may never be known, *cf*. R-2112 (*USI*, 576 F.3d at 1215, slip op. at 35) (noting that the criminal convictions include obstruction of justice, for providing false information to the grand jury investigating these crimes), the record adduced during the extensive federal criminal proceedings suggests hundreds of millions of dollars in direct effects of the bribery and corruption, *see* R-2235-36 (*McNair*, 605 F.3d at 1217 n.96, slip op. at 120-21) (noting that one defendant's pre-sentence investigation report calculated a "net profit or benefit" of $67,980,043); R-2251 (*id*. at 1224 n.114, slip op. at 136) (net profit or benefit of $42,460,880 for another defendant); R-2338 (*White*, 663 F.3d at 1212, slip op. at 7) ($1,395,552 in professional fees paid to another defendant were "received in return for" cash bribes), with untold additional dollars lost through corruption of the bidding process, make-work projects, improper remission of penalties, and the like;

WHEREAS,

EE. In addition, the financing aspects of the fraud – which involved switching the County's fixed-rate debt to the variable-rate variety (including so-called "synthetic fixed" debt) – left the County particularly vulnerable to the market failures of 2008, and sped the County's default and its attendant consequences, *see, e.g.*, *Financing Plans*, 40 CUMB. L. REV. at 748-49 (explaining that although the 2008 bond insurer downgrades had "no consequences to the County" with respect to its fixed-rate debt, "[w]hen the insurers of the synthetic fixed rate debt were downgraded, however, the County's debt service ratcheted up, effectively doubling or tripling");

WHEREAS,

FF. The facts of the massive and long-running fraud perpetrated on the County and its citizens have been established beyond a reasonable doubt after full and fair trials, *see, e.g.*, R-2125 (*McNair*, 605 F.3d at 1168, slip op. at 10) (noting that the Government and the defense called 36 witnesses and 23 witnesses, respectively, at just one of the trials), and on an evidentiary showing that has been characterized by the United States Court of Appeals for the Eleventh Circuit as "overwhelming[,]" R-2118 (*id*. at 1165, slip op. at 3), grounded in a "wealth of evidence," R-2263 (*id*. at 1230, slip. op at 148), "ample," R-2342 (*White*, 663 F.3d at 1213, slip op. at 11), and "more than sufficient," R-2088 (*USI*, 576 F.3d at 1205, slip op. at 11);

WHEREAS,

GG. To ascertain an approximate amount by which the myriad forms of fraud, waste, and improper conduct has inflated the cost of the System, the County retained an expert engineering firm – CH2M Hill – to evaluate the extent to which the current book value of the assets comprising the System compare to what a highly

regarded engineering-procurement-construction firm estimates the System should have cost;

WHEREAS,

HH. The current book value of the assets comprising the System is approximately $2.819 billion; of that total, approximately $2.386 billion consists of wastewater treatment plant ("WWTP") assets;

WHEREAS,

II. CH2M Hill has prepared a draft analysis, *see* R-1931-2066, estimating the cost of building each of the System's nine WWTPs to their current permitted capacity, calculating each value initially in 2012 dollars and then adjusting the result for inflation back to each WWTP's in-service date; additionally, for the three most costly WWTPs, CH2M Hill conducted an alternative analysis of the cost of building more appropriately-sized facilities – *i.e.*, WWTPs designed to treat what the System actually handles (with appropriate provisions for wet weather flow events and System growth), rather than the much larger permitted capacity;

WHEREAS,

JJ. Although CH2M Hill's conclusions are still in draft form and subject to revision, CH2M Hill has preliminarily estimated the costs for each of the County's nine WWTPs as follows:

(i.) ***Valley Creek (Current Flows, 2012 Dollars)***: Sized based on current 20-year projected flows, the total cost, in 2012 dollars, would have been approximately $347.2 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $520.8 million to approximately $243 million), *see* R-1939;

(ii.) ***Valley Creek (Current Flows, 2005 Dollars)***: Adjusting that figure ($347.2 million) for inflation correlates to an acquisition cost of approximately $281.6 million, *see* R-1939; which would be depreciated to a current book value of $230.5 million (assuming a 40-year useful life for plant assets);

(iii.) ***Valley Creek (Permitted Flows, 2012 Dollars)***: Sized based on 2012 permitted flows, the total cost, in 2012 dollars, would have been approximately $518.2 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $777.3 million to approximately $362.7 million); *see* R-1938;

(iv.) ***Valley Creek (Permitted Flows, 2005 Dollars)***: Adjusting that figure ($518.2 million) for inflation correlates to an acquisition cost of approximately $420.3 million, *see* R-1938; which would be depreciated to

a current book value of approximately $344.1 million (assuming a 40-year useful life for plant assets);

(v.) ***Village Creek (Current Flows, 2012 Dollars)***: Sized based on current 20-year projected flows, the total cost, in 2012 dollars, would have been approximately $357.6 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $536.4 million to approximately $250.3 million), *see* R-1939;

(vi.) ***Village Creek (Current Flows, 2003 Dollars)***: Adjusting that figure ($357.6 million) for inflation correlates to an acquisition cost of approximately $253.9 million, *see* R-1939; which would be depreciated to a current book value of approximately $194.6 million (assuming a 40-year useful life for plant assets);

(vii.) ***Village Creek (Permitted Flows, 2012 Dollars)***: Sized based on 2012 permitted flows, the total cost, in 2012 dollars, would have been approximately $454 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $681 million to approximately $317.8 million), *see* R-1938;

(viii.) ***Village Creek (Permitted Flows, 2003 Dollars)***: Adjusting that figure ($454 million) for inflation correlates to an acquisition cost of approximately $322.4 million, *see* R-1938; which would be depreciated to a current book value of approximately $247.2 million (assuming a 40-year useful life for plant assets);

(ix.) ***Five Mile Creek (Current Flows, 2012 Dollars)***: Sized based on current 20-year projected flows, the total cost, in 2012 dollars, would have been approximately $98.9 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $148.4 million to approximately $69.3 million), *see* R-1940;

(x.) ***Five Mile Creek (Current Flows, 2008 Dollars)***: Adjusting that figure ($98.9 million) for inflation correlates to an acquisition cost of approximately $92.8 million, *see* R-1940; which would be depreciated to a current book value of approximately $83.9 million (assuming a 40-year useful life for plant assets);

(xi.) ***Five Mile Creek (Permitted Flows, 2012 Dollars)***: Sized based on 2012 permitted flows, the total cost, in 2012 dollars, would have been approximately $179.7 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $269.6 million to approximately $125.8 million), *see* R-1938;

(xii.) ***Five Mile Creek (Permitted Flows, 2008 Dollars)***: Adjusting that figure ($179.7 million) for inflation correlates to an acquisition cost of approximately $168.5 million, *see* R-1938; which would be depreciated to

a current book value of approximately $152.4 million (assuming a 40-year useful life for plant assets);

(xiii.) ***Cahaba (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $150.4 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $225.6 million to approximately $105.3 million), *see* R-1938;

(xiv.) ***Cahaba (Permitted Flows, 2005 Dollars)***: Adjusting that figure ($150.4 million) for inflation correlates to an acquisition cost of approximately $121 million, *see* R-1938; which would be depreciated to a current book value of approximately $99.1 million (assuming a 40-year useful life for plant assets);

(xv.) ***Leeds (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $57.1 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $85.6 million to approximately $40 million), *see* R-1939;

(xvi.) ***Leeds (Permitted Flows, 1995 Dollars)***: Adjusting that figure ($57.1 million) for inflation correlates to an acquisition cost of approximately $34.3 million, *see* R-1939; which would be depreciated to a current book value of approximately $19.3 million (assuming a 40-year useful life for plant assets);

(xvii.) ***Turkey Creek (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $64.7 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $97.1 million to approximately $45.3 million), *see* R-1939;

(xviii.) ***Turkey Creek (Permitted Flows, 2005 Dollars)***: Adjusting that figure ($64.7 million) for inflation correlates to an acquisition cost of approximately $51.7 million, *see* R-1939; which would be depreciated to a current book value of approximately $41.9 million (assuming a 40-year useful life for plant assets);

(xix.) ***Trussville (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $49.8 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $74.7 million to approximately $34.8 million), *see* R-1939;

(xx.) ***Trussville (Permitted Flows, 1998 Dollars)***: Adjusting that figure ($49.8 million) for inflation correlates to an acquisition cost of approximately $32.6 million, *see* R-1939; which would be depreciated to a current book value of approximately $20.8 million (assuming a 40-year useful life for plant assets);

(xxi.) ***Prudes Creek (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $23 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $34.5 million to approximately $16.1 million), *see* R-1939;

(xxii.) ***Prudes Creek (Permitted Flows, 2004 Dollars)***: Adjusting that figure ($23 million) for inflation correlates to an acquisition cost of approximately $17.6 million, *see* R-1939; which would be depreciated to a current book value of approximately $14.0 million (assuming a 40-year useful life for plant assets);

(xxiii.) ***Warrior (Permitted Flows, 2012 Dollars)***: The total cost, in 2012 dollars, would have been approximately $13.8 million (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $20.8 million to approximately $9.7 million), *see* R-1939;

(xxiv.) ***Warrior (Permitted Flows, 2006 Dollars)***: Adjusting that figure ($13.8 million) for inflation correlates to an acquisition cost of approximately $11.6 million, *see* R-1939; which would be depreciated to a current book value of approximately $9.8 million (assuming a 40-year useful life for plant assets);

WHEREAS,

KK. Aggregating the CH2M Hill estimates for all nine WWTPs leads to the following totals:

(i.) ***Current Flows, 2012 Dollars***: Sized based on current 20-year projected flows, the total cost, in 2012 dollars, would have been approximately $1.163 billion (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $1.744 billion to approximately $814 million), *see* R-1940;

(ii.) ***Current Flows, Inflation-Adjusted Dollars***: Adjusting that figure ($1.163 billion) for inflation correlates to an acquisition cost of approximately $897.9 million, *see* R-1940; which would be depreciated to a current book value of approximately $714.0 million (assuming a 40-year useful life for plant assets);

(iii.) ***Permitted Flows, 2012 Dollars***: Sized based on 2012 permitted flows, the total cost, in 2012 dollars, would have been approximately $1.511 billion (with an expected accuracy range of plus 50% to minus 30% – *i.e.*, approximately $2.266 billion to approximately $1.058 billion), *see* R-1939;

(iv.) ***Permitted Flows, Inflation-Adjusted Dollars***: Adjusting that figure ($1.511 billion) for inflation correlates to an acquisition cost of approximately $1.181 billion, *see* R-1939; which would be depreciated to

a current book value of approximately $948.5 million (assuming a 40-year useful life for plant assets);

WHEREAS,

LL. The range between which the System's current book value of approximately $2.819 billion differs from the value of facilities required to deliver sewer services as a result of the *Kipp* Assets and excessive costs incurred in connection with the WWTPs is between $1.597 billion (permitted flows) and $1.832 billion (current flows);

WHEREAS,

MM. This range is conservative insofar as it assumes no deduction for waste, fraud or abuse in connection with any of the System's other fixed assets;

WHEREAS,

NN. The substantial increase in costs "due to poor planning, waste, and fraud," *Financing Plans*, 40 CUMB. L. REV. at 719, resulted in increased debt due under the Indenture, which in turn led to higher debt service costs;

WHEREAS,

OO. The Automatic Rate Adjustment Resolution provided that sewer rates should automatically increase each year to a level sufficient to satisfy increased costs, without any action by the Commission or any input from the public, *see* R-1612 (Memorandum Opinion dated June 12, 2009 (the "Proctor Decision"), in *The Bank of New York Mellon, et al. v. Jefferson County, Alabama, et al.*, Case No. 2:08-cv-01703-RDP (N.D. Ala.) (the "Federal Receivership Case")) (describing "periodic, automatic rate increases in certain circumstances … designed to ensure the County's ability to service its debt"); *see also* R-1638-39 n.23 (Proctor Decision); *cf. Financing Plans*, 40 CUMB. L. REV. at 730-31 ("Sewer rates adopted by the Commission have always been thought to require a public hearing prior to adoption. The automatic rate increase ordinance removed this [step and] made rate increases a mathematical process, divorced from policy and political considerations.");

WHEREAS,

PP. Between 1997 and 2008, sewer rates increased approximately 329%, and an additional automatic rate increase of more than 300% was set to take effect on January 1, 2009, pursuant to the Automatic Rate Adjustment Resolution;

WHEREAS,

QQ. On December 16, 2008, the Commission "suspend[ed] the operation of the [Automatic Rate Adjustment Resolution]," and directed that "there shall be no

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adjustment of System rates pending further action of the Commission after such notice and hearing as required by applicable law," R-1602-03;

WHEREAS,

RR. The Commission next acted on sewer rates and charges on March 31, 2009 (by amending the Sewer Use and Pretreatment Ordinance to levy a fee for processing applications for private water meters), and the Commission has not modified sewer rates and charges since;

WHEREAS,

SS. The preceding circumstances, together with significant market failures and bond-insurer downgrades, *see generally* Hon. Spencer T. Bachus, *Federal Policy Responses to the Predicament of Municipal Finance*, 40 CUMB. L. REV. 759, 765-67 (2009-2010) ("*Policy Responses*"); *cf.* R-1613 (Proctor Decision) ("To be sure, the County originally borrowed (and was loaned) far too much money."), led to a default under the Indenture;

WHEREAS,

TT. As a consequence of that default, by order dated September 22, 2010 (the "Receiver Order") in *The Bank of New York Mellon, et al. v. Jefferson County, Alabama, et al.*, Case No. CV-2009-02318 (Ala. Cir. Ct.) (the "State Receivership Case"), the circuit court of Jefferson County appointed a receiver (the "Receiver") over the System and ruled that the Receiver had exclusive power to exercise the Commission's authority under Amendment 73 and Act 619;

WHEREAS,

UU. Because the Receiver Order prohibited the Commission from taking any action concerning the System (including fixing rates and charges), the Commission was enjoined from considering any rate increase from September 2010 through the filing of the County's chapter 9 bankruptcy case in the United States Bankruptcy Court for the Northern District of Alabama (the "Bankruptcy Court") on November 9, 2011;

WHEREAS,

VV. After the Bankruptcy Court found on January 6, 2012, in the Stay Ruling, that the Commission once again may exercise the plenary authority provided for in Amendment 73 and Act 619, the Commission gave public notice of its intent to "exercise its constitutional obligations in respect of sewer rates and charges on the basis of . . . testimony, evidence and public comments received during and in connection with [a series of] public sewer rate hearings," R-0531, and to that end convened public hearings at the Birmingham-Jefferson Civic Center on June 12, 2012, at the Bessemer Courthouse on July 24, 2012, and in the John L. Carroll

Moot Courtroom at Samford University's Cumberland School of Law on August 20, 2012;

WHEREAS,

WW. Ample public notice was provided in advance of each of the hearings, *see* R-0001-02; R-0203-04; R-0533-35, and all stakeholders – including "ratepayers, creditors and any other parties" (*id.*) – were invited to be heard in person and/or via the submission of "any comments or materials they want the Commission to consider in connection with the fixing of rates and charges for sewer service or the fixing of a rate structure," *id.*; *cf. Financing Plans*, 40 CUMB. L. REV. at 731 ("Public hearings . . . might have protected the public from the incompetence and criminality that occurred.");

WHEREAS,

XX. In addition to the foregoing public notice, the County Manager sent personal invitations to each of the major sewer creditors, soliciting their participation in the process and advising, *inter alia*, that "[t]he Commission takes very seriously its newly returned authority over the system, and intends to exercise this public trust in a sound, transparent manner . . . on the basis of the very best information and expertise available, gleaned in a manner befitting a representative democracy: public hearings at which everyone affected by the sewer system and sewer rates and charges has the opportunity to hear the evidence on which the Commission's decisions will be based, and to offer any additional testimony, evidence or commentary that may be germane to the ratemaking process," R-0179-0202;

WHEREAS,

YY. The hearings were well-publicized in the local media, and were attended by a substantial number of citizens, ratepayers and public officials, *see, e.g.*, R-0049 & R-0134 (noting the presence of certain members of the Jefferson County delegation to the Alabama Legislature);

WHEREAS,

ZZ. Eighteen citizens spoke publicly during the hearings, providing information and comment on a range of topics pertinent to the Commission's responsibilities under Amendment 73 and Act 619, *see, e.g.*, R-0115 (representative of the Eastlake community explaining how inability to pay high sewer bills has led to the disconnection of water service and attendant public health concerns); R-0119 (mobile home park owner stating that his combined water and sewer bill went from between \$500 and \$600 per month in 1999 to between \$6,000 and \$7,000 per month today, and that these increased costs have been passed on in part to low-income tenants); R-0136 (real estate broker with 30 years' experience in the community observing that high sewer rates deter home sales); R-0139 (concerned citizen opining that ratepayers should not bear the full brunt of "the financial [sleight] of hand that was committed" in connection with the financing and

construction of the System); R-0139-42 (retired utility employee explaining the cumulative impact of high natural gas rates, high electricity rates, and high sewer rates, and recommending that the Commission coordinate with the Alabama Public Service Commission, which has jurisdiction over private utility rates); R-0143 (Ensley resident observing that high sewer rates can lead to a vicious spiral of customers leaving the System and thereby increasing the burden on those who remain, who in turn are more likely to leave the System);

WHEREAS,

AAA. The Commission heard sworn testimony from Mr. David Denard, Director of ESD, concerning the operation of the System, the value of the services it provides, the condition of System infrastructure, and the characteristics of future capital expenditures that will be required to properly maintain the System and keep it in compliance with applicable federal and state law, *see* R-0060-82 (transcribed testimony); R-0003-0018 (written presentation); R-0170 (verification);

WHEREAS,

BBB. Among other things, Mr. Denard testified that:

(i.) Residential sewer accounts are charged on the basis of billable sewer flows at the rate of $7.40 per CCF, *see* R-0070; these sewer use charges account for over 90% of the System's revenues, *see* R-0069, and are "highly variable," R-0070;

(ii.) Over the past ten years, the System has experienced a "very consistent decline in the . . . volume of usage from [its] customer base," R-0072; the decline in consumption has "exceeded three percent per year on a very consistent basis for the last ten years," *id.*;

(iii.) "There is a disconnect" between the System's revenues, which are variable, and its costs, which "are, for the most part, fixed," R-0072; in order to address its declining revenue stream, the County "will almost certainly have to [convert] some portion of the current rate structure to a fixed charge," R-0012;

(iv.) The County currently charges a minimum charge (set in 1991) of $2 per month for users with no usage, *see* R-0071; this charge reflects the fact that the System "incurs fixed expenses to provide service for each account regardless of volumetric usage," R-0011; the amount of the charge "needs to be considered and reconsidered," R-0071;

(v.) The County levies industrial surcharges (that is, additional charges imposed on high-strength users based on the strength of their waste, *see* R-0010) and septage charges (to recover the cost of disposing of septic tank waste delivered directly to the System's wastewater treatment plants by

septage haulers, *see* R-0011); neither the industrial surcharges nor the septage rate has changed since 1991, *see* R-0071; *see also* R-0011-12;

(vi.) The County undertook a "tremendous obligation and liability to . . . fix [the *Kipp* Assets]," R-0076; although the *Kipp* Assets were valued in excess of $1.4 billion for accounting purposes, they were "subsequently determined to be in worse condition than assumed" and have been a net liability from a cash-flow perspective, *see* R-0013; and

(vii.) The System's annual revenues are currently approximately $162 million, *see* R-0069; *see also* R-0009; its annual operating expenses are currently approximately $56 million, *see* R-0064; *see also* R-0006; ESD expects to reduce operating expenses by approximately $4 million per year by decreasing personnel expenses, *see* R-0067, and estimates that capital expenditures will average $36 million per year over the next five years, *see* R-0079; *see also* R-0016;

WHEREAS,

CCC. The Commission heard sworn testimony from Dr. Stephanie Rauterkus, a finance professor at the University of Alabama – Birmingham, analyzing and quantifying the burden on the community from sewer rates and charges, including in comparison to other areas of the country, *see* R-0084-0110 (transcribed testimony); R-0019-47 (written presentation); R-0171 (verification);

WHEREAS,

DDD. Among other things, Dr. Rauterkus testified that:

(i.) Relative to median home value, residential sewer bills in Jefferson County impose a "significantly higher" burden than sewer bills in the other 49 large metropolitan areas included in her analysis, *see* R-0108; specifically, Dr. Rauterkus found that the average annual sewer bill as a percentage of median home value across the 50 metropolitan areas she examined is 0.17%, whereas the average annual sewer bill in Jefferson County is 0.33% of median home value, *see* R-0109; *see also* R-0047; indeed, 83% of Jefferson County sewer customers pay more than the national average as a percentage of home value, *see* R-0047;

(ii.) The average annual sewer bill as a percentage of median household income ("MHI") across the 50 metropolitan areas included in Dr. Rauterkus's study is 0.87%; the average bill in Jefferson County is 1.0% of MHI, *see* R-0103; *see also* R-0046; expressed as a percentage of MHI, sewer bills in Jefferson County are higher than sewer bills in 76% of the metropolitan areas she examined, *see* R-0103; *see also* R-0032; and

(iii.) The burden imposed upon economically vulnerable residents of the County is cause for concern, inasmuch as sewer bills already amount to

2.5% of MHI for residents in the lowest MHI decile, *see* R-0097; *see also* R-0028;

WHEREAS,

EEE. The Commission heard sworn testimony from Mr. Eric Rothstein, a nationally recognized utility system consultant and strategic financial planner, concerning the financing of capital improvements and wastewater utility ratemaking in exceptional situations such as Jefferson County's, *see* R-0264-0328 (transcribed testimony); R-0212-58 (written presentation); R-0368 (verification);

WHEREAS,

FFF. Among other things, Mr. Rothstein testified that:

(i.) The amount of debt incurred in respect of the System is "extraordinary": typical long-term indebtedness per customer for most utilities is between $1,100 to $2,000, *see* R-0305-07, whereas the amount of long-term indebtedness per customer in Jefferson County is more than $21,000, *see* R-0205, 0527; *see also* R-0512-13 (Receiver's sworn trial testimony) ("[The Receiver:] [T]ake a look at the investment per customer here and the resulting sewer debt. You know, I have worked in thirty-five different states all across the country [and] I have never seen that type of investment per customer and the debt associated with it.");

(ii.) At this extraordinary level, "[i]t's just not reasonable, appropriate, or . . . likely even possible for the County to increase rates to pay for the outstanding debt as it becomes due and payable, and to pay for the expenses of operating the system in compliance with applicable law," R-0315; *see also* R-0514 (Receiver's sworn trial testimony) (the "three or four hundred percent rate increases" that would be necessary to service the full amount of outstanding sewer debt are "in my mind and my professional judgment . . . excessive");

(iii.) In this unique circumstance, the County could look for guidance in "how private utilities are regulated," such as the concept of disallowing certain imprudently incurred costs, *see* R-0320 ("Private utilities [set rates by] look[ing] at operating expenses and [looking] at the amount of invested rate base, and calculat[ing] a return on that invested rate base; the concept being that those who've invested in the system are entitled to receive a return on their investment. One of the fundamental princip[les] of that is the rate of return is earned on used and useful assets."); *see also* R-0374 (Receiver's sworn trial testimony) ("A rate proceeding for an investor-owned utility is when a utility comes forward to recommend a certain amount of rate increase and there is due diligence and rulings by the Public Service Commission within that state.");

(iv.) Using that analogy, the County would inquire, "[W]hat would be the debt levels associated with a reasonable[,] prudently incurred cost [of building the System] as opposed to where the system is now[?]," R-0321-22; *see also* R-0321 ("Are there assets that are not really at the value that's recorded in the fixed asset records? . . . Are there assets [for which] the book value has been artificially inflated because of the graft and corruption that occurred[?]"); *cf.* R-0457 (Receiver's sworn trial testimony) (describing one basis for the Receiver's proposed rate increase: "[T]here had always been a concern in the public that the higher rates were [necessary because of] the 2002/2003 refinancing of the debt. And so we did an analysis [of] what would [have] happen[ed] if we had never done the auction rate swaps in 2002 and 2003 and had continued to finance improvements with just conventional fixed rate debt, where would rates be today. And the analysis showed that they would be thirty-two percent higher than they are today. So clearly I felt that helped support a twenty-five percent rate increase.");

(v.) The private utility analogy would also require accounting for the fact that the "process of consolidati[ng] a diverse set of different sewer systems of varying quality" (*i.e.*, incorporating the *Kipp* Assets) has the current effect of "distort[ing] information on the balance sheet," R-0303, insofar as nothing was paid for the *Kipp* Assets and therefore no reasonable return would be due on the *Kipp* Assets;

(vi.) "There is not a bright line standard for reasonableness" in wastewater ratemaking, *i.e.*, "[t]here is not some place that we can look to . . . that says $10 per CCF is reasonable and $10.05 is not," R-0323; and

(vii.) Nevertheless, there are certain hallmarks of reasonableness and non-discrimination, including:

a. The principles that "the same reasonable rates need to be applicable to everyone in the same class of customers," R-0323-24;

b. Rates must be "generally applicable to everybody," R-0324;

c. It is appropriate to make "smooth, nondisruptive rate increases . . . that people can plan for, people can manage, people can understand," R-0325;

d. "Rate increases [should not] ask customers to pay for something that's not being used or some costs that were not prudently incurred," *id.*;

e. "It doesn't make sense to set rates that will only pay for operating expenses and debt service costs, but not provide the annual renewal and rehabilitation necessary to keep the system in good working order," *id.*; and

f. “It doesn’t make sense to establish rates that deny customers access to a vitally needed service required to maintain public health,” R-0326;

WHEREAS,

GGG. The Commission heard sworn testimony from Mr. Lance LeFleur, Director of the Alabama Department of Environmental Management (“ADEM”), concerning the County’s nine National Pollutant Discharge Elimination System (“NPDES”) permits and resources required to comply with them, including the required upcoming expenditure of an estimated $150 million to comply with new phosphorous limits, *see* R-0543-0553 (transcribed testimony); R-0562 (errata to transcribed testimony); R-0563 (verification);

WHEREAS,

HHH. Among other things, Mr. LeFleur testified that:

(i.) “Over the past 15 years, . . . the County has done a good job” complying with the requirements of the NPDES permits, and “the professionals who operate the County sewer system have done an excellent job running the system,” R-0546;

(ii.) ADEM anticipates that it will soon issue renewal permits with stricter phosphorous limitations on two of the County’s treatment plants, *see* R-0548, and that compliance with these permits will require more than $150 million in capital and operating expenses, *see* R-0551-52; and

(iii.) The permits provide for a gradual phasing in of the phosphorous limits over the “maximum time period available,” R-0551; failure to comply with the limits would constitute a violation of the Clean Water Act and result in “significant adverse financial consequences and possible loss of local control,” R-0552-53;

WHEREAS,

III. The major sewer creditors, including the Bank of New York Mellon, in its capacity as Indenture Trustee (the “Trustee”), JPMorgan Chase Bank, N.A., Bank of America, Bank of Nova Scotia, Socièté Gènèrale, Bank of New York Mellon, State Street Bank and Trust Company, Lloyds TSB Bank plc, Assured Guaranty Municipal Corp., Syncora Guarantee Inc., and an *ad hoc* group of sewer creditors (the “GLC Group”), submitted as part of the public hearing process over a thousand pages of material for the Commission’s consideration, including:

(i.) A detailed, 36-page submission from the GLC Group (the “GLC Submission”) addressing the long-term financial footing of the System and encouraging the Commission to, *inter alia*, increase the customer base by

requiring mandatory hookups, *see* R-0564-99 (citing ALA. CODE § 11-3-11(a)(15));

(ii.) A 4-page letter (the "Trustee Letter") addressing the public hearing process, identifying what the creditors contend are errors in the evidence before the Commission, "urg[ing] the Commission and its consultants to review and consider carefully all relevant information," *see* R-0600-603, and appending 1,112 pages of exhibits (collectively with the Trustee Letter, the "Trustee Submission"), *see* R-0604-1714, including:

a. The Original Indenture, *see* R-0604-715;

b. Certain creditors' initial response to the Commission's invitation to appear and be heard as part of the ratemaking process, *see* R-0717-37;

c. The Red Oak Consulting Final Technical Report, dated January 31, 2007 (the "Red Oak Report"), *see* R-0738-1013;

d. The Comprehensive Wastewater Cost of Service and Rate Study Report, dated February 3, 2010 (the "Raftelis Report"), *see* R-1014-1135;

e. The BE&K 2003 Final Report (the "BE&K Report"), *see* R-1136-1295;

f. The Paul B. Krebs & Associates Report, dated November 5, 2002 (the "Krebs Report"), *see* R-1296-1308;

g. The Paul B. Krebs & Associates Revenue Analysis, dated March 31, 2003 (the "Krebs Revenue Analysis"), *see* R-1309-53;

h. An earlier draft of the Krebs Revenue Analysis, dated March 13, 2003 (the "Krebs Draft"), *see* R-1354-1407;

i. A draft expert report from Raftelis Financial Consultants, dated 2008 (the "Raftelis Draft"), *see* R-1408-49;

j. The Report of the Special Master, dated January 20, 2009 (the "Special Master Report"), *see* R-1450-1513;

k. The Receiver's First Interim Report on Finances, Operations, and Rates of the Jefferson County Sewer System, dated June 14, 2011 (the "Receiver Report"), *see* R-1514-1600;

l. The December 16, 2008 Resolution suspending the Automatic Rate Adjustment Resolution, *see* R-1602-03;

m. A "chart describing the consultants', Special Masters', and Receiver's rate setting recommendations between 2002 and 2011, as compared to the County's actual rates during that period," *see* R-1604-08;

n. The Proctor Decision, *see* R-1609-63;

o. The Receiver Order, *see* R-1664-86;

p. A draft settlement term sheet dated as of September 14, 2011 (the "September 2011 Term Sheet"), *see* R-1687-88;

q. Excerpts from the transcript of Mr. Peiffer Brandt's May 17, 2010 deposition in the State Receivership Case, *see* R-1689-94;

r. Excerpts from the transcript of Mr. Rothstein's August 23, 2010 deposition in the State Receivership Case, *see* R-1695-98;

s. A letter from Mr. Brandt dated March 5, 2009, *see* R-1699;

t. Excerpts from the transcript of a hearing held February 25, 2009 in the Federal Receivership Case, *see* R-1700-08;

u. Excerpts from the transcript of a hearing held June 1, 2009 in the Federal Receivership Case, *see* R-1709-12; and

v. A set of typed notes, dated October 15, 2009, *see* R-1713-14;

WHEREAS,

JJJ. The GLC Submission compares the System to 28 other sewer systems also operating under EPA consent decrees, *see* R-0573, 0592-93; including by miles of sewer pipe, *see* R-0576, 0578; number of customers, *see* R-0577-78; operating expenses by customer, *see* R-0579; sewer fees as a percentage of median income, *see* R-0581, 0583; property tax as a percentage of median income, *see* R-0582-83; and projected sewer fee increases for 2013-2015, *see* R-0585-86;

WHEREAS,

KKK. Among other topics, the GLC Group discusses:

(i.) The fixed nature of most sewer costs and the consequence that a smaller base of customers will shoulder higher per-account costs as compared to a larger customer base, *see* R-0568, 0575;

(ii.) The comparability of the sewer rate increases contemplated under the September 2011 Term Sheet to average projected increases of comparable sewer systems operating under EPA consent decrees, *see* R-0568;

(iii.) Today's historically low interest rates, *see* R-0569-70; *see also* R-0571 (overview of municipal financing market); and the County's potential ability to access such rates through legislative measures (including the creation of a GUSC and the backing of a State moral obligation pledge), *see* R-0569, 0596-97; and

(iv.) The legality and desirability of requiring mandatory hookups for new construction within proximity to existing sewer lines, *see* R-0595;

WHEREAS,

LLL. The GLC Group further notes that, according to the Special Master Report, "[s]ewer fees for Jefferson County currently represent 96% of total [system] funding," whereas other systems under EPA consent decrees generate only 93% of their revenue from sewer fees, R-0588; accordingly, the GLC Group recommends that the County consider additional revenue generation from other sources, including clean water charges for septic system owners and potential revenue enhancements outlined in the Special Master Report;

WHEREAS,

MMM. The GLC Group further states that "[n]othwithstanding anything in [the GLC Submission], we believe that [the County] is obligated to set sewer fees by the existing formula established in the sewer warrant indenture," R-0567;

WHEREAS,

NNN. The Trustee Letter reiterates the creditors' position "that the County is both obligated and able to raise rates to a level sufficient to pay all of the County's sewer obligations in full," R-0600; *see also* R-0603 ("[T]he Indenture Trustee believes the County can, consistent with Alabama law and recognized models of financial capacity, implement revenue increases over the next several years that, if done in conjunction with effective and efficient operation and administration of the System, and proper planning for future capital needs and utilization of all available resources, will allow the County to fulfill its obligations to the Warrantholders and the residents of Jefferson County. The County will have to increase rates to achieve the revenues necessary to meet its obligations. However, there may be a number of different rate structures that could be implemented that would allow the County to meet its obligations to the Warrantholders and to its residents. Moreover, if the County were to increase revenues from sources other than rate increases, such as through mandatory hook up, reserve capacity fees, clean water fees, or other non-user fees, the rate increases needed to achieve the necessary revenue increases may be reduced.");

WHEREAS,

OOO. In addition, the Trustee Letter states that it identifies "two significant errors . . . in the information disseminated at the public hearings and upon which the

Commission apparently intends to rely," R-0603, and indicates that the Trustee Letter is "being submitted in an effort to correct a number of the County's current assumptions and conclusions about sewer bills and the impact on System customers," R-0602;

WHEREAS,

PPP. Specifically, the Trustee Letter states that Mr. Rothstein and Dr. Rauterkus used inaccurate figures when comparing sewer rates in Jefferson County to sewer rates elsewhere, insofar as Mr. Rothstein "calculated that a monthly bill for a Jefferson County customer would be almost $63.00 if that customer used 10 ccf of water per month," whereas "the average water usage for Jefferson County sewer customers is closer to 6 ccf per month, which would result in an average monthly sewer bill closer to $38.00," R-0602; *see also id.* R-0602-03 (asserting that although Dr. Rauterkus "assumed the average water usage for Jefferson County Sewer customers is approximately 6 ccf per month," she "then assumed that 6 ccf is the same average monthly usage for the other communities in her comparison" – notwithstanding that other communities may have different levels of water usage);

WHEREAS,

QQQ. Mr. Rothstein and Dr. Rauterkus have considered the Trustee Letter, and although they recognize the broader point being made (that average water usage in Jefferson County is below average water usage in certain other areas being compared in their respective analyses), Mr. Rothstein and Dr. Rauterkus note that the data they presented is accurate and complete and is designed to "compare apples to apples" by reflecting bill amounts based on a single, consistent level of usage; *cf.* R-0885 (identical methodology employed in the Red Oak Report submitted by the Trustee, which compares Jefferson County's sewer rate burden to "typical monthly sewer rates" in twelve other jurisdictions based on identical consumption across jurisdictions);

WHEREAS,

RRR. The Trustee Submission confirms and supports much of the other data presented to the Commission, including:

(i.) The burden imposed by the *Kipp* Assets, *see, e.g.*, R-1139 (BE&K Report) ("When the County agreed [to take the *Kipp* Assets], it was not fully aware of the poor condition of the municipal sewers. The impacts from this decision to consolidate are still being felt today."); R-1175 (same; noting that although "the County expected to obtain approximately 9 million linear feet of sewer lines from the municipalities," in fact it "actually took possession of close to 12 million linear feet" – more than quadrupling the size of the System – and the *Kipp* Assets "were in much worse condition than anticipated due to lack of maintenance and annual

improvement"); R-1188 (same; noting that "[t]he additional sewers and the unanticipated lack of maintenance . . . impacted the size and scope of the [Capital Improvement] Program");

(ii.) Significant and unjustifiable overbuilding of the WWTPs, *see, e.g.*, R-1140 (BE&K Report) ("Wastewater flows in the County have shown no increase over the past five years [*i.e.*, 1998-2003], with no significant increase expected. Yet plant investments were made that significantly increased capacity, requiring a huge capital investment. . . . [A] significant portion of the approximately $1 billion spent [as of the BE&K Report in 2003] was for expanding the capacity of the treatment plants in a system that shows no demands for expansion. Several of the plants now have a capacity of 2.5 to 3 times the average daily flow, which significantly increases operating costs and the challenge of proper operations. Therefore, a significant amount of unnecessary capital was invested, which had the effect of increasing the cost of future operations."); R-1196 (identifying "an additional capital burden in excess of $100 million" attributable to certain aspects of the overbuilding); R-1197 (concluding that portions of the Village Creek WWTP are "twice the size necessary to meet the intended use"); R-0895 (Red Oak Report) (noting "significant excess capacity" not justified by reasonable growth assumptions); and

(iii.) Waste, incompetence and abuse, *see, e.g.*, R-1183 (BE&K Report) (discussing the lack of capital planning that led to cancelling three significant projects midway through: "The new Cahaba River trunk sewer (Super Sewer) was forecast to cost $147 million. It was cancelled after spending $62 million. The new Morris Kimberly wastewater treatment plant was forecast to cost $40 million. It was cancelled after spending $15 million. The Trussville trunk sewer was forecast to cost $32 million. It was cancelled after spending $18 million."); R-1192 ("[T]he BE&K team was surprised when we didn't see a more advanced, robust hydraulic model used as a core analysis tool as is typical for large and complex systems [because] [t]ypical [p]rogram cost savings in the order of 25% have been shown to be available" when such appropriate tools are used);

WHEREAS,

SSS. The Trustee Letter states in a footnote that although "the County has stated that the Trustee is calling for rate increases of 400% or more," in fact "the Trustee has never called for such increases in the past and is not doing so now," R-0603;

WHEREAS,

TTT. The Trustee Submission includes the Raftelis Report, which concludes that for the County to increase rates sufficient to pay the $700 million in principal and interest scheduled for fiscal year 2009-2010, "[r]ates would need to be raised by approximately 527% to cover this payment and budgeted O&M expenses,

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assuming no impact on demand elasticity," R-1041; *accord* Stay Ruling, 474 B.R. at 244-45 ("[Rates] would increase by a further 527% based on rates desired by the Indenture Trustee.");

WHEREAS,

UUU. None of the creditor submissions in the Record referenced, described, or supported a particular level of revenue increase proposed to be implemented today (as distinct from historical recommendations), other than urging the Commission to comply with the Rate Covenant in the Indenture;

WHEREAS,

VVV. The County has issued three interim reports on the ratemaking process, *see* R-0172-78 (First Report); R-0526-32 (Second Report); R-1715-25 (Third Report); and has described in these reports the private utility ratemaking analogy outlined by Mr. Rothstein and its conceptual and legal bases, *see, e.g.*, R-0528 (Second Report recounting Mr. Rothstein's testimony and noting that under well-settled Alabama law, "'[a] regulated utility's cost of service consists of two basic components: [1] a reasonable return on its property devoted to public service, [*i.e.*,] its cost of capital; and [2] its operating expenses, including taxes and depreciation. The property upon which the Company is permitted to earn a specific rate of return is its statutory rate base. Generally, the . . . rate base [is] *the reasonable value of its property devoted to the public service, calculated by its original cost, less the accrued depreciation*.'" (quoting *Union Springs Tel. Co. v. Ala. Pub. Serv. Comm'n*, 437 So. 2d 485, 486 (Ala. 1983) (emphasis added));

WHEREAS,

WWW. None of the creditor submissions in the Record expressed any disagreement with the private utility ratemaking analogy outlined by Mr. Rothstein, other than urging the Commission to comply with the Rate Covenant in the Indenture, *see, e.g.*, R-0207 (creditors' response to the Commission's invitation to appear and be heard on rates) ("Throughout all of those proceedings, the Trustee has consistently reiterated and supported its position that the County is obligated under the express terms of the Indenture to repay the Sewer Warrants in full, and to 'fix, revise, and maintain' sewer rates sufficient to pay the Sewer Warrants and to operate and maintain the System. Put simply, the [County] is required to comply with the rate covenant and the other covenants set forth in the Indenture. The County has chosen not to comply with its obligations. The [County] does not need to extend an invitation to the Invitees to elicit these views, as they are already well known by the County Commission and have been well established in numerous hearings and pleadings in both state and federal courts over the last four years."); *see also* R-0208 (same, noting that the creditors "are skeptical that these public hearings are anything but a further effort to delay the process");

WHEREAS,

XXX. Insofar as the Receiver, the Raftelis Report, and Mr. Rothstein have independently concluded that it would be unreasonable and infeasible to raise rates to a level necessary to cure all defaults under the Indenture, refill the depleted reserve funds to the required levels, service the debt, and operate the System in a lawful and appropriate manner, *see* R-1574-75 (Receiver Report); R-0514 (Receiver testimony), R-1041 (Raftelis Report); R-0315 (Rothstein testimony), and inasmuch as no citizen, ratepayer, creditor, or regulator has suggested an alternative ratemaking approach (other than simply urging compliance with the Indenture) or indicated any disagreement with Mr. Rothstein's testimony at the public hearings (other than on an unrelated point concerning the proper comparison of typical sewer bills), and inasmuch as the requirements of the Rate Covenant in the Indenture are conditioned on the requirement of Alabama law that the rules and regulations setting sewer rates must be "reasonable and nondiscriminatory," the Commission finds and determines that it is appropriate to consider an approach under which the debt service portion of the System's revenue requirements should be estimated based on the indebtedness the County would be servicing had there been no fraud, graft, waste, gross incompetence and the like in the construction of the System;

WHEREAS,

YYY. The debt service portion of the System's revenue requirements under this methodology has not yet been ascertained, but the Record evidence (including the CH2M Hill analysis and the System's indisputable operating needs) indicates that additional revenue will be necessary under any scenario;

WHEREAS,

ZZZ. Mr. Rothstein recommends that the basic rate structure of the System must change under any scenario, and advises that any such change must be implemented in an appropriate manner that avoids rate shock and enables customers to adjust to and plan for bill impacts under a revised pricing structure;

WHEREAS,

AAAA. Mr. Denard advises, and Mr. Rothstein concurs, that implementing a new rate structure while ensuring cash flow is uninterrupted will require careful coordination with the County's wastewater billing partners, including adequate time to perform and test necessary programming changes in the billing software of the respective billing partners, revise business processes and customer service protocols to facilitate orderly billing, and advise and inform customers about the reasons for, and implications of, the revised rate structure; accordingly, structural changes should take effect on March 1, 2013, or as soon thereafter as can practicably be implemented by the County's billing partners;

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WHEREAS,

BBBB. Mr. Rothstein recommends that in view of the foregoing, the County should proceed on an interim basis as follows:

(i.) The County should fundamentally change the sewer rate structure to include a fixed component, a tiered residential volumetric rate (using an inclining block structure), a uniform non-residential volumetric rate, retention of a 15% "watering credit" for residential accounts (which his own research confirms is an appropriate credit), and certain adjustments to septage and industrial waste fees and charges;

(ii.) As part of the implementation of this new structure, the County should initially set a $10 fixed base charge for all accounts with 5/8" meters (scaled upward for other meter sizes), a marginal residential volumetric rate of $4.50 per CCF for all users' first three CCF, a marginal residential volumetric rate of $7 per CCF for all users' next three CCF, a marginal residential volumetric rate of $8 per CCF for all additional usage, a non-residential volumetric rate of $7.60 per CCF;

(iii.) The County should increase its septic hauling charge from its current rate of $30 per thousand gallons to $60 per thousand gallons for septage and $75 per thousand gallons for grease, reflecting the higher cost of service for grease handling;

(iv.) The County should simplify its industrial waste surcharge rates by implementing the charges initially proposed by the Receiver, which are $0.2855 per pound for Suspended Solids ("TSS"), $0.8057 per pound for Biochemical Oxygen Demand ("BOD"), $0.4028 per pound for Chemical Oxygen Demand ("COD"), $0.1447 for Fats, Oils, and Grease ("FOG"), and $2.9273 per pound for Phosphorous;

(v.) The County should implement this new structure and rates on March 1, 2013, or as soon thereafter as can practicably be implemented by the County's billing partners; and

(vi.) The County should closely monitor the amount of revenues generated by the new rate structure and sewer rates, which at this point (prior to implementation) can only be estimated, as it is not known how customers' usage patterns might change in response to the new structure;

WHEREAS,

CCCC. Mr. Rothstein's recommendations are consistent with and supported by the Record, which contains persuasive support for:

(i.) Implementing a fixed monthly charge, *see, e.g.*, R-1046 (Raftelis Report); R-1500 (Special Master Report); R-1589-90 (Receiver Report);

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(ii.) Increasing septage and industrial waste rates and charges, *see, e.g.*, R-1058-67 (Raftelis Report) (recommending septic hauling charges of $60 per thousand gallons for septage and $75 per thousand gallons for grease); R-1591 (Receiver's Report) (recommending industrial waste surcharges closely mirroring Mr. Rothstein's recommendations);

(iii.) Retaining the 15% watering credit for residential customers, *see, e.g.*, R-1057 (Raftelis Report) ("Th[e] data validates the continued utilization of the percent of metered water use billing system, and supports an 85% return factor as reasonable."); *see also* R-2070 (Act 619 § 5) (requiring the County to "mak[e] due allowance . . . for water not entering the sewerage [*sic*] system"); and

(iv.) Implementing these important structural changes in a deliberate and careful manner, *see, e.g.*, R-0744 (Red Oak Report); R-1030 (Raftelis Report); R-1263 (BE&K Report); R-1303 (Krebs Report); R-1414 (Raftelis Draft); R-1498 (Special Master Report); R-1580 (Receiver Report), and comports with Act 619's direction to "from time to time when necessary revise" sewer rates and charges, R-2070 (Act 619 § 6(a));

WHEREAS,

DDDD. Mr. Rothstein further recommends that sewer rates and charges be revisited once the revenue effects of the revised rate structure are susceptible to more precise measurement or the Commission is in a position to adjust the County's sewer indebtedness, at which time a rate schedule that will generate revenues sufficient to satisfy all three "silos" of costs (operating expenses, capital expenditures, and appropriate debt service) can be calculated; *cf.* R-1574-75 (Receiver Report) ("In simplest terms, the revenue requirement [for the System] is the sum of the following costs: (1) O&M Expenses; plus (2) required capital expenditures; plus (3) debt service costs . . . ."); R-0682 (Indenture § 12.5(a)) (same, albeit with slightly different phrasing);

WHEREAS,

EEEE. To the extent, however, that the County remains in chapter 9 bankruptcy and the Bankruptcy Court's Net Revenues Opinion has not been reversed or modified on appeal, Mr. Rothstein recommends that rate revenues otherwise available to satisfy the capital expenditure "silo" as part of any further rate adjustments should be suspended for the duration of the Bankruptcy Case, inasmuch as it is neither fair nor reasonable to collect revenues designed to fund prospective capital expenditures if (as is the case by virtue of the Net Revenues Opinion) such revenues will instead be required to be remitted to the Trustee for debt service;

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WHEREAS,

FFFF. With respect to suggestions in the Record on the advisability of mandatory hookups, *see* R-0595 (GLC Submission); R-1267 (BE&K Report); R-1597 (Receiver Report):

(i.) Regulations of the Jefferson County Board of Health already require that "[w]henever new construction is proposed or any on-site sewage disposal system malfunctions so as to create a potential or actual public health hazard or nuisance and cannot be reasonably repaired, the owner and/or occupant shall be required to connect to a sanitary sewer system when any portion of the lot or parcel of land in question is within a distance of one hundred (100) feet of a sanitary sewer existing within any public street, alley, or right-of-way which abuts or joins the lot or parcel of land," R-1844;

(ii.) This already-exercised authority is nearly co-extensive with the Commission's sole legislative authority to require property owners to connect to the System, *see* ALA. CODE § 11-3-11(a)(15) ("[N]o county commission shall have the power to require any owner of property to connect to a county sewer system if (i) the property of such owner is served by any other sewer system as of the date (the 'prospective connection date') that the construction of such county sewer system has advanced to the point that operational sewer lines belonging to such system are adjacent to the property of such owner, (ii) the property of such owner is served by a septic tank installed as of the prospective connection date, or (iii) any building to be served by such county sewer system is located on the property of such owner at a distance greater than 200 feet from the collector line of such county sewer system."); and

(iii.) Nothing in the Record indicates that duplicating or supplementing the regulations already promulgated by the Board of Health is necessary or appropriate at this time;

WHEREAS,

GGGG. With respect to suggestions in the Record on the advisability of a County-wide clean water fee or non-user charge, *see, e.g.*, R-0205 (Trustee Letter):

(i.) Act 619 does not authorize imposition of such a fee or charge insofar as it specifies that "sewer rentals or sewer service charges" may be imposed upon and collect from "the persons and property whose sewerage [*sic*] is disposed of or treated by such sewers or sewerage [*sic*] treatment or disposal plants," R-2068 (Act 619 § 1), and does not include in its description of the permissible bases on which sewer rates and charges may be calculated any mention of mere residence in the County as a basis for imposing fees, R-2070 (Act 619 § 5);

(ii.) In any event, evidence in the Record indicates that the function of a clean water fee or non-user charge (*i.e.*, recognition that the entire County benefits from the System) is already performed by the 0.7 mill ad valorem tax (the "Sewer Tax") levied and collected by the County pursuant to Act Number 716, Feb. 28, 1901 ("Act 716"), for "the repair of the sanitary system of the county and to protect the water supplies," *see, e.g.*, R-0940 (Red Oak Report) ("Ad valorem taxes are a general source of revenue that is most appropriately applied to governmental services that have a substantial benefit to the community as a whole and for which it is difficult to distinguish individual benefit."); R-1277 (BE&K Report) (same); and

(iii.) The Commission has no authority to increase the Sewer Tax because the current millage rate of 0.7 mills is the highest rate allowed by Act 716; rather, the Sewer Tax rate can only be raised by amendment of Act 716, or by enactment of another statute to provide additional taxing authority, which in either case would require an act of the State Legislature and a favorable vote of the citizens within the geographic boundary of the County;

WHEREAS,

HHHH. In view of the substantial Record evidence of the burden created by high sewer rates, and consistent with the Commission's charge to "manage, operate, control and administer" the System, R-2067 (Amendment 73), it is necessary and appropriate to implement a conservation program that will help all ratepayers – without regard to income or wealth – calibrate their water usage (and hence their sewer bills) to a level that is sustainable economically, *cf*. R-1345 (Krebs Revenue Analysis) (recommending a lifeline rate), R-1384-89 (Krebs Draft) (same);

WHEREAS,

IIII. To that end, Dr. Rauterkus is working with ESD to develop a conservation program that will involve such practical measures as assisting customers in identifying leaks and inefficient appliances, facilitating the remediation of such leaks and inefficiencies (by, for example, providing low-flow shower heads), and educating customers on conservation matters; and

WHEREAS,

JJJJ. With regard to septage charges in particular, the increased burden on residents who use septic tanks will be significantly less than the percentage change in the County's septage rate, insofar as:

(i.) Typical residential septic tanks in the County have a capacity of 1,000 gallons, although some newer and larger homes have 2,000-gallon tanks;

(ii.) Septage haulers in the County typically charge $300 to pump a residential septic tank;

(iii.) The County currently charges septage haulers $30 per thousand gallons to dispose of septage;

(iv.) Assuming all increased costs were passed on to customers, a 100% increase in the septage rate (from $30 per thousand gallons to $60 per thousand gallons) would add an additional $30 to $60 to the cost of pumping a typically sized residential septic tank;

(v.) Although most on-site sewage guidelines recommend cleaning every five years, it is unlikely that most are cleaned as frequently as recommended; rather, septic tanks are typically cleaned every five to fifteen years; and

(vi.) Accordingly, for a household with a 1,000 gallon septic tank, a 100% increase in the County's septage rate would result in an increase in the cost of pumping the tank from $300 to $330 (*i.e.*, 10%), which (if the household's septic tank were pumped every seven years) would equate to a $0.36 monthly increase.

THE JEFFERSON COUNTY COMMISSION FINDS AND DETERMINES AS FOLLOWS:

I. That, in light of the Stay Ruling, the Commission is able to exercise its constitutional responsibility to make "reasonable and nondiscriminatory rules and regulations fixing rates and charges," R-2067 (Amendment 73) for sewer service;

II. That, to the extent consistent with Amendment 73, *see Shell v. Jefferson County*, 454 So. 2d 1331, 1336-37 (Ala. 1984) (holding that Amendment 73, as "part of the organic law of this state," overrides any conflicting provisions of Act 619), Act 619 obligates the Commission to set sewer rates such that "the revenues derived therefrom will at all times be adequate but not in excess of amounts reasonably necessary" to operate the System and make appropriate capital improvements (there being no issued and outstanding bonded indebtedness, R-2070);

III. That, to the extent consistent with Amendment 73 and Act 619 (*i.e.*, "to the extent permitted by law," R-0682 (Indenture § 12.5(b))), the Commission is obligated under the Indenture to "make from time to time, to the extent permitted by law, such increases and other changes in [sewer] rates and charges" as may be necessary to comply with the debt coverage formulas, *see* R-0682-83 (Indenture § 12.5(b)); *provided, however*, that non-compliance with the Rate Covenant will not be an event of default under the Indenture if "the County employs a utility system consultant to review the System and its existing rates and fees and makes a good faith effort to comply with the recommendations of such consultant," *see* R-0690 (Indenture § 13.1(b)(ii));

IV. That it is appropriate to exercise the Commission's constitutional and statutory ratemaking authority on the basis of the Record adduced during and in connection with the public sewer rate hearings;

V. That: (i) due and sufficient notice of the public sewer rate hearings was provided; (ii) all persons and entities with a stake in the operation of the System (including ratepayers, citizens, creditors, and regulators) have had a full and fair opportunity to make their views known to the Commission and to provide any information they wished the Commission to consider in connection with ratemaking (all of which has been incorporated as part of the Record); and (iii) the Commission has fully and carefully considered the entire Record;

VI. That Mr. Rothstein is a "utility system consultant" employed by the County to "review the System and its existing rates and fees," and that it is proper and appropriate to "comply with the recommendations of such consultant," R-0690 (Indenture § 13.1(b)(ii)), in undertaking the Commission's constitutional and statutory obligation to make reasonable and non-discriminatory rules and regulations fixing rates and charges for sewer service;

VII. That the existing sewer rate structure is due to be replaced;

VIII. That the proposed rate structure recommended by Mr. Rothstein – which includes, *inter alia*, a fixed charge component, a tiered residential volumetric rate (using an inclining block structure), a uniform non-residential volumetric rate, retention of a 15% "watering credit" for residential accounts, and certain adjustments to septage and industrial waste fees and charges – is appropriate and proper, and is consistent with Amendment 73, Act 619, and the Indenture;

IX. That the sewer rates recommended by Mr. Rothstein – which include, *inter alia*, a $10 fixed charge for all accounts with 5/8" meters (scaled upward for other meter sizes), a marginal residential volumetric rate of $4.50 per CCF for all users' first three CCF, a marginal residential volumetric rate of $7 per CCF for all users' next three CCF, a marginal residential volumetric rate of $8 per CCF for all additional usage, a non-residential volumetric rate of $7.60 per CCF, a septic hauling charge of $60 per thousand gallons for septage and $75 per thousand gallons for grease, and upward adjustments of industrial waste fees and charges – are appropriate and proper, and are consistent with Amendment 73, Act 619, and the Indenture;

X. That the course of action recommended by Mr. Rothstein – including implementing the new rate structure and sewer rates on March 1, 2013 (or as soon thereafter as can practicably be implemented by the County's billing partners), closely monitoring the amount of revenues generated by the new rate structure and sewer rates, and revisiting sewer rates and charges once revenue effects can be ascertained – is appropriate and proper, and is consistent with Amendment 73, Act 619, and the Indenture;

XI. That mandatory hookups are already required under regulations issued by the Board of Health, and that no showing has been made that any other or further mandatory hookup

requirement (which would be either duplicative or conflicting) that the Commission may have authority to enact under section 11-3-11(a)(15) of the Alabama Code is necessary or appropriate at this time;

XII. That it lacks authority under state law to implement a clean water fee, non-user charge, or any other similar fee or charge imposed on individuals or entities not connected to the System, and that in any event such a measure would, in effect, constitute an attempt to increase the ad valorem tax (over which the Commission has no authority); and

XIII. That, in light of the significant sewer rates and bill impacts created thereby, it is appropriate and proper to implement a conservation program being developed by Dr. Rauterkus, and that the costs of implementing and administrating such program constitute "Operating Expenses" under the Indenture.

NOW, THEREFORE, BE IT RESOLVED BY THE JEFFERSON COUNTY COMMISSION:

1. That the Jefferson County Sewer Use/Pretreatment Ordinance Adopted May 11, 1982, Ordinance No. 689, at Minute Book 61, pages 237-264, including all amendments thereto, is **REPEALED**;

2. That the Grease Control Program Ordinance Adopted October 3, 2006, Ordinance No. 1778, at Minute Book 152, pages 133-138, including all amendments thereto, is **REPEALED**;

3. That Resolution No. Feb-12-1997-Bess-1, adopted February 12, 1997, at Minute Book 6, pages 256-260, is **REPEALED**;

4. That the Jefferson County Sewer Use Administrative Ordinance, Ordinance No. 1808, set out below, is **ADOPTED**;

5. That the Jefferson County Sewer Use Charge Ordinance, Ordinance No. 1809, set out below, is **ADOPTED**;

6. That a copy of this Resolution, together with the Record, the Jefferson County Sewer Use Administrative Ordinance, and the Jefferson County Sewer Use Charge Ordinance, should be delivered to the Alabama Public Service Commission (the "PSC"), with the Commission's recommendation (consistent with citizen comments at the public sewer rate hearings) that the PSC take the sewer rate burden into account when assessing rates that other utilities in the area are permitted to charge;

7. That the five vacancies on the Board of Arbitration should be filled by no later than December 31, 2012, and to that end invites nominations or recommendations of qualified candidates by any person or entity with a stake in the operation of the System (including citizens, ratepayers, creditors, and regulators), which nominations or recommendations should be directed to the County Manager;

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8. That until such time as the Board of Arbitration is constituted and able to act on any requests for review of sewer rates, all pending and future requests for review of sewer rates be held in temporary abeyance by the County Manager;

9. That the Commission will revisit sewer rates and charges no later than August 1, 2014, consistent with Act 619's direction that the Commission "from time to time when necessary revise" rates and charges of the System, R-2070 (Act 619 § 6(a));

10. That, once the revenue effects of the revised rate structure are susceptible to more precise measurement, the Commission will entertain a further rate proposal that will generate revenues sufficient to satisfy operating expenses, capital expenditures, and debt service on an amount that correlates to the value of the used and useful System assets; provided, however, that to the extent that the County remains in chapter 9 bankruptcy and the Bankruptcy Court's Net Revenues Opinion has not been reversed or modified on appeal, the portion of the rate revenues designed to satisfy the capital expenditure needs of the System will be suspended for the duration of the Bankruptcy Case; and

11. That the Minute Clerk shall maintain the Record, as the basis on which the Commission has exercised its authority, *cf. Pilcher v. City of Dothan*, 93 So. 16, 19 (Ala. 1922) ("[M]unicipal governmental action, of which a record is required to be made, cannot be shown by parol; [rather,] the records themselves (unless lost or destroyed) are the best and only evidence of such governmental action."), in the Minute Clerk's office separate and apart from the official minutes of the Commission;

DONE and ORDERED this 6th day of November, 2012.

[INSERT ORDINANCE 1808]

[INSERT ORDINANCE 1809]

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JEFFERSON COUNTY
SEWER USE ADMINISTRATIVE ORDINANCE
ADOPTED NOVEMBER 6, 2012

This document is provided as a convenience to the public. The official ordinance and amendments thereto are contained in the office of the Minute Clerk of Jefferson County in Minute Book xx, pages xx. In the event of a discrepancy between any words or figures contained in this document and those contained in the official minutes of the Jefferson County Commission, the words and figures reflected in the official minutes shall govern.

JEFFERSON COUNTY
SEWER USE ADMINISTRATIVE ORDINANCE

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ARTICLE I. GENERAL PROVISIONS

A. Purpose and Policy

This Ordinance sets forth uniform requirements for all users of the wastewater collection and treatment system for Jefferson County, Alabama, and enables the County to comply with all applicable State and Federal laws required by the Clean Water Act of 1972 and the general Pretreatment Regulations (40 CFR, Part 403), and with the requirements of the Consent Decree.

The objectives of this Ordinance are:

a) to prevent the introduction of pollutants into the Sewer System that may interfere with the operation of the System or contaminate the resulting sludge;
b) to prevent the introduction of pollutants into the Sewer System that will pass through the System inadequately treated into receiving waters or the atmosphere or otherwise be incompatible with the Sewer System;
c) to improve the opportunity to recycle and reclaim wastewaters and sludge from the Sewer System;
d) to minimize the quantities of infiltration/inflow that enters the Sewer System; and,
e) to minimize the possibility of sanitary sewer overflows; and,
f) to comply with the objectives of the Consent Decree.

This ordinance provides for the regulation of all contributors to the System through the issuance of permits and through enforcement of general requirements requiring monitoring, compliance and reporting.

This ordinance shall apply to all sewer users in Jefferson County and to persons outside the County who are, by contract or agreement with the County, users of the System. Except as otherwise provided herein, the Environmental Services Department shall administer, interpret, implement, and enforce the provisions of this ordinance. Where not specifically provided herein, the provisions of this ordinance shall be enforced and interpreted consistent with the "Jefferson County Sewer Use Charge Ordinance."

B. National Categorical Pretreatment Standards

Certain Industrial Users (as defined by the EPA in the General Pretreatment Regulations published in the June 26, 1978 Federal Register, titled Part 403 General Pretreatment Regulations and any revision thereof) are, or hereafter shall become, subject to National Categorical Pretreatment Standards promulgated by the EPA specifying quantities or concentrations of pollutants or pollutant properties which may be discharged into the System. All Industrial Users subject to a National Categorical Pretreatment Standard shall comply with all requirements of such standard and shall also comply with any additional or more stringent limitations contained in this Ordinance. Compliance with

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National Categorical Pretreatment Standards for existing sources subject to such standards or for existing sources which hereafter become subject to such standards shall be required within three (3) years following promulgation of the standards unless a shorter compliance time is specified in the standard. Compliance with National Categorical Pretreatment Standards for new sources shall be required upon promulgation of the Standard. Except where expressly authorized by an applicable National Categorical Pretreatment Standard, no Industrial User shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitution for adequate treatment to achieve compliance with such standard.

C. Definitions

Unless the context specifically indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

1) "ADEM" shall mean the Alabama Department of Environmental Management or its duly authorized deputy, agent, or representative.

2) "Act", "The Act", or "CWA" shall mean the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. § 1251, *et seq.*

3) "All contributors" denotes any Person or Owner contributing wastewater to the System.

4) "Alternative grease removal technology" shall mean an automatically operated mechanical device specifically designed to remove grease from the waste stream.

5) "ASTM" shall mean the American Society for Testing and Materials.

6) "Authorized Representative of an Industrial User" shall mean any one of the following: (1) a principal executive officer of at least the level of Vice-President, if the industrial user is a corporation; (2) a general partner or proprietor if the industrial user is a partner or proprietorship, respectively; or (3) a duly authorized representative of the individual above if such representative is responsible for the overall operation of the facilities from which the discharge originates.

7) "Best Management Practices" shall mean any program, process, operating method or measure that controls, prevents, removes or reduces discharge of FOG.

8) "BOD_5" or "BOD" (biochemical oxygen demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees C, expressed in milligrams per liter by weight. BOD shall be determined by standard methods as hereinafter defined.

9) "Categorical Standards" shall mean the National Categorical Pretreatment Standards or Pretreatment Standard.

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10) “CFR” denotes the Code of Federal Regulations.

11) “COD” shall mean chemical oxygen demand as determined by standard test methods.

12) “Charge(s)” shall mean all applicable charges, fees, assessments, costs or penalties levied under the “Jefferson County Sewer Use Charge Ordinance,” as adopted.

13) “Composite Sample” shall mean the makeup of a number of individual samples, so taken as to represent the nature of wastewater or industrial wastes.

14) “Condensate” shall mean liquid water resulting from the change of water vapor to liquid by the use of traditional air conditioner units or water heaters.

15) “Consent Decree” shall mean the Consent Decree entered on December 9, 1996 in the consolidated cases R. Allen Kipp, Jr. et al. v. Jefferson County, Alabama, et al. (United States District Court for the Northern District of Alabama, Civil Action No. 93-G-2492-S) and United States v. Jefferson County, Alabama, et al. (United States District Court for the Northern District of Alabama, Civil Action No. 94-G-2947-S).

16) “Constituents” shall mean the combination of particles, chemicals or conditions existing in the wastewater.

17) “Consumption” shall mean the metering of domestic water at a given unit of measure.

18) “Cooling Water” shall mean the water discharged from commercial air conditioning, cooling or refrigeration sources such as chillers and cooling towers.

19) “Cu. Ft.” denotes cubic feet.

20) “County” shall mean the Jefferson County Commission or its employees, duly authorized agents or representatives.

21) “Direct Discharge” shall mean the discharge of treated or untreated wastewater directly to the waters of the State of Alabama, as interpreted by ADEM.

22) “Director” shall mean the Director of the Environmental Services Department or his designee.

23) “Effluent” shall mean the discharge of flow from an industry or a treatment plant facility.

24) “Environmental Services Department” or “ESD” shall mean the County department that has direct responsibility for the maintenance, management and operations of the Sewer System.

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25) "EPA" shall mean the U.S. Environmental Protection Agency, or where appropriate, the term may also be used as a designation for the Regional Administrator or other duly authorized official of said agency.

26) "Explosive Liquid" shall mean any liquid which produces two successive readings on an explosion hazard meter, at the point of discharge into the system, of five percent (5%) or greater or any single reading over ten percent (10%) of the lower explosive limit of the meter.

27) "Flammable Liquid" shall mean any liquid having a flash point below 100°F and having a vapor pressure not exceeding 40 psia absolute pressure at 100°F .

28) "FOG" shall mean fats, oils, and grease.

29) "Food" shall mean any raw, cooked or processed edible substance, ice, beverage or ingredient intended for human consumption.

30) "Food Service Facility" shall mean any facility engaged in the preparation of food for human consumption and/or serving of meals, short orders, sandwiches, frozen desserts or other edible products. The term includes restaurants, coffee shops, cafeterias, short order cafes, luncheonettes, taverns, lunchrooms, places which manufacture retail sandwiches, soda fountains, institutional cafeterias, catering establishments and similar facilities by whatever name called.

31) "Fryer Oil" shall mean oil that is used and/or reused in fryers for the preparation of foods.

32) "Grab Sample" shall mean a sample, which is taken from a waste stream on a one-time basis without regard to the total flow in the waste stream.

33) "Grease" shall mean fats, oils and grease used for the purpose of preparing food or resulting from food preparation and includes all elements of FOG. Grease is also generated from washing and cleaning operations such as pot washing, dishwashers, trenches and floor drains. The terms grease and FOG may be used interchangeably.

34) "Grease Control Device" shall mean any grease interceptor, grease trap or other approved mechanism, device or process, which attaches to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap or collect or treat FOG prior to the balance of the liquid waste being discharged into the System.

35) "Grease Interceptor" shall mean an indoor device located in a food service facility or under a sink designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

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36) "Grease Permit" or "Food Service Facility Grease Control Program Permit (FSFGCPP)" shall mean the license/authorization to discharge wastewater/liquid waste into the System granted to the Owner of a Food Service Facility or his/her authorized agent.

37) "Grease Trap" shall mean an outdoor device located underground and outside of a food service facility designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

38) "Hazardous Waste" shall mean any material or wastes identified by the EPA Hazardous Waste Resolution, Part 261, including all wastes identified in Subpart D thereof, regardless of the quantity of material stored or generated.

39) "Health Department" shall mean the State Board of Health as constituted in accordance with Ala. Code § 22-2-1 *et seq.*, and includes the Committee of Public Health or State Health Officer when acting as the Board. The Health Department is not affiliated with the Jefferson County Commission.

40) "Holding Tank Waste" shall mean any waste from holding tanks such as vessels, campers, chemical toilets, trailers, septic tanks, and vacuum pump trucks.

41) "Impact Fee" shall mean the charge assessed to any sewer user prior to connection with, or access to, the System.

42) "Indirect Discharge" shall mean the discharge or introduction into the System of non-domestic pollutants from any source regulated under Section 307(b) or (c) of the Act (including holding tank waste discharged into the System).

43) "Infiltration/Inflow" or "I/I" shall mean the total quantity of water from both infiltration and inflow without distinguishing the source. Infiltration shall mean the water entering a sewer system and service connections from the ground, through sources such as broken or cracked pipe, defective pipe joints, improper connections, manhole walls, etc. Inflow shall mean direct surface or rainwater discharged into the sewer system, including through service connections, from sources such as roof leaders, cellars, yard and area drains, foundation drains, cooling water discharges, drains from springs and swamp areas, cross connections from storm sewers, surface runoff, etc.

44) "Industrial User" shall mean any industry producing liquid waste discharging either with or without pretreatment into the System.

45) "Industrial Sewer Connection Application" shall mean the application required to be filed by all industrial contributors or potential industrial contributors who intend to connect to the System. This request shall be on forms provided by the County, which specify the quantity, strengths, and any special qualities of their industrial waste.

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46) “Influent” shall mean the wastewater arriving at a County wastewater treatment plant for treatment.

47) “Interference” shall mean the inhibition, unreasonable degradation or disruption of treatment processes, treatment and/or collection operations, or sewer system operations which contributes to a violation of any requirements of the County’s NPDES permits, including sanitary sewer system overflows either within the collection system or at any treatment plant due to infiltration/inflow or a lack of treatment of wastewaters containing infiltration/inflow. This term includes the prevention of sewage biosolids use or disposal by the County in accordance with Section 405 of the Clean Water Act, or any criteria, guidelines or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Water Act, the Toxic Substances Control Act, or more stringent State criteria (including those contained in any State biosolids management regulation pursuant to title IV of the SWDA) applicable to the method of biosolid disposal or use employed by the County.

48) “l” denotes liter.

49) “Master Plumber” shall mean any person in continuous and responsible charge of the installation, alteration, repair or renovation of plumbing work and who possesses a current, valid and unrevoked Certificate of Competency issued by the Alabama Plumbers and Gas Fitters Examining Board as a Master Plumber.

50) “MBAS” denotes methylene-blue-active substance.

51) “mg/l” denotes milligrams per liter and shall mean ratio by weight.

52) “Mobile food unit” shall mean a self-propelled or vehicle mounted unit intended to be used as a food service facility.

53) “National Pollution Discharge Elimination System Permit” or “NPDES Permit” shall mean a permit issued pursuant to Section 402 of the Act (33 U.S.C. § 1342).

54) “National Categorical Pretreatment Standards” shall mean any regulation containing pollutant discharge limits promulgated by the EPA in accordance with Section 307(b) and (c) of the Act which applies to Industrial Users.

55) “Natural Outlet” shall mean any outlet used to dispose of liquid waste, which ultimately flows or leads into a watercourse, pond, ditch, lake, or other body of surface or ground water.

56) “New Source” shall mean any industrial source, in which the construction is commenced after the publication of proposed regulations prescribing a Section 307(c) National Categorical Pretreatment Standard which will be applicable to such source, if such standard is thereafter promulgated within 120 days of proposal in the

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Federal Register. Where the Standard is promulgated later than 120 days after proposal, a New Source shall mean any source, the construction of which is commended after the date of promulgation of the standard.

57) "pH" shall mean the logarithm of the reciprocal of the concentration of the hydrogen ion. "pH" shall be determined by standard methods as hereinafter defined.

58) "Person" or "Owner" shall mean any natural person, individual, firm, company, joint stock company, association, society, corporation, group, partnership, co-partnership, trust, estate, governmental or legal entity, or their assigned representatives, agents or assigns.

59) "Pollutant" shall mean any dredged spoil, solid waste, incinerator residue, sewage garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, excess heat, wrecked or discarded equipment, rock, sand, and industrial, municipal, and agricultural waste discharged into water; and shall include any pollutant identified in a National Categorical Pretreatment Standard or any incompatible waste identified in Article II of this Ordinance.

60) "Pretreatment" shall mean the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into the System. The reduction or alteration may be obtained by physical, chemical, or biological processes, process changes, or other means except as prohibited by 40 CFR Section 403.6(d).

61) "Pretreatment Requirement" shall mean any substantive or procedural requirement related to pretreatment, other than a National Pretreatment Standard imposed on an industrial user.

62) "Pretreatment Standard" shall mean either a National Categorical Pretreatment Standard or a pretreatment standard imposed as a result of the User's discharging any incompatible wastewater regulated by Article II of this Ordinance.

63) "Public Water System" shall mean a system for the provision to the public of piped water for human consumption.

64) "Receiving Waters" shall mean those waters into which the County's NPDES permitted effluent is discharged.

65) "Restaurant" shall mean an establishment which serves food and/or beverages for human consumption.

66) "SWDA" denotes the Solid Waste Disposal Act, 42 U.S.C. § 6901, et seq.

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67) "Sampling Vault/Port" shall mean the structure downstream of a grease trap, interceptor or alternative grease control device that is specially constructed to allow inspection and sampling prior to discharge of effluent into the System.

68) "Sanitary Sewer" shall mean a sewer, which carries wastewater, and from which storm, surface, and ground waters are intended to be excluded.

69) "Sewer" or "main sewer" shall mean a pipe or conduit eight (8) inches in diameter or larger intended for carrying wastewater and generally located in public right-of-way or easement.

70) "Sewer Connection Permit" shall mean the license to proceed with work on a sewer service line, either as new construction or for the repair of an existing line.

71) "Sewer Service Line" shall mean any sanitary sewer line or conduit located outside the building structure which connects the building's plumbing from the outside building wall to the main sewer. The sewer service line is usually four (4) inches in diameter, sometimes six (6) inches in diameter, and in special cases eight (8) inches in diameter or larger. The County does not maintain the sewer service line from the outside building wall to the main sewer.

72) "Sewer System" or "System" shall mean a publicly-owned treatment works (POTW), as defined by Section 212 of the Act (33 U.S.C. § 1292), owned by the County. The term shall mean any wastewater treatment facility, any sanitary sewer that conveys wastewater to such treatment facility and any wastewater pumping facility.

73) "Shall" is mandatory; "may" is permissive.

74) "Significant Industrial User" shall mean any Industrial User of the System that is subject to Categorical Pretreatment Standards and/or who has a discharge flow of 25,000 gallons or more per average work day, or has a flow greater than 5% of the flow in the County wastewater treatment facility providing treatment, or has in its wastewater toxic pollutants as defined herein or within the Act, or is found by the County, ADEM, or the EPA to have significant impact, either singly or in combination with other contributing industries, on the System, the quality of sludge, or effluent quality.

75) "Standard Industrial Classification" or "SIC" shall mean the classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1972.

76) "Standard Methods" shall mean those sampling and analysis procedures established by and in accordance with EPA pursuant to Section 304(g) of the Act and contained in 40 CFR, Part 136, as amended, or the "Standard Methods for the Examination of Water and Sewer" as prepared, approved, and published jointly by the American Public Health Association, the American Water Works Association, and the Water

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Environment Federation. In cases where procedures vary, the EPA methodologies shall supersede.

77) "SID Permit" shall mean a State Indirect Discharge permit issued by ADEM. Such permits may be issued to dischargers of non-domestic pollutants from any source, including, but not limited to, those regulated under Section 307(b) or (c) of the Act.

78) "Storm Sewer" or "Storm Drain" shall mean a sewer which carries storm and surface waters and drainage, but excludes wastewater and polluted industrial wastes.

79) "Suspended Solids" shall mean solids that either float on the surface, or are in suspension in water, wastewater, or liquid as defined by standard methods.

80) "Temporary food service facility" shall mean a food service facility that is not permanently connected to the System nor operates at the same location for a period of time exceeding 14 days in conjunction with a single event, such as a fair, carnival, circus, exhibition or similar temporary gathering. Temporary food service facilities are not regulated by the Grease Control Program.

81) "TOC" shall mean total organic carbon as determined by standard methods.

82) "TSS" shall mean total suspended solids as determined by standard methods.

83) "Total Solids" shall mean total weight expressed in mg/l of all solids: dissolved, undissolved, organic, or inorganic.

84) "Toxic" shall mean detrimental to or adversely affecting the organisms or other processes involved in wastewater treatment.

85) "Toxic Pollutant" shall include but not be limited to any pollutant identified pursuant to Section 307(a) of the Act.

86) "County Treatment Plant" or "County Plant" shall mean that portion of the County's sewer system designed to provide wastewater treatment.

87) "U.S.C." denotes Unites States Code.

88) "User" shall mean the occupant and/or the owner(s) of property from which wastewater is discharged into the System and any individual or entity, including any municipality, that contributes, causes, or permits the contribution of wastewater into the System.

89) "Watercourse" shall mean a channel in which a flow of water occurs, either continuously or intermittently.

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90) “Wastewater” shall mean any solids, liquids, gas, or radiological substance originating from residences, business buildings, institutions, and industrial establishments together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the System.

91) “WEF” shall mean the Water Environment Federation.

Terms for which definitions are not specifically provided herein or in the “Jefferson County Sewer Use Charge Ordinance” shall be interpreted as defined in the Glossary of the current edition of “Design of Municipal Wastewater Treatment Plants, Volume 3” (MOP 8) published by the WEF and the American Society of Civil Engineers.

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ARTICLE II. DISCHARGE PROHIBITIONS

A. General Discharge Prohibitions

No user shall contribute or cause to be contributed, directly, or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the System. These general prohibitions apply to all such users of the System whether or not the user is subject to National Categorical Pretreatment Standards or any other National, State, or Local Pretreatment Standards or Requirements. A user may not contribute the following substances to the System:

1) Any wastewater containing quantities of flammable or explosive liquids, or any liquids, solids, or gases which by reason of their nature or quality are, or may be, sufficient alone or by interaction with other substances to cause fire or explosion or be an interference in any way to the System or to the operation of the System. Prohibited materials include, but are not limited to: alcohols, aldehydes, benzene, bromates, carbides, chlorates, commercial solvents, ethers, fuel oil, gasoline, any hydrocarbon derivatives, hydrides, kerosene, ketones, mineral spirits, motor oils, naphtha, perchlorates, peroxides, sulfides, toluene, xylene and any other substances which the County, the State, or EPA has notified the User is a flame or explosion hazard to the System.

2) Any pollutants which will cause corrosive structural damage to the System (in no case with a pH less than 5.0 or higher than 10.5) or wastewater having other corrosive property capable of causing damage or hazard to structures, equipment, and/or personnel of the sewer system or which may be damaging to the operation of the System.

3) Solid or viscous substances in amounts which may cause obstruction to the flow in the System or other interference with the operation of the System such as, but not limited to: garbage with particles greater than 1/2 inch, ashes, cinders, animal guts or tissues, paunch, manure, offal, bones, hair, hides or fleshings, entrails, whole bloods, beer or distillery slops, milk residue, ice cream, sugar syrups, feathers, sand, lime residues, stone or marble dust, metal, glass, straw, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastics, fiberglass, paint or ink residues, gas, tar, asphalt residues, chemical residues, residues from refining or processing of fuel or lubricating facilities, cannery waste, mud, grinding waste, and polishing waste.

4) Any wastewater which contains fats, oils, or grease, any non-polar material or any wastewater which contains a substance that will solidify or become viscous within the collection system or at the treatment plant or otherwise interfere with the operations of the System.

5) Any uncontrolled wastewater containing spent oils, lubricants, or fuel from vehicles or machinery.

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6) Any pollutants released at a flow and/or pollutant concentration which will cause interference to the System.

7) Any wastewater having a temperature, which will inhibit biological activity in the System resulting in interference, but in no case wastewater with a temperature at the introduction into wastewater treatment plant which exceeds 40 degrees C (104 degrees F). No user shall discharge into any sewer line, or appurtenance of the sewer system, wastewater with a temperature exceeding 65.5 degrees C (150 degrees F). More stringent limitations may be required if it is determined the Sewer System is adversely affected by lower temperatures.

8) Any wastewater containing toxic pollutants which either singly or by interaction with other pollutants, would injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters of the sewer system, or exceed the limitations set forth in a Categorical Pretreatment Standard.

9) Any noxious or malodorous liquids, gases, or solids which whether singly or by interaction with other wastes are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for their maintenance and repair.

10) Any substance which may cause the System wastewater treatment plant effluent or any other product of the System wastewater treatment plant such as residues, biosolids, or scum, to be unsuitable for reclamation and reuse or to interfere with the reclamation process where the County is pursuing a reuse and reclamation program. In no case shall a substance discharged to the System cause the County to be in non-compliance with biosolids use or disposal criteria, guidelines, or regulations developed under Section 503 of the Act; any criteria, guidelines, or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, or State criteria applicable to the biosolids management method being used.

11) Any substance which will cause the County to violate its NPDES and/or State Disposal System Permit or the receiving water quality standards.

12) Any wastewater with color that cannot be removed by any County wastewater treatment plant.

13) Any liquid or wastewater containing quantities of radioactive waste in excess of presently existing or subsequently accepted limits for drinking water as established by applicable State or Federal regulations.

14) Any substance that is introduced to the System in a negligent or vandalistic manner including, but not limited to, cloth, metal, wood, plastic, concrete, rock, glass, leaves, and grass.

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15) Any non-permitted liquid leachate from a landfill, drain field, or any type of soil drainage system.

16) Any discharge generated from pools, ponds, or fountains.

B. Prohibitions on Stormwater and Ground Water

Storm water, ground water, rain water, street drainage, roof top drainage, basement drainage, sump pumpings, sub-surface drainage, or yard drainage shall not be discharged through direct or indirect connections to the System. All users of the System are prohibited from discharging stormwater, groundwater, any drainage waters or any waters which may cause or contribute to infiltration/inflow.

C. Maximum Discharge Concentrations

Following herewith are maximum discharge concentrations for any User of the System. The limits are subject to change by the EPA, ADEM, and/or the County. Such change may occur through changes imposed by National Categorical Pretreatment Standards or by the County's determination that an interference exists in the System by reason of any limit set forth herein or by case-specific considerations.

MAXIMUM DISCHARGE CONCENTRATIONS

POLLUTANT	DAILY MAXIMUM, mg/l
Aluminum, dissolved	50.0
Cadmium, total	0.3
Chromium +6	0.2
Chromium, total	5.0
Copper, total	1.0
Cyanide, as CN or HCN	1.0
Iron, total	20.0
Lead, total	0.5
Nickel, total	1.0
Silver, total	0.5
Tin, total	10.0
Zinc, total	3.6
Arsenic	0.10
Ammonia	25.0
Barium	1.0
Chlorides	200.0
Fluorides	1.50
Mercury	0.01
Molybdenum	0.10
Phenol	1.00
Phosphate	30.00
Selenium	0.10

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D. Cooling Water

Cooling water discharge may be considered on a case by case basis. Permission to discharge will be granted at the sole discretion of the Director. If permission is denied, all cooling water must be discharged under an NPDES permit issued by ADEM, as applicable.

E. State Requirements

State requirements and limitations on discharges shall apply in any case where they are more stringent than Federal requirements and limitations or the County's requirements and limitations on discharges described in this Ordinance.

F. Excessive Discharge

No user shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the National Categorical Pretreatment Standards, or in any other pollutant specific limitation developed by the County or State without prior written approval by the County. Where necessary in the opinion of the County, flow equalization facilities may be required to eliminate peak flow concentration conditions which could overload the System. Equalization units shall have a capacity judged by the County to allow controlled discharge of the flow at such a rate which will eliminate peak flow conditions. Detailed flow equalization plans, facility plans, specifications and operating procedures shall be submitted to the County for review and recommendations in a specified format. However, the County shall not approve the submittal for performance.

G. Possible Inhibitory Discharges

If any waters or wastes are proposed to be discharged to the System which contain the substances or possess the characteristics either enumerated or not enumerated in this Article, and which in the judgment of the County and/or the State and Federal agencies having jurisdiction may cause an interference with the System, the biosolids or receiving waters, or which may otherwise create a hazard to life or constitute a public nuisance, the County may:

1) reject the wastes in accordance with Article III of this Ordinance;

2) for industries affected by the National Categorical Pretreatment Standards, require pretreatment to an acceptable condition for discharge to the System and state a compliance date which in no case shall exceed three (3) years but may be sooner if so stated in the National Categorical Pretreatment Standards;

3) require control over the quantities and rates of discharge;

4) require payment to cover the added cost of collecting, transporting, handling and

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treating the wastewater not covered by standard Charges.

If the County or ADEM requires or permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment may be reviewed by the County, ADEM, and Federal Agencies having jurisdiction. In any case, the design and installation shall be subject to the requirements of all applicable codes, resolutions, and laws.

H. Accidental Discharges

1. General

Each industrial user shall provide protection from accidental discharge of prohibited materials or other substances regulated by this Ordinance. Facilities to prevent accidental discharge or prohibited materials shall be provided and maintained at the owner's or user's own cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the County for review and comment. However, the County's review and comment shall in no way be interpreted as a performance approval of such facilities. All existing industrial users shall complete such a plan at the time the industry begins production. No new industrial users who commence this contribution to the sewer system after the effective date of this Ordinance shall be permitted to introduce pollutants into the system until accidental discharge procedures have been reviewed and approved by the County and ADEM and implemented by the Owner or user. Review of such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the user's facility as necessary to meet the requirements of this Ordinance. In the case of an accidental discharge, it is the responsibility of the user to immediately telephone 205-942-0681 and notify County personnel of the incident. The notification shall include:

1) time of discharge
2) location of discharge
3) type of waste
4) concentration and volume
5) corrective action being taken
6) company name
7) contact official
8) phone number

2. Written Notice

Within five (5) days following an accidental discharge, the user shall submit to the County and ADEM a detailed written report which shall include:

1) company name
2) contact official
3) date, time, and type of material discharged
4) corrective actions taken at the time of the discharge and degree of success

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5) a determination that the cause of the discharge was of mechanical or human nature
6) a detailed description of new or modified actions which will be instituted to prevent such an occurrence from happening again
7) a timetable for implementing the corrective actions

Such notification shall not relieve the user of any expense, loss, damage or other liability which may be incurred by the County as a result of damage to the system, fish kills, or any other damage to person or property, nor shall such notification relieve the user of any fines, civil penalties, or other liability which may be imposed by this Ordinance or other applicable law.

3. Notice to Employees

A notice shall be permanently placed on the user's bulletin board or other prominent place advising employees whom to call in the event of a prohibited discharge. Employers shall insure that all employees who may cause or suffer an occurrence of such a discharge are advised of the emergency notification procedure.

I. Hazardous Wastes

It is a violation of this Ordinance to discharge or cause to be discharged any material categorized as a hazardous waste.

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ARTICLE III. ENFORCEMENT AND ABATEMENT

A. Violation

Discharge of wastewater in any manner in violation of this Ordinance or of any condition of an SID permit shall be corrected and abated as provided for specifically in this Article or elsewhere in the Ordinance.

B. Violation Notification

Whenever the County determines or has reasonable cause to believe that a discharge of wastewater has occurred in violation of the provisions of this Ordinance, an SID permit, or any other applicable law or regulation, the County shall notify ADEM and the User of such violation. Failure of the County to provide such notice shall not in any way relieve the User from consequences of a wrongful or illegal discharge.

C. Conciliation Meetings

The County and ADEM may, but shall not be required to, invite the User to a conciliatory meeting to discuss the violation and methods of correcting the cause of the violation. If the County, ADEM, and the User agree to appropriate remedial and preventative measures, they shall commit such agreement in writing with provisions for a reasonable compliance schedule and the same shall be incorporated as a supplemental condition of the User's SID permit.

D. Show Cause Hearing

ADEM may issue a show cause notice to the User at a specified date and time to show cause why the User's SID Permit should not be modified, suspended, or revoked for a violation of this Ordinance, or other applicable law or regulation, or conditions in the SID permit of the User. If the County seeks to modify the User's SID permit to establish wastewater characteristic limitations or other control techniques to prevent future violations, it shall notify the User of the general nature of the recommended modifications.

E. Referral to Attorney General

ADEM or the County may refer a case to the State of Alabama Attorney General's office for action for a User's violation of a Categorical Standard or the conditions of the User's SID Permit.

F. Injunctive Relief

ADEM or the County may file civil suits for injunction, damages, or other appropriate relief to enforce the provisions of this Ordinance or other applicable law or regulation.

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G. Assessment of Damages to Others

When any unauthorized discharge to the System (including vandalism) results in an obstruction, damage, or any other impairment to the System or to property or person of others, or results in any expense of whatever character or nature to the County, the County may assess the expense to the responsible party.

H. Petition for Federal or State Enforcement

In addition to other remedies of enforcement provided herein, the County may petition the EPA to exercise such methods or remedies as shall be available to such government entities to seek criminal or civil penalties, injunctive relief, or such other remedies as may be provided by applicable Federal or State laws to insure compliance by Industrial Users with applicable pretreatment standards, to prevent the introduction of toxic pollutants or other regulated pollutants into the sewer system, or to prevent such other water pollution as may be regulated by State or Federal law.

I. Emergency Termination of Service

In the event of an actual or threatened discharge to the System of any pollutant which in the opinion of the County, presents or may present substantial danger to the health or welfare of persons, or causes an interference or degradation to the System, the County shall immediately notify ADEM of the nature of the emergency. The County shall also attempt to notify the User or other person causing the emergency and request their assistance in abating the discharge. The County may also temporarily terminate the service of such User or Users as necessary to abate the condition. Sewer service may be restored by the County at the User's expense when the adverse discharge has been abated or corrected.

J. Termination of Service

The County may disconnect a User from the System when:

1) EPA or ADEM informs the County that the effluent from the wastewater treatment plant is no longer of a quality permitted for discharge to a watercourse, and it is determined that the User is delivering wastewater to the System that cannot be sufficiently treated or requires treatment that is not provided by the County as normal domestic wastewater treatment, or
2) the User:
    a) discharges industrial waste or wastewater that is in violation of the SID Permit issued, or
    b) discharges any substance to the sewer defined in Article II as being prohibited, or
    c) discharges any wastewater at an uncontrolled, variable rate in sufficient quantity to cause an interference in the System, or
    d) fails to pay Charges for sanitary sewer service when due, or
    e) repeats a discharge of prohibited constituents to the System, or
    f) fails to allow entry to the User's premises to inspect or repair the sanitary

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sewer system.

If the service is discontinued pursuant to this Section, the County may disconnect the User at the User's expense, or continue disconnection until such time as the violation is abated. Reconnection shall be at the discretion of the County and at the User's expense.

K. Other Remedies

For violations of this Ordinance and any rules and regulations of the County respecting the System, the County may pursue any remedy or enforcement authority provided to it by law. These remedies may include directing the public water system provider to discontinue the water supply to the property and the recording of liens.

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ARTICLE IV. STATE INDIRECT DISCHARGE PERMITS, DISCHARGE REPORTS, AND ADMINISTRATION

A. Applicability

The provisions of this Article are applicable to Industrial Users, as defined by ADEM, or any Industrial User specified by the County. Any permits issued hereunder to Industrial Users who are subject to or become subject to a "National Categorical Pretreatment Standard" as that term is defined in 40 CFR 403.3(i) shall be conditioned upon the Industrial User's also complying with all applicable substantive and procedural requirements promulgated by the EPA and ADEM under the "National Categorical Pretreatment Standards" or any other pollutants identified as "priority pollutants."

B. Application and Permit Requirements for Industrial Users

Prior to discharging non-domestic wastewater into the System, all Significant Industrial Users, as defined by ADEM, and any Industrial User, shall simultaneously submit an application and engineering report to Jefferson County and to ADEM for the purpose of obtaining an SID permit. The original and one copy of said package shall be submitted to ADEM while an additional two (2) copies shall be submitted to Jefferson County. The engineering report shall contain the information specified in Article IV.C. All original application packages shall also include a site plan, floor plan, mechanical and plumbing plans with sufficient detail to show all sewers and appurtenances in the Industrial User's premises by size, location, and elevation, and the Industrial User shall submit to the County and ADEM revised plans whenever alterations or additions to the Industrial User's premises affect said plans. Any currently connected User discharging wastewater other than domestic wastewater who has not heretofore filed such a report shall file same with the County and ADEM within ninety (90) calendar days of receiving notice from the County.

C. Report Requirements

The report required by Section B above or other provisions of this Article for all Industrial Users shall contain, in units and terms appropriate for evaluation, the information listed in sub-sections (1) through (9) below. Industrial Users subject to National Categorical Pretreatment Standards shall submit to the County and ADEM a report which contains the information listed in sub-sections (1) through (9) below within one hundred and eighty (180) calendar days after the promulgation by the EPA of a National Categorical Pretreatment Standard under Section 307(b) or (c) (33 U.S.C. 1317(b) or (c) of the Act).

Industrial Users who are unable to achieve a discharge limit set forth in Article II hereof without improved operation and maintenance procedures or pretreatment shall submit a report which contains the information listed in sub-sections (1) through (9) below. Said report shall be certified by a Professional Engineer registered in the State of Alabama and contain all or applicable portions of the following:

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1) General information including name and affiliation of company, number of employees, product(s) to be manufactured, including rate of production and SIC number(s), hours of operation, and water supply and disposition.
2) A map showing location of manufacturing plant (with section, township, range, latitude and longitude), treatment facilities and drainage, and locations of each discharge point. In case of indirect discharges, the location of sewer and point of industry connection should be shown.
3) A narrative account of manufacturing operation(s) explaining and/or defining raw materials, processes and products. Blockline or schematic diagrams indicating points of wastewater origin and its collection and disposition should be included.
4) The average and maximum total flow of each discharge from such Industrial User to the System, in gallons per day.
5) The average and maximum of both quantity and quality of the wastewater discharge from each regulated process from such Industrial User and identification of any applicable Pretreatment Standards and Requirements. The concentration shall be reported as a maximum or average level as provided for in the applicable Pretreatment Standard. If an equivalent concentration limit has been calculated in accordance with a Pretreatment Standard, this adjusted concentration limit shall also be submitted to ADEM for approval.
6) Description of existing wastewater treatment facilities including design basis, pretreatment measures, and recovery systems. Means of handling cooling water, storm drainage, and sanitary wastes should be described. Containment systems for product storage areas, loading and intermediate, or raw material handling areas, process areas, and other areas with spill potential should be described. Where applicable, the availability of a Spill Prevention Control and Containment (SPCC) Plan should be indicated.
7) When treatment sludges are generated, dewatering and handling methods and location of disposal should be indicated. Quantity and analysis information should also be furnished.
8) A statement reviewed and signed by an authorized representative of the Industrial User indicating whether Pretreatment Standards are met on a consistent basis and, if not, whether additional operation and maintenance procedures or additional pretreatment is required for the Industrial User to meet the Pretreatment Standards and Requirements.
9) If additional pretreatment or operation and maintenance procedures will be required to meet the Pretreatment Standards, then the report shall contain the shortest schedule by which the Industrial User will provide such additional pretreatment. The completion date in this schedule shall not be later than the completion date established for the applicable Pretreatment Standards.

D. <u>Incomplete Applications</u>

Industrial Users who have filed incomplete applications will be notified by the County that the application is deficient and the nature of such deficiency. If the deficiency is not corrected within thirty (30) days or within such extended period as allowed by the County, the County shall submit the application for a permit to ADEM with a recommendation that it be denied and notify the applicant in writing of such action.

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E. Evaluation of Application

Upon receipt of the County's recommendation, ADEM shall conduct its final evaluation of the completed applications and propose such special permit conditions as it deems advisable. All SID permits shall be expressly subject to all provisions of this Ordinance and all other applicable laws and regulations. Based on the County's recommendation, ADEM may also propose that the SID permit be subject to one or more special conditions in regard to any of the following:

1) Pretreatment Requirements;
2) The average and maximum wastewater constituents and characteristics;
3) Limits on rate and time of discharge or requirements for flow regulation and equalization;
4) Requirements for installation of inspection and sampling facilities;
5) Specifications for monitoring programs, which may include sampling locations, frequency and method of sampling, number, types, and standards for tests and reporting schedule;
6) Requirements for submission of technical reports or discharge reports;
7) Requirements for maintaining records relating to wastewater discharge;
8) Monthly average and daily maximum discharge concentrations, or other appropriate limits when incompatible pollutants (as set forth in Article II) are proposed or present in the Industrial User's wastewater discharge;
9) Other conditions as deemed appropriate by the County to insure compliance with this Ordinance, or other applicable law or regulation. The County reserves the right to require more stringent discharge limits or conditions if it so chooses.
10) A reasonable compliance schedule as may be required by applicable law or regulation to insure the Industrial User's compliance with pretreatment requirements or improved methods of operation and maintenance;
11) Requirements for the installation of facilities to prevent and control accidental discharges or spills at the Industrial User's premises.

F. Applicant's Notification of Draft SID Permit and Right to Object

Upon completion of its evaluation, ADEM shall issue a draft SID Permit with special conditions to be included. The applicant shall have thirty (30) days from receipt of ADEM draft SID Permit to review same and mail a registered letter stating any objections to the County and ADEM. ADEM may, but shall not be required to, schedule a meeting with the County and applicant's authorized representative within fifteen days following receipt of the applicant's objections, and attempt to resolve disputed issues concerning the draft SID Permit. If applicant files no objection to the draft SID Permit or a subsequent agreement is reached concerning same, ADEM shall issue a SID Permit to applicant with such special conditions incorporated therein.

G. Industrial Impact Permit

In addition to the SID Permit application, the Industrial User shall obtain an impact

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permit. Upon determination that the available capacity of the existing System is sufficient to accommodate applicant's wastewater and upon the Industrial User's receipt of an ADEM-issued SID permit, the County shall issue the applicant a permit authorizing such connection and permitting applicant to discharge wastewater from such premises to the System at the rate and in quantities stated therein.

H. Compliance Scheduling and Reporting Requirements

The Industrial User shall comply with the following conditions and requirements pertaining to reporting and compliance scheduling:

1) The schedule shall contain certain increments of progress in the form of calendar dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment requirements for the Industrial User to meet the applicable Pretreatment Standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).
2) No increment referred to in Article IV.H.1 shall exceed nine (9) months.
3) Not later than fourteen (14) days following each date in the schedule and the final date for compliance, the Industrial User shall submit a progress report to the County and ADEM including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for the delay, and steps being taken by the Industrial User to return the construction to the schedule established. In no event shall more than nine (9) months elapse between such progress reports to the County and ADEM.
4) Within ninety (90) days following the date for final compliance with applicable Pretreatment Standards or, in the case of a New Source, prior to commencement of the introduction of wastewater into the System, any Industrial User subject to Pretreatment Standards and Requirements shall submit to the County and ADEM a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by Pretreatment Standards and Requirements and the average and maximum daily flow for those process units which are regulated by such Pretreatment Standards or Requirements. The report shall state whether the applicable Pretreatment Standards or Requirements are being met on a consistent basis and, if not, what additional operation and maintenance procedure or pretreatment is necessary to bring the Industrial User into compliance with the applicable Pretreatment Standards or Requirements. This statement shall be signed by an authorized representative of the Industrial User and certified to by a Professional Engineer registered in the State of Alabama.
5) Any Industrial User subject to a Pretreatment Standard, after the compliance date of such Pretreatment Standard, or, in the case of a New Source, after commencement of the discharge into the System, shall submit to the County and ADEM, at such times and intervals as specified in the respective permit, a report indicating the nature and concentration of pollutants in the effluent which are

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limited by such Pretreatment Standard. In addition, this report shall include a record of all daily flows which, during the reporting period, exceeded the average daily flow reported in Section C(4) of this Article. At the discretion of the County and ADEM and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., the County and ADEM may agree to a specific schedule for report submission.

6) The County and ADEM, as applicable, may impose mass limitations on Industrial Users where the imposition of mass limitations are appropriate. In such cases, the report required by Article IV.B. shall indicate the mass of pollutants regulated by Pretreatment Standards in the effluent of the Industrial User. Where mass limitations are imposed on Industrial Users, matching concentration limits may be imposed on Industrial Users.
7) The Industrial User shall immediately notify the County of any prohibited discharge under Article II.A.
8) The reports required in this Article shall contain the results of sampling and analysis of the discharge, including the flow rate and the nature and concentration, or production and mass limits where requested by the County and ADEM, of pollutants contained herein which are limited by the applicable Pretreatment Standards. The frequency of monitoring shall be prescribed in the applicable Pretreatment Standard. All analyses shall be performed in accordance with procedures established by the EPA under the provisions of Section 304(h) of the Act (33 U.S.C. § 1314(h)) and contained in 40 CFR Part 136 and amendments thereto, or with any other test procedures approved by the EPA or ADEM. Sampling shall be performed in accordance with the techniques approved by the EPA.

I. Maintenance of Records

Any Industrial User subject to the report requirements established in this Article shall maintain records of all information resulting from any required monitoring activities. Such records shall include for all samples:

1) the date, exact place, method, and time of sampling, preservation techniques, and the names of the persons taking the samples;
2) the date analyses were performed;
3) who performed the analyses;
4) the analytical techniques/methods used; and
5) the results of such analyses.

J. Retention of Records

Any Industrial User subject to the reporting requirement established in this Article shall be required to retain for a minimum of five (5) years any records of monitoring activities and results (whether or not such monitoring activities are required by this Article) and shall make such records available for inspection and copying by the County, ADEM or the EPA. This period of retention shall be extended during the course of any unresolved litigation involving the Industrial User or when requested by the County, ADEM, or the

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K. Permit Duration

ADEM will issue SID Permits for a period of five (5) years. Notwithstanding the foregoing, Industrial Users becoming subject to a National Pretreatment Standard shall apply for new permits on the effective date of such National Pretreatment Standards. The County shall notify in writing any User whom it has cause to believe is subject to a National Categorical Pretreatment Standard of the promulgation of such federal regulations, but any failure of the County in this regard shall not relieve the User of the duty of complying with such National Pretreatment Standards. A User must apply in writing to the County and ADEM for a renewal permit within one hundred eighty (180) days prior to expiration of the current permit. Limitations or conditions of a permit are subject to modification or change as such changes may become necessary due to revisions in applicable water quality standards, changes in the County's NPDES permit, changes in Article II of this Ordinance, changes in other applicable law or regulation, or for other just cause. Users shall be notified of any proposed changes in their permit by the County and ADEM at least thirty (30) days prior to the effective date of the change. Any change or new condition in a permit shall include a provision for a reasonable time to achieve for compliance. The user may appeal the decision of ADEM in regard to any changed permit conditions as otherwise provided in this Ordinance.

L. Permit Transfer

SID Permits are issued to a specific Industrial User for a specific operation and facility. An SID Permit shall not be reassigned or sold to a new User or different premises. An SID Permit may be transferred when the facility ownership changes, but ADEM and the County reserve the right to issue a new or modified permit.

M. Permit Revocation

Any permit issued under the provisions of this Article is subject to be modified, suspended, or revoked in whole or in part during its term for cause, including, without limitation, the following:

1) Violation of any terms or conditions of the wastewater discharge permit or other applicable law or regulation;
2) Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; or
3) A change in any permit condition that requires either a temporary or permanent reduction or elimination of the regulated discharge.

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ARTICLE V. INSPECTION, MONITORING AND ENTRY

A. General

Whenever required to carry out the objective of this Ordinance, including but not limited to, (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, standard of performance, or permit condition under this Ordinance; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, standard of performance, permit condition or any requirement established under this Ordinance.

1) The County and ADEM shall require any Industrial User or any other User including residential and non-residential Users, if deemed necessary, to comply with the requirements this Ordinance, including:
   (a) establish and maintain such records as required by Article IV of the Ordinance;
   (b) make such reports as required;
   (c) install, use and maintain such monitoring equipment and methods (including, where appropriate, biological monitoring methods) as required;
   (d) sample such effluent (in accordance with such methods, at such locations, at such intervals, and in such manner as the County and ADEM shall prescribe);
   (e) provide the County, ADEM or EPA with access to the User's premises; and
   (f) provide such other information as the County or ADEM may reasonably require.
2) The authorized representative of the County, ADEM, or EPA, upon presentation of his credentials:
   (a) shall, within thirty (30) minutes of presenting proper credentials, have a right of entry to all properties for purposes of inspection, observation, measurement, sampling and testing in accordance with the provisions of this Ordinance; and
   (b) may at any time have access to and copy any records, inspect any monitoring equipment or method required under clause (1), and sample any effluents where the owner or operator of such source is required to sample under such clause.
3) Where, in the opinion of the County, construction, repair, or maintenance of any portion of the System is needed, the County, its employees or contractors shall be permitted to enter property and perform such work as may be necessary. The County shall have the right to disconnect illicit or unpermitted sources from the System. The responsibility for payment of the cost and expense of any such activities shall be determined by the County and billed to the user as appropriate.
4) Where, in the opinion of the County, construction, repair or maintenance of any portion of the System carrying wastewater, storm water, or surface water is needed, and said portion lies outside of a public easement, the owner thereof shall be advised by the County of the needed construction, repair or maintenance and

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be given a reasonable time as determined by the County to complete such work. Upon the owner's refusal or failure to complete such work as aforesaid, the County may, with consent of the owner, perform such work at the expense of the owner. Upon the failure of the owner to perform such work or consent to such work at the owner's expense, the County may disconnect said portion from the System.

B. Requirements

Specific requirements under the provisions of Article V.A shall be established by the County and ADEM for each Industrial User and such requirements shall be included as a condition of the Industrial User's SID permit. The nature or degree of any requirements under this provision shall depend upon the nature of the Industrial User's discharge, the impact of the discharge and economic reasonableness of any such requirement imposed. The Industrial User shall be required to design any necessary facility, and to submit detailed design plans and operating procedures to the County and ADEM for review in accordance with accepted engineering practices. However, the County shall not approve such a submittal for performance.

C. Denied Right of Entry

In the event any User denies the County, ADEM, or EPA, or their authorized representatives, the right of entry to or upon the User's premises for purposes of inspection, sampling effluents, inspecting and copying records, or performing such other duties as shall be imposed upon the User under this Ordinance, the County, ADEM, or EPA shall use such means as shall be advisable and reasonably necessary to discharge its duties under this Ordinance to obtain entry.

D. Denied Duty

Any User failing or refusing to discharge any duty imposed upon him under the provisions of this Article, or who denies the County and ADEM or the EPA the right to enter upon the User's premises for purposes of inspection, sampling effluents, inspecting and copying records, or such other duties as may be imposed upon him under this Ordinance, shall be deemed to have violated the conditions of his SID permit, as applicable, and such permit shall be subject to modification, suspension, or revocation under the procedure established in Article III of this Ordinance.

E. Sampling Structure and Equipment

1. General

All industrial waste connections shall have a sampling structure which will meet the requirements of this Ordinance. The Industrial User shall supply and maintain at its expense such equipment as may be necessary to enable the County to take refrigerated continuous flow proportional samples of the wastewater discharges. If, after initial

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sampling and monitoring by the County, it is determined that the structure and equipment are inadequate to obtain data of sufficient quality, the County may require changes or modifications in the structure and equipment as it deems necessary. It shall be the Industrial User's responsibility to maintain such structure and equipment. Any damage or loss which necessitates repair or replacement of the County's sampling equipment shall be assessed and charged to the Industrial User on an actual cost basis.

2. Suggested Sampling Structures

Documents are available to assist the User in constructing the aforementioned sampling structure. These documents are available upon request by contacting the Industrial Pretreatment Office at 205-238-3833.

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ARTICLE VI. INDIRECT DISCHARGES

A. Hauled Wastewater

No person may discharge hauled wastewater into the System except in the manner and at such locations as may be designated by the County.

B. Certification of Haulers

Any person engaged in the hauling of wastewater to the System must hold a current valid certificate of competency from the Jefferson County Health Department and a license from the Alabama Onsite Wastewater Board. The discharge of hauled wastewater to the System will not be permitted without evidence of such certification.

C. Wastewater Limitations

The discharge of hauled wastewater shall generally be limited to the following:

1) Contents of residential household septic tanks (septage)
2) Food Service Facility grease traps/interceptors

The County reserves the right to refuse any hauled wastewater when, in the absolute discretion of the County, it appears that the discharge of hauled wastewater may interfere with the effective operation of the System.

D. Discharge Locations

The County shall designate the locations and times where hauled wastewater may be discharged. Locations and times of operation are subject to change without notice.

Current locations accepting discharge of hauled wastewater are as follows:

1) Septage Discharge Facility near the Birmingham Municipal Airport at 1701 40th Street North
2) Valley Creek Wastewater Treatment Plant in West Bessemer
3) Village Creek Wastewater Treatment Plant in Ensley (facility accepts grease trap discharge)
4) Such other places as may be designated by the Director of Environmental Services

E. Monitoring of Discharge

The County may collect samples of each load of hauled wastewater to ensure compliance with this Ordinance. The County may also require the wastewater hauler to provide an analysis of the wastewater of any load prior to discharge.

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F. Grease Waste

Grease trap waste shall not be combined with septic tank waste and transported to the disposal site as part of a mixed load. Discharge of mixed septage and waste grease loads are prohibited.

Grease manifests shall accompany all grease interceptor and trap waste to the disposal site. The grease hauler shall complete the middle portion of the grease disposal manifest and deliver the manifest to the disposal site for completion.

Only grease collected in Jefferson County or from Users of the System may be discharged at ESD Facilities. Grease disposal manifests shall accompany all grease interceptor and trap waste and be delivered to the grease disposal site.

G. Other Waste

Other hauled wastewater or liquid waste may, at the discretion of the County, be accepted for discharge at an approved location provided that:

1) Wastewater contains no industrial waste or sludges (refer to SID permit and/or Jefferson County Pretreatment Office);
2) Wastewater contains no hazardous waste; and
3) Wastewater is not otherwise limited by this Ordinance.

Sampling and analysis of such non-domestic septage or grease waste shall be provided. Additional Charges for the discharge of such waste may apply as determined by the County.

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ARTICLE VII. BUILDINGS, SEWERS, AND CONNECTIONS

A. User Responsibility

All costs and expenses related to the installation and/or connection of the sewer service line shall be borne by the User. The User shall indemnify the County from any loss or damage that may directly or indirectly be occasioned by the installation of the sewer service line.

B. Number of Sewers per Building

A separate and independent sewer service line shall be provided for every building. Variances to this rule are subject to approval by the Sewer Permitting and Inspections Office (716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, Alabama).

C. Construction Standards

The size, slope, alignment, materials or construction of a sewer service line, and the methods to be used in excavating, placing of pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the ESD Standard Specifications for Sanitary Sewer Service Lines and Connections, the ESD Standards for Construction of Commercial and Residential Sanitary Sewer Systems, all applicable plumbing codes, and other applicable rules and regulations of the County.

D. Sewer Elevation

Whenever possible, a building's sewer service line shall be designed to operate by gravity flow. In limited circumstances, a private lift station may be approved by the Sewer Permitting and Inspections Office.

E. Connection Standards

The connection of the sewer service line into the public sewer shall conform to the requirements of the building and plumbing codes or other applicable rules and regulations of the County. In the absence of specific code provisions, the materials and use provided in applicable specifications of ASTM and WPCF Manual of Practice No. 9 shall apply. All such connections shall be made gastight and watertight. The County reserves the right to deny connections.

F. On-Site Requirements

All excavations for sewer service line installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a satisfactory manner.

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G. Interceptors

Grease, oil and sand interceptors shall be provided by the Owner when, in the opinion of the County, they are necessary for the proper handling of liquid wastes as provided for in Article II.A. Interceptors shall not be required for individual private living quarters or dwelling units. Prior to installation, all interceptor plans and specifications shall be approved by the County and shall be readily and easily accessible for cleaning and inspection.

H. Facility Maintenance

Where primary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

I. Cross-Connection

Any cross-connection between potable water supply and a sanitary sewer is prohibited.

J. Right of Way Limitations

No private sewer may be extended more than fifty (50) feet in the public right of way. At no time shall a permanent structure be located over a sewer main or sewer service line.

K. Sewer Impact Permits

All persons or entities who intend to connect to the System or modify, expand, or change an existing connection to the System shall obtain an impact permit for plumbing fixtures. Commencement of work prior to obtaining a permit is prohibited and subject to penalty.

Impact permits shall be obtained by the User or a designated agent of the User before a building or plumbing permit will be issued for any residential, commercial, or industrial facilities whose wastewater is treated in the System. The following is required of an applicant in order to secure an impact permit:

1) Applicants shall provide a building, site utility and plumbing drawings to the Sewer Permitting and Inspections Office (716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, Alabama). Site utility plans are required for Non-Residential Users. It is the responsibility of the applicant to determine the number of fixtures.

2) Upon payment of applicable Charges, the applicant shall receive two copies of the impact permit. The applicant shall retain one copy for his or its personal records, and submit one copy to the governing municipal jurisdiction for a building permit, if required.

3) A building permit shall not be issued prior to the issuance of an impact permit as outlined in 2) and in accordance with the Unification Agreement.

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4) The County shall inspect the premise to determine compliance with the impact permit. It shall be the responsibility of the applicant and/or the Owner, or Owner's representative to notify the County of completion of construction. For any plumbing fixtures which were not included in the impact permit, Charges shall be paid in full before a certificate of occupancy is issued.

L. Alternate Waste Systems Conversion Prohibition

All persons, firms or entities owning or occupying any home, mobile home, commercial building or industry currently connected to the System shall not disconnect from the System for the purposes of connection to an alternate waste treatment system. The System shall be deemed the primary source of waste disposal.

M. Sewer Connection Permits

All persons or entities who wish to connect a new service line to the System, or to modify, change, or repair an existing service line or connection to the System, shall obtain a sewer connection or sewer repair permit from the Sewer Permitting and Inspections Office (716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, Alabama).

All sewer connection permits shall be obtained prior to starting any excavation for the installation or repair of a sewer service line or connection. Plumbers may also be required to secure excavation permits from other jurisdictions when entering road rights of way. The Sewer Connection Permit shall be obtained by the Owner's plumber from the Sewer Permitting and Inspection Office. The sewer connection permit shall be obtained and signed by a Master Plumber or his duly authorized representative. The plumbing company shall have a current bond with the Jefferson County Commission, and be licensed by the State of Alabama Plumbing and Gas Fitters Board.

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ARTICLE VIII. GREASE CONTROL

A. Application and Permit Requirements

All Food Service Facilities having the potential to discharge Fats, Oils and Grease (FOG) into the Sewer System shall obtain a Grease Control Program Permit. On all new construction, a sewer impact permit must be obtained from the Sewer Permitting and Inspection Office (716 Richard Arrington, Jr. Blvd. North, Suite A300, Birmingham, Alabama, prior to the issuance of a Grease Control Program Permit.

1. Procedures

Grease Control Program Permits shall be obtained by the Owner or his designated agent. A Grease Control Program Permit must be obtained before (1) a sewer connection permit is issued for new construction or (2) an impact permit is issued for remodels on existing structures for any food service facility whose wastewater is treated in the System. The following describes the process required by an applicant securing a grease permit.

a) The Owner shall submit an application for permit to the Grease Control Program Office (1290 Oak Grove Road, Homewood, AL 35209). The Owner shall include a site utility plan and/or plumbing plans with details, size and location of the grease control device and sampling vault inclusive of locations for all sinks, dishwashers, restrooms, sewer connections, etc. (as deemed necessary) along with a recent copy of the water bill for the facility in question. All grease interceptors and traps located at a facility and operated by the same Owner must be included in the permit application, each grease control device shall be identified individually on said application. All information contained in the Food Service Facility Grease Control Program Permit Application shall be certified by the applicant as true and complete prior to the County's review for approval.

b) Upon submittal and payment, the County will review the permit application for acceptance.

c) Permit acceptance conditions may include, but are not limited to, the following:

   i. permit duration,
   ii. permit fee,
   iii. permit transfer prohibition,
   iv. frequency of inspections,
   v. maintenance requirements,
   vi. compliance schedule,
   vii. requirements for retaining records,
   viii. statement of permission for the County to enter upon the User's property without prior notifications for the purpose of inspection, observation, photography, records examination and copying, measurement, sampling or testing, and
   ix. other conditions deemed by the County necessary to ensure compliance with this program and other applicable ordinances, laws and regulations.

d) A Food Service Facility may apply for a Permit Exemption if the Food Service Facility does not discharge significant amounts of FOG to the System. Such

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facilities shall engage only in the reheating, hot holding or assembly of ready to eat food products, and as a result, there is no wastewater discharge containing a significant amount of FOG. Food Service Facilities which are granted an exemption from the permit requirement are subject to inspection by ESD inspectors and are required to notify the County if changes are made where grease waste is generated. A permit exemption shall be subject to a single exemption Charge. The exemption will be in effect until there is a change in food service operations that generates FOG or if the facility is linked to a sewer blockage or sanitary sewer overflow.

e) Permit Denial: The applicant will be advised in writing of the specific cause for the denial within sixty (60) calendar days of the decision to deny the permit application. If the applicant is denied a permit under this program, he shall have the right to appeal such denial to the Director. The appeal shall be filed within fifteen (15) business days of receipt of the notice of denial.

2. Grease Control Device Requirements

All new Food Service Facilities that discharge FOG into the System shall install, operate, and maintain properly sized grease control devices provided in this Ordinance and in accordance with all regulatory authorities having jurisdiction. New construction shall include remodels where plumbing is being re-worked, excavation is being performed on-site, or when there is a change in size or type of food preparation equipment. Existing FSFs may be required to modify existing grease control devices, or to install new or additional grease control devices.

a) Grease Traps (Outdoor Applications)
Grease traps shall be required for each new and existing Food Service Facility if the service provided by the establishment includes food preparation, operation of a food grinder or an automatic dishwasher.

i. Grease traps shall have a capacity of not less than two (2) 1,000 gallon traps installed in series for a total capacity of 2,000 gallons;
ii. The Director may approve the use of a single 1,000 gallon trap where site conditions prevent the installation of two 1,000 gallon traps in series; and
iii. The Director may approve the use of a single 1,000 gallon trap for food service facilities if a Food Service Facility demonstrates that a single 1,000 gallon trap can accommodate the nature of the food service provided.

Contact the Grease Control Program at 238-3878 for grease trap specifications. If additional Food Service Facilities are added to an existing trap, a professional engineer must certify that the existing trap can properly function with the additional FOG loading.

b) Grease Interceptors (Indoor Applications)
Grease interceptors may be approved for use by the County for indoor installations if site conditions prevent the installation of outdoor grease traps, if the Food Service Facility operates infrequently, or if the facility is replacing an

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existing grease interceptor provided that the Food Service Facility is not equipped with a dishwasher or a food waste grinder.

Grease interceptors shall be sized in accordance with Plumbing and Drainage Institute Standard PDI-G101, Testing and Rating Procedure for Grease Interceptor with Appendix of Sizing and Installation Data.

Discharge of the following materials to an indoor grease interceptor is prohibited:

i. Wastewater with a temperature higher than 140 degrees F,
ii. Wastewater discharged from a dishwasher
iii. Acidic or caustic cleaners, or
iv. Wastewater discharged from a food waste grinder (disposal).

c) Alternative Grease Removal Technologies
Alternative grease removal technologies may be approved by the County for the purpose of controlling FOG discharge into the sewer system in lieu of a standard grease interceptor or trap if ESD determines the device employing such technology shall be at least as effective as a standard grease interceptor or trap. The approved device shall be wired directly to a circuit breaker and shall contain audio and visual alarms that can only be reset by opening and servicing the device.

The User shall provide the following information to ESD for the evaluation of the proposed technology:

i. A design that is specific to the Food Service Facility submitting the information prepared and certified by a professional engineer. The County will not consider a general proposal.
ii. Complete information regarding the performance of the technology and proof of effectiveness in removing FOG from the waste stream.
iii. Specifications for maintenance service and frequency.
iv. The manufacturer's installation and operation manuals.

If the alternative technology is approved, the User shall install and maintain the device in accordance with the manufacturer's installation and operation specifications. Maintenance shall be performed at least as often as stipulated in the permit, even if the manufacturer specifies less frequent maintenance.

d) Sampling Location
Grease control device sampling vaults or ports shall be required at all new Food Service Facilities. Existing Food Service Facilities may be required to provide a sampling vault/port if two or more failures have occurred and it has determined that the Existing Food Service Facility is a contributor to the downstream blockage.

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3. Action Plan

If it is determined by the ESD that an existing grease interceptor or grease trap does not meet the capacity and/or functionality requirements as set forth in this Ordinance, the Owner shall submit a detailed Action Plan within 30 days of notification. The Action Plan shall clearly identify the method which will be used to address the deficient grease interceptor or trap. Options to address the deficient grease interceptor or trap include the following:

Option 1 – Install a grease interceptor or trap (grease control device) of proper size and install a sampling vault/port. The Action Plan shall identify the location and size of the existing grease interceptor or trap, the location and size of the proposed grease interceptor or trap and sampling vault/port, and the date by which the proposed grease interceptor or trap will be in service. ESD will review the proposed location, size and installation schedule and either approve the Action Plan or request modifications and resubmittal of the Action Plan.

Option 2 – Install one or more additional grease interceptors or traps (grease control devices) in series with the existing interceptor or trap to provide the required capacity and install a sampling vault/port. The Action Plan shall identify the location and size of the existing grease interceptor or trap, the location and size of the proposed grease interceptor or trap and the sampling vault, and the date by which the proposed grease interceptor or trap and sampling vault/port will be in service. ESD will review the proposed location, size and installation schedule and either approve the Action Plan or request modifications and resubmittal of the Action Plan.

Option 3 – Install a grease control device employing alternative technology. The device can be a standalone device or may be used in combination with a conventional passive grease interceptor or trap. The Action Plan shall include manufacturer's information on the specific device to be installed and a drawing showing the Food Service Facility plumbing, the proposed location of the device, and the location of the sampling vault/port.

B. Grease Permit Violations

The Director may revoke a permit or approval in the event that any part of the construction, installation or maintenance of the grease control device is in violation of, or not in compliance with, the provisions of this Ordinance.

Installation, modifications, repairs or replacement of grease control devices shall be inspected by the County. Any work completed without prior approval by the County shall be subject to a non-compliance Charge.

C. Maintenance Requirements for Grease Control Devices

Maintenance shall be performed for grease control devices as determined by inspections, sampling and the application of the 25 Percent Rule, or at intervals specified in the Permit, whichever is more frequent, but no less than every 90 days for outdoor grease

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traps and every 14 days for indoor grease interceptors. Maintenance of all grease control devices shall be performed as frequently as necessary to protect the sanitary sewer system against the accumulation of FOG. If multiple grease control devices are installed, all systems in the series must be pumped according to the maintenance schedule.

The 25 Percent Rule requires that the depth of oil and grease (floating and settled) in a trap shall be less than 25 percent of the total operating depth of the trap. The operating depth of a trap is determined by measuring the internal depth from the outlet water elevation to the bottom of the trap.

Food Service Facilities which operate infrequently or only for special events may request a modification to the maintenance schedule specified above. The County may authorize a maintenance frequency related to the operation of the Food Service Facility. The User shall submit a request, in writing, for a modified maintenance schedule which includes all details of operation to the County for review.

The User shall be responsible for the proper removal and disposal of the grease interceptor or trap waste. All waste removed from each grease interceptor or trap must be disposed of properly at an appropriate facility designed to receive grease interceptor or trap waste. All grease waste generated within the System shall be disposed of at designated County facilities.

Maintenance shall include the complete removal of all grease waste from the interceptor or trap including floatable materials, wastewater, sludges, and solids. Grease interceptors and traps shall be operated in accordance with the manufacturer's specifications and/or in accordance with generally accepted engineering standards and practices.

Grease trap maintenance shall include the following minimum services:

1) Complete removal of all grease interceptor or trap contents rather than skimming the top grease layer,
2) Thorough cleaning of the grease interceptor or trap to remove grease and scum from inner walls and baffles,
3) Filling cleaned interceptor or trap with cold potable water, and
4) Completion of middle section of the grease disposal manifest form and delivery to waste disposal site along with the grease interceptor or trap waste.

Top skimming, decanting or back flushing of the grease interceptor or trap or its contents for the purpose of reducing the volume of waste to be hauled is prohibited. Vehicles capable of separating water from grease shall not discharge separated water into the grease trap or into the wastewater collection system.

The User shall be responsible for retaining records of the maintenance of all grease control devices including manifests, permits, permit applications, correspondence, sampling data and any other documentation that may be requested by ESD. These records shall include the dates of service, volume of waste removed, waste hauler, and disposal site of waste. These records shall be kept on-site at the location of the grease

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control device for a period of three (3) years and are subject to review without prior notification.

D. Grease Control Program Inspections and Compliance

Grease interceptors and traps shall be subject to inspection a minimum of once per year to determine compliance. Frequency of inspections may be increased in order to protect the System against the accumulation of grease. Compliance shall be evaluated based on any of the following criteria:

1) Implementation of Best Management Practices (BMPs),
2) Grease control device(s) kept in compliance with 25 Percent Rule,
3) Regularly scheduled maintenance of grease control device(s),
4) Documentation of maintenance and proper disposal,
5) Employee education and training and documentation thereof
6) Completion of approved action plans, and
7) Absence of fryer oil.

Failure to comply with any of these requirements may result in a non-compliance Charge.

If a grease interceptor or trap fails an inspection, the inspector shall notify the User that maintenance must be performed on the grease device within seven (7) calendar days. The inspector will return within 14 calendar days to re-inspect the grease device, and the FSF shall be subject to a re-inspection Charge per grease interceptor or trap. If the grease interceptor or trap is determined to be in compliance, annual inspections shall resume the subsequent year.

If the grease interceptor or trap fails a re-inspection, a notice of non-compliance shall be issued and maintenance must be performed on the grease interceptor or trap immediately. A second re-inspection will be scheduled within 24 hours. The User shall be subject to the re-inspection Charge for each re-inspection.

Any grease interceptor or trap receiving three (3) notices of non-compliance within a 24-month period shall be deemed a nuisance by the County and shall require corrective actions as determined by the County to cure the nuisance, including, if deemed necessary, termination of all discharges to the System

Any alternative technology grease control device found in non-compliance shall be deemed a nuisance by the County. If the user is unable to cure the nuisance, installation of a conventional passive grease trap shall be required.

E. Prohibitions

The following activities are specifically prohibited:

1) Introduction of chemical elements directly into the grease control device or any section of the plumbing system.
2) Disposal of fryer oil to the System.

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F. Grease Haulers

All grease haulers shall be licensed by the Jefferson County Department of Health and hold a Septic Tank Haulers Permit. Grease trap waste shall not be combined with septic tank waste and transported to the disposal site as part of a mixed load. Discharge of mixed septage and waste grease loads are prohibited.

Grease manifests shall accompany all grease interceptor and trap waste to the disposal site. The grease hauler shall complete the middle portion of the grease disposal manifest and deliver the manifest to the disposal site for completion.

Only grease collected in Jefferson County may be discharged at ESD Facilities. Grease collected outside of Jefferson County shall not be accepted for disposal at any ESD Facility. Grease disposal manifests shall accompany all grease interceptor and trap waste and be delivered to the grease disposal site.

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ARTICLE IX. GENERAL PROVISIONS

A. Damage to Sewer System

No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any portion of the Sewer System.

B. Validity

All resolutions, ordinances, parts of resolutions, or parts of ordinances in conflict herewith are hereby repealed.

C. Severability

The provisions of this Ordinance are severable. If any provision, section, paragraph, sentence or part thereof, or the application thereof to any individual or entity, shall be held unconstitutional or invalid, such decision shall not affect or impair the remainder of this Ordinance, it being the Commission's legislative intent to ordain and enact each provision, section, paragraph, sentence and part thereof separately and independently of each other.

D. Penalties

Violation of any provision of this Ordinance may subject the violator to fine and/or other enforcement remedies available to the County and to ADEM. Each day on which a violation shall occur or continue shall be deemed a separate and distinct offense. In addition to any such fines or enforcement remedies, the County shall be allowed to recover reasonable attorney's fees, interest, penalties, court costs, court reporter's fees and any other expenses of litigation or collections from any person or entity in violation of this Ordinance or the orders, rules, regulation and permits issued hereunder.

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ARTICLE X. ORDINANCE IN FORCE

A. Date Effective

This ordinance shall be in full force and effect on the date of adoption by the Jefferson County Commission.

B. Date Adopted

Passed and adopted by the Jefferson County Commission on the _____ day of _____________________, _____. Approved this ____ day of __________________, _____.

by____.

Attest:

____

Minute Clerk of the Jefferson County Commission

Approved as to correctness:

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JEFFERSON COUNTY
SEWER USE CHARGE ORDINANCE
ADOPTED NOVEMBER 6, 2012

This document is provided as a convenience to the public. The official ordinance and amendments thereto are contained in the office of the Minute Clerk of Jefferson County in Minute Book xx, pages xx. In the event of a discrepancy between any words or figures contained in this document and those contained in the official minutes of the Jefferson County Commission, the words and figures reflected in the official minutes shall govern.

JEFFERSON COUNTY
SEWER USE CHARGE ORDINANCE

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ARTICLE I. GENERAL PROVISIONS

A. Purpose and Policy

This ordinance establishes sewer charges for those whose sewerage is disposed of or treated by the wastewater collection and treatment system for Jefferson County, Alabama. This ordinance contains the Commission's reasonable and nondiscriminatory rules and regulations fixing rates and charges for sewer service, providing for the payment, collection, and enforcement thereof, and the protection of its property. These rules and regulations accomplish the equitable distribution of costs of the System.

This ordinance shall apply to all System Users in Jefferson County and to persons outside the County who are, by contract or agreement with the County, Users of the System. Except as otherwise provided herein, the Environmental Services Department shall administer, interpret, implement, and enforce the provisions of this ordinance. Where not specifically provided herein, the provisions of this ordinance shall be enforced and interpreted consistent with the "Jefferson County Sewer Use Administrative Ordinance."

B. Definitions

Unless the context specifically indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

1. "ADEM" shall mean the Alabama Department of Environmental Management or its duly authorized deputy, agent, or representative.

2. "All contributors" denotes any Person or Owner contributing wastewater to the System.

3. "BOD_5" (denoting five day biochemical oxygen demand), shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees C, expressed in milligrams per liter by weight. BOD shall be determined by standard methods as hereinafter defined.

4. "Billed Volumetric Units" shall mean the total metered volume of water after application of the Return Factor (see Article II.A)

5. "COD" shall mean chemical oxygen demand as determined by standard test methods.

6. "Condensate" shall mean liquid water resulting from the change of water vapor to liquid by the use of traditional air conditioner units or water heaters.

7. "Constituents" shall mean the combination of particles, chemicals or conditions existing in the wastewater.

8. "Consumption" shall mean the amount of water used, as measured by a water meter

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using a given unit of measure.

9. “Cooling Water” shall mean the water discharged from commercial air conditioning, cooling or refrigeration sources such as chillers and cooling towers.

10. “Cu. Ft.” denotes cubic feet.

11. “County” shall mean the Jefferson County Commission or its employees, duly authorized agents or representatives.

12. “Director” shall mean the Director of the Environmental Services Department or his designee.

13. “Environmental Services Department” or “ESD” shall mean the County department that has direct responsibility for the maintenance, management and operations of the Sewer System.

14. “FOG” shall mean fats, oils, and grease.

15. “Grease Control Device” shall mean any grease interceptor, grease trap or other approved mechanism, device or process, which attaches to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap, collect or treat FOG prior to the balance of the liquid waste being discharged into the System.

16. “Grease Interceptor” shall mean an indoor device located in a food service facility or under a sink designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

17. “Grease Permit” or “Food Service Facility Grease Control Program Permit (FSFGCPP)” shall mean the license/authorization to discharge wastewater/liquid waste into the System granted to the Owner of a Food Service Facility or his/her authorized agent.

18. “Grease Trap” shall mean an outdoor device located underground and outside of a food service facility designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the System by gravity.

19. “Health Department” shall mean the State Board of Health as constituted in accordance with Ala. Code § 22-2-1 *et seq.*, and includes the Committee of Public Health or State Health Officer when acting as the Board. The Health Department is not affiliated with the Jefferson County Commission.

20. “Impact Fee” shall mean the charge assessed to any sewer user prior to connection with, or access to, the System.

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21. “Industrial User” shall mean any industry discharging liquid waste into the System either with or without pretreatment.

22. “Industrial Wastewater” shall mean any wastewater discharge with pollutant loadings in excess of the values described in Article IV.D.1.

23. “Industrial Wastewater Surcharge” shall mean the additional service charge assessed to Users whose wastewater characteristics exceed those of normal wastewater as defined in this ordinance.

24. “l” denotes liter.

25. “Metered Water” shall mean the quantity of all sources of water, including water from wells, consumed by the sewer User (see Article II).

26. “mg/l” denotes milligrams per liter and shall mean ratio by weight.

27. “Non-Residential User” or “Other User” shall mean a premise or person who is not considered a Residential User and includes multi-family residential (with master meter(s), i.e. apartment complex, mobile home complex, etc.), commercial and industrial premises that discharge wastewater of Standard Strength into the System.

28. “Non-Resident User” shall mean a User whose property is located outside the corporate limits of Jefferson County.

29. “Person” or “Owner” shall mean any natural person, individual, firm, company, joint stock company, association, society, corporation, group, partnership, co-partnership, trust, estate, governmental or legal entity, or their assigned representatives, agents or assigns.

30. “Private Meter” shall mean a secondary water meter installed by the user downstream of the primary domestic water meter to measure non-sewered (outdoor) water use.

31. “Public Water System” shall mean a system for the provision to the public of piped water for human consumption.

32. “Residential User” or “Domestic User” shall mean a premise or person who discharges into the System wastewater that is of a volume and strength typical for residences, and who lives in a single-family structure, such as an individual house, duplex, townhouse, or condominium, or any other independently-owned single-family structure with an individual water meter for metering potable water. Multi-family residential units are not considered Residential Users.

33. “Sanitary Sewer” shall mean a sewer which carries wastewater, and from which storm, surface, and ground waters are intended to be excluded.

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34. “Sewer” or “main sewer” shall mean a pipe or conduit eight (8) inches in diameter or larger intended for carrying wastewater and generally located in public right-of-way or easement.

35. “Sewer Connection Permit” shall mean the license to proceed with work on a sewer service line, either as new construction or for the repair of an existing line.

36. “Sewer Service Line” shall mean any sanitary sewer line or conduit located outside the building structure which connects the building’s plumbing from the outside building wall to the main sewer. The sewer service line is usually four (4) inches in diameter, sometimes six (6) inches in diameter, and in special cases eight (8) inches in diameter or larger. The County does not maintain the sewer service line from the outside building wall to the main sewer.

37. “Sewer System” or “System” shall mean a publicly-owned treatment works (POTW) (as defined by Section 212 of the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, codified at 33 U.S.C. § 1292) owned by the County. The term shall mean any wastewater treatment facility, any sanitary sewer that conveys wastewater to such treatment facility and any wastewater pumping facility.

38. “Shall” is mandatory; “may” is permissive.

39. “Standard Methods” shall mean those sampling and analysis procedures established by and in accordance with EPA pursuant to Section 304(g) of the Act and contained in 40 CFR, Part 136, as amended, or the “Standard Methods for the Examination of Water and Sewer” as prepared, approved, and published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation. In cases where procedures vary, the EPA’s methodologies shall supersede.

40. “Standard Strength” shall describe wastewaters of any origin having a pollutant content less than the wastewater pollutant characteristics defined in Article IV, Section D.1 of this ordinance and having no prohibited qualities of sanitary sewer system admission.

41. “Suspended Solids” shall mean solids that either float on the surface, or are in suspension in water, wastewater, or liquid as defined by standard methods.

42. “Total Phosphorous” or “TP” shall mean total phosphorous as determined by standard methods.

43. “TSS” shall mean total suspended solids as determined by standard methods.

44. “Total Solids” shall mean total weight expressed in mg/l of all solids: dissolved, undissolved, organic, or inorganic.

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45. "User" shall mean the occupant and/or the owner(s) of property from which wastewater is discharged into the System and any individual or entity, including municipalities, who contributes, causes, or permits the contribution of wastewater into the System.

46. "Wastewater" shall mean any solids, liquids, gas, or radiological substance originating from residences, business buildings, institutions, and industrial establishments together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the System.

Terms for which definitions are not specifically provided herein or in the "Jefferson County Sewer Use Administrative Ordinance" shall be interpreted as defined in the Glossary of the current edition of "Design of Municipal Wastewater Treatment Plants, Volume 3" (MOP 8) published by the WEF and the American Society of Civil Engineers.

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ARTICLE II. BILLING UNITS

A. Volume Determination

The Environmental Services Department shall, at its own discretion, determine the factor and percentage of metered or non-metered water discharged to the System for the purposes of billing consistent with the following:

In making a quantity determination for System Users, the quantity of wastewater discharged by the User to the System shall be the same as the quantity of water delivered to the User by the Public Water System. In limited circumstances, should well water be used for the User's supply of water, the well shall be metered and quantities made known to the County on a monthly basis.

1. Residential Users

Billed Volumetric Units for Residential Users, except participants in the private meter program or as otherwise determined, shall be the metered quantity multiplied by a Return Factor as an allowance for metered water not returned to sewer. The Factor shall be as follows:

Residential Return Factor 0.85

Multi-family residences, apartments, condominiums, lofts and other residential users without unique, contiguous, deeded, unimproved land for that residential unit shall not be eligible for the Residential Return Factor.

2. Non-Residential Users

Billed Volumetric Units for Non-Residential Users and participants in the private meter program shall be the metered quantity multiplied by a Return Factor of 1.00, *provided, however*, a custom return factor may be established at the discretion of ESD for future, continuous use where sufficient evidence exists.

It shall be the obligation of Non-Residential Users who evaporate or otherwise dispose of water delivered by the Public Water System to alternate disposal systems to install such meters or other devices deemed necessary by the County to determine the estimated quantity discharged to the System. The County will consider establishing a constant ratio, factor, or percentage to be applied to the metered water quantity delivered by the Public Water System in order to determine the quantity of wastewater discharged by the User. It shall be the responsibility of the User to provide adequate written documentation which justifies the factor to the satisfaction of the County. The value of this factor will be reviewed for accuracy by ESD biannually, or whenever deemed necessary by the County in its sole discretion.

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B. Impact Fee Units

1. Fixtures

Impact fee units shall be billed per defined unit times the rate provided in this ordinance as follows:

Fixture Type	No. Units
Bathtub	1
Shower	1
Water Closet/toilet	1
Lavatory	1
Sink	1
Urinal	1
Bidet	1
Sink	1
Dishwasher	1
Washing Machine	1
Garbage disposal units or pre-wiring for same	1
Stub outs for plumbing fixtures	1
Floor drain	0.5
Trench drain (per 18” of length)	0.5
Bradley wash sink (per 18” of sink perimeter)	1
Body wash/massage	1
Drinking fountain	0.5
Condensate drain	0.5
Sump pump or ejector	1
Dumpster Drain	1
Commercial kitchen sink	1
Commercial dishwasher	1
Commercial ice machine	1
Photographic developing machine	1
Autoclave	1
Restaurant/Bar Seat (booths are calculated per 18” length)	1
Other (any other connection to the System as determined by the County as a full or partial unit)	

2. Food Service Establishments

The impact fee for full service restaurants and bars shall be assessed at a rate of one (1) plumbing fixture per seat. The impact fee for all other food-serving establishments shall be determined on the basis of projected volume of flow to the sewer as provided for in Article II.B.4.

3. Alternate Waste Disposal (Septic) System Conversion

A fixture credit shall be applied for each existing fixture up to a maximum of sixteen (16)

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fixtures (or equivalent fixtures) in the event of a conversion from an existing septic or alternate waste disposal system. If the conversion is performed without a permit then the fixture credits shall not apply.

4. Non-Residential

The impact fee for any connection to the System which will result in a non-domestic discharge of wastewater by virtue of the volume, rate of flow, or the level of pollutant concentrations will be determined by the County on a case-by-case basis. The County will base its determination upon all factors which may substantially affect System hydraulic and treatment capacity.

The determination shall be based on the annual volume contributed by a domestic household, which is defined as having twelve (12) plumbing fixtures, and the flow from which is equivalent to 125 hundred cubic feet per year. Therefore, an equivalent fixture, in terms of flow, shall be equal to 10.42 hundred cubic feet per year.

The impact connection fee for non-domestic users shall be as follows:

1) The impact fee shall be determined based on the applicant's estimates of flow at the time of application to secure an impact permit.
2) The County shall apply the applicant's estimates to the following formula to determine the number of equivalent plumbing fixtures and the impact fee to be charged as a result thereof.

$$\text{Number of Equivalent Plumbing Fixtures} = \frac{\text{annual volume of water to sewer (cu. ft.)}}{1{,}042}$$

$$\text{Non-Residential Impact Fee} = \text{Number of Equivalent Plumbing Fixtures} \times \text{the rate established by Article IV.E.1}$$

3) A determination of actual wastewater volume discharged to the System shall be made using actual metered water consumption during the first year of the applicant's use. If it is determined by actual measurement that the volume discharged to the System is substantially different from the estimates given by the applicant, an adjustment will be made either by refund or additional charge to the applicant. The adjustment shall be made on the highest six (6) month volume discharged to the System. Metering shall be installed at the User's expense if required by the County for determination of actual wastewater volume discharged.

ARTICLE III. ADJUSTMENTS AND CREDITS

A. Sewer User Adjustments

Users are eligible to receive a leak adjustment credit based on their volumetric (consumption) sewer charge within the prior twelve (12) month period. Any leak of domestic water that does not discharge to a sanitary drainage system at the premise may be eligible for credit. However, such leak shall be documented to have arisen from a defect in the permanent plumbing system and subsequently have been repaired. A "Jefferson County ESD Request for Leak Adjustment Form" must be completed in its entirety and returned to the Sewer Permitting and Inspections Office, located at 716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL 35203, along with a dated and descriptive plumbing repair invoice, a work order from a Public Water System, or a receipt in cases where the Owner completes his own repairs.

The County does not provide "courtesy" adjustments. No adjustment will be given based solely on the fact that a User has an unusually high water and sewer bill, and water adjustments or credits given by a Public Water System shall not form the sole basis nor create an obligation to the County to grant a similar adjustment for sewer charges. Sewer charges may be adjusted only if the User supplies sufficient written documentation.

Swimming pools which have been verified on site, measured for volume, and are deemed to be a permanent structure by a Sewer Service Inspector, are eligible for a once-per-year adjustment. The User must be able to demonstrate that the water drained from the pool was not discharged to the System. The adjustment shall be allowed only in cases where there is a substantial pool filling. Adjustments shall not be made prior to the User being billed for the water volume.

B. Adjustment Limitations

Any request for an adjustment of sewer charges shall be limited to one (1) year from the billing date of the original charge, and shall be submitted to the Sewer Permitting and Inspection Office (716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL).

C. Credit for Existing Fixtures

If an existing structure is to be demolished, altered, remodeled or expanded, an applicant will be allowed credit for the plumbing fixtures in the existing structure. Credit will be given only for those plumbing fixtures in the existing structure which are connected to the System and shall only be applied to a new or remodeled structure at the same location. To receive credit for existing fixtures, applicants must arrange an inspection by County personnel to verify the fixture count before removing the old fixtures. Credit will not be given unless the fixtures have been inspected by ESD prior to removal or evidence of a prior paid impact permit is presented. Except as provided herein, credit for existing connections and fixtures cannot be transferred to another location.

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In circumstances such as natural disasters or other uncontrollable circumstances where credit for existing fixtures cannot be accurately determined, the County shall determine the credits available based on available information consistent with this Ordinance. The burden of proof for establishing any claimed credit as provided herein shall be on the applicant.

D. Exemptions

The governing bodies of all municipalities under the terms of their respective unification agreements shall be exempt from payment of all impact fees for facilities which will be used directly by those governing bodies for carrying out their governmental functions. The impact fee exemption does not apply to park boards, recreation boards, school systems, or any other boards or alliances which are autonomous, or are not a direct function of, or owned by, the municipal governing body. However, this fee exemption does not remove the requirement that any applicable permits must be obtained prior to securing a building permit.

E. Refund of Impact Fees

Upon proper application by the permittee, the County will refund Impact Fees for fixtures which have not been installed. If no building permit was issued, the permittee must return all copies of the original impact permit in order to receive a refund. If a building permit was issued, the permittee must return the applicant's copy of the impact permit along with the original issued receipt to the Sewer Permitting and Inspection Office within two (2) years of issuance. The administrative fee shall be deducted from the total amount of the refund.

F. Private Meters

A User of the System may elect to install a private meter on a water service line that is connected to fixtures, equipment, or systems that do not discharge wastewater to the System. Users with installed private meters shall not be eligible for the Residential Return Factor adjustment. Private meter requirements and credit procedures are as follows:

1) A private meter must be permanently installed on the water service line or water distribution system downstream of the primary domestic water service meter. Water metered by the private meter must not directly or indirectly enter the System. Portable meters that attach onto the end of a hose or faucet are not eligible.
2) The private meter shall be registered by an ESD Sewer Service Inspector. The initial meter reading shall start from the reading that is registered at the time of inspection. It is the responsibility of the User to inform the County of the presence of a private meter by calling 205-325-5801 to request a registration/inspection of the private meter. Retroactive usage credit prior to registration shall not be allowed.

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3) The private meter owner or an authorized party must be present at the time the private meter is registered by the County and must acknowledge its limitations of use.
4) All private meter readings must be submitted to the Environmental Services Sewer Permitting and Inspection Office at 716 Richard Arrington Jr. Blvd. North, Suite A300, Birmingham, AL 35203.
5) Meter readings should be submitted every 6 months, but not more frequently than every 6 months. Credit shall not be granted for any use prior to the twelve-month period from the date of submission for credit.
6) Private meter forms must be filled out in their entirety in order to be processed.
7) A private meter processing fee as provided for in Article IV.B shall be charged for each private water meter credit administered.

Any active participant of the private meter program who wishes to terminate their current enrollment status must request such action in writing to ESD and shall not be allowed re-enrollment for a twelve month period from the date of request.

The County reserves the right to require, at any time, the private meter to be inspected or re-registered by a Sewer Service Inspector.

It shall be the responsibility of the User to determine whether a private meter is enrolled in the credit program.

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ARTICLE IV. FEES, CHARGES, AND PENALTIES

A. Sewer Use Charges

All Users of the System, or their designated agents, shall pay a sewer use charge to the County. Sewer use charges shall include (1) fixed monthly charges and (2) volumetric charges in accordance with the following schedules. Sewer use charges for unmetered water will be determined by the County in its sole discretion.

1. Residential

A block volume charge shall be levied on Billed Volumetric Units in accordance with the below schedule. Whole units shall be used to determine under which Block the charge arises.

	Per 100 Cubic Feet		
	Block 1	Block 2	Block 3
Volume	0-3	4-6	7+
Rate per unit	$4.50	$7.00	$8.00

	Per 1000 Gallons		
	Block 1	Block 2	Block 3
Volume	0-2246	2247-4491	4492+
Rate per unit	$6.02	$9.36	$10.69

2. Non-residential

A block volume charge shall be levied on Billed Volumetric Units in accordance with the below schedule.

	Per 100 Cubic Feet
Volume	0+
Rate per unit	$7.60

	Per 1000 Gallons
Volume	0+
Rate per unit	$10.16

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3. Monthly Base Charge

In addition to the volumetric charges in A.1 and A.2, a monthly base charge for each installed meter (except Private Meters) shall be levied as follows:

Meter Size (in. dia.)	Charge
5/8”	$10.00
3/4”	11.00
1”	14.00
1.5”	18.00
2”	29.00
3”	110.00
4”	140.00
6”	210.00
8”	290.00
10”	370.00

4. Billing Frequency

Bills are rendered monthly or quarterly at the discretion of the County.

B. Private Meter/Pool Processing Fee

A processing fee in the amount of $12.00 shall be imposed for the processing of each application for private meter or pool credit.

C. Non-Resident Users

All Non-Resident Users shall pay a sewer User charge to the County equal to the User charges described in Sections A.1 through A.3 of this Article multiplied by the following Non-Resident User Factor.

Non-Resident User Factor = 1.06

The monthly base charges set forth in Section A.3 of this Article shall also be multiplied by the Non-Resident User Factor. All other fees or charges described within this Ordinance shall be assessed to Non-Resident Users in accordance with the schedules set forth herein or as may be established by Jefferson County.

At the discretion of the County and at such times when County ad-valorem tax or any other System-related tax is modified or adopted, the Non-Resident User Factor may be changed or modified by the County.

D. Industrial Waste Surcharges

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1. Industrial User Surcharges

An industrial waste surcharge shall be levied against any Industrial User of the System whose wastewater characteristics exceed the following standard strength:

Constituent	Strength	Rate per pound
BOD	300 mg/l	$0.8284
COD	750 mg/l	$0.4142
TSS	300 mg/l	$0.2734
FOG	50 mg/l	$0.1715
TP	4 mg/l	$3.2650

If an industrial wastewater discharge contains excessive loading for both BOD and COD, the imposed surcharge will be based on one of the two parameters as determined by the County in its sole discretion.

At the discretion of the County and at such times when data has been compiled and established, additional or modified industrial waste surcharge parameters, concentrations, or rates may be imposed.

Pounds shall be computed by multiplying the factor 0.00624 (the conversion factor used to determine the weight in pounds of one milligram per liter (mg/l) for a liquid volume in hundreds of cubic feet) times the volume of the wastewater (in hundreds of cubic feet) times the parts per million (ppm) of wastewater characteristics as described in the Table above.

2. Sampling and Analysis

Sampling and analysis charges shall be calculated and assessed as follows:

(1) Round trip mileage shall be charged per mile at the currently published Internal Revenue Service Standard Mileage Rate.
(2) Crew cost: $35.00 per hour (charged in ¼ hour segments at sampling site, each segment = $8.75).
(3) Laboratory analytical cost: Billed by wastewater characteristic, as defined in the laboratory fee schedule, which may be obtained from the Industrial Pretreatment Office at 205-238-3833.
(4) Technical and administrative fees including data collection, calculations, entry, report dispersal and billing per sampling cycle: Flat rate of $50.00.

3. Miscellaneous Fees

Cost incurred by the County for sampling, analysis and monitoring of industrial wastewater not otherwise provided for in this Ordinance shall be charged to the monitored industry on an actual cost basis.

4. Hauled Wastewater

Charges for discharging all hauled wastewater into an approved System facility, as measured at the receiving facility, shall be as follows:

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Waste type	Rate per 1000 gallons
Septage and domestic wastewater	$60.00
Grease trap waste	$75.00
Other	*

*Charges for other non-standard discharges shall be calculated by the County based on estimated increased operating costs if, at the County's discretion, the particular waste stream constituents are higher concentrations than typical domestic septage or grease trap waste. Leachate, unless otherwise determined, shall be considered septage.

E. Sewer Impact Fees

1. Fixture Rate

An impact fee shall be levied upon each new connection to the System regardless of county jurisdiction as follows:

Fixture	Impact Fee
Single fixture unit	$225.00
Equivalent fixture unit	$225.00
Stubouts for plumbing fixtures	*
Other fixtures	**

* Impact fee for stubouts will be the cumulative fee for the fixtures to be served by the stubout.

** Impact fee to be determined by the County on a case by case basis in accordance with Article II.B.4 and at a rate of $225.00 per plumbing fixture.

Failure to make payment for any plumbing fixture prior to installation shall result in a doubling of the payment if said payment is not submitted within thirty (30) days of notification. However, failure to mail any notice, or failure to receive any notice, shall in no way affect the obligation of the applicant to pay the fees and any penalty.

2. Alternate Waste Disposal System Conversion

Any home, mobile home or commercial building served by a septic tank, package plant, or other means of waste disposal which was constructed and approved for use subject to the standards of the Jefferson County Department of Health may connect to the System, provided there is no prohibition in the regulations of the County, State or Federal Government and upon payment of a one hundred dollar ($100.00) fee for such connection.

3. Impact Fees Refund

An administrative fee for refund of impact fees will be assessed as follows:

No. Fixtures	Fee

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1 - 10	$20.00
11 - 50	$30.00
51	$50.00

F. Sewer Connection Fees

The sewer connection fees as listed include all required inspections and will be assessed for each single user connection in accordance with the following schedule:

Permit type	Prior to installation	After installation
Connection	$50.00	$550.00
Repair	$50.00	$550.00
Tap[1]	$150.00	
Disconnection	$25.00	

[1]County provides saddle, labor, and materials for tap to existing sewer mains.

If the County Sewer Service Inspector is required to visit the connection site for more than two (2) inspections due to faulty material, poor workmanship etc., the third inspection and each inspection thereafter shall be charged at $100 per inspection. After hour, weekend, and holiday inspections must be pre-approved by the ESD and shall be charged at a rate of $100.00 per hour, with a 2 hour minimum. The rate is "per inspector" as deemed necessary by the County.

G. Grease Trap Fees

Grease trap and interceptor fees shall be assessed in accordance with the following schedule:

Annual Inspection Fee

Number	Fee
1-5	$300.00
6-10	$500.00
11+	*

*Units in excess of 10 shall be assessed $500.00 plus $200.00 for each additional 5 units in excess of 10

Other Fees

Type	Fee
Non-compliance	$400.00
Re-inspection	$400.00
Exemption	$300.00

Installation, modifications, repairs or replacement of grease control devices shall be inspected by the ESD inspectors. Any work completed without prior notice shall be subject to a non-compliance fee.

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H. Billing Fees

Billing fees shall be assessed in accordance with the following schedule:

Type	Fee
Lien Recording	$16.00
Lien Satisfaction	$16.00
Return Check	$30.00
Pay Off Amount (per sheet)	$4.00

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ARTICLE V. GENERAL PROVISIONS

A. Validity

All resolutions, ordinances, parts of resolutions, or parts of ordinances in conflict herewith are hereby repealed.

B. Severability

The provisions of this Ordinance are severable. If any provision, section, paragraph, sentence or part thereof, or the application thereof to any individual or entity, shall be held unconstitutional or invalid, such decision shall not affect or impair the remainder of this Ordinance, it being the Commission's legislative intent to ordain and enact each provision, section, paragraph, sentence and part thereof separately and independently of each other.

C. Penalties

The County shall be allowed to recover reasonable attorney's fees, interest, penalties, collection fees, court costs, court reporter's fees and any other expenses of litigation or collections from any person or entity in violation or non-payment of the provisions of this this Ordinance.

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ARTICLE VI. ORDINANCE IN FORCE

A. Date Effective

This ordinance shall be in full force and effect on the date of passage, with such rates and charges being assessed as soon as is practicable.

B. Date Adopted

Passed and adopted by the Jefferson County Commission on the _____ day of ______________________, _____. Approved this ____ day of ___________________, _____.

by____.

Attest:

____

Minute Clerk of the Jefferson County Commission
Approved as to correctness:

DRAFT

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE NORTHERN DISTRICT OF ALABAMA
SOUTHERN DIVISION

In re:	)	
	)	
JEFFERSON COUNTY, ALABAMA, a political subdivision of the State of Alabama,	)	**Case No. 11-05736-TBB**
	)	**Chapter 9**
Debtor.	)	

SUPPLEMENT TO FOURTH PERIODIC STATUS REPORT
CONCERNING THE SEWER RATEMAKING PROCESS

On October 29, 2012, Jefferson County, Alabama (the "County"), the debtor in the above-captioned chapter 9 case, filed its *Fourth Periodic Status Report Concerning the Sewer Ratemaking Process* [Docket No. 1379] (the "Fourth Report").[1] The County respectfully supplements the Fourth Report with the following additional exhibits:

Exhibit H: A copy of the notice described in the third numbered paragraph of the Fourth Report, as posted at the County Courthouse, on www.jeffcosewerhearings.org., and on www.al.com;

Exhibit I: A transcript of the October 29, 2012 meeting of the Administrative Services Committee, which meeting was discussed in the Fourth Report;

Exhibit J: A revised version of the FAQ handout (Ex. B to the Fourth Report), revised to correct two typographical errors[2];

Exhibit K: An official copy of *Resolution No. Feb-12-1997-Bess-1*, adopted February 12, 1997, which would be repealed by the Proposed Resolution;

1 Capitalized terms not otherwise defined have the meanings ascribed in the Fourth Report.

2 The two typographical errors are on the second page of the document. In the first question on the second page, an inaccurate reference to "$4.25" has been changed to "$4.50." In the last question on the second page, an inaccurate reference to "5.8%" has been changed to "5.9%."

Exhibit L: An official copy of the *Grease Control Program Ordinance* adopted October 3, 2006, which would be repealed by the Proposed Resolution;

Exhibit M: The final report of CH2M Hill concerning the County's wastewater treatment plant assets, an earlier draft of which is referenced in Recitals GG, *et. seq*. of the Proposed Resolution;

Exhibit N: A copy of the February 28, 1901 law, Act Number 716, 1900-1 Ala. Acts 1722, *et seq.*, referenced in the Proposed Resolution;

Exhibit O: A copy of Michael D. Floyd's *A Brief History of the Jefferson County Sewer Crisis*, 40 CUMB. L. REV. 691, 693 (2009-2010), referenced in the Proposed Resolution, which Professor Floyd and the Cumberland Law Review have graciously provided permission to include in the Record; and

Exhibit P: A copy of James H. White, III's *Financing Plans for the Jefferson County Sewer System: Issues and Mistakes*, 40 CUMB. L. REV. 717 (2009-2010), referenced in the Proposed Resolution, which Mr. White and the Cumberland Law Review have graciously provided permission to include in the Record.

A copy of this Supplement and all exhibits thereto will be added to the Record, and are available free of charge at www.jeffcosewerhearings.org.

Respectfully submitted this 5th day of November, 2012.

By: /s/ J. Patrick Darby
BRADLEY ARANT BOULT CUMMINGS LLP
J. Patrick Darby
Joseph B. Mays, Jr.
Dylan Black
J. Thomas Richie
One Federal Place
1819 Fifth Avenue North
Birmingham, Alabama 35203

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dblack@babc.com, trichie@babc.com

-and-

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Counsel for Jefferson County, Alabama

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NOTICE OF PUBLIC HEARING

Please take notice that the Jefferson County Commission will meet in the Commission Chamber in the Jefferson County Courthouse in Birmingham, Alabama, at 10 a.m. on Tuesday, November 6, 2012. The purpose of the meeting will be to receive comments from the public about a proposed resolution adopting the Jefferson County Sewer Charge Ordinance, which makes changes in the charges for sewer service, and the Jefferson County Sewer Administrative Ordinance, which sets forth rules and regulations regarding sewer use. Following the public hearing, the Commission will deliberate and vote on whether to adopt the proposed resolution.

The proposed resolution and the two ordinances are available in the office of the County Manager, Second Floor, Jefferson County Courthouse, 716 Richard Arrington Jr. Blvd. North in Birmingham, Alabama, and at the website www.jeffcosewerhearings.org.

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6 ADMINISTRATIVE SERVICES COMMITTEE MEETING
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11 * * * * * * * * * * *
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15 TRANSCRIPT OF MEETING,
16 OCTOBER 29, 2012
17
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19
20
21 taken before Stone Arledge, ACCR# 608, on
22 Monday, October 29th, 2012, commencing at
23 11:07 a.m. at the Jefferson County Courthouse,
24 716 Richard Arrington Jr. Boulevard North,
25 Birmingham, Alabama 35203.

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1 A P P E A R A N C E S
2
3 ADMINISTRATIVE SERVICES COMMITTEE:
4
5 T. JOE KNIGHT
6 SANDRA LITTLE BROWN
7 DAVID CARRINGTON
8 JAMES A. STEPHENS
9
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1 I, Stone Arledge, ACCR# 608, a
2 Court Reporter of Birmingham, Alabama, certify
3 that on this date, as provided by Rule 30 of the
4 Alabama Rules of Civil Procedure and the
5 foregoing stipulation of counsel, there came
6 before me this witness in the above cause, for
7 oral examination, whereupon the following
8 proceedings were had:
9
10 MR. CARRINGTON: We're going to recess
11 the executive session and we're going to re --
12 or we're going to actually convene a meeting of
13 the Administrative Services Committee to hear
14 presentations from free people. Mr. Eric
15 Rothstein, who is a sewer rate consultant
16 obtained by the -- our attorneys in our Chapter
17 9 bankruptcy. Dr. Stephanie Rauterkus, who is a
18 professor at UAB, will also be giving -- making
19 a brief presentation, and then Mr. David Denard,
20 who is our department head of ESD.
21 The first presentation will be
22 given by Mr. Eric Rothstein. Welcome to the
23 Commission Chambers, sir.
24 MR. ROTHSTEIN: Good morning. I think
25 we have this almost set up. Okay. I want to

1 walk through the proposed sewer rates and
2 charges, so let me give you a sense of the
3 objectives that we had when developing the
4 proposed rates and charges.
5 The first and perhaps most
6 fundamental is to correct some of the
7 fundamental flaws in the current structure and
8 to ensure that all the sewer rate components of
9 our proposed rates are reasonable, are fair and
10 nondiscriminatory and are feasible. Some of the
11 other things that we wanted to look at were to
12 make sure that the rates going forward were
13 consistent with industry best practices, so
14 you're on a more solid foundation, and to limit
15 the extent of revenue instability with some of
16 the structural changes in the rates, and in so
17 doing provide for a foundation for future rate
18 setting. I'll talk a bit about what I mean by
19 these structural changes in the rates, but
20 everybody is anxious to see what they are, so
21 let me show them to you.
22 So here is the proposed sewer
23 rates and charges for general service. The
24 first component is one of those structural
25 changes. It incorporates a base charge. The

1 base charge would be graduated by meter size, so
2 that $10 figure is for a five-eighths-inch
3 meter, which is the typical meter size for
4 residential service and would increase based on
5 the meter size. This is a charge that would be
6 charged irrespective of the volume of metered
7 water use. So this is charged to all accounts.
8 Then there are volumetric rates. This is rates
9 on the basis of the amount of billed sewer flow.
10 It is in three tiers, sometimes referred to as
11 an inclining block rate structure. The first
12 tier is from 0 to 3 CCF. CCF being hundreds of
13 cubic feet, or 748.5 gallons of water, and for
14 that the charge would be $4.50 per CCF for those
15 first three CCF. The next tier is for 4 to 6
16 CCF and the charge for that would be $7 per CCF,
17 and increasing one more time for use of 7 CCF
18 and above at $8 per CCF. This is for
19 residential service. For nonresidential
20 service, the inclining block rate structure
21 really is not appropriate, so we are talking
22 there about a uniform volumetric rate of $7.60.
23 Some additional structural
24 changes to the rates relate to septage hauling
25 and industrial waste. Septage is broken into

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1 two different charges. Charges for general
2 septage at $60 per thousand gallons and for
3 higher strength grease is at $75 per thousand
4 gallons. This is a bit of a change. Previously
5 it was -- just for both septage and grease
6 was -- was all on the basis of a single charge
7 per thousand gallons. We have also changed the
8 industrial waste charges. These are in dollars
9 per pound. One of the things that is --
10 structural changes that has been made, there was
11 a tier structure in the industrial waste
12 charges. This eliminates the differential
13 charges based on tiers and applies a single
14 charge per pound as is shown here. So 28.55
15 cents for total suspended solids. Biochemical
16 oxygen demand at 0.8057 dollars. Chemical
17 oxygen demand at 0.4028 dollars per pound.
18 Fats, oils, and grease at 0.1447 dollars per
19 pound and phosphorus at two dollars and 92.73
20 cents per pound. So those are the new charges.
21 Let me give you sense as to why
22 we did these. The fixed charge, that base
23 charge. Number one, I think it's extremely
24 important to recognize that there are
25 significant costs involved in basically

1 establishing and having a service available to
2 customers. So the fixed charge or the base
3 charge, which, again, is very common in the
4 industry is in some measure a reflection of the
5 cost of providing service. In addition, it
6 provides for a measure of revenue -- of revenue
7 stability. What we are trying to do is -- is
8 improve revenue stability. This is a measure to
9 do so. Again, that revenue stability is
10 achieved by virtue of the fact that this is a
11 charge that is -- that is put in place
12 irrespective of the volume of water used. So
13 all customers would be charged these fixed
14 charges.
15 Relating to the first bullet
16 point of reflecting the cost of service, this
17 begins a correction of avoiding what I refer to
18 as a free rider problem. Under the existing
19 rates, the charge for zero volume of water use
20 is $2, which does not recover even the cost of
21 sending the bill, so the county is incurring
22 considerable costs to basically have service
23 available and -- and have that account in place,
24 and customers under the existing rate structure
25 are essentially not paying for that and,

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1 essentially, are free riders. So this corrects
2 that inequity.
3 The residential tiered rates
4 are intended to do a couple of things. There
5 is, to some extent, a conservation price signal
6 that is provided, but perhaps the most important
7 aspect is that it insulates the majority of
8 users from very large percentage bill impacts
9 given that we're putting these fixed charges in
10 place. So when you put the fixed charges in
11 place, that has a bill impact in and of itself,
12 and so by doing this and doing the residential
13 tiered rates we're able to provide some
14 insulation for the majority of users from the
15 effect of putting in the fixed charge. Also, by
16 establishing a lower rate for that first 0 to 3
17 CCF, we're providing some measure of assurance
18 of the affordability of service required for
19 basic health and human sanitary needs. So
20 remember that that first 3 CCF was at $4.50 per
21 CCF as opposed to $7 and $8 in subsequent tiers.
22 That lower cost for that first 3 CCF is intended
23 to provide for assuring the affordability of
24 service. Also, the higher margin rates are --
25 for above-average usage, it provides some --

1 some higher costs for exceptionally higher use.
2 One of the things I think is
3 important to note with respect to these
4 residential rates is that these tier thresholds
5 are for all residential users. Make sure that
6 -- well, it is clear that these are, in fact,
7 nondiscriminatory rates. All customers are
8 subject to 0 to 3 CCF at $4.50. All customers
9 are subject to the next tier and all customers
10 are subject to the third tier. So there's no
11 discrimination in that respect.
12 Again, we provided some
13 discounting of use for health and sanitary
14 needs, and the higher rates are for
15 above-average or for higher use. I said that
16 the nonresidential rates, it's inappropriate to
17 charge a tiered structure. This is because a
18 tier structure would effectively penalize
19 certain commercial customers simply for being
20 large. If you think about, for example, a large
21 hotel may have implemented all kinds of energy
22 -- of water conservation measures and be a
23 relatively efficient user of water relative to a
24 smaller hotel who may not, but if you have an
25 inclining block rate structure, that large hotel

1 would basically pay most of its water at the
2 higher cost and the smaller hotel would pay at
3 the lower cost. So what we don't want to do is
4 provide that kind of discriminatory, if you
5 will, price signal for nonresidential customers.
6 One thing to also note is, is
7 that this fixed charge applies for both
8 residential and nonresidential customers, and so
9 with the changes in the fixed charge by meter
10 size we're able to generate a fair amount of
11 additional revenue on that basis alone, and so
12 that is the reason why that the rates for the
13 nonresidential customers are increased the 20
14 cents -- is limited to the 20-cent increase. It
15 is also important to note that the industrial
16 waste and septage hauling charges correct for
17 historical subsidy that has occurred and better
18 aligns as to cost. Those customers have not
19 seen increases in the charges for septage
20 hauling and for industrial waste in sometime,
21 and so for all intensive purposes they have not
22 been recovering -- they have not been paying for
23 the cost of service and so the charges that --
24 are being proposed correct for that historical
25 subsidy of those customers.

1 One thing I wanted to make sure
2 we are clear about is how the water use that is
3 being billed is determined. The metered water
4 use is -- for residential customers is still
5 subject to the 15 percent irrigation credit, as
6 it has been referred to. So when we talk about
7 billed sewer volume, if you are a 10 CCF water
8 user, you are charged for 8.5 CCF of sewer use.
9 That applies that 15 percent irrigation credit.
10 One thing that we did in our analysis is we
11 looked as to whether that was reasonable, and,
12 in fact, we looked at the -- at the 2011 data
13 and it does, in fact, seem to reasonably
14 correspond to the differential water use
15 patterns that you see summer to winter. There
16 are some other options for -- for doing this
17 kind of a adjustment, if you will, to the
18 metered water use to reflect discharges to the
19 sewer system. Some utilities use a summer-only
20 credit. Many utilities use what is referred to
21 as winter-month averaging. Something that you
22 might -- may eventually want to move to, but it
23 is common practice to -- in particular for
24 residential customers to recognize that not all
25 metered water use returns to the sewer system

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1 and you should be charging for sewer use, and so
2 the 15 percent credit is an appropriate
3 component of the rate and something that we have
4 retained and, in fact, validated.
5 That irrigation credit is -- in
6 fact, reflects those summer/winter differentials
7 is not as characteristic in the nonresidential
8 class, so we do not apply that credit for
9 nonresidential customers. However, there are
10 some nonresidential customers that do receive
11 some sort of recognition of metered water use
12 that does not return to the sewer system through
13 customer-specific sorts of exemptions, like an
14 evaporative cooling tower credit. So, again,
15 here are the proposed sewer rates and charges
16 again. The base charge is graduated by meter
17 size and applies for both residential and
18 nonresidential. Residential customers are
19 subject to a inclining block tiered structure
20 for their billed sewer volume, so it's the water
21 use adjusted for the 15 percent credit. So
22 people might wonder what are the impacts of
23 these sorts of -- sorts of charges. Before I go
24 into that, I would like to make sure that we
25 have an understanding of who in particular are

1 those residential customers and what are the
2 patterns of water use that we see.
3 This is something called a bill
4 frequency distribution chart, and it charts the
5 amount of consumption the customers have on the
6 bottom axis and the percent of total customers
7 in the -- in the vertical axis, and so what you
8 see is, is that the majority of customers fall
9 somewhere between 3 and 10 CCF of usage. There
10 is a substantial number of customers who use
11 less than 3 CCF and there is some customers that
12 use more than 10 CCF, but the heartland, if you
13 will, of the customers' usage patterns is in
14 that grouping there of 3 to, say, 10 or so CCF
15 of use. What happens in terms of the
16 residential bills? This is one chart that shows
17 what happens in terms of the residential bills,
18 and what you see is, is that in that area
19 between 3 and 10, 11 or so CCF of usage, there's
20 relatively limited bill impacts. What we're
21 accomplishing here is through the correction of
22 the flaws that we see, in particular associated
23 with that fixed charge there is a certain amount
24 of revenue recovery that is accomplished by
25 changing the rate structure to incorporate a

1 base charge and so that -- those increases that
2 you see at the very bottom 0, 1, 2, 3 CCF in
3 terms of dollars provides for some additional
4 revenue generation and, likewise, at the upper
5 end of the scale. This is not the easiest to
6 read, given that it goes up, so I thought I'd
7 actually give you the calculations. So this is
8 the residential -- for residential bill impacts,
9 you see water consumption, the adjustment and
10 the application of the -- what is the billed
11 waste water volume that is being charged for.
12 You see the calculation of the previous bill and
13 the calculation of the new bill and you see the
14 differences, and what you will see is, is that
15 for a customer who uses no water, there is a
16 fairly significant change in the bill, from $2
17 to $8. Oh, I'm sorry, $2 to $10, with an $8
18 difference. Those differences change and grow
19 smaller as the impact of that base charge
20 becomes a less significant share of the total
21 bill. So when we hit 3 CCF users, you're at
22 under $3 increase in the bill for those users,
23 and that's true as you go from 3 all the way
24 through 10 CCF. So there are significant
25 increases at 0, 1, even 2 CCF. I think that

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1 those significant increases at 0, 1, 2 CCF are
2 important and are -- and are very appropriate.
3 Keep in mind, historically, you've had a
4 situation which those customers were not charged
5 those fixed charges and you, in effect, were
6 subsidizing that service. So this corrects for
7 that free rider problem. This provides a
8 cost -- reflects the cost of having service
9 available for those customers, and with that,
10 and as you saw in the bill distribution, there
11 are a significant number of accounts that are
12 billed 0, 1, 2 CCF. There is some reasonably
13 significant amount of revenue generation
14 associated with that correction.
15 We continue on through and you
16 see that the bill impacts remain relatively
17 modest through even twice the average amount of
18 usage but then become more substantial as you go
19 through the consumption spectrum. On the
20 nonresidential side, again, the scaling here
21 becomes difficult if you're wanting to try to
22 show what happens for all users. There are some
23 impacts. It's relatively limited. Again, we
24 have a situation in which the meter charges, the
25 charges -- the base charge for these accounts

1 produces on a -- in a percentage term some
2 reasonably significant increases or differences
3 in the amount of the sewer charges, especially
4 at the low volumes of consumption, and that
5 continues on through. As you look at these
6 things, at these amounts on a percentage basis,
7 it is a less -- less substantial than what you
8 see on a system-wide basis at the upper tiers in
9 part because of, again, the effect and the
10 benefit of -- of the imposition of the fixed
11 charges. So these are the base charges and the
12 charges on the meters. You will see that they
13 are graduated fairly substantially, and it is
14 that vehicle that it provides us the mechanism
15 for cost recovery.
16 Turning to the industrial waste
17 -- septage and industrial waste surcharges.
18 These are also fairly substantial in terms of
19 the increases, on the order of 100 percent.
20 This is a situation which I think it's very
21 important to recognize that you have charges
22 that have not been adjusted since 1990, and so
23 when you talk about these increases, these still
24 remain increases that, number one, provide for a
25 cost that is consistent with the market and

1 provide for a correction of a historical subsidy
2 of industrial waste and septage hauling. The
3 fact that these customers have not been charged
4 at the cost of service must be corrected if
5 we're to provide a foundation on a going-forward
6 basis for the -- for any future changes. So
7 there are a couple of things that happen here.
8 We have changed the amount of the -- of the
9 charges for septage hauling. We have also
10 changed the structure a bit so that for septage
11 we have a break between septage hauling and
12 grease, and for industrial waste we have
13 simplified the industrial surcharges, eliminated
14 a tiering structure and had those septage
15 charges on the basis of a single charge per
16 pound of industrial waste delivered. These are
17 those septage charges again.
18 The last thing I wanted to -- a
19 couple of final things I wanted to speak to is
20 there has been much discussion about a mandatory
21 hookup. It is important to note that there are
22 existing health department regulations that
23 address this. It applies to new construction
24 only and it suggests that basically if you're
25 within the proximity of 100 feet of sewer lines

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1 that there is need for a hookup. This is very
2 consistent with industry practices. Also, it is
3 worth noting that this is not a clean water fee
4 or any form of nonuser fee. So that is not in
5 place.
6 Folks may be finally interested
7 in what does all these changes mean in terms
8 of -- in terms of revenue generation, so this
9 provides something of an estimate of the
10 percentage changes in revenues that are
11 anticipated from this package of changes to the
12 rates and charges. I think it's very important
13 to note that these are estimated levels. We are
14 talking here about fairly fundamental changes in
15 the way in which sewer service is charged for
16 your customers. They haven't faced a base
17 charge before and now they have a base charge;
18 the inclining block tiers, the changes in the
19 septage and the industrial waste charges. These
20 are all reasonably substantial and significant
21 changes in the ways in which customers are
22 charged, and as a consequence, though we have
23 provided for estimates of what we refer to as
24 price elasticity of demand to try to estimate
25 what the impacts would be in terms of

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1 consumption patterns as a consequence of these
2 changes, these are still somewhat uncertain
3 because it's not just a price change, it's a
4 change in the structure by which those prices
5 are conveyed. So these are, in fact, estimated
6 numbers. You will see that the residential rate
7 structure revisions are anticipated -- increased
8 residential volumetric -- or residential service
9 charge revenues by about 6.percent,
10 nonresidential at about 4.2 percent. That
11 difference is intentional. It begins to correct
12 for a subsidy that is currently in place, where
13 nonresidential customers are paying a bit more
14 than the cost of service and residential
15 customers are paying a bit less. In the septage
16 and industrial waste charge revisions, we are --
17 we are again have a fairly substantial price
18 elasticity of demand adjustment so that on a
19 system-wide basis we're anticipating that this
20 will be just less than about a 6 percent
21 increase in an overall revenue generation from
22 these proposed changes.
23 Let me lastly speak to some
24 practicalities. I know that this has been a
25 subject that has been on folks' mind for quite a

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1 period of time, subject to a great deal of
2 discussion, public hearings and so forth.
3 You've taken in a lot of information. There are
4 also some basic logistical issues that we need
5 to be mindful of as we think about how those
6 changes are to be made. Obviously, there is a
7 process of the rate ordinance adoption. But
8 it's also important to know that you have three
9 billing providers, and all three of those are
10 going to need to go through the process of
11 making programming changes to their billing
12 system software to be able to bill these new
13 rates, and, again, this is not simply a matter
14 of changing a number from $7.40 to some other
15 number. It involves structural changes in the
16 rates that require some involved programming and
17 parallel testing. In addition, it's going to
18 be, I think, quite important to make sure that
19 all billing providers have provided training to
20 their customer service representatives and
21 understand how to calculate the -- the new
22 bills. Again, it's not simply a matter of
23 looking at what you were billed -- billed in
24 terms of metered water use and multiplying by
25 $7.40. It's a bit more involved, a bit more

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1 complicated, and so it's very important that
2 customer service representatives know about,
3 understand and can calculate these -- these
4 bills and be able to communicate that to your
5 customers. Also, there are the practical
6 aspects of those things that happened in billing
7 adjustments. It is pretty commonplace for a
8 number of adjustments to happen after water is
9 metered by your customers for any one of a
10 variety of reasons. Again, because of the
11 complexity of the rate structure, it's important
12 to get those billing adjustment procedures in
13 place and well understood but all the parties,
14 and there's also the process of making sure that
15 we have -- going through the reconciliation, the
16 financial reconciliation, and understand what's
17 happening in terms of the revenues and how --
18 how this different rate structure is resulting
19 in differences in the -- in the revenues that
20 are generated.
21 There is also the practical
22 aspect of just getting the information out.
23 There is obviously publishing the new ordinance
24 on the website, but I believe that it's
25 important to have a fairly involved

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1 communication program that explains how the rate
2 structures are changing and how customers will
3 be billed on a going-forward basis.
4 So these implementation
5 requirements will obviously require a certain
6 amount of time in order to be able to put in
7 place these proposed rates, but as a final
8 point, I do believe these proposed rates are
9 important to act upon, that they correct for
10 fundamental flaws in the existing rate
11 structure, that they are reasonable, they are
12 nondiscriminatory, they are fair and they are
13 appropriate. I'll be happy to answer any
14 questions.
15 MR. KNIGHT: The septage charge, $60
16 now per 1,000 gallons. Is that the new one?
17 MR. ROTHSTEIN: Yes.
18 MR. KNIGHT: And that's up from the $30
19 per thousand gallons that it is presently and
20 has been since '91?
21 MR. ROTHSTEIN: Correct.
22 MR. KNIGHT: So if I've got a thousand
23 gallon tank and a hauler comes to my house and
24 empties my thousand dollars (sic) and I get that
25 done, say, over 5 or 7 years, my cost is going

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1 to go up a little bit because the hauler's cost
2 is going to go up for dumping in our sewer.
3 Right?
4 MR. ROTHSTEIN: Correct. A very little
5 bit, actually. When you think about -- when you
6 think about the fact that those -- those events,
7 the cleaning out of the -- of the septic system,
8 everything else, is a once in every five years
9 or so sort of thing, and this cost component is
10 one cost component of a series of cost
11 components that the septic hauler has to
12 recover. I think David Denard provided some
13 analysis that suggested that this would be a
14 very limited amount of additional cost to the
15 residential customer for -- associated with this
16 increase.
17 MR. DENARD: And I can go ahead and
18 speak to this. A typical septic tank is 1,000
19 gallons. Some are 1500, some are 1,000 gallons.
20 The life of -- how often they get cleaned varies
21 a lot, but we estimate somewhere around every
22 seven years. So for a 1,000 gallon tank, it
23 would work out every seven years to a septic
24 tank user of about 36 cents per month difference
25 over that seven-year period. Thirty dollars

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1 every seven years would be the difference
2 between the existing rate and the new rate.
3 MR. STEPHENS: Mr. Denard, what are the
4 surrounding counties or what are the -- the
5 people competing for that septage, what are they
6 charging?
7 MR. DENARD: North Shelby, Jasper,
8 southwest, some of the other local
9 municipalities typically charge anywhere from
10 about 70 to $80 per thousand gallons.
11 MR. STEPHENS: So even with this
12 increase, we are less than that?
13 MR. DENARD: We'll -- we will still be
14 below what some of the other municipalities --
15 surrounding municipalities, yes.
16 MR. STEPHENS: Thank you.
17 MR. CARRINGTON: Mr. Denard, just to
18 clarify, the $60 proposed increase is only a
19 portion of the total cost of having your septic
20 tank pumped.
21 MR. DENARD: Yes. Typical -- typical
22 cleaning charge for a thousand gallon tank is
23 $300 of which $30 of that 300 --
24 MR. CARRINGTON: Thirty is ours.
25 MR. DENARD: -- would be the component

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1 of septage. As it currently stands, if --
2 assuming that the septic tank haulers pass that
3 increased cost, the full increased cost on, it
4 would be $330 per thousand gallons, to clean out
5 a thousand gallon tank, so.
6 MR. CARRINGTON: Thank you. Any other
7 questions?
8 Mr. Rothstein, the bar graph
9 that you showed us showed peaks, two peaks, two
10 -- typical users are using 6 to 7 CCF.
11 MR. ROTHSTEIN: Yes, yes.
12 MR. CARRINGTON: Can we look at that
13 real quickly, sir. Is that -- where are those
14 two peaks at? What level?
15 MR. ROTHSTEIN: Well, so we've got
16 three -- the two peaks are at, I believe, five
17 and six or four and five.
18 MR. CARRINGTON: Okay. Well, let's
19 take the worst case of six.
20 MR. ROTHSTEIN: Uh-huh (yes).
21 MR. CARRINGTON: For someone using 6
22 CCF residential, what would be their bill
23 increase?
24 MR. ROTHSTEIN: We have that here. I
25 think this is the easiest place to see what

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1 these bill impacts are (indicating). So you see
2 at 4 CCF it's a dollar -- $14 difference, so
3 their bill would go from $25.16 to $26.30. For
4 the 5 CCF user, it goes up 80 cents; $31.45 to
5 $32.25. We calculated your average residential
6 account as at 6.2 CCF.
7 MR. CARRINGTON: Okay.
8 MR. ROTHSTEIN: So your 6 CCF user,
9 it's a 46 cent increase per month, from $37.74
10 to $38.20.
11 MR. CARRINGTON: Thank you.
12 MR. ROTHSTEIN: And I think we
13 calculated this at -- a little over half of the
14 customers would see less than a $2 increase per
15 month in their bills. About two-thirds would
16 see less than a $3 increase in their bills per
17 month.
18 MR. CARRINGTON: So those are exceeding
19 more than $3 a month, or basically these free
20 riders that are in the low end, they're not
21 using any water or -- is that --
22 MR. ROTHSTEIN: Correct.
23 MR. CARRINGTON: Or the ones that are
24 watering their mansions every day?
25 MR. ROTHSTEIN: Exactly.

1 MR. CARRINGTON: Okay. Of the free
2 riders -- and I read this statistic someplace.
3 They're -- if they're in Birmingham, they're a
4 free rider in Birmingham and they're not using
5 any water, they're subject to a base charge by
6 Birmingham Water Works. Is that correct?
7 MR. ROTHSTEIN: Correct. Uh-huh (yes).
8 MR. CARRINGTON: And what's that base
9 charge in comparison to our proposed base
10 charge?
11 MR. ROTHSTEIN: I believe their base
12 charge is $17.34, if I have that right, so --
13 MR. CARRINGTON: So they're paying
14 17.34 before they take one drop of water?
15 MR. ROTHSTEIN: Right. I think -- and
16 I think that that's an indicator of the nature
17 of the standard practice in the industry, is to
18 recognize that there are significant costs
19 involved in basically having service available.
20 Birmingham Water Works reflects that in the fact
21 that they've got a base charge of $17.34. For
22 you not to have had that in place, I think,
23 needs to be corrected, and that's the reason for
24 the -- the meter charge.
25 MR. CARRINGTON: Thank you, sir. Any

1 other questions?
2 MR. KNIGHT: Yeah. Just one
3 clarification. I'm doing some math here.
4 That's scary.
5 MS. BROWN: My question, since he's
6 doing his math, would you say the average bill
7 is in the five, six, seven and eight and it
8 goes -- the difference is lower than all the
9 others; 80 cents from the five, 46 cents and
10 even 12 cents, and I would probably average my
11 bill between 37 and 44, and this is two -- this
12 is my history. The average bill is probably --
13 I think the average bill is running between 31
14 and 44 cents, so you're actually saying they're
15 going to do 12 cents difference to 58 cents on
16 the bill monthly?
17 MR. ROTHSTEIN: Yeah. Yes, exactly. I
18 think you're talking about in here, if your --
19 if your customers' averages are in the 7 to 8
20 CCF range, that's the kind of bill impacts that
21 they would be seeing.
22 MS. BROWN: Why is it -- I mean, why is
23 that rate so low in that area?
24 MR. ROTHSTEIN: Well, it is -- what we
25 are able to do here is we're able to correct for

1 the fundamental flaw in the existing rate
2 structure and still achieve a reasonable amount
3 of revenue generation in the 5 to 6 percent
4 range. You saw that overall the revenue
5 generation that we're talking about here is in
6 the 6 percent range, 5.9 percent. We're able to
7 do that, and as I said, very intentionally
8 insulate the -- if you will, the majority of
9 customers from significant bill impacts by
10 accomplishing the revenue generation that we
11 need in the -- by correction of the -- of the
12 fixed charge. So if we -- if we did not have
13 the tiered structure and we applied that base
14 charge, then you would have much more
15 significant dollar amount and percentage bill
16 increases in these -- in that area, in the 3 to
17 10 CCF users. But the combination of the base
18 charge, which I think is very important to have,
19 and the tiering enables us to accomplish several
20 things at the same time. We're able to
21 accomplish a correction of the flaw of the very,
22 very low volume users and correct for the free
23 rider program. We're able to generate a
24 reasonable amount of additional revenue through
25 that correction, but if you were to leave it at

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1 that and then charge an increased volumetric
2 rate, it would mean very substantial bill
3 impacts for the majority of users. And so the
4 tiered rate structure enables us to accomplish
5 all those things at the same time and avoid that
6 problem.
7 MR. CARRINGTON: Commissioner Knight.
8 MR. KNIGHT: We're measuring this in
9 cubic feet.
10 MR. ROTHSTEIN: Hundreds of cubic feet.
11 MR. KNIGHT: Hundreds of cubic feet.
12 One CCF equals 748 --
13 MR. ROTHSTEIN: Forty-eight -- 48.5
14 gallons.
15 MR. CARRINGTON: Any other questions?
16 (No response.)
17 MR. CARRINGTON: Thank you, sir.
18 MR. ROTHSTEIN: Thank you.
19 MR. CARRINGTON: Dr. Rauterkus.
20 No wonder I couldn't see you.
21 You were hiding behind him.
22 DR. RAUTERKUS: Good morning. I just
23 wanted to follow up on a few things that Eric
24 said, but, first, I -- I want to say that I,
25 too, agree that this structural change in the

1 rates is necessary and appropriate. More
2 importantly, what I wanted to convey is that
3 it's -- I don't believe that this proposed
4 change would be burdensome to the consumers. In
5 fact, because as we're seeing here, the average,
6 actually as Commissioner Brown just mentioned,
7 is the average rate payer will not -- will see
8 less than a one dollar increase in their bill
9 each month, that it would not be burdensome to
10 the consumers. Still, what we're also seeing is
11 that all ratepayers or all consumers will see an
12 increase in their bills, and so because we're
13 seeing an increase across the board, even though
14 in some cases and even in the case of the
15 average user that increase would be very small,
16 it's important to note that there is an increase
17 across the board, and given that, it would be
18 reasonable to offer or provide -- develop a
19 program that would allow ratepayers or consumers
20 that are struggling to pay their bills with some
21 means to control their usage and potentially
22 control their bill. And so this would be, in
23 effect, a water conservation program that would
24 allow consumers to identify their usage, their
25 usage patterns and possibly see some

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1 opportunities to control that usage.
2 The way that I would recommend
3 approaching such a program is to think of this
4 in phases, and, in fact, what Eric has provided
5 to us today would effectively constitute the
6 first phase, actually, of a conservation
7 program, because in that first phase you're --
8 you're really getting at the low-hanging fruit,
9 so-to-speak, and -- and so the key element here
10 is the change in the structural design of the --
11 of the sewer rates. And when we think about
12 that relative to water conservation and -- an
13 increasing block rate structure as has been
14 proposed actually works out to be a water
15 conservation strategy, because when consumers
16 are charged based on their usage and they see an
17 increased usage rate for the higher usage
18 levels, as we see here in the 8, 9, 10 and above
19 categories, that will encourage consumers to
20 think about their usage patterns and try to
21 control that if they have concerns about their
22 bill.
23 Now, if that -- such a program
24 is successful, obviously that's going to have an
25 impact on revenues, but as Eric also mentioned,

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1 that's also accounted for in the model, and so
2 because, as he mentioned earlier, these -- he's
3 accounted for price elasticity. What that means
4 is that we're already expecting that as rates
5 increase, as we've -- we're discussing here,
6 that consumption will decrease, and so that may
7 -- that may just be an automatic effect as
8 people are trying to find ways to handle this
9 themselves or also because of the success of the
10 water conservation program as I'm recommending
11 to you. So I talked about phases. So that
12 first phase is here again with the increasing
13 block rate structure.
14 Second, as Eric also mentioned,
15 is communication. So public education and
16 information about what exactly are we talking
17 about. What is an increasing block rate
18 structure? That will take some effort to get
19 the word out to explain what it means, to
20 explain why Eric and I believe that this is good
21 and right and appropriate, and so a program to
22 inform and educate consumers could include
23 several components such as, first, just changing
24 the billing -- the wording on the billing
25 statements in terms of explaining the usage. We

1 just talked about -- Commissioner Knight talked
2 about the number of gallons in a CCF. Well,
3 currently the bills talk about usage in terms of
4 1, 2, 3 CCFs. My suspicion is that the average
5 consumer has no clue what that means, and so I
6 believe that the first step in education is
7 going from this kind of mysterious usage
8 explanation as we see now to something that
9 would make more sense and something that we --
10 we know and we're used to every day like
11 gallons, or even liters, if that makes more
12 sense to people; but in this country gallons
13 tends to make sense to people. And also when
14 we're -- when I'm thinking about cutting back my
15 usage or what flushing my toilet or taking a
16 long shower means to my sewer bill, then perhaps
17 talking about the number of gallons that I'm
18 using or putting into the sewer system each day
19 versus CCFs per month might be more useful. So,
20 again, that's one example of what this education
21 program would mean.
22 So obviously the first step is
23 talking about the structure, what it is,
24 defining these terms and then getting that
25 information into the hands of consumers, so a

1 website is an obvious first step. But what we
2 see in our -- in our hands each month is our
3 bill, and so getting that information on the
4 bill in a -- in language that makes sense to
5 people would be a very important element of this
6 program, and then there are other things that
7 can be done like inserts that say, okay, now
8 that you know why your charge is what it is,
9 here are ways that you can cut back on your
10 usage; and so there is a number of things that
11 can be done there. So that's the first part.
12 The second part of a
13 conservation program would be a little bit more
14 customer-specific. So things -- elements such
15 as water audits. So a specific audit of a
16 particular consumer's usage, meaning -- and this
17 is just on outline, so we would have to talk
18 about exactly how this would be done, but a
19 water use audit would -- would mean going to a
20 particular residence and looking at meter
21 accuracy, use of water in the kitchen, in the
22 bathrooms and so on, and maybe even in the
23 irrigation system, the -- the sprinklers and so
24 on and looking to see how efficiently the water
25 is being used. So in this second set of program

1 elements, what I'm talking about is water use
2 efficiency.
3 So in the first phase, if we're
4 talking about education, getting to a rate
5 structure that makes sense for cost recovery and
6 fairness across all consumer levels, then the
7 second phase is about water use efficiency,
8 making sure that we're using water efficiently
9 and that -- that everyone understands what it
10 takes to do that. So one example would be the
11 water use audits.
12 The second is commonly done in
13 a -- in a water conservation program would be
14 retrofits, and so that can be done in a number
15 of ways. There are certain retrofits like
16 low-flow shower heads, faucet aerators, toilet
17 flappers and all kinds of things that are very
18 simple fixes that will make the use of water
19 more efficient in residences. And then another
20 example is landscaping, you know, looking at
21 leaky sprinklers and -- and so forth. But
22 that's that second phase, and so those -- that
23 phase is very, very important because when we're
24 talking about water use efficiency, it's
25 important from the standpoint of folks who might

1 have trouble paying their bill when rates go up
2 because oftentimes the folks who have trouble
3 paying their bill aren't using water
4 efficiently, and that is often because they are
5 living in older structures that have older
6 fixtures that are inefficient, and so some
7 municipalities when they implement a water
8 conservation program like I've recommended will
9 specifically target older buildings, older
10 structures, and in Birmingham it's -- we have a
11 significant stock of older -- older housing, and
12 unfortunately those -- those older housing --
13 older buildings are inhabited by lower income
14 folks, and so by targeting that you -- you
15 effectively reach out to those who might have
16 trouble with the rate increase.
17 Now, looking at what has been
18 done in other areas, I -- I just looked at a
19 sampling of case studies of, kind of, success
20 stories of water conservation programs,
21 particularly in the South, and I looked at
22 Tampa, Florida; Cary, North Carolina; and
23 Houston, Texas. One element that all three
24 water conservation programs had was this
25 increasing block rate structure with their

1 pricing. And, second, again, the two pretty
2 much go hand-in-hand, is education. Explaining
3 to people what that is, how their bills are
4 determined, and so that can be -- again can be
5 achieved in a number of ways. But in all three
6 cases that was kind of the starting point, and
7 then after that the municipalities did different
8 things with retrofits and water use audits and
9 -- and so on, but those were the key common
10 elements.
11 MR. CARRINGTON: Any questions for
12 Dr. Rauterkus?
13 MR. KNIGHT: My rough calculation of
14 6.2 CCF, which I think has been the average
15 user, that's about 4300 gallons a month --
16 DR. RAUTERKUS: Per month.
17 MR. KNIGHT: -- which would be about
18 140 gallons a day.
19 DR. RAUTERKUS: Correct.
20 MR. KNIGHT: So that's just -- we do
21 need the interpretation of that CCF because I --
22 I didn't really understand that 100 cubic feet
23 at first, so.
24 DR. RAUTERKUS: And when -- when you
25 add that type of information to an education

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1 program, then what you can add to it is the
2 number of gallons that are typically consumed
3 when flushing a toilet, taking a shower and so
4 on, and so it puts it in tangible, meaningful
5 terms for consumers.
6 MR. CARRINGTON: Dr. Rauterkus,
7 Mr. Rothstein mentioned the importance of
8 communication. You focused on education, but
9 you used the word "education" as well. I think
10 the Commission -- even though this is the first
11 I heard of your presentation, you are consistent
12 with our direction as well. We felt the need to
13 hire some experts in the area of communication
14 to assist us through the Chapter 9 process and
15 our plan of adjustment, which obviously the
16 sewer revenue proposal was critical to that, and
17 so we've actually -- I just -- Rick Journey, who
18 was with Fox, and Brandon -- Brandon, I forget
19 your last name. I'm sorry.
20 MR. WILSON: Wilson.
21 MR. CARRINGTON: Wilson. Have been
22 retained to assist us, not only with this but
23 through Chapter 9 in communication to the public
24 about what's going on. So we're already -- we
25 appreciate your reenforcement of an action we

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1 have already taken. Thank you.
2 DR. RAUTERKUS: Thank you.
3 MR. CARRINGTON: Mr. Denard, you're up.
4 Five minutes would be appropriate.
5 MR. DENARD: Well, I think we've
6 covered already what I was going to talk about,
7 and that's the septage. I'm --
8 MR. KNIGHT: And even though there's a
9 lot of other lawyers in here, you don't really
10 have to raise your hand, but --
11 MR. DENARD: So I can -- I can explain
12 that again or not.
13 MR. CARRINGTON: Was that what you were
14 going to --
15 MR. DENARD: That was it.
16 MR. CARRINGTON: -- propose is what --
17 MR. DENARD: Any other questions?
18 MR. CARRINGTON: Any questions for
19 Mr. Denard?
20 (No response.)
21 MR. CARRINGTON: Thank you, Mr. --
22 MR. DENARD: And I will make a
23 secondary point, and that is the grease rate.
24 We feel it's very important. Grease is a
25 significant problem currently at our treatment

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1 plants. We think there -- there needs to be
2 some price signal. We'll continue to evaluate
3 how that impacts our plants and whether the 75
4 is appropriate or not, so.
5 MR. CARRINGTON: Well, I think at a
6 prior meeting you had mentioned we had some
7 restaurants outside of our area actually taking
8 their grease to Florida?
9 MR. DENARD: There is currently a
10 limited market for where out-of-county grease
11 goes, and so some are going to Atlanta, some are
12 going to the panhandle of Florida or south
13 Alabama. We would like to look at market rates
14 and whether we can -- if the pricing is
15 appropriate, we could expand the market for what
16 we take in terms of grease and septage. So
17 we'll continue to pursue that and do a business
18 case on that as well.
19 MR. KNIGHT: Let me ask a question and
20 follow up with that. If our local restaurant
21 here dumps grease into our system and then we've
22 got a restaurant, say, in Cullman or St. Clair
23 or Shelby and they want to come and dump their
24 grease in our system, can we charge those
25 out-of-county dumpers more than we charge the

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1 local?
2 MR. DENARD: Grease is treated a little
3 bit differently in the ordinance. We currently
4 limit the grease that we receive from only
5 in-county grease --
6 MR. KNIGHT: Okay.
7 MR. DENARD: -- because of the current
8 problems we have in treating it. We want to
9 explore the possibility of increasing the
10 facilities and being able to -- to better
11 capture and treat that, and once we have that in
12 place, we would like to do a market survey and
13 open that up to a reasonable -- on a more
14 reasonable basis. But right now we do not
15 accept out-of-county grease waste.
16 MR. CARRINGTON: It would not tax our
17 system if we increase --
18 MR. KLEE: Commissioner Knight, the
19 answer to your question is no. The rates have
20 to be nondiscriminatory. That means that the
21 rates you charge for dumping grease to an
22 out-of-county person would have to be the same
23 as you charge to a Jefferson County person.
24 MR. KNIGHT: Would that also apply in
25 septage?

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1 MR. KLEE: Yes.
2 MR. CARRINGTON: I like that, although
3 do we have the capacity to expand? Is that a
4 possible revenue source for us if we were able
5 to expand?
6 MR. DENARD: We would have to expend --
7 expend about $5 million to put in some
8 additional facilities to treat the grease waste.
9 We think we can make a business case --
10 MR. CARRINGTON: Business case.
11 MR. DENARD: -- for that, but capital
12 dollars are very limited now, and that's not
13 something we are currently pursuing without some
14 revenue stream to offset that.
15 MR. CARRINGTON: Thank you,
16 Mr. Denard. Any other questions for
17 Mr. Denard?
18 MR. KNIGHT: Do we have a program to
19 educate people not to put grease down their --
20 MR. DENARD: Absolutely. The --
21 MR. KNIGHT: -- pipes? Because that's
22 a problem, isn't it?
23 MR. DENARD: The primary -- the primary
24 focus is on the food service facilities because
25 that's where we get most of the grease, but

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1 we've got a residential educational program. We
2 go to apartment complexes. We do some -- where
3 we see particular grease problems. We do door
4 hangers. So there is a public education portion
5 of it. We may at some point do some mailers,
6 some bill flyers or something like that, but --
7 do some more education.
8 MS. BROWN: Is that Birmingham, someone
9 using jugs to put the --
10 MR. DENARD: We have about 20 grease --
11 MS. BROWN: Recycle the grease?
12 MR. DENARD: Yes. We have about -- we
13 have about 20 stations that we have out in the
14 -- the areas where residents can take their
15 grease and swap -- get a clean jug, fill it up,
16 bring the dirty jug and we'll -- we take that
17 grease and recycle it as well. So we have a
18 program that does that as well.
19 MR. CARRINGTON: Thank you, Mr. Denard.
20 Unless there is further
21 questions or discussion from members of the
22 Commission, we have a 37-page resolution in
23 front of us that will have two ordinances
24 attached. All we're taking action on today is
25 to move this resolution to the agenda for the

1 November 6 reconvened meeting of the County
2 Commission. Do we have such a motion?
3 MR. STEPHENS: So moved.
4 MS. BROWN: Second.
5 MR. CARRINGTON: We have a motion and a
6 second. All in favor, please say "aye."
7 MR. KNIGHT: Aye.
8 MS. BROWN: Aye.
9 MR. CARRINGTON: Aye.
10 MR. STEPHENS: Aye.
11 MR. CARRINGTON: Any opposed say "nay."
12 MR. BOWMAN: I abstain.
13 MR. CARRINGTON: There -- the motion to
14 move it to the agenda is passed 4-0-1. There
15 being no further business, this Administrative
16 Services Committee meeting is recessed.
17 Thank you.
18 (The proceeding concluded at
19 12:05 p.m.)
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1 C E R T I F I C A T E

2

3 STATE OF ALABAMA:

4 COUNTY OF JEFFERSON:

5

6 I hereby certify that the above

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11 I further certify that I am

12 neither kin nor of counsel to any of the parties

13 nor in any way financially interested in the

14 outcome of this case.

15 I further certify that I am

16 duly licensed by the Alabama Board of Court

17 Reporting as a Licensed Court Reporter as

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20 /s/ Stone Arledge

21 STONE ARLEDGE

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New Sewer Rates

Base Charge*
$10.00

Residential Sewer Volume Rates Per Hundred Cubic Feet (CCF)

0 – 3 CCF
$4.50
4 – 6 CCF
$7.00
7 CCF & Above
$8.00

Non-Residential Sewer Volume Rates

All CCF
$7.60

* Base charges graduated by meter size

2013 Jefferson County Sewer Rate Restructuring

Frequently Asked Questions

Why is the County making these changes?
The County is making these changes so that sewer rates will more fairly charge customers for services provided based on the advice of its rate expert and following months of study and public hearings. Rates for sewer service have not been increased since 2008.

How are the rate changes related to the County's bankruptcy?
The filing of the County's bankruptcy blocked the power of John Young, the sewer receiver, to raise rates. However, the bankruptcy judge could allow the sewer receiver to take control of rates again if the Commission does not take necessary actions like this rate restructuring. The new rates provide a fair, reasonable rate structure so the Commission can move toward an exit from bankruptcy.

Is there a non-user fee or clean water charge?
No. There is no non-user fee or clean water charge.

How will my sewer bill change?
The box on the following page shows how much bills will increase for various levels of water use. For most residential customers, those increases will be less than $2 / month.

Will the 15 percent credit for residential water use still apply?
Yes. The credit still applies for residential users.

What is the new "Base Charge" and why is it being charged?
The Base Charge applies to all active sewer accounts. The amount of the Base Charge depends on the size of a customer's water meter (most residential customers have a 5/8" water meter, and will therefore have a $10 Base Charge). The Base Charge recovers a portion of the fixed costs of providing sewer service.

Do other utilities impose base charges?
Yes. Water, sewer and other utilities commonly impose base charges – largely because they are a fair way to recover costs for serving customers. For example, Birmingham Water Works Board's rates feature a $17.34 base charge for most residential users.

How do the rate blocks for residential users work?
Customers are charged for the volume of sewage they discharge to the sewer system. Usually, this volume is measured in units of one hundred cubic feet (CCF). Every residential user will pay $4.50 per CCF for the first three CCF of sewage discharged to the sewer system. If a residential customer discharges more than three CCF, the fourth, fifth, and sixth CCFs will each cost $7 per CCF. If a residential customer discharges seven CCFs or more, each additional CCF will cost $8 per CCF.

Monthly Effect on Residential Sewer Bills

Use	Monthly Effect
0 CCF	$8.00
1	$7.54
2	$5.07
3	$2.61
4	$1.14
5	$0.80
6	$0.46
7	$0.12
8	$0.58
9	$1.09
10	$1.60
11	$2.11
12	$2.62
13	$3.13
14	$3.64
15	$4.15
16	$4.66
17	$5.17
18	$5.68
19	$6.19
20	$6.70

How did you determine the amount of usage for each block?
The first block of water use is charged at the lowest rate because it is meant to cover basic human health and sanitary needs for a family of 4 persons. The second block includes the average level of discharge for residential customers in Jefferson County. The third block includes above-average use and recognizes the corresponding burdens on the system.

Why are industrial waste and septic hauler waste rates being increased?
Unlike charges for general sewer service, these charges have not been increased since 1991. Also, septage rates do not currently recover the costs to provide service. The increases correct these long-standing inequities and enable the County to more nearly recover its costs.

Will there be more sewer rate changes?
Yes. Water and sewer rates around the country have been increasing at roughly double the rate of inflation for years and are expected to continue to do so. Jefferson County's sewer system is not insulated from the factors that are driving these rate increases, including generally rising costs, stricter regulatory requirements, and the need to renew and rehabilitate aging infrastructure. The new rate structure is expected to generate a 5.9% overall revenue increase; however, the exact effect of this structure on revenues is not yet certain. These factors, along with any changes that may be appropriate in connection with the County's exit from bankruptcy, are likely to require future rate adjustments. Jefferson County is committed to working diligently to continue to impose fair, reasonable, and lawful rates for all the system's customers.

7 East-Patient Care Technician-1
7 East-Flex Staff Nurse-1
7 East-7on/7off LPN-3
7 South-Staff Nurse-1
High Risk Nursery-LPN-1
Emergency Clinic-Unit Clerk-1
Radiology-Chief Radiological Technologist-1

APPROVED AT BESSEMER COMMISSION MEETING
DATE 2-12-97
MINUTE BOOK 6 PAGE 256-60

Motion was made by Commissioner White seconded by Commissioner Collins that the Request for Certification be approved. Voting "Aye" White, Collins, Germany, McNair and Buckelew

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BE IT RESOLVED BY THE JEFFERSON COUNTY COMMISSION, THAT THE FOLLOWING REPORT FILED BY THE PURCHASED DEPARTMENT BE, AND THE SAME HEREBY IS APPROVED. RECOMMENDATIONS FOR CONTRACTS ARE BASED UPON THE LOWEST BIDS MEETING SPECIFICATIONS.

RECOMMENDED THAT THE ENCUMBRANCE JOURNAL BE APPROVED (THIS REGISTER IS ON FILE IN THE PURCHASING DEPARTMENT)

1. Cooper Green Hospital-Central Supply from Futuretech, Inc., Birmingham, Al add to contract for miscellaneous Central Supply items for the period 1/1/96 to 9/30/97 $15,000.00, total. Ref. Bid No. 212B-5

2. Cooper Green Hospital-Surgery from Alcon Surgical, Ft. Worth, Tx, add to contract for surgical packs and supplies for the period 10/1/96 to 9/30/97 $20,000.00, total. Ref. Bid No. 324-6.

3. Cooper Green Hospital Surgery from Alcon Surgical, Ft. Worth, Tx. add to contract for intraocular lens implants for the period 10/1/96 to 9/30/97 $25,000.00, total. Ref. Bid No. No. 321-6.

4. General Services-Communications from Allcom/Birmingham Communications, Birmingham, Al power plants for Communication System 6 each $62,490.00, total. Ref. Bid No. 85-7.

5. Personnel Board from Head's Inc., Birmingham, Al modular furniture $30,522.78, total. Ref. Bid No. 38-5.

6. Revenue Department from Danka, Inc. Birmingham, Al 1 each copier $6,150.00, total. State
State of Alabama Contract T-185 #4000900

7. Sheriff Dept. Birmingham from Ben Atkinson Motors, Inc., Tallassee, Al 1 each Ford Expedition Utility Vehicle $28,399.00, total. Ref. State of Alabama T-191.

Motion was made by Commissioner Collins seconded by Commissioner Germany that the Purchasing Minutes be approved. Voting "Aye" Collins, Germany, McNair, White and Buckelew

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Feb-12-1997-Bess-1

BE IT RESOLVED AND ORDERED by the JEFFERSON COUNTY COMMISSION (herein called the "Commission") as follows:

Section 1. The Commission has ascertained and found and does hereby determine and declare as follows:

In order to comply with the requirements of the Consent Decree entered in those civil actions consolidated in the United States District Court, Northern District of Alabama, and styled *United States of America v. Jefferson County, Alabama, et al.*, Civil Action

No. 94-G-2947-S, and *R. Allen Kipp, Jr., et al. and Cahaba River Society, Inc. v. Jefferson County, Alabama, et al.*, Civil Action No. 93-G-2492-S, and to otherwise provide for the expansion and improvement of the County's sanitary sewer system (herein called the "System"), the County will be required to borrow substantial sums of money over a period of eight to ten years.

a. To accomplish the objectives described in the preceding subsection (a) in a manner that will minimize, as much as practicable, the long-term financial burden on the users of the System, the Commission is authorizing, contemporaneously with the adoption of this resolution and order, (i) the execution and delivery of a Trust Indenture dated as of February 1, 1997 (herein called the "Indenture"), between the County and AmSouth Bank of Alabama, as trustee (herein called the "Trustee"), and (ii) the issuance pursuant to the Indenture of two series of sewer revenue warrants (herein called the "Series 1997 Warrants"), the proceeds of which will be used to refund all outstanding sewer revenue obligations of the County.

b. In the Indenture, the County will make certain covenants (herein collectively called the "Rate Covenant") to establish and maintain rates and charges for the services provided by the System at levels that will produce, on an annual basis, net revenues in an amount at least equal to certain specified percentages of the annual debt service requirements for all obligations at the time issued and outstanding under the Indenture.

c. Continual compliance with the Rate Covenant by the County is necessary to avoid the undesirable consequences of a default by the County under the Indenture and to ensure that the County retains the ability to make future borrowings pursuant to the Indenture on the most favorable terms reasonably available to the County.

d. Periodic increases in the rates and charges for the services provided by the System will be required in order for the County to remain in compliance with the Rate Covenant.

e. The Commission has heretofore established the rates and charges for the services provided by the System through the adoption on May 11, 1982, of the County's Sewer Use/Pretreatment Ordinance and through numerous amendments to said ordinance (said ordinance, as heretofore amended, being herein called the "Rate Ordinance").

f. In order to achieve continual compliance with the Rate Covenant, it is desirable, appropriate and in the best interests of the users of the System for the Commission to amend the Rate Ordinance in order to establish procedures that will result in periodic automatic increases in the rates and charges for the services provided by the System based on certain objectively-established factors.

Section 1. As used in this resolution and order, the following terms and phrases have the following meanings:

"Net Revenues Available for Debt Service" means, for any period, the difference between (A) the sum of (i) the total amount of System Revenues accrued during such period, and (ii) the amount of interest earned during such period on moneys held in those of the funds and accounts established under the Indenture other than the Rate Stabilization Fund (to the extent that such interest is not taken into account pursuant to the preceding clause (i)) and (B) the total amount of Operating Expenses incurred during such period (determined in accordance with generally accepted accounting principles).

"Operating Expenses" means, for the applicable period or periods, (a) the reasonable and necessary expenses of efficiently and economically administering and operating the System, including, without limitation, the costs of all items of labor, materials, supplies, equipment (other than equipment chargeable to fixed capital account), premiums on insurance policies and fidelity bonds maintained with respect to the System (including casualty, liability and any other types of insurance), fees for engineers, attorneys and accountants (except where such fees are chargeable to fixed capital account) and all other items, except depreciation,

amortization, interest and payments made pursuant to Qualified Swaps (as defined in the Indenture), that by generally accepted accounting principles are properly chargeable to expenses of administration and operation and are not characterized as extraordinary items, (b) the expenses of maintaining the System in good repair and in good operating condition, but not including items that by generally accepted accounting principles are properly chargeable to fixed capital account, and (c) the fees and charges of the Trustee. Payments or transfers of Sewer Revenues into the General Fund of the County shall constitute payments of Operating Expenses if and to the extent that the services or benefits for which such payments or transfers are made are such that payments to a Person other than the County for such services or benefits would constitute payments of Operating Expenses.

"Prior Years' Surplus" means, with respect to any particular fiscal year, the aggregate amount on deposit in the Rate Stabilization Fund and the Depreciation Fund established under the Indenture on the first day of such fiscal year.

"Sewer Tax" means that certain ad valorem tax levied by the County on an annual basis for the benefit of the System pursuant to Act No. 716 of the 1900-01 Session of the General Assembly of Alabama.

"System Revenues" means the revenues derived from the Sewer Tax and all revenues, receipts, income and other moneys hereafter received by or on behalf of the County from whatever source derived from the operation of the System, including, without limitation, the fees, deposits and charges paid by users of the System and interest earnings on the funds and accounts established under the Indenture (other than the Rate Stabilization Fund) and any other funds held by the County or its agents that are attributable to or traceable from moneys derived from the operation of the System, but excluding, however, any federal or state grants to the County in respect of the System and any income derived from such grants.

"User Charge" means any fee or charge imposed upon and collected from users of the System the amount of which is calculated, in the case of any particular user, solely by reference to the volume of water consumed by such user.

Section 2. The Commission hereby directs the County's Director of Finance to make the following determinations within 60 days after the end of each fiscal year of the County:

a. whether or not the Net Revenues Available for Debt Service and Prior Years' Surplus for the then most recently completed fiscal year were sufficient to result in compliance with the Rate Covenant for such fiscal year (the "Historical Evaluation");

b. whether or not the combination of the Net Revenues Available for Debt Service for the then most recently completed fiscal year (subject to adjustment in the manner hereinafter described) and the Prior Years' Surplus as of the beginning of the then current fiscal year would be sufficient to result in compliance with the Rate Covenant for the then current fiscal year (the "Immediate Prospective Evaluation"); and

c. whether or not the Net Revenues Available for Debt Service for the then most recently completed fiscal year (subject to adjustment in the manner hereinafter described) were equal to or greater than 100% of Maximum Annual Debt Service (as defined in the Indenture) (the "Extended Prospective Evaluation").

For purposes of the Immediate Prospective Evaluation and the Extended Prospective Evaluation, the Net Revenues Available for Debt Service for the preceding fiscal year shall be adjusted to give effect to any increase in the rates and charges for services furnished by the System that was put into effect after the beginning of such fiscal year.

If at the beginning of any fiscal year the County's Director of Finance makes the aforesaid determinations and concludes that the County has failed to satisfy the Historical Evaluation, the Immediate Prospective Evaluation or the Extended Prospective Evaluation, then a written notice (herein called a "Rate Adjustment Notice") setting forth such determinations and the conclusions

reached shall be delivered, no later than December 10 in such fiscal year, to the Trustee and to each member of the Commission.

In any instance in which the County's Director of Finance concludes that the County has failed to satisfy the Historical Evaluation or the Immediate Prospective Evaluation (or both), the County's Director of Finance shall calculate, and shall set forth in the related Rate Adjustment Notice, the minimum amount of hypothetical revenues from User Charges for the then most recently completed fiscal year which, if such hypothetical revenues had actually been received and if all other items of revenue and expense for such fiscal year had remained constant, would have resulted in the County's satisfying both the Historical Evaluation and the Immediate Prospective Evaluation (such calculated amount being herein called the "Immediate Revenue Target Amount").

In any instance in which the County's Director of Finance concludes that the County has failed to satisfy the Extended Prospective Evaluation, the County's Director of Finance shall calculate, and shall set forth in the related Rate Adjustment Notice, the minimum amount of hypothetical revenues from User Charges for the then most recently completed fiscal year which, if such hypothetical revenues had actually been received and if all other items of revenue and expense for such fiscal year had remained constant, would have resulted in the County's satisfying the Extended Prospective Evaluation (such calculated amount being herein called the "Future Revenue Target Amount").

Section 3. The Commission hereby amends the Rate Ordinance to provide that, in each instance in which a Rate Adjustment Notice is prepared and delivered pursuant to the provisions of the preceding Section 3, each rate for the User Charges shall be increased automatically, in the manner hereinafter described, with such increased rate or rates to be effective as of January 1 in the fiscal year in which such notice is prepared and delivered. As used in the formulas hereinafter set forth, the term "Existing Rate" means the rate for User Charges in effect at the beginning of the fiscal year in which a Rate Adjustment Notice is prepared and delivered, except that, in any instance in which the Director of Finance determines that the County has failed to satisfy the Historical Evaluation but has satisfied the Immediate Prospective Evaluation, the term "Existing Rate" means, for purposes of the formula set forth in the succeeding subparagraph (a), the weighted average rate for User Charges in effect during the then most recently completed Fiscal Year. Except as otherwise provided herein, the new User Charge rate resulting from an automatic rate increase becoming effective pursuant to this section shall be determined in accordance with the following subparagraphs:

a. In any instance in which a Rate Adjustment Notice is prepared and delivered because of a failure to satisfy the Historical Evaluation or the Immediate Prospective Evaluation (or both), the new User Charge rate shall be determined by the following formula:

New Rate = Existing Rate + 4/3[(Existing Rate x a/b) - Existing Rate]

where b = the aggregate amount of revenues received from User Charges during the then most recently completed Fiscal Year, and

a = the Revenue Target Amount.

b. In any instance in which a Rate Adjustment Notice is prepared and delivered because of a failure to satisfy the Extended Prospective Evaluation, the new User Charge rate shall be determined by the following formula:

$$\text{New Rate} = \text{Existing Rate} \times \frac{b + 35\%(a-b)}{b}$$

where b = the aggregate amount of revenues received from User Charges during the then most recently completed fiscal year, and

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a = the Future Revenue Target Amount

c. In any instance in which a Rate Adjustment Notice is prepared and delivered because of both a failure to satisfy the Historical Evaluation or the Immediate Prospective Evaluation (or both) and a failure to satisfy the Extended Prospective Evaluation, the new User Charge rate shall be the greater of the two rates determined by application of the formulas in the preceding subparagraphs (a) and (b).

Notwithstanding the foregoing provisions of this section, in any instance in which the "New Rate" resulting from application of the foregoing formula is less than the applicable rate for User Charges that is then in effect, no rate adjustment shall be effected by the operation of the provisions of this section.

Section 4. In no event shall the provisions of this resolution and order limit or restrict the power and authority of the Commission (a) to modify the rates for User Charges in addition to the automatic rate increases resulting from application of the provisions of Section 4, or (b) to modify the rates for any fees or charges other than User Charges for services provided by the System.

Section 5. The various provisions of this resolution and order are hereby declared to be severable. In the event any provision hereof shall be held invalid by a court of competent jurisdiction, such invalidity shall not affect any other provision of this resolution and order.

Section 6. This resolution and order shall take effect upon its passage and adoption by the Commission.

Motion was made by Commissioner McNair seconded by Commissioner Collins that the above resolution be approved. Voting "Aye" McNair, White, Germany, and Buckelew. Voting "Nay" Collins

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Feb-12-1997-Bcs6-2

BE IT RESOLVED AND ORDERED by the Jefferson County Commission (herein called the "Commission") as follows:

Section 1 **Findings.** The Commission has ascertained and found and does hereby determine and declare as follows:

(a) Under and pursuant to the provisions of that certain Trust Indenture dated as of November 15, 1988, as heretofore supplemented and amended (herein called the "1988 Indenture"), between the County and AmSouth Bank of Alabama, as trustee, the County has heretofore issued its Sewer Revenue Warrants, Series 1992 (herein called the "Series 1992 Warrants"), which warrants are now outstanding in the aggregate principal amount of $50,780,000 and its Sewer Revenue Warrants, Series 1993 (herein called the "Series 1993 Warrants"), which warrants are now outstanding in the aggregate principal amount of $41,800,000.

(b) Under and pursuant to the provisions of that certain Trust Indenture dated as of August 1, 1995 (herein called the "1995-A Indenture"), between the County and AmSouth Bank of Alabama, as trustee, the County has heretofore issued its Sewer Revenue Warrants, Series 1995-A (herein called the "Series 1995-A Warrants"), which warrants are now outstanding in the aggregate principal amount of $130,000,000.

(c) Under and pursuant to the provisions of a resolution and order adopted by the Commission on August 25, 1992 (herein called the "SRF Warrant Resolution"), the County has heretofore issued to the Alabama Water Pollution Control Authority a Sewer Revenue Warrant dated August 31, 1992 (herein called the "SRF Warrant"), which warrant is now outstanding in the principal amount of $54,835,000.

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JEFFERSON COUNTY

ENVIRONMENTAL SERVICES DEPARTMENT

GREASE CONTROL PROGRAM

ORDINANCE

adopted
OCTOBER 3, 2006

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JEFFERSON COUNTY
ENVIRONMENTAL SERVICES DEPARTMENT
GREASE CONTROL PROGRAM

GREASE CONTROL PROGRAM ORDINANCE
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JEFFERSON COUNTY
ENVIRONMENTAL SERVICES DEPARTMENT

GREASE CONTROL PROGRAM

INTRODUCTION

The Jefferson County Environmental Services Department (JCESD), under the direction of the Jefferson County Commission (JCC), has the responsibility to collect, transport, and treat sanitary sewage in Jefferson County

JCESD maintains over 2700 miles of sewer lines throughout Jefferson County. When sewer lines are blocked, wastewater backs up until it overflows from manholes or building plumbing fixtures into storm drains, directly into creeks, or into buildings. These overflows are termed Sanitary Sewer Overflows [SSOs].

SSOs violate the Clean Water Act and render Jefferson County subject to fines and other legal actions.

Investigations by JCESD have shown that grease is the leading cause of dry weather SSOs in Jefferson County and many of these dry weather SSOs have been determined to be caused by Fats, Oils and Grease [FOG] from Food Service Facilities (FSFs). When grease is disposed of directly into the sewer system it cools, solidifies, and combines with other foreign materials in sewer lines and restricts flow through the pipe. In some cases the grease completely blocks a sewer line.

In 2005 approximately 60% of SSOs were found to be caused by grease from FSFs. In response JCESD is implementing this Grease Control Program (GCP) for Food Service Facilities.

The Grease Control Program is one of many steps taken by JCESD to eliminate SSOs and comply with the Clean Water Act and the Consent Decree. The Clean Water Act requires the elimination of ALL SSOs in the Jefferson County sanitary sewer system. The purpose of this Program is to decrease the amount of FOG discharged into the sanitary sewer system and thereby reduce the number of dry weather SSOs.

The Grease Control Program will be evaluated periodically and will be modified as necessary to maximize the effectiveness of the Grease Control Program.

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DEFINITIONS

The following words, terms, and phrases shall have the meaning ascribed to them in this section, except where context clearly indicates a different meaning.

Alternative grease removal technology means an automatically operated mechanical device specifically designed to remove grease from the waste stream.

Applicant means the Owner or Agent of any food service facility submitting an application for a Food Service Facility Grease Control Permit to the Jefferson County Environmental Services Department.

Best Management Practices means any program, process, operating method, or measure that controls, prevents, removes, or reduces discharge of FOG.

Commission means the Jefferson County Commission.

Department means the Jefferson County Environmental Services Department.

Director means the Director of the Jefferson County Environmental Services Department, his designee, or the person the Director may designate to carry out the functions set forth in the Grease Control Program.

FOG means fats, oils, and grease.

Food means any raw, cooked, or processed edible substance, ice, beverage, or ingredient intended for human consumption.

Food service facility means any facility engaged in the preparation of food for human consumption and/or serving of meals, lunches, short orders, sandwiches, frozen desserts, or other edible products. The term includes restaurants, coffee shops, cafeterias, short order cafes, luncheonettes, taverns, lunchrooms, places which manufacture retail sandwiches, soda fountains, institutional cafeterias, catering establishments, and similar facilities by whatever named called.

Fryer oil means oil that is used and/or reused in fryers for the preparation of foods such as fried chicken and french fries. Discharge of fryer oil into the County sewer system is prohibited.

Grease means fats, oils, and grease used for the purpose of preparing food, or resulting from food preparation and includes all elements of FOG. The terms grease and FOG may be used interchangeably.

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Grease Interceptor means an indoor device located in a food service facility or under a sink designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity. Grease interceptors shall be equipped with a device to control the rate of flow so that the device's rated flow is not exceeded.

Grease Trap means an outdoot device located underground and outside of a food service facility designed to collect, contain and remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity.

Maintenance means the complete removal of all grease interceptor or trap contents including floatable materials, wastewater, sludges, and solids. The interceptor or trap must be thoroughly cleaned to remove grease and scum from inner walls and baffles. Interceptor or trap must be filled with cold potable water to complete maintenance operation.

Mobile food unit means a self propelled or vehicle mounted unit intended to be used as a food service facility. Mobile food units are not regulated by this program.

Permit means written authorization to discharge to the County's wastewater collection system granted by the Department to the Owner of a Food Service Facility or his/her authorized agent. Permit is also referred to as a Food Service Facility Grease Control Program Permit (FSFGCPP). Permits are non-transferable. A new Owner or operator of an existing FSF shall apply for and obtain a new Permit.

Sampling Vault means the last point downstream of a grease trap that is specially constructed to allow inspection and sampling prior to discharge of effluent into the County's sanitary sewer collection system.

Temporary food service facility means a food service facility that has no permanent sewer connection and operates at the same location for a period of time not to exceed 14 days in conjunction with a single event, such as a fair, carnival, circus, exhibition, or similar temporary gathering. Temporary food service facilities are not regulated by this program.

User means the owner or operator of a food service facility that discharges wastewater into the County sanitary sewer.

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Permit Requirements for Food Service Facilities

Each Food Service Facility shall obtain a Grease Control Program Permit to enable the inspection and monitoring of facilities which have the potential to discharge FOG to the County sewer system. New installations must show proof that sewer impact fees have been paid.

There will be an annual permit fee as set forth below:

Number of Grease Interceptors or Traps	Annual Fee
1 – 5	$200.00
6 – 10	$400.00
11 – 15	$600.00
16 – 20	$800.00

For each 5 additional grease interceptors or traps in excess of 20, the annual fee shall be increased by $200.00.

A re-inspection fee of $300.00 per grease interceptor or trap shall be charged each time a facility fails a grease interceptor or trap inspection and must be re-inspected.

The Director will evaluate these fees annually and adjust fees administratively based on the cost to the County for the operation of the Grease Control Program.

All information contained in the Food Service Facility Grease Control Program Permit Application shall be certified by the applicant as true and complete prior to the County's review for approval. The application shall include all grease interceptors and traps located at a facility which are operated by the same Owner or Manager. Each grease interceptor and trap shall be identified individually on the application by a unique identifier. The Director shall review completed applications for approval within 30 days of receipt.

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Permit conditions may include, but are not limited to, the following:

- Permit duration,
- Permit fee,
- Permit is non-transferable,
- Frequency of inspections,
- Maintenance requirements,
- Compliance schedule,
- Requirements for retaining records,
- Statement of permission for the Director and other duly authorized employees of the County to enter upon the User's property without prior notification for the purpose of inspection, observation, photography, records examination and copying, measurement, sampling or testing, and
- Other conditions deemed by the Director necessary to ensure compliance with this program and other applicable ordinances, laws and regulations.

If a permit application is denied:

- The Applicant will be advised in writing of the specific cause for the denial within sixty (60) calendar days of the decision to deny the permit application.
- The Applicant who is denied a permit under this program shall have the right to appeal such denial to the Director. The appeal shall be filed within fifteen (15) business days of receipt of the notice of denial.

Exemption from Grease Control Program Permit Requirement

Food Service Facilities which do not discharge FOG to the sanitary sewer system may file an application for exemption from permit requirement. Food Service Facilities which are granted an exemption from the permit requirement are subject to inspection by ESD inspectors and are required to notify the County if changes are made which generate grease waste. The application for exemption requires a $200 fee to cover the cost of initial inspection and processing the request. This is a one time fee based on the exemption being granted. The exemption will be in effect until there is a change in food service operations.

Requirements for Best Management Practices [BMPs]

All Food Service Facilities shall develop and implement Best Management Practices [BMPs] to minimize the discharge of FOG to the sanitary sewer system.

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Requirements for Grease Control Devices

All new Food Service Facilities that discharge FOG into the sanitary sewer system shall install, operate, and maintain properly sized grease interceptors or traps as indicated below. Existing FSFs may be required to modify existing grease control devices, or to install new or additional grease control devices, and operate, and maintain properly sized grease interceptors or traps as indicated below.

Grease Traps [Outdoor]

- Grease traps shall have a capacity of not less than two (2) 1,000 gallon traps installed in series for a total capacity of 2,000 gallons;
- The Director may approve the use of a single 1,000 gallon trap where site conditions prevent the installation of two 1,000 gallon traps in series; and
- The Director may approve the use of a single 1,000 gallon trap for food service facilities having a seating capacity of 100 persons or less.

Grease Interceptors [Indoor]

- The Director may approve the installation of one or more indoor grease interceptors provided the food service facility is not equipped with a dishwasher and/or a food waste grinder.
- Grease interceptors shall be sized in accordance with Plumbing and Drainage Institute Standard PDI-G101, Testing and Rating Procedure for Grease Interceptor with Appendix of Sizing and Installation Data.
- Discharge of the following materials to an indoor grease interceptor is prohibited:
  - Wastewater with a temperature higher than 140 degrees Fahrenheit,
  - Wastewater discharged from a dishwasher,
  - Acidic or caustic cleaners, and/or
  - Wastewater discharged from a food waste grinder (disposal).

Alternative Grease Removal Technologies

The Director may approve the use of alternative grease removal technologies, e.g. skimmers, for controlling FOG discharge into the sanitary sewer system in lieu of a standard grease interceptor or trap if JCESD determines the device employing such technology to be at least as effective as a standard grease interceptor or trap. The approved device shall be wired directly to a circuit breaker and shall contain audio and visual alarms that can only be reset by opening and servicing the device.

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The User shall provide the following information to allow JCESD to evaluate the proposed technology:

- A proposal that is specific to the Food Service Facility submitting the information. The Director will not consider a general or generic proposal.
- Complete information regarding the performance of the technology and proof of effectiveness in removing FOG from the waste stream.
- Specifications for maintenance service and frequency.
- The manufacturer's installation and operation manuals.

If the alternative technology is approved, the User shall install and maintain the device in accordance with the manufacturer's installation and operation specifications. Maintenance shall be performed at least as often as stipulated in the permit, even if the manufacturer specifies less frequent maintenance.

Grease Control Device Sampling Vault

All Food Service Facilities may be required to provide a sampling vault to allow JCESD to collect random samples as deemed necessary.

Maintenance Requirements for Grease Interceptors and Traps

The 25 Percent Rule requires that the depth of oil and grease (floating and settled) in a trap shall be less than 25 percent of the total operating depth of the trap. The operating depth of a trap is determined by measuring the internal depth from the outlet water elevation to the bottom of the trap.

Maintenance of outdoor grease traps shall be performed as frequently as necessary to protect the sanitary sewer system against the accumulation of FOG. Maintenance shall be performed as determined by inspection and application of the 25 Percent Rule, or at intervals specified in the Permit, whichever is more frequent. Maintenance shall be performed at least every 90 days.

Maintenance of indoor grease interceptors shall be performed as frequently as necessary to protect the sanitary sewer system against the accumulation of FOG. Maintenance shall be performed as required by inspection and/or sampling or at intervals specified in the Permit, whichever is more frequent. Maintenance shall be performed at least every 14 days.

Food Service Facilities which operate infrequently or only for special events may request a modification to the maintenance schedule specified above. The Director may authorize a maintenance frequency related to the operation of the Food Service Facility. The User shall submit a request for a modified

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maintenance schedule which includes all details of operation for the Director for review.

The User shall be responsible for the proper removal and disposal of the grease interceptor or trap waste. All waste removed from each grease interceptor or trap must be disposed of properly at an appropriate facility designed to receive grease interceptor or trap waste. If grease interceptor or trap waste is disposed of in Jefferson County the disposal facility is located at the Village Creek Wastewater Treatment Plant. No grease interceptor or trap waste shall be discharged to the County's sewer system except at the Village WWTP facility. Grease interceptor and trap waste shall not be disposed of at the Airport Septage Dump Site.

Maintenance shall include the complete removal of all grease interceptor or trap contents including floatable materials, wastewater, sludges, and solids. Grease and scum shall be removed from interior walls and baffles. Interceptor or trap must be filled with cold potable water after cleaning to complete maintenance operations. Grease interceptors and traps shall be operated in accordance with the manufacturer's specifications and/or in accordance with generally accepted engineering standards and practices.

The User shall be responsible for retaining records of the maintenance of grease interceptors and traps including manifests, permits, permit applications, correspondence, sampling data and any other documentation that may be requested by JCESD. These records shall include the dates of service, volume of waste removed, waste hauler, and disposal site of waste. These records shall be kept on-site at the location of the grease trap for a period of three (3) years and are subject to review without prior notification.

Compliance with Grease Control Program

Compliance with the Grease Control Program shall be evaluated based on the following criteria:

- Implementation of Best Management Practices [BMPs],
- Grease control device(s) kept in compliance with 25% Rule,
- Regularly scheduled maintenance of grease control device(s),
- Documentation of maintenance and proper disposal, and
- Employee education and training

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Prohibitions

The following activities are specifically prohibited:

1. Introduction of bacteriological, chemical, or enzymatic elements into the grease interceptor or trap or any element of the plumbing system is specifically prohibited.
2. Disposal of fryer oil to the County sanitary sewer system is specifically prohibited.

Grease Haulers

All grease haulers shall be licensed by the Jefferson County Department of Health and hold a Septic Tank Haulers Permit. Grease trap waste shall not be combined with septic tank waste and transported to the disposal site as part of a mixed load. Discharge of mixed septage and waste grease loads are prohibited at both the Airport Dump Site and the Village Creek WWTP facility.

Grease manifests shall accompany all grease interceptor and trap waste to the disposal site. The grease hauler shall complete the middle portion of the grease disposal manifest and deliver the manifest to the disposal site for completion and return to the FSF.

Grease trap maintenance shall include the following minimum services:

- ✓ Complete removal of all grease interceptor or trap contents rather than skimming the top grease layer,
- ✓ Thorough cleaning of the grease interceptor or trap to remove grease and scum from inner walls and baffles,
- ✓ Filling cleaned interceptor or trap with cold potable water, and
- ✓ Completion of middle section of the grease disposal manifest form and delivery to waste disposal site along with the grease interceptor or trap waste.

Top skimming, decanting or back flushing of the grease interceptor or trap or its contents for the purpose of reducing the volume of waste to be hauled is prohibited. Vehicles capable of separating water from grease shall not discharge separated water into the grease trap or into the wastewater collection system.

Only grease collected in Jefferson County may be discharged at the Village WWTP. Grease collected outside of Jefferson County shall not be discharged at the Village WWTP or at any other location in the Jefferson County sanitary sewer system. Grease disposal manifests shall accompany all grease interceptor and trap waste and be delivered to the grease disposal site.

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Inspections by Jefferson County Environmental Services Department [JCESD]

Grease interceptors and traps shall be inspected a minimum of once a year. Frequency of inspection may be increased in order to protect the sanitary sewer collection system against the accumulation of grease.

If a grease interceptor or trap fails an inspection, the inspector shall notify the User that maintenance must be performed on the grease interceptor or trap within seven (7) calendar days. The inspector will return within 14 calendar days to re-inspect the grease interceptor or trap. The fee for the re-inspection shall be $300.00 per grease interceptor or trap. If the grease interceptor or trap is found to be in compliance, the inspector shall schedule the next inspection within 90 calendar days if it is an outside grease trap or within 14 days if it is an indoor grease interceptor.

If the grease interceptor or trap fails the re-inspection, a notice of non-compliance shall be issued and maintenance must be performed on the grease interceptor or trap immediately. A second re-inspection will be scheduled within 24 hours. The User shall be assessed a fee of $300.00 for each re-inspection.

Any grease interceptor or trap which receives three (3) notices of non-compliance within a 24 month period shall be deemed a nuisance by the Director and shall require corrective actions as determined by the Director to cure the nuisance, including, if deemed necessary, termination of all discharges to the Jefferson county sanitary sewer system

Any alternative technology grease removal device found in non-compliance shall be deemed a nuisance by the Director. If the user is unable to cure the nuisance, installation of a conventional passive grease trap shall be required.

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Action Plan to Address Undersized Grease Interceptor and/or Trap

If JCESD determines that an existing grease interceptor or trap has less capacity than is required, the User shall submit a detailed Action Plan within 30 days of being so notified. The Action Plan shall clearly identify the method which will be used to address the undersized grease interceptor or trap. Options to address the undersized grease interceptor or trap include the following:

Option 1 – Install a grease interceptor or trap of proper size and install a sampling vault. The Action Plan shall identify the location and size of the existing grease interceptor or trap, the location and size of the proposed grease interceptor or trap and sampling vault, and the date by which the proposed grease interceptor or trap will be in service. JCESD will review the proposed location, size and installation schedule and either approve the Action Plan or request modifications and re-submittal of the Action Plan.

Option 2 – Install one or more additional grease interceptors or traps in series with the existing interceptor or trap to provide the required capacity and install a sampling vault. The Action Plan shall identify the location and size of the existing grease interceptor or trap, the location and size of the proposed grease interceptor or trap and the sampling vault, and the date by which the proposed grease interceptor or trap and sampling vault will be in service. JCESD will review the proposed location, size and installation schedule and either approve the Action Plan or request modifications and re-submittal of the Action Plan.

Option 3 – Install a grease removal device employing alternative technology. The device can be a stand alone device or may be used in combination with a conventional passive grease interceptor or trap. The Action Plan shall include manufacturer's information on the specific device to be installed and a drawing showing the Food Service Facility plumbing, the proposed location of the device, and the location of the sampling vault.

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Final

Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Prepared for

Bradley Arant Boult Cummings LLP

November 2012

CH2MHILL®

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Acronyms and Abbreviations

˚C	degrees Celsius
BOD_5	5-day biochemical oxygen demand
$cBOD_5$	carbonaceous 5-day biochemical oxygen demand
CPES	CH2M HILL Parametric Cost Estimating System
ENR BCI	Engineering News Record Building Cost Index
lb/day	pound(s) per day
MG	million gallon(s)
mg/L	milligram(s) per liter
mgd	million gallon(s) per day
MLSS	mixed liquor suspended solids
mm	millimeter(s)
NPDES	National Pollutant Discharge Elimination System
RAS	return-activated sludge
SRT	solids retention time
TP	total phosphorous
TSS	total suspended solids
UV	ultraviolet light
VIP	Virginia Initiative Plant
VSS	volatile suspended solids
WAS	waste-activated sludge
WWTP	wastewater treatment plant

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SECTION 1

Background

Jefferson County Environmental Services Department oversees the operation of nine wastewater treatment plants (WWTP) in and around Birmingham, Alabama. CH2M HILL was contracted to develop new conceptual-level greenfield designs and opinions of cost for each of the treatment facilities. To that end, process models were created for each facility, which then defined treatment processes including the type of technology employed and size, number, and capacity of individual treatment facilities. The new facility designs are based on historical influent characteristics (carbonaceous 5-day biochemical oxygen demand [$cBOD_5$], total suspended solids [TSS]) from each plant, with treatment performance based on current National Pollutant Discharge Elimination System (NPDES) permit conditions for discharge flow and loadings.

For comparative purposes, a second opinion of cost was developed for the Village Creek, Valley Creek, and Five Mile Creek WWTPs. The only difference in assumptions for the second opinion of cost for these three plants was the flow. The second opinion of cost was based on the current 20-year projected flow, not the existing permitted flow, for each of the three plants.

The designs developed for each plant are intended to represent what is considered, in CH2M HILL's opinion, to be a reasonable and representative design for the particular capacity and permitted performance of each plant and not a direct copy of what is currently in operation. For that reason, the designs described in this document, for the various plants, may differ significantly from what is currently in use.

The Sections below provide details of the assumptions made for each opinion of cost. Table 1-1 and 1-2 present a summary of the opinions of cost and shows an opinion of adjusted cost. The adjusted cost correlates the 2012 dollars on which the opinions are based, to the year dollars when the respective plant was placed in service. The Engineering News Record Building Cost Index (ENR BCI) was used for the dollar year adjustment.

TABLE 1-1
Summary of Opinions of Cost: Comparing Costs in 2012 Dollars and 2012 Dollars Adjusted to Date Plant Placed in Service for WWTPs Sized for 2012 Permitted Flows

	Plant	Opinion of Cost 2012 Dollars ($)	In-Service Date	ENR BCI Index for In-Service Date	ENR BCI Index for 2012	Conversion Factor	2012 Dollars Adjusted to In-Service Date ($)
1	**Valley Creek**						
	Construction Cost:	421,290,000	7/5/2005	41.84	51.59	0.811	341,670,000
	Total Capital Cost:	518,200,000					420,270,000
2	**Village Creek**						
	Construction Cost:	369,110,000	6/19/2003	36.63	51.59	0.710	262,080,000
	Total Capital Cost:	454,030,000					322,370,000
3	**Five Mile Creek**						
	Construction Cost:	146,100,000	12/1/2008	48.37	51.59	0.938	136,980,000
	Total Capital Cost:	179,720,000					168,500,000
4	**Cahaba**						
	Construction Cost:	122,240,000	4/1/2005	41.84	51.59	0.811	99,140,000
	Total Capital Cost:	150,370,000					121,950,000

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TABLE 1-1

Summary of Opinions of Cost: Comparing Costs in 2012 Dollars and 2012 Dollars Adjusted to Date Plant Placed in Service for WWTPs Sized for 2012 Permitted Flows

	Plant	Opinion of Cost 2012 Dollars ($)	In-Service Date	ENR BCI Index for In-Service Date	ENR BCI Index for 2012	Conversion Factor	2012 Dollars Adjusted to In-Service Date ($)
5	**Leeds**						
	Construction Cost:	33,780,000	4/20/1995	30.97	51.59	0.600	20,280,000
	Total Capital Cost:	41,570,000					24,950,000
6	**Turkey Creek**						
	Construction Cost:	53,120,000	3/21/2005	41.18	51.59	0.798	42,400,000
	Total Capital Cost:	65,360,000					52,170,000
7	**Trussville**						
	Construction Cost:	40,760,000	5/21/1998	33.76	51.59	0.654	26,670,000
	Total Capital Cost:	50,160,000					32,820,000
8	**Prudes Creek**						
	Construction Cost:	18,670,000	7/1/2004	39.53	51.59	0.766	14,310,000
	Total Capital Cost:	22,990,000					17,620,000
9	**Warrior**						
	Construction Cost:	10,560,000	7/31/2006	43.35	51.59	0.840	8,870,000
	Total Capital Cost:	13,010,000					10,930,000
Totals	**Construction Cost:**	**1,215,630,000**			**Totals**	**Construction Cost:**	**952,400,000**
	Total Capital Cost:	**1,495,410,000**				**Total Capital Cost:**	**1,171,580,000**

TABLE 1-2

Summary of Opinions of Cost: Comparing Costs in 2012 Dollars and 2012 Dollars Adjusted to Date Plant Placed in Service with Village, Valley, and Five Mile WWTPS Sized for Current 20-Year Projected Flows

	Plant	Opinion of Cost 2012 Dollars ($)	In-Service Date	ENR BCI Index for In-Service Date	ENR BCI Index for 2012	Conversion Factor	2012 Dollars Adjusted to In-Service Date ($)
1	**Valley Creek**						
	Construction Cost:	282,260,000	7/5/2005	41.84	51.59	0.811	228,920,000
	Total Capital Cost:	347,200,000					281,580,000
2	**Village Creek**						
	Construction Cost:	290,690,000	6/19/2003	36.63	51.59	0.710	206,400,000
	Total Capital Cost:	357,570,000					253,880,000
3	**Five Mile Creek**						
	Construction Cost:	80,410,000	12/1/2008	48.37	51.59	0.938	75,390,000

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TABLE 1-2
Summary of Opinions of Cost: Comparing Costs in 2012 Dollars and 2012 Dollars Adjusted to Date Plant Placed in Service with Village, Valley, and Five Mile WWTPS Sized for Current 20-Year Projected Flows

	Plant	Opinion of Cost 2012 Dollars ($)	In-Service Date	ENR BCI Index for In-Service Date	ENR BCI Index for 2012	Conversion Factor	2012 Dollars Adjusted to In-Service Date ($)
	Total Capital Cost:	98,930,000					92,760,000
4	**Cahaba**						
	Construction Cost:	122,240,000	4/1/2005	41.84	51.59	0.811	99,140,000
	Total Capital Cost:	150,370,000					121,950,000
5	**Leeds**						
	Construction Cost:	33,780,000	4/20/1995	30.97	51.59	0.600	20,280,000
	Total Capital Cost:	41,570,000					24,950,000
6	**Turkey Creek**						
	Construction Cost:	53,120,000	3/21/2005	41.18	51.59	0.798	42,400,000
	Total Capital Cost:	65,360,000					52,170,000
7	**Trussville**						
	Construction Cost:	40,760,000	5/21/1998	33.76	51.59	0.654	26,670,000
	Total Capital Cost:	50,160,000					32,820,000
8	**Prudes Creek**						
	Construction Cost:	18,670,000	7/1/2004	39.53	51.59	0.766	14,310,000
	Total Capital Cost:	22,990,000					17,620,000
9	**Warrior**						
	Construction Cost:	10,560,000	7/31/2006	43.35	51.59	0.840	8,870,000
	Total Capital Cost:	13,010,000					10,930,000
Totals	**Construction Cost:**	**932,490,000**			**Totals**	**Construction Cost:**	**722,380,000**
	Total Capital Cost:	**1,147,160,000**				**Total Capital Cost:**	**888,660,000**

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SECTION 2

Valley Creek WWTP Modeling and Cost Opinion

2.1 Valley Creek WWTP

The Valley Creek WWTP NPDES #AL0023655 is a two-stage activated sludge facility with effluent filtration and ultraviolet light (UV) disinfection, which serves the southern part of Jefferson County. The plant is currently permitted to treat 85 million gallons per day (mgd) with a peak design flow of 170 mgd. The plant also includes 110 million gallons (MG) of wet weather storage. The solids handling trains include gravity thickeners, anaerobic digestion, belt filter press dewatering, and lime addition to make sure that the biosolids meet Class B requirements. The biosolids are then land applied at two county-leased reclamation sites.

2.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Valley Creek WWTP* (Jefferson County, 2011a) and *Valley Creek Wastewater Treatment Plant Energy and Process Optimization Study* (Hazen & Sawyer, 2012a). The values used in the process modeling are summarized in Table 2-1.

TABLE 2-1
Valley Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	85 mgd
Peak Design Flow	170 mgd
Design $cBOD_5$	106,400 lb/day at 150 mg/L
Design TSS	163,145 lb/day at 230 mg/L
Design TKN	18,550 lb/day at 26 mg/L
Design NH_3-N	12,000 lb/day at 17 mg/L
Design TP	2,840 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. Volatile suspended solids (VSS):total suspended solids (TSS) ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14 degrees Celsius (˚C), which is an assumed value based on similar locations.

Notes:

lb/day = pounds per day
mg/L = milligrams per liter
NH_3-N = ammonia-nitrogen
TKN = total Kjeldahl nitrogen
TP = total phosphorous

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2.3 Effluent Permit Values

The current NPDES permit for the Valley Creek WWTP includes the values presented in Table 2-2, which define the level of treatment necessary for the new design. The average design flow is listed as 85 mgd and the average design 5-day biochemical oxygen demand (BOD_5) loading as 141,780 lb/day.

TABLE 2-2
Valley Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	8.0	24.0	1.0	3.0
December-April	8.0	24.0	1.0	4.0

2.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Circular primary clarifiers with primary scum and sludge pumping
- Activated sludge secondary treatment, configured as a modified Ludzack-Ettinger process
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- Return-activated sludge (RAS)/waste-activated sludge (WAS) pumping system
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity primary sludge thickeners
- Centrifuge WAS thickeners and polymer system
- Internal recycle collection and pumping
- Anaerobic digestion and mixing system
- Effluent pump station
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 2-1).

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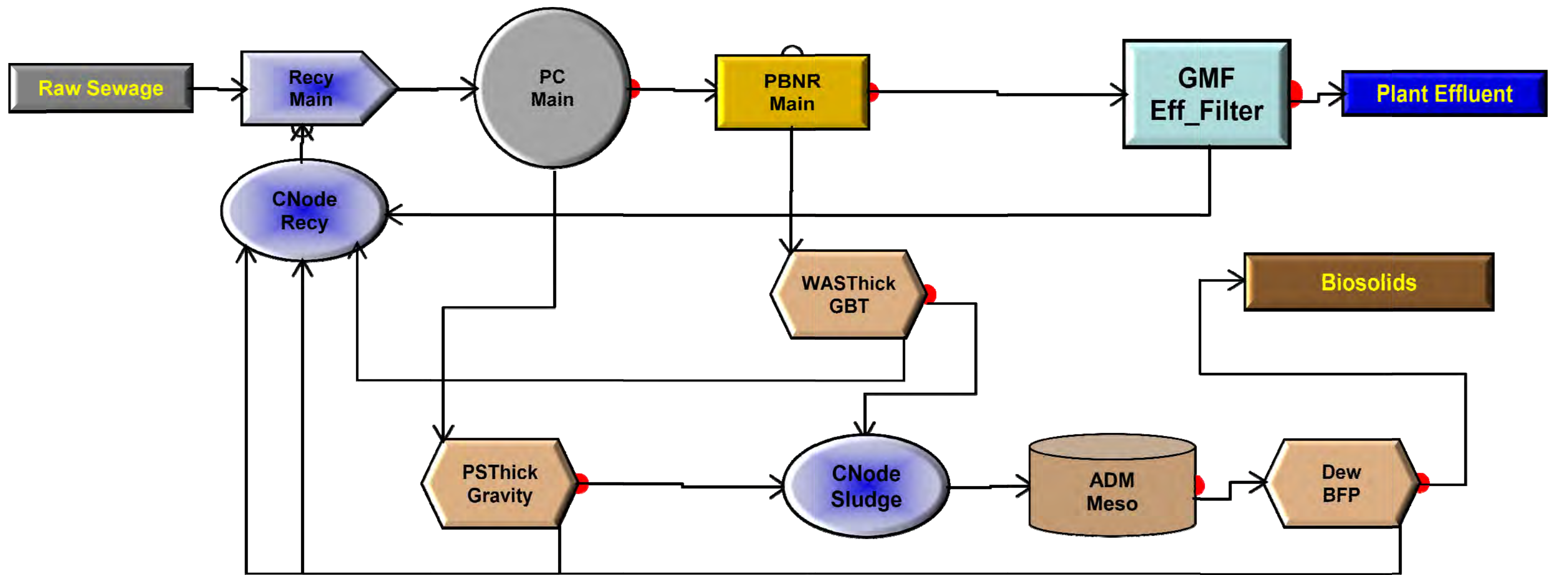
FIGURE 2-1
Valley Creek WWTP Process Flow Diagram



Notes:

ADM Meso	=	mesophillic anaerobic digestion
CNode	=	combination node
Dew BFP	=	belt filter press dewatering
Eff	=	effluent
GBT	=	gravity belt thickener
GMF	=	granular media filtration
PBNR	=	biological nutrient removal process module
PC	=	primary clarifier
PS Thick	=	primary sludge thickening
Recy	=	recycle

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A design data summary of the proposed major treatment facilities is provided below (see Table 2-3).

TABLE 2-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	11
Capacity, each	60 mgd
Capacity, total	660 mgd
Flow Equalization	
Number	10
Volume, each	11 MG
Volume, total	110 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	5
Capacity, each	42.5 mgd
Capacity, total	212.5 mgd
Grit Removal	
Type	Vortex
Number	4
Capacity, each	42.5 mgd
Capacity, total	170 mgd
Primary Clarifiers	
Type	Circular
Number	8
Diameter, each	130 ft
Surface area, each	13,100 sf
Surface area, total	105,000 sf
Bioreactors (activated sludge process)	
Type	Plug flow
Number	10
Design SRT	13 days at 14˚C
Design MLSS	3,300 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Mixed liquor recycle rate	250% of design flow rate
Volume, each	3.0 MG
Volume, total	30 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	5
Capacity, each	23,000 scfm
Capacity, total	115,000 scfm

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TABLE 2-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Secondary Clarifiers	
Type	Circular
Number	10
Diameter, each	150 ft
Surface area, each	18,000 sf
Surface area, total	180,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	30
Area, each	536 sf
Area, total	16,000 sf
Effluent UV	
Type	Low pressure, high output
Channels	11
Banks per Channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm^2
Primary Sludge Thickening	
Type	Gravity
Number	5
Diameter, each	45 ft
Surface area, each	1,590 sf
Surface area, total	7,950 sf
WAS Thickening	
Type	Centrifugal
Number	7
Capacity, each	380 gpm
Capacity, total	2,660 gpm
Sludge Stabilization	
Type	Anaerobic digestion
Number	8
Mixing system	Mechanical pumping/jet mixing
Design SRT	20 days
Estimated Volatile Solids Reduction	43%
Volume, each	0.88 MG
Volume, total	7.0 MG
Digested Sludge Dewatering	
Type	Centrifugal
Number	4
Capacity, each	300 gpm
Capacity, total	1,200 gpm

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TABLE 2-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Emergency Generators	
Number	5
Capacity, each	3,100 kW
Capacity, total	15,500 kW

Notes:
% = percent
ft = feet
gpm = gallons per minute
kW = kilowatts
mJ/cm^2 = milli-Joules per square centimeter
MLSS = mixed-liquor suspended solids
mm = millimeters
scfm = standard cubic feet per minute
sf = square feet
SRT = sludge retention time

2.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (85 mgd) and under winter conditions, is summarized below (see Table 2-4).

TABLE 2-4
Valley Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.7
TSS	3.6
TKN	1.4
NH_3-N	0.1
TP	2.4

2.6 Cost Opinion

Cost estimates were prepared using the CH2M HILL Parametric Cost Estimating System (CPES). CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 2-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such

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as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix A at the end of this document.

TABLE 2-5
Valley Creek WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	421,290,000
Capital Cost	518,200,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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Village Creek WWTP Modeling and Cost Opinion

3.1 Village Creek WWTP

The Village Creek WWTP NPDES #AL0023647 consists of two plants, one single-stage and one two-stage activated sludge facility with effluent filtration and UV disinfection, which serves the central part of Jefferson County. Currently, each plant is permitted to treat 30 mgd with a combined peak flow (bypassing biological treatment) of 280 mgd. Both plants are based on activated sludge treatment and final clarifiers. Sludge handling consists of anaerobic digestion, centrifuge dewatering, and lime conditioning to make sure treatment meets Class B standards. The biosolids are then land applied at two county-leased reclamation sites.

3.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Village Creek WWTP* (Jefferson County, 2011b) and *Village Creek Wastewater Treatment Plant Waste Gas Energy Recover and Process Optimization Evaluation* (Hazen & Sawyer, 2012b). The values used in the process modeling are summarized in Table 3-1.

TABLE 3-1
Village Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	60 mgd
Peak Design Flow	160 mgd
Design $cBOD_5$	65,700 lb/day at 131 mg/L
Design TSS	89,800 lb/day at 179 mg/L
Design TKN	12,200 lb/day at 24 mg/L
Design NH_3-N	7,930 lb/day at 16 mg/L
Design TP	3,000 lb/day at 6 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

3.3 Effluent Permit Values

The current NPDES permit for the Village Creek WWTP includes the following values (see Table 3-2), which define the level of treatment necessary for the new design. The average design flow is listed as 60 mgd and the average design BOD_5 loading as 140,112 lb/day for the combined total of both plants.

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TABLE 3-2
Village Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	4.0	24.0	1.0	Report
December-April	6.0	24.0	1.0	Report

3.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Circular primary clarifiers with primary scum and sludge pumping
- Activated sludge secondary treatment, configured as a modified Ludzack-Ettinger process
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity primary sludge thickeners
- Centrifuge WAS thickeners and polymer system
- Internal recycle collection and pumping
- Anaerobic digestion and mixing system
- Effluent pump station
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 3-1).

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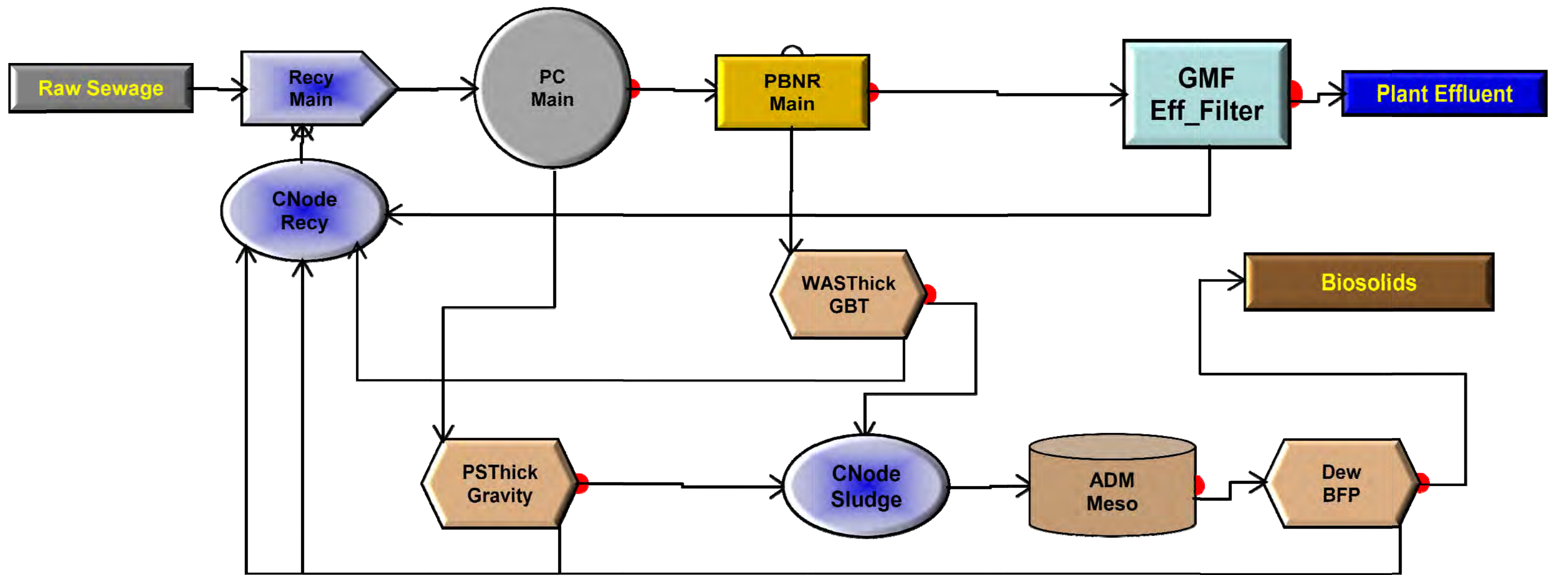
FIGURE 3-1
Village Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 3-3).

TABLE 3-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	8
Capacity, each	54.3 mgd
Capacity, total	434 mgd
Flow Equalization	
Number	20
Volume, each	4.5 MG
Volume, total	90 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	4
Capacity, each	40 mgd
Capacity, total	160 mgd
Grit Removal	
Type	Vortex
Number	4
Capacity, each	40.0 mgd
Capacity, total	160 mgd
Primary Clarifiers	
Type	Circular
Number	6
Diameter, each	126 ft
Surface area, each	12,500 sf
Surface area, total	75,000 sf
Bioreactors (activated sludge process)	
Type	Plug flow
Number	10
Design SRT	13 days at 14˚C
Design MLSS	3,200 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Mixed liquor recycle rate	250% of design flow rate
Volume, each	1.9 MG
Volume, total	19 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	5

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TABLE 3-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Capacity, each	14,500 scfm
Capacity, total	72,500 scfm
Secondary Clarifiers	
Type	Circular
Number	10
Diameter, each	135 ft
Surface area, each	14,300 sf
Surface area, total	143,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	26
Area, each	542 sf
Area, total	14,000 sf
Effluent UV	
Type	Low pressure, high output
Channels	11
Banks per channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm2
Primary Sludge Thickening	
Type	Gravity
Number	5
Diameter, each	35 ft
Surface area, each	962 sf
Surface area, total	4,810 sf
WAS Thickening	
Type	Centrifugal
Number	7
Capacity, each	380 gpm
Capacity, total	2,660 gpm
Sludge Stabilization	
Type	Anaerobic digestion
Number	8
Mixing system	Mechanical pumping/jet mixing
Design SRT	20 days
Estimated Volatile Solids Reduction	43%
Volume, each	0.53 MG
Volume, total	4.2 MG

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TABLE 3-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Digested Sludge Dewatering	
Type	Centrifugal
Number	4
Capacity, each	250 gpm
Capacity, total	1,000 gpm
Emergency Generators	
Number	6
Capacity, each	3,100 kW
Capacity, total	18,600 kW

3.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (60 mgd) and under winter conditions, is summarized below (see Table 3-4).

TABLE 3-4
Village Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.7
TSS	3.7
TKN	1.3
NH_3-N	0.1
TP	4.5

3.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 3-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix B at the end of this document.

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TABLE 3-5
Village Creek WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	$369,110,000
Capital Cost	$454,030,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 4
Five Mile Creek WWTP Modeling and Cost Opinion

4.1 Five Mile Creek WWTP

The Five Mile Creek WWTP NPDES #AL0026913 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the central part of Jefferson County. The plant is currently permitted to treat 30 mgd with a peak design flow of 56 mgd. The plant also includes 45 MG of wet weather storage. Sludge handling consists of aerobic digestion, gravity thickening, and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

4.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Five Mile Creek WWTP* (Jefferson County, 2011c) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The raw influent wastewater would generally be characterized as weak. The values used in the process modeling are summarized in Table 4-1.

TABLE 4-1
Five Mile Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	30 mgd
Peak Design Flow	56 mgd
Design $cBOD_5$	25,500 lb/day at 102 mg/L
Design TSS	28,100 lb/day at 112 mg/L
Design TKN	5,100 lb/day at 20 mg/L
Design NH_3-N	3,000 lb/day at 12 mg/L
Design TP	1,130 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

4.3 Effluent Permit Values

The current NPDES permit for the Five Mile Creek WWTP includes the following values (see Table 4-2), which define the level of treatment necessary for the new design. The average design flow is listed as 30 mgd and the average design BOD_5 loading as 50,040 lb/day.

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TABLE 4-2
Five Mile Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	6.0	30.0	2.0	4.0
December-April	7.0	30.0	2.5	5.0

4.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Filter feed pump station
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 4-1).

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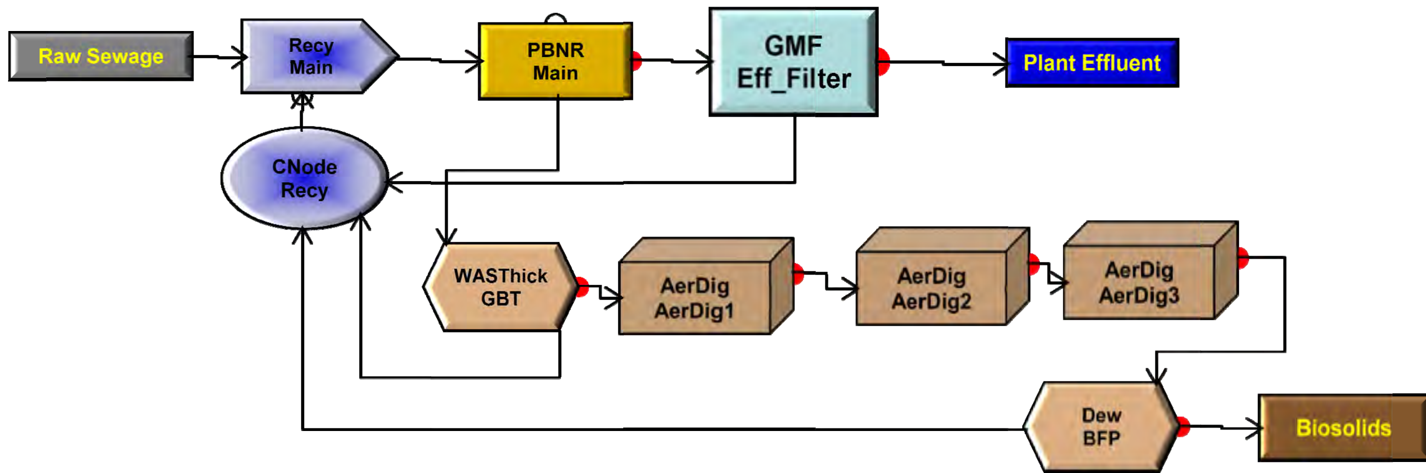
FIGURE 4-1
Five Mile Creek WWTP Process Flow Diagram



Note:

AerDig = Aerobic Digester

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A design data summary of the proposed major treatment facilities is provided below (see Table 4-3). CH2M HILL would commonly use primary clarifiers and anaerobic digestion on a plant of this size, but because of the weak wastewater, it was decided to forego primary clarification, which makes anaerobic digestion difficult, and use aerobic digestion.

TABLE 4-3
Five Mile Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	8
Capacity, each	14.0 mgd
Capacity, total	112 mgd
Flow Equalization	
Number	5
Volume, each	9 MG
Volume, total	45 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	2
Capacity, each	30 mgd
Capacity, total	60 mgd
Grit Removal	
Type	Vortex
Number	2
Capacity, each	30 mgd
Capacity, total	60 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	3
Design SRT	10 days at 14˚C
Design MLSS	3,400 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	3.0 MG
Volume, total	9.0 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	5
Capacity, each	5,840 scfm
Capacity, total	29,200 scfm
Secondary Clarifiers	
Type	Circular
Number	4
Diameter, each	144 ft

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TABLE 4-3
Five Mile Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Surface area, each	16,250 sf
Surface area, total	65,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	18
Area, each	375 sf
Area, total	6,750 sf
Effluent UV	
Type	Low pressure, high output
Channels	6
Banks per Channel	3
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	3
Size	2 m
Capacity, each	300 gpm
Capacity, total	900 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	29 days
Volume, each	0.3 MG
Volume, total	1.8 MG
Digested Sludge Dewatering	
Type	Centrifugal
Number	2
Capacity, each	225 gpm
Capacity, total	450 gpm
Emergency Generators	
Number	3
Capacity, each	2,000 kW
Capacity, total	6,000 kW

4.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (30 mgd) and under winter conditions, is summarized below (see Table 4-4).

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TABLE 4-4
Five Mile Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.4
TSS	3.1
TKN	1.0
NH_3-N	0.1
TP	2.8

4.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 4-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix C at the end of this document.

TABLE 4-5
Five Mile Creek WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	146,100,000
Capital Cost	179,720,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.

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4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 5

Cahaba River WWTP Modeling and Cost Opinion

5.1 Cahaba River WWTP

The Cahaba River WWTP NPDES #AL0023027 is a five-stage biological nutrient removal activated sludge facility with effluent filtration and UV disinfection, which serves the southeastern part of Jefferson County. The plant is currently permitted to treat 12 mgd with a peak design flow of 16 mgd. The plant also includes approximately 21 MG of wet weather storage. Sludge handling consists of aerobic digestion, thickening, and belt press dewatering. The biosolids are then land applied at two county-leased reclamation sites.

5.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Cahaba River WWTP* (Jefferson County, 2011d) and *Cahaba WWTP TMDL Improvements Project Preliminary Design Report* (CDM, 2011b). The values used in the process modeling are summarized in Table 5-1.

TABLE 5-1
Cahaba River WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	12 mgd
Peak Design Flow	16 mgd
Design $cBOD_5$	14,400 lb/day at 143 mg/L
Design TSS	16,900 lb/day at 169 mg/L
Design TKN	3,100 lb/day at 31 mg/L
Design NH_3-N	2,650 lb/day at 26 mg/L
Design TP	600 lb/day at 6 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

5.3 Effluent Permit Values

The current NPDES permit for the Cahaba River WWTP includes the following values (see Table 5-2), which define the level of treatment necessary for the new design. The average design flow is listed as 12 mgd and the average design BOD_5 loading as 19,912 lb/day for the combined total of both plants.

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TABLE 5-2
Cahaba River WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	4.0	30.0	1.0	2.0
December-April	10.0	30.0	2.0	4.0

Note:
Additionally, it was agreed that a TP limit of 0.2 mg/L would be assumed to be in place for this analysis.

5.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Circular primary clarifiers with primary scum and sludge pumping
- Activated sludge secondary treatment, configured as a Virginia Initiative Plant (VIP) process for phosphorus removal
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- Chemical feed system for metal salt addition (for phosphorus removal)
- RAS/WAS pumping system
- Filter feed pump station
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity primary sludge thickeners
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Anaerobic digestion and mixing system
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 5-1).

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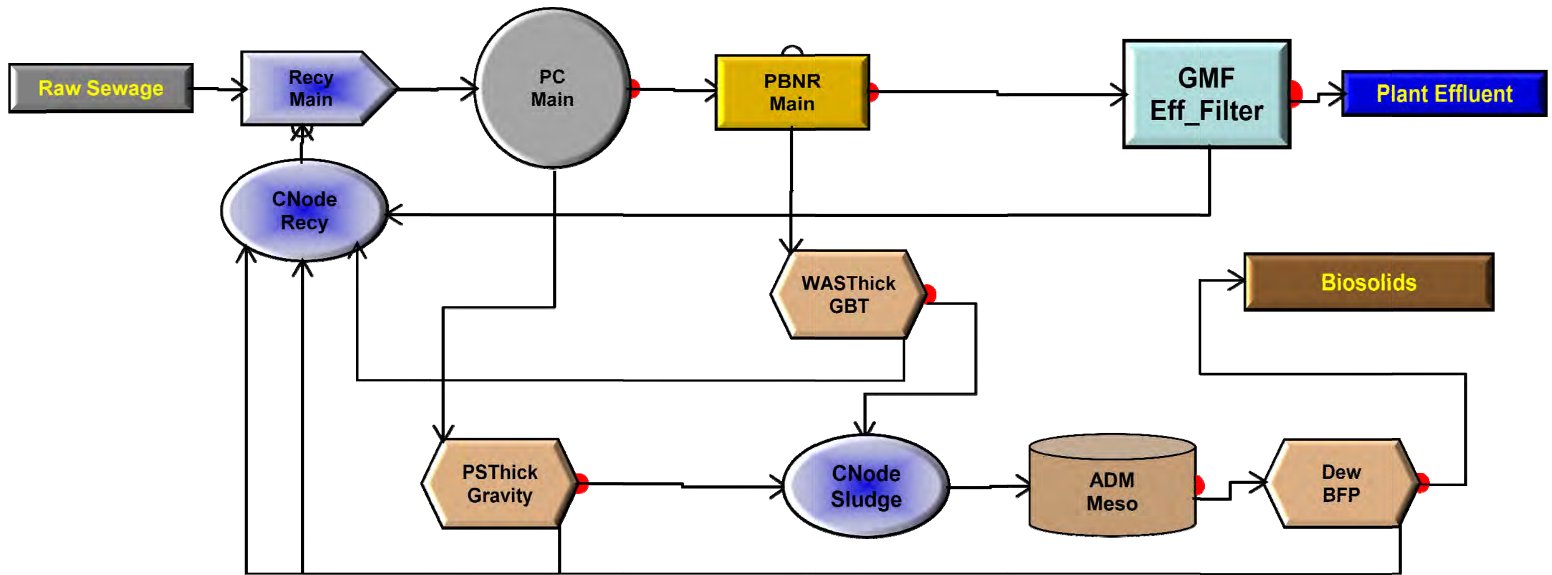
FIGURE 5-1
Cahaba River WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 5-3).

TABLE 5-3
Cahaba River WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	10
Capacity, each	12.1 mgd
Capacity, total	121 mgd
Flow Equalization	
Number	5
Volume, each	4.2 MG
Volume, total	21 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	2
Capacity, each	8.3 mgd
Capacity, total	16.6 mgd
Grit Removal	
Type	Vortex
Number	2
Capacity, each	8.3 mgd
Capacity, total	16.6 mgd
Primary Clarifiers	
Type	Circular
Number	2
Diameter, each	107 ft
Surface area, each	9,000 sf
Surface area, total	18,000 sf
Bioreactors (activated sludge process)	
Type	Plug flow, VIP process
Number	3
Design SRT	13 days at 14˚C
Design MLSS	3,100 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Mixed liquor recycle rates	150% of design flow rate, each
Volume, each	1.0 MG
Volume, total	3.0 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	5

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TABLE 5-3
Cahaba River WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Capacity, each	3,400 scfm
Capacity, total	17,000 scfm
Secondary Clarifiers	
Type	Circular
Number	2
Diameter, each	126 ft
Surface area, each	12,500 sf
Surface area, total	25,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	8
Area, each	500 sf
Area, total	4,000 sf
Effluent UV	
Type	Low pressure, high output
Channels	2
Banks per Channel	3
Design Transmittance	65%
Design Dose	40 mJ/cm2
Primary Sludge Thickening	
Type	Gravity
Number	3
Diameter, each	30 ft
Surface area, each	707 sf
Surface area, total	2,121 sf
WAS Thickening	
Type	Gravity belt
Number	2
Size	2m
Capacity, each	300 gpm
Capacity, total	600 gpm
Sludge Stabilization	
Type	Anaerobic digestion
Number	4
Mixing system	Mechanical pumping/jet mixing
Design SRT	20 days
Estimated Volatile Solids Reduction	50%
Volume, each	0.3 MG
Volume, total	1.2 MG

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TABLE 5-3
Cahaba River WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Digested Sludge Dewatering	
Type	Centrifugal
Number	2
Capacity, each	175 gpm
Capacity, total	350 gpm
Emergency Generators	
Number	1
Capacity, each	2,000 kW
Capacity, total	2,000 kW

5.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (12 mgd) and under winter conditions, is summarized below (see Table 5-4).

TABLE 5-4
Cahaba River WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.4
TSS	3.7
TKN	1.2
NH_3-N	0.1
TP	0.15

5.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 5-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix D at the end of this document.

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TABLE 5-5
Cahaba River WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	122,240,000
Capital Cost	150,370,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 6

Leeds WWTP Modeling and Cost Opinion

6.1 Leeds WWTP

The Leeds WWTP NPDES #AL0067067 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the eastern part of Jefferson County. The plant is currently designed to treat 5 mgd with a peak design flow of 10 mgd, and permitted to discharge 2 mgd. The plant also includes 5 MG of wet weather storage. Sludge handling consists of aerobic digestion and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

6.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Leeds WWTP* (Jefferson County, 2011e) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The values used in the process modeling are summarized in Table 6-1.

TABLE 6-1
Leeds WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	2.0 mgd
Peak Design Flow	4.0 mgd
Design $cBOD_5$	2,950 lb/day at 177 mg/L
Design TSS	3,230/day at 193 mg/L
Design TKN	545 lb/day at 33 mg/L
Design NH_3-N	320 lb/day at 19 mg/L
Design TP	114 lb/day at 7 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

6.3 Effluent Permit Values

The current NPDES permit for the Leeds WWTP includes the following values (see Table 6-2), which define the level of treatment necessary for the new design. The average design flow is listed as 5 mgd and the average design BOD_5 loading as 8,340 lb/day.

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TABLE 6-2
Leeds WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)	TP (mg/L)	Cu (µg/L)
May-November	4.0	24.0	2.0	4.0	1.0	42.2
December-April	10.0	24.0	3.0	8.0	1.0	42.2

6.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screen and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- Chemical feed system for phosphorus removal
- RAS/WAS pumping system
- Cloth media disk effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Belt press dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 6-1).

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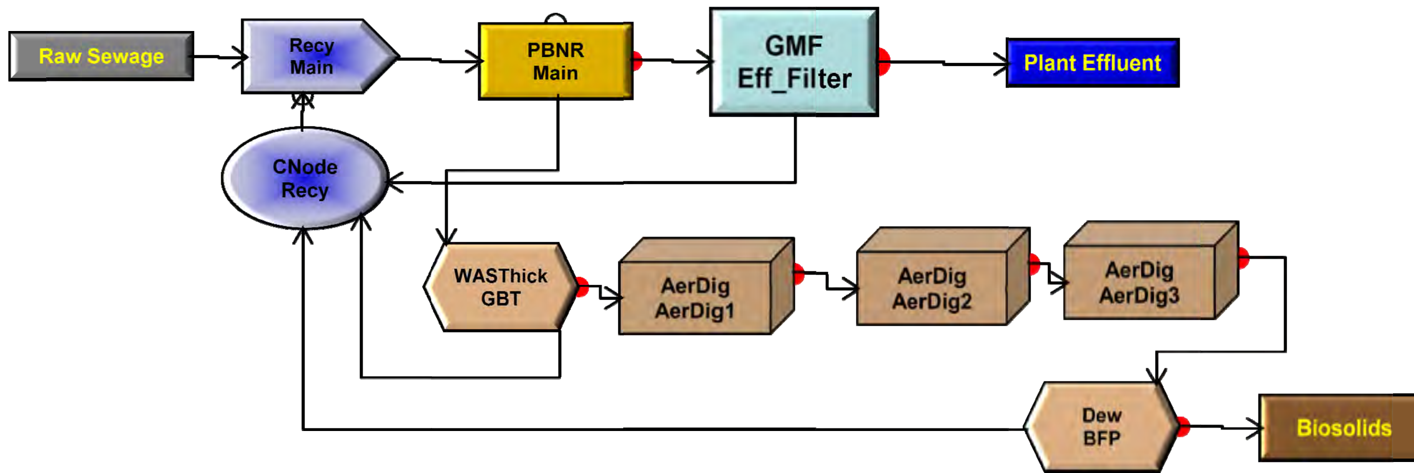
FIGURE 6-1
Leeds WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 6-3).

TABLE 6-3
Leeds WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	7
Capacity, each	2.0 mgd
Capacity, total	14 mgd
Flow Equalization	
Number	3
Volume, each	0.67 MG
Volume, total	2.0 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	1
Capacity, each	4.0 mgd
Capacity, total	4.0 mgd
Grit Removal	
Type	Vortex
Number	1
Capacity, each	4.0 mgd
Capacity, total	4.0 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	3
Design SRT	10 days at 14˚C
Design MLSS	3,300 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	0.43 MG
Volume, total	1.3 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	4
Capacity, each	694 scfm
Capacity, total	2,780 scfm
Secondary Clarifiers	
Type	Circular
Number	3
Diameter, each	47 ft
Surface area, each	1,730 sf
Surface area, total	5,200 sf

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TABLE 6-3
Leeds WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Effluent Filters	
Type	Cloth media disk
Number	3
Area, each	213 sf
Area, total	640 sf
Effluent UV	
Type	Low pressure, high output
Channels	1
Banks per Channel	2
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	1
Size	2 m
Capacity, each	175 gpm
Capacity, total	175 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	32 days
Volume, each	0.05 MG
Volume, total	0.30 MG
Digested Sludge Dewatering	
Type	Belt press
Number	1
Capacity, each	40 gpm
Capacity, total	40 gpm
Emergency Generators	
Number	1
Capacity, each	600 kW
Capacity, total	600 kW

6.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (2 mgd) and under winter conditions, is summarized below (see Table 6-4).

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TABLE 6-4
Leeds WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.1
TSS	3.2
TKN	1.4
NH_3-N	0.1
TP	0.8

Note:

Copper removal cannot be estimated by biological treatment models; therefore, if the copper permit limit is currently being met, CH2M HILL would expect it to be met under this design.

6.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 6-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix E at the end of this document.

TABLE 6-5
Leeds WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	33,780,000
Capital Cost	41,570,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent

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equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.

2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 7
Turkey Creek WWTP Modeling and Cost Opinion

7.1 Turkey Creek WWTP

The Turkey Creek WWTP NPDES #AL0022926 is a single-stage activated sludge facility with UV disinfection, which serves the northeastern part of Jefferson County. The plant is currently permitted to treat 5 mgd with a peak design flow of 25 mgd. The plant also includes 14 MG of wet weather storage. Sludge handling consists of aerobic digestion and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

7.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Turkey Creek WWTP* (Jefferson County, 2011f) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The values used in the process modeling are summarized in Table 7-1.

TABLE 7-1
Turkey Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	5.0 mgd
Peak Design Flow	25.0 mgd
Design $cBOD_5$	3,600 lb/day at 86 mg/L
Design TSS	4,320 lb/day at 103 mg/L
Design TKN	820 lb/day at 20 mg/L
Design NH_3-N	420 lb/day at 10 mg/L
Design TP	156 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

7.3 Effluent Permit Values

The current NPDES permit for the Turkey Creek WWTP includes the following values (see Table 7-2), which define the level of treatment necessary for the new design. The average design flow is listed as 5 mgd and the average design BOD_5 loading as 7,506 lb/day.

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TABLE 7-2
Turkey Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)	TP (mg/L)
April-October	20.0	24.0	2.5	Report	1.0
November-March	20.0	24.0	5.0	Report	1.0

7.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- Chemical feed system for phosphorus removal
- RAS/WAS pumping system
- Cloth media disk effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Belt press dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 7-1).

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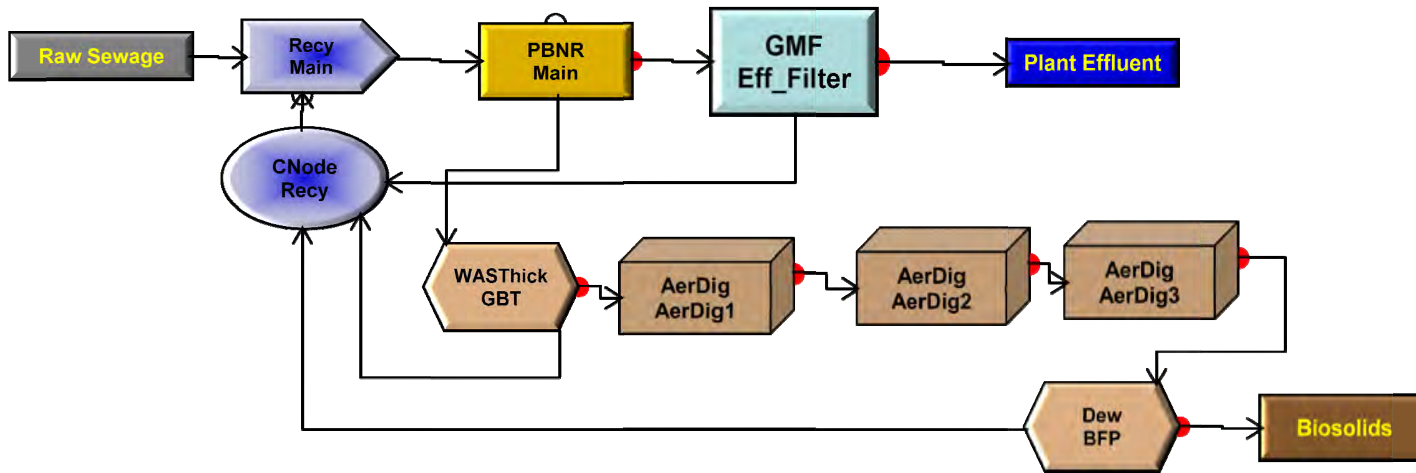
FIGURE 7-1
Turkey Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 7-3).

TABLE 7-3
Turkey Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	4
Capacity, each	8.3 mgd
Capacity, total	33 mgd
Flow Equalization	
Number	3
Volume, each	4.7 MG
Volume, total	14 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	1
Capacity, each	25 mgd
Capacity, total	25 mgd
Grit Removal	
Type	Vortex
Number	1
Capacity, each	25 mgd
Capacity, total	25 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	3
Design SRT	11 days at 14˚C
Design MLSS	3,000 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	0.6 MG
Volume, total	1.7 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	4
Capacity, each	920 scfm
Capacity, total	3,680 scfm
Secondary Clarifiers	
Type	Circular
Number	3
Diameter, each	78 ft
Surface area, each	4,800 sf
Surface area, total	14,500 sf

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TABLE 7-3
Turkey Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Effluent Filters	
Type	Cloth media disk
Number	3
Area, each	600 sf
Area, total	1,800 sf
Effluent UV	
Type	Low pressure, high output
Channels	2
Banks per channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	1
Capacity, each	150 gpm
Capacity, total	150 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	30 days
Volume, each	0.045 MG
Volume, total	0.27 MG
Digested Sludge Dewatering	
Type	Belt press
Number	1
Capacity, each	50 gpm
Capacity, total	50 gpm
Emergency Generators	
Number	1
Capacity, each	1,500 kW
Capacity, total	1,500 kW

7.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (5 mgd) and under winter conditions, is summarized below (see Table 7-4).

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TABLE 7-4
Turkey Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.3
TSS	3.2
TKN	1.5
NH_3-N	0.1
TP	0.8

7.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 7-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix F at the end of this document.

TABLE 7-5
Turkey Creek WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	53,120,000
Capital Cost	65,360,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.

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4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 8

Trussville WWTP Modeling and Cost Opinion

8.1 Trussville WWTP

The Trussville WWTP NPDES #AL0022934 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the northeastern part of Jefferson County. The plant is currently permitted to treat 4 mgd with a peak design flow of 12.8 mgd. Sludge handling consists of aerobic digestion, gravity thickening, and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

8.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Trussville WWTP* (Jefferson County, 2011g) and *Trussville WWTP Phase I & II TMDL Improvements Project Preliminary Design Report* (CDM, 2012). The values used in the process modeling are summarized in Table 8-1.

TABLE 8-1
Trussville WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	4.0 mgd
Peak Design Flow	12.8 mgd
Design $cBOD_5$	4,980 lb/day at 149 mg/L
Design TSS	7,070 lb/day at 212 mg/L
Design TKN	950 lb/day at 29 mg/L
Design NH_3-N	490 lb/day at 15 mg/L
Design TP	174 lb/day at 5 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

8.3 Effluent Permit Values

The current NPDES permit for the Trussville WWTP includes the following values (see Table 8-2), which define the level of treatment necessary for the new design. The average design flow is listed as 4 mgd and the average design BOD_5 loading as 10,014 lb/day.

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TABLE 8-2
Trussville WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)	TP (mg/L)
May-November	3.0	30.0	1.0	2.0	See note
December-April	10.0	30.0	1.0	2.0	See Note

Note:

This facility currently has an effluent TP limit of 3.3 mg/L; in anticipation of permit changes, CH2M HILL has assumed that a more stringent permit limit of 0.2 mg/L is in place.

8.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- Chemical feed system for phosphorus removal
- RAS/WAS pumping system
- Cloth media disk effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Belt press dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below.

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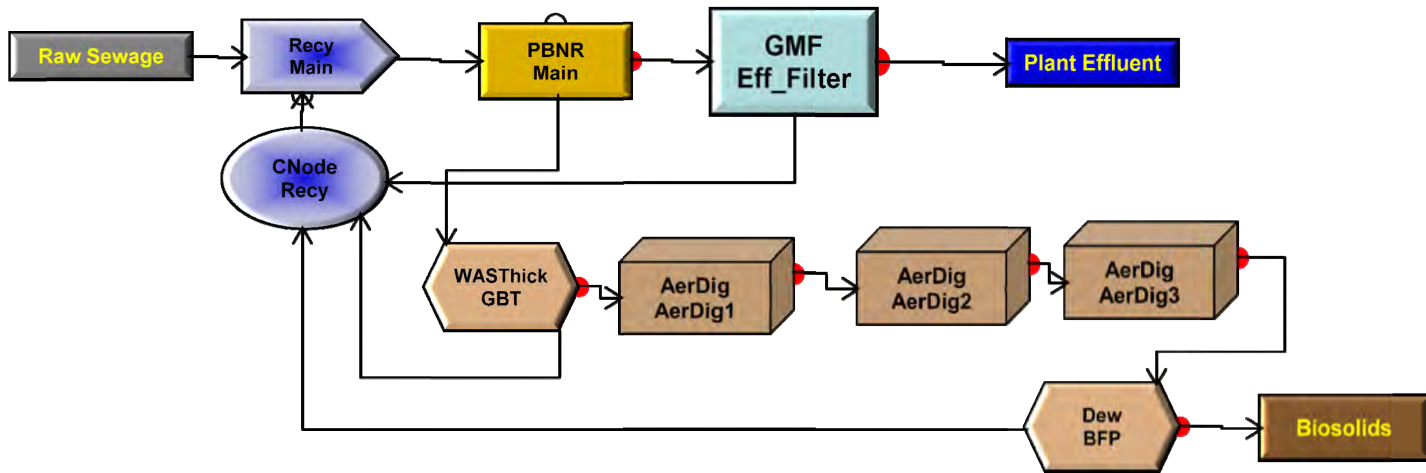
FIGURE 8-1
Trussville WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 8-3).

TABLE 8-3
Trussville WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	3
Capacity, each	6.4 mgd
Capacity, total	19.2 mgd
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	1
Capacity, each	12.8 mgd
Capacity, total	12.8 mgd
Grit Removal	
Type	Vortex
Number	1
Capacity, each	12.8 mgd
Capacity, total	12.8 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	3
Design SRT	10 days at 14˚C
Design MLSS	3,400 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	0.67 MG
Volume, total	2.0 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	4
Capacity, each	1,130 scfm
Capacity, total	4,520 scfm
Secondary Clarifiers	
Type	Circular
Number	3
Diameter, each	74 ft
Surface area, each	4,300 sf
Surface area, total	13,000 sf

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TABLE 8-3
Trussville WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Effluent Filters	
Type	Cloth media disk
Number	3
Area, each	467 sf
Area, total	1,400 sf
Effluent UV	
Type	Low pressure, high output
Channels	1
Banks per channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	1
Capacity, each	150 gpm
Capacity, total	150 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	28 days
Volume, each	0.07 MG
Volume, total	0.42 MG
Digested Sludge Dewatering	
Type	Belt press
Number	1
Capacity, each	50 gpm
Capacity, total	50 gpm
Emergency Generators	
Number	1
Capacity, each	1,500 kW
Capacity, total	1,500 kW

8.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (4 mgd) and under winter conditions, is summarized below (see Table 8-4).

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TABLE 8-4
Trussville WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	0.9
TSS	3.2
TKN	1.2
NH_3-N	0.1
TP	0.16

8.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 8-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix G at the end of this document.

TABLE 8-5
Trussville WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	40,760,000
Capital Cost	50,160,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.

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4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 9

Prudes Creek WWTP Modeling and Cost Opinion

9.1 Prudes Creek WWTP

The Prudes Creek WWTP NPDES #AL0056120 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the western part of Jefferson County. The plant is currently permitted to treat 0.9 mgd with a peak design flow of 3.5 mgd. Sludge handling consists of gravity thickening and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

9.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Prudes Creek WWTP* (Jefferson County, 2011h) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The values used in the process modeling are summarized in Table 9-1.

TABLE 9-1
Prudes Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	0.9 mgd
Peak Design Flow	3.5 mgd
Design $cBOD_5$	585 lb/day at 78 mg/L
Design TSS	676 lb/day at 90 mg/L
Design TKN	147 lb/day at 20 mg/L
Design NH_3-N	75 lb/day at 10 mg/L
Design TP	28 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

9.3 Effluent Permit Values

The current NPDES permit for the Prudes Creek WWTP includes the following values (see Table 9-2), which define the level of treatment necessary for the new design. The average design flow is listed as 0.9 mgd and the average design BOD_5 loading as 2,144 lb/day.

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TABLE 9-2
Prudes Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
April-October	8.0	30.0	2.5	5.0
November-March	25.0	30.0	10.0	20.0

9.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Cloth media disk effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Belt press dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 9-1).

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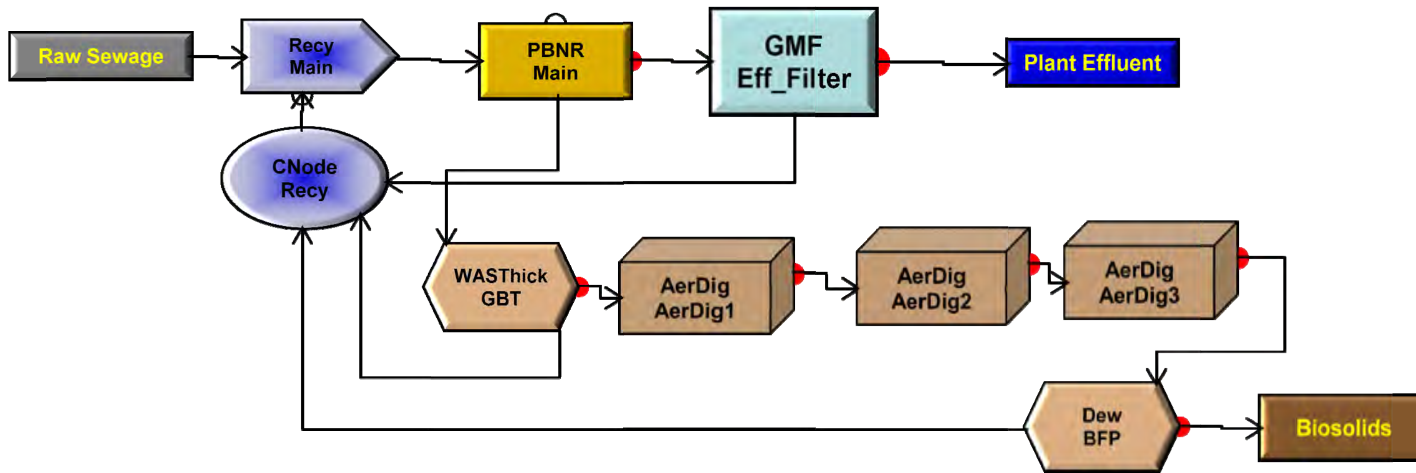
FIGURE 9-1

Prudes Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 9-3).

TABLE 9-3
Prudes Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	5
Capacity, each	0.88 mgd
Capacity, total	4.38 mgd
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	1
Capacity, each	3.5 mgd
Capacity, total	3.5 mgd
Grit Removal	
Type	Vortex
Number	1
Capacity, each	3.5 mgd
Capacity, total	3.5 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	2
Design SRT	10 days at 14˚C
Design MLSS	3,100 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	0.13 MG
Volume, total	0.25 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	3
Capacity, each	357 scfm
Capacity, total	1,070 scfm
Secondary Clarifiers	
Type	Circular
Number	2
Diameter, each	50 ft
Surface area, each	2,000 sf
Surface area, total	4,000 sf

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TABLE 9-3
Prudes Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Effluent Filters	
Type	Cloth media disk
Number	2
Area, each	200 sf
Area, total	400 sf
Effluent UV	
Type	Low pressure, high output
Channels	1
Banks per channel	3
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	1
Size	0.3 m
Capacity, each	50 gpm
Capacity, total	50 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	29 days
Volume, each	0.007 MG
Volume, total	0.042 MG
Digested Sludge Dewatering	
Type	Belt press
Number	1
Size	0.5 m
Capacity, each	25 gpm
Capacity, total	25 gpm
Emergency Generators	
Number	1
Capacity, each	400 kW
Capacity, total	400 kW

9.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (0.9 mgd) and under winter conditions, is summarized below (see Table 9-4).

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TABLE 9-4
Prudes Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.4
TSS	3.3
TKN	0.8
NH_3-N	0.1
TP	2.8

9.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 9-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix H at the end of this document.

TABLE 9-5
Prudes Creek WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	18,670,000
Capital Cost	22,990,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.

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4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.
12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 10

Warrior WWTP Modeling and Cost Opinion

10.1 Warrior WWTP

The Warrior WWTP NPDES #AL0050881 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the northern part of Jefferson County. The plant is currently permitted to treat 0.1 mgd with a peak design flow of 0.5 mgd. Sludge handling consists of aerobic digestion and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

10.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Warrior WWTP* (Jefferson County, 2011i) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The values used in the process modeling are summarized in Table 10-1.

TABLE 10-1
Warrior WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	0.1 mgd
Peak Design Flow	0.5 mgd
Design $cBOD_5$	446 lb/day at 534 mg/L
Design TSS	501 lb/day at 600 mg/L
Design TKN	83 lb/day at 100 mg/L
Design NH_3-N	57 lb/day at 63 mg/L
Design TP	12 lb/day at 14 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

10.3 Effluent Permit Values

The current NPDES permit for the Warrior WWTP includes the following values (see Table 10-2), which define the level of treatment necessary for the new design. The average design flow is listed as 0.1 mgd and the average design BOD_5 loading as 475 lb/day.

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TABLE 10-2
Warrior WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
April-October	18.0	24.0	1.2	Report
November-March	25.0	24.0	2.1	Report

10.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Cloth media disk effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Internal recycle collection and pumping
- Aerobic digestion with decant thickening
- Belt press dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 10-1).

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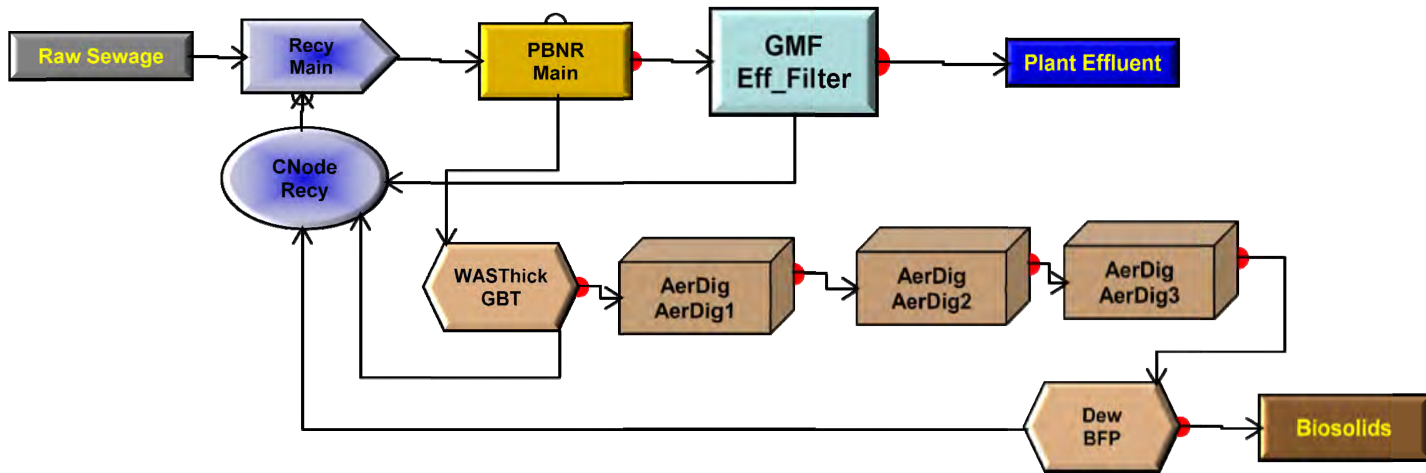
FIGURE 10-1
Warrior WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 10-3).

TABLE 10-3
Warrior WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	3
Capacity, each	0.25 mgd
Capacity, total	0.75 mgd
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	1
Capacity, each	0.5 mgd
Capacity, total	0.5 mgd
Grit Removal	
Type	Vortex
Number	1
Capacity, each	0.5 mgd
Capacity, total	0.5 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	2
Design SRT	10 days at 14˚C
Design MLSS	3,100 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	0.08 MG
Volume, total	0.17 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	3
Capacity, each	250 scfm
Capacity, total	750 scfm
Secondary Clarifiers	
Type	Circular
Number	2
Diameter, each	18 ft
Surface area, each	250 sf
Surface area, total	500 sf
Effluent Filters	
Type	Cloth media disk
Number	2
Area, each	25 sf
Area, total	50 sf

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TABLE 10-3
Warrior WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Effluent UV	
Type	Low pressure, high output
Channels	1
Banks per channel	2
Design Transmittance	65%
Design Dose	40 mJ/cm2
Sludge Stabilization	
Type	Aerobic digestion/decant
Number	2 trains of 2 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	30 days
Volume, each	0.0175 MG
Volume, total	0.07 MG
Digested Sludge Dewatering	
Type	Belt press
Number	1
Size	0.5 m
Capacity, each	25 gpm
Capacity, total	25 gpm
Emergency Generators	
Number	1
Capacity, each	200 kW
Capacity, total	200 kW

10.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (0.1 mgd)and under winter conditions, is summarized below (see Table 10-4).

TABLE 10-4
Warrior WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	3.2
TSS	3.3
TKN	3.7
NH_3-N	0.1
TP	7.2

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10.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 10-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix I at the end of this document.

TABLE 10-5
Warrior WWTP Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	10,560,000
Capital Cost	13,010,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. The peak flow peaking factor used was the same as currently permitted.
8. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
9. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
10. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
11. A location adjustment factor was used for local conditions in Birmingham, Alabama.

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12. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
13. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
14. Operations building and maintenance building sizes were assumed.
15. No contingency was included.

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SECTION 11

Valley Creek WWTP Modeling and Cost Opinion; Sized Based on Most Recent Flow Projections

11.1 Valley Creek WWTP

The Valley Creek WWTP NPDES #AL0023655 is a two-stage activated sludge facility with effluent filtration and ultraviolet light (UV) disinfection, which serves the southern part of Jefferson County. The plant is currently permitted to treat 85 mgd with a peak design flow of 170 mgd. The plant also includes 110 MG of wet weather storage. The solids handling trains include gravity thickeners, anaerobic digestion, belt filter press dewatering, and lime addition to make sure that the biosolids meet Class B requirements. The biosolids are then land applied at two county-leased reclamation sites.

The most recently completed flow projections (CDM, 2011a) indicate that the maximum anticipated average daily flow for the Valley Creek WWTP is only 34.76 mgd, which is much lower than the permitted flow. Additionally, the Energy and Process Optimization Study (Hazen & Sawyer, 2012a) recommended that the maximum throughput of the plant be limited to 135 mgd based on using the existing 110 MG of wet weather storage. Therefore, the plant was analyzed using these values with the results summarized below.

11.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Valley Creek WWTP* (Jefferson County, 2011a) and *Valley Creek Wastewater Treatment Plant Energy and Process Optimization Study* (Hazen & Sawyer, 2012a). The values used in the process modeling are summarized in Table 11-1.

TABLE 11-1
Valley Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	34.76 mgd
Peak Design Flow	135.0 mgd
Design $cBOD_5$	43,800 lb/day at 150 mg/L
Design TSS	67,200 lb/day at 230 mg/L
Design TKN	7,640 lb/day at 26 mg/L
Design NH_3-N	4,970 lb/day at 17 mg/L
Design TP	1,170 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14°C, which is an assumed value based on similar locations.

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11.3 Effluent Permit Values

The current NPDES permit for the Valley Creek WWTP includes the following values (see Table 11-2), which define the level of treatment necessary for the new design. The average design flow is listed as 85 mgd and the average design BOD_5 loading as 141,780 lb/day.

TABLE 11-2
Valley Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	8.0	24.0	1.0	3.0
December-April	8.0	24.0	1.0	4.0

11.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Circular primary clarifiers with primary scum and sludge pumping
- Activated sludge secondary treatment, configured as a modified Ludzack-Ettinger process
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity primary sludge thickeners
- Centrifuge WAS thickeners and polymer system
- Internal recycle collection and pumping
- Anaerobic digestion and mixing system
- Effluent pump station
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 11-1).

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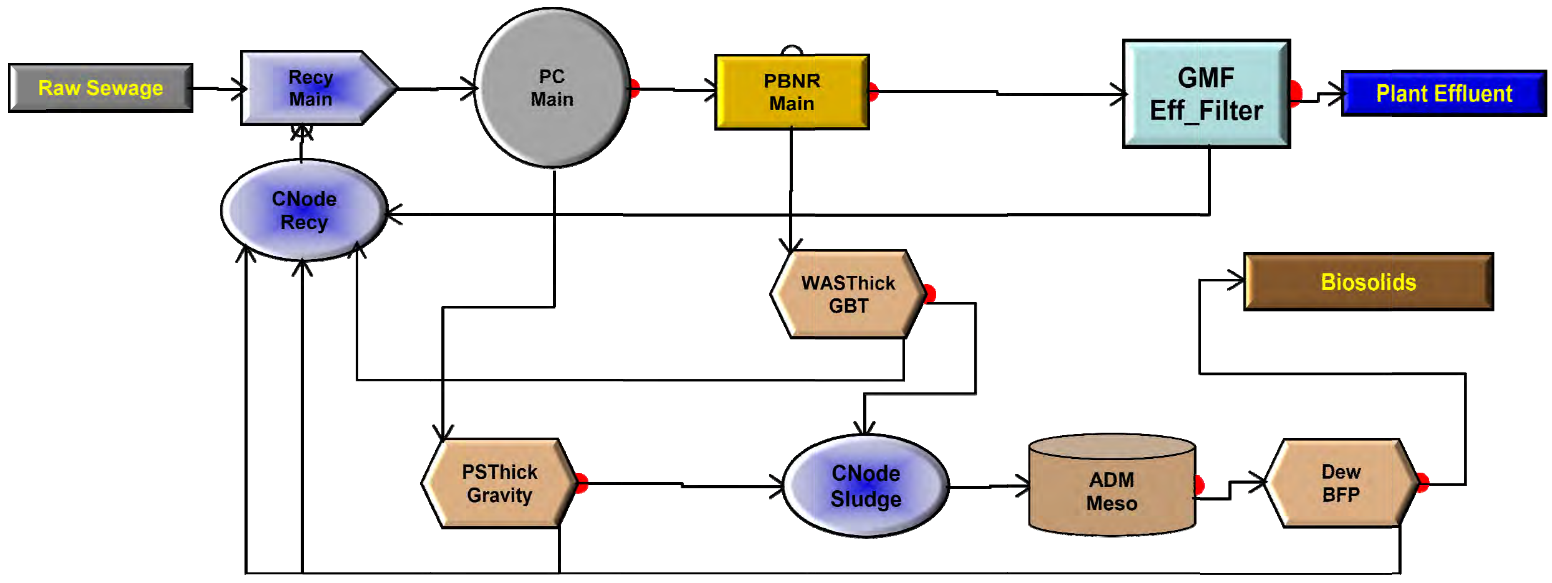
FIGURE 11-1
Valley Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 11-3).

TABLE 11-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	6
Capacity, each	35 mgd
Capacity, total	210 mgd
Flow Equalization	
Number	10
Volume, each	11 MG
Volume, total	110 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	4
Capacity, each	33.75 mgd
Capacity, total	135 mgd
Grit Removal	
Type	Vortex
Number	3
Capacity, each	45.0 mgd
Capacity, total	135 mgd
Primary Clarifiers	
Type	Circular
Number	4
Diameter, each	130 ft
Surface area, each	13,100 sf
Surface area, total	52,500 sf
Bioreactors (activated sludge process)	
Type	Plug flow
Number	10
Design SRT	13 days at 14˚C
Design MLSS	2,800 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Mixed liquor recycle rate	250% of design flow rate
Volume, each	1.5 MG
Volume, total	15 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	6
Capacity, each	7,000 scfm
Capacity, total	42,000 scfm

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TABLE 11-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Secondary Clarifiers	
Type	Circular
Number	8
Diameter, each	138 ft
Surface area, each	15,000 sf
Surface area, total	120,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	22
Area, each	450 sf
Area, total	9,900 sf
Effluent UV	
Type	Low pressure, high output
Channels	12
Banks per Channel	3
Design Transmittance	65%
Design Dose	40 mJ/cm^2
Primary Sludge Thickening	
Type	Gravity
Number	3
Diameter, each	45 ft
Surface area, each	1,590 sf
Surface area, total	4,770 sf
WAS Thickening	
Type	Centrifugal
Number	2
Capacity, each	500 gpm
Capacity, total	1,000 gpm
Sludge Stabilization	
Type	Anaerobic digestion
Number	6
Mixing system	Mechanical pumping/jet mixing
Design SRT	22 days
Estimated Volatile Solids Reduction	43%
Volume, each	0.53 MG
Volume, total	3.2 MG
Digested Sludge Dewatering	
Type	Centrifugal
Number	2
Capacity, each	300 gpm
Capacity, total	600 gpm

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TABLE 11-3
Valley Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Emergency Generators	
Number	3
Capacity, each	3,100 kW
Capacity, total	9,300 kW

11.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (35 mgd) and under winter conditions, is summarized below (see Table 11-4).

TABLE 11-4
Valley Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.7
TSS	3.7
TKN	1.4
NH_3-N	0.1
TP	2.4

11.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 11-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix J at the end of this document.

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TABLE 11-5
Valley Creek WWTP (Reduced Flow Projection) Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	282,260,000
Capital Cost	347,200,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
8. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
9. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
10. A location adjustment factor was used for local conditions in Birmingham, Alabama.
11. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
12. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
13. Operations building and maintenance building sizes were assumed.
14. No contingency was included.

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SECTION 12

Village Creek WWTP Modeling and Cost Opinion; Sized Based on Most Recent Flow Projections

12.1 Village Creek WWTP

The Village Creek WWTP NPDES #AL0023647 consists of two plants, one single-stage and one two-stage activated sludge facility with effluent filtration and UV disinfection, which serves the central part of Jefferson County. Currently, each plant is permitted to treat 30 mgd with a combined peak flow (bypassing biological treatment) of 280 mgd. Both plants are based on activated sludge treatment and final clarifiers. Sludge handling consists of anaerobic digestion, centrifuge dewatering, and lime conditioning to make sure treatment meets Class B standards. The biosolids are then land applied at two county-leased reclamation sites.

The most recently completed flow projections (CDM, 2012a) indicate that the maximum anticipated average daily flow for the Village Creek WWTP is only 38.48 mgd, which is much lower than the permitted flow. Additionally, the Energy and Process Optimization Study (Hazen & Sawyer, 2012a) recommended that the maximum throughput of the plant be limited to 143 mgd based on using the existing 90 MG of wet weather storage. Therefore, the plant was analyzed using these values with the results summarized below.

12.2 Modeling Flows and Load

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Village Creek WWTP* (Jefferson County, 2011b) and *Village Creek Wastewater Treatment Plant Waste Gas Energy Recover and Process Optimization Evaluation* (Hazen & Sawyer, 2012b). The values used in the process modeling are summarized in Table 12-1.

TABLE 12-1
Village Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	38.48 mgd
Peak Design Flow	143.0 mgd
Design $cBOD_5$	42,100 lb/day at 131 mg/L
Design TSS	57,600 lb/day at 179 mg/L
Design TKN	7,820 lb/day at 24 mg/L
Design NH_3-N	5,100 lb/day at 16 mg/L
Design TP	1,930 lb/day at 6 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

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12.3 Effluent Permit Values

The current NPDES permit for the Village Creek WWTP includes the following values (see Table 12-2), which define the level of treatment necessary for the new design. The average design flow is listed as 60 mgd and the average design BOD_5 loading as 140,112 lb/day for the combined total of both plants.

TABLE 12-2
Village Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	4.0	24.0	1.0	Report
December-April	6.0	24.0	1.0	Report

12.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Circular primary clarifiers with primary scum and sludge pumping
- Activated sludge secondary treatment, configured as a modified Ludzack-Ettinger process
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity primary sludge thickeners
- Centrifuge WAS thickeners and polymer system
- Internal recycle collection and pumping
- Anaerobic digestion and mixing system
- Effluent pump station
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 12-1).

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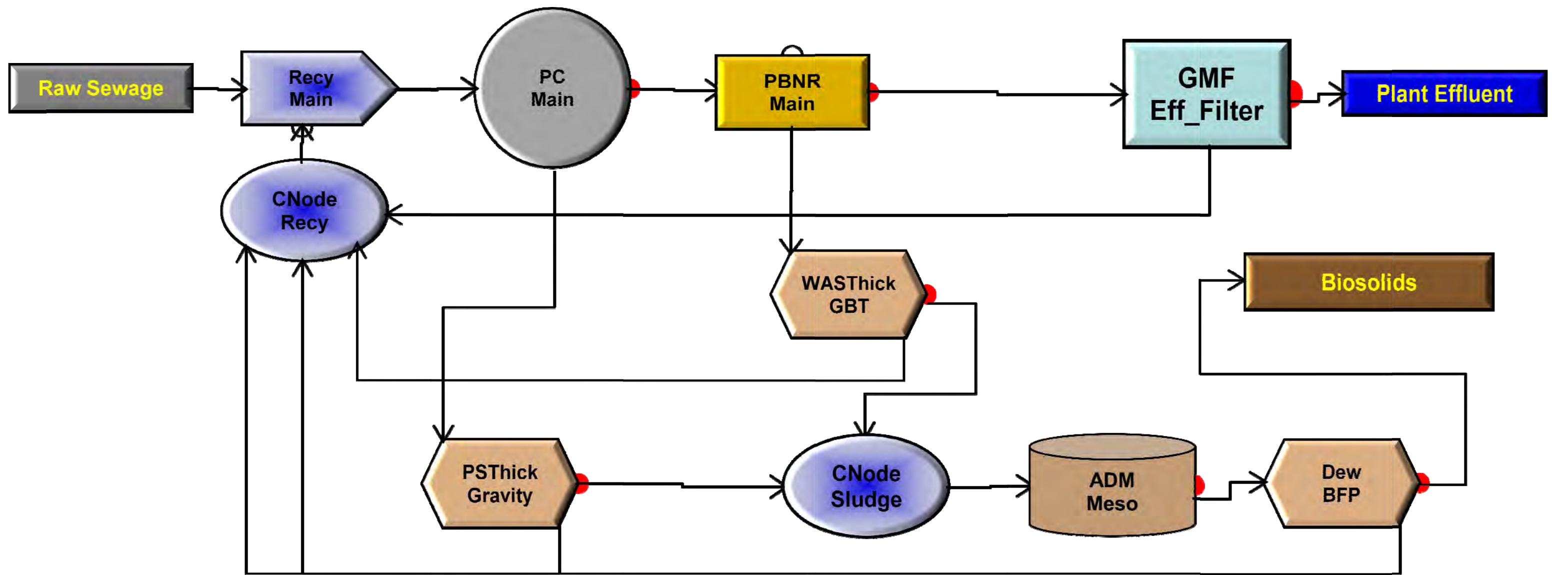
FIGURE 12-1
Village Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 12-3).

TABLE 12-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	6
Capacity, each	38.0 mgd
Capacity, total	228 mgd
Flow Equalization	
Number	20
Volume, each	4.5 MG
Volume, total	90 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	3
Capacity, each	48.0 mgd
Capacity, total	143 mgd
Grit Removal	
Type	Vortex
Number	3
Capacity, each	48.0 mgd
Capacity, total	143 mgd
Primary Clarifiers	
Type	Circular
Number	4
Diameter, each	129 ft
Surface area, each	13,000 sf
Surface area, total	52,000 sf
Bioreactors (activated sludge process)	
Type	Plug flow
Number	10
Design SRT	13 days at 14˚C
Design MLSS	2,300 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Mixed liquor recycle rate	250% of design flow rate
Volume, each	1.75 MG
Volume, total	17.5 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	6

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TABLE 12-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Capacity, each	6,930 scfm
Capacity, total	41,580 scfm
Secondary Clarifiers	
Type	Circular
Number	6
Diameter, each	150 ft
Surface area, each	17,700 sf
Surface area, total	106,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	26
Area, each	458 sf
Area, total	11,900 sf
Effluent UV	
Type	Low pressure, high output
Channels	10
Banks per channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm2
Primary Sludge Thickening	
Type	Gravity
Number	3
Diameter, each	40 ft
Surface area, each	1,260 sf
Surface area, total	3,780 sf
WAS Thickening	
Type	Centrifugal
Number	3
Capacity, each	500 gpm
Capacity, total	1,500 gpm
Sludge Stabilization	
Type	Anaerobic digestion
Number	6
Mixing system	Mechanical pumping/jet mixing
Design SRT	24 days
Estimated Volatile Solids Reduction	43%
Volume, each	0.53 MG
Volume, total	3.2 MG

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TABLE 12-3
Village Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Digested Sludge Dewatering	
Type	Centrifugal
Number	2
Capacity, each	300 gpm
Capacity, total	600 gpm
Emergency Generators	
Number	3
Capacity, each	3,100 kW
Capacity, total	9,300 kW

12.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (38 mgd) and under winter conditions, is summarized below (see Table 12-4).

TABLE 12-4
Village Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.7
TSS	3.7
TKN	1.3
NH_3-N	0.1
TP	4.5

12.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 12-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix K at the end of this document.

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TABLE 12-5
Village Creek WWTP (Reduced Flow Projection) Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	290,690,000
Capital Cost	357,570,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.
3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
8. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
9. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
10. A location adjustment factor was used for local conditions in Birmingham, Alabama.
11. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
12. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
13. Operations building and maintenance building sizes were assumed.
14. No contingency was included.

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SECTION 13

Five Mile Creek WWTP Modeling and Cost Opinion; Sized Based on Most Recent Flow Projections

13.1 Five Mile Creek WWTP

The Five Mile Creek WWTP NPDES #AL0026913 is a single-stage activated sludge facility with effluent filtration and UV disinfection, which serves the central part of Jefferson County. The plant is currently permitted to treat 30 mgd with a peak design flow of 56 mgd. The plant also includes 45 MG of wet weather storage. Sludge handling consists of aerobic digestion, gravity thickening, and sludge drying beds. The biosolids are then land applied at two county-leased reclamation sites.

The most recently completed flow projections (CDM, 2011a) indicate that the maximum anticipated average daily flow for the Five Mile Creek WWTP is only 11.04 mgd, which is much lower than the permitted flow. The maximum plant throughput is estimated at 20.5 mgd based on the original design peaking factors. The volume of wet weather storage has been reduced proportionally from 45 MG to 16.5 MG. Therefore, the plant was analyzed using these values with the results summarized below.

13.2 Modeling Flows and Loads

Process modeling influent flows and loads were developed based on information provided in the documents *2011 Municipal Water Pollution Annual Report for the Five Mile Creek WWTP* (Jefferson County, 2011c) and *County-Wide Biosolids Master Plan* (CDM, 2011a). Limited data was available on influent characteristics other than $cBOD_5$; therefore, literature values were assumed for other influent parameters. The raw influent wastewater would generally be characterized as weak. The values used in the process modeling are summarized in Table 13-1.

TABLE 13-1
Five Mile Creek WWTP Process Modeling Flows and Loads
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Parameter	Value
Average Design Flow	11.0 mgd
Peak Design Flow	20.5 mgd
Design $cBOD_5$	9,360 lb/day at 102 mg/L
Design TSS	10,300 lb/day at 112 mg/L
Design TKN	1,840 lb/day at 20 mg/L
Design NH_3-N	1,100 lb/day at 12 mg/L
Design TP	367 lb/day at 4 mg/L

Assumptions:

1. The average design flow is defined as the annual average day flow; design loads are estimated as maximum month loads based on development of maximum month:average day peaking factors either included in, or derived from, the referenced documents.
2. VSS:TSS ratio is assumed to be 80 percent.
3. Alkalinity data were not available; therefore, it was assumed to be non-limiting from a process perspective.
4. Process modeling was performed under assumed winter conditions; the cold water temperature used was 14˚C, which is an assumed value based on similar locations.

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13.3 Effluent Permit Values

The current NPDES permit for the Five Mile Creek WWTP includes the following values (see Table 13-2), which define the level of treatment necessary for the new design. The average design flow is listed as 30 mgd and the average design BOD_5 loading as 50,040 lb/day.

TABLE 13-2
Five Mile Creek WWTP Permit Limits
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Months	$cBOD_5$ (mg/L)	TSS (mg/L)	NH_3-N (mg/L)	TKN (mg/L)
May-November	6.0	30.0	2.0	4.0
December-April	7.0	30.0	2.5	5.0

13.4 Proposed Facilities

The facilities included in the proposed design generally include the following components:

- Influent pump station
- Flow equalization basins
- Influent fine screens and grit removal
- Activated sludge secondary treatment
- Fine bubble aeration system within the activated sludge process
- Multi-stage centrifugal process aeration blowers
- Circular secondary clarifiers with secondary scum pumping
- RAS/WAS pumping system
- Filter feed pump station
- Deep bed granular media effluent filters
- Effluent UV disinfection
- Cascade post aeration
- Gravity belt WAS thickeners and polymer system
- Internal recycle collection and pumping
- Aerobic digestion
- Centrifuge dewatering of digested sludge with polymer system
- Plant water system
- Emergency generators
- Operations building
- Maintenance building

A process flow diagram of the proposed facilities, from the process model Pro2D, is provided below (see Figure 13-1).

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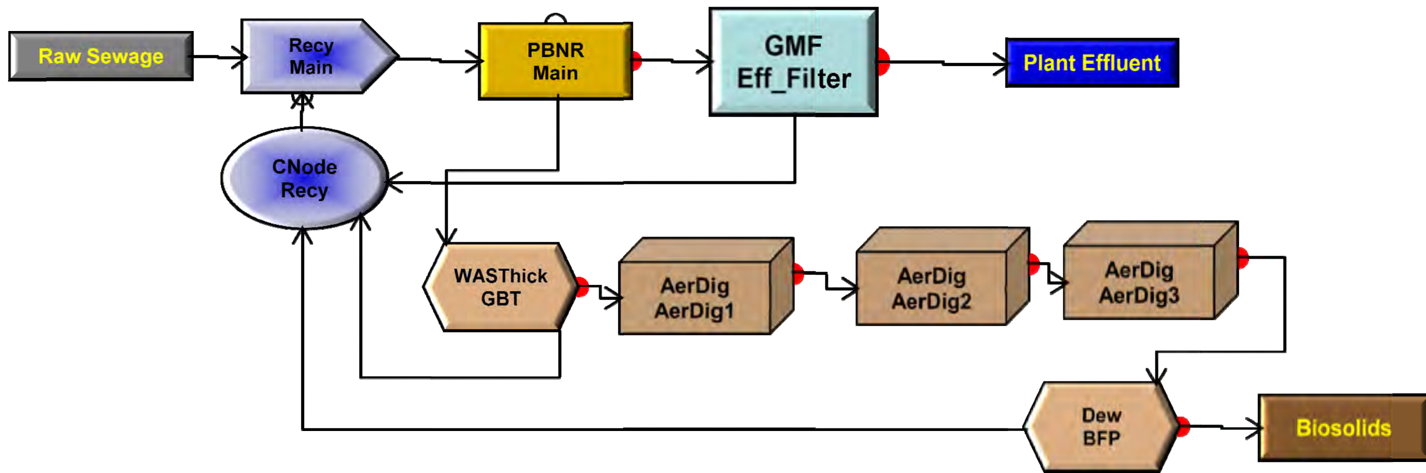
FIGURE 13-1
Five Mile Creek WWTP Process Flow Diagram



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A design data summary of the proposed major treatment facilities is provided below (see Table 13-3). CH2M HILL would commonly use primary clarifiers and anaerobic digestion on a plant of this size, but because of the weak wastewater, it was decided to forego primary clarification, which makes anaerobic digestion difficult, and use aerobic digestion.

TABLE 13-3
Five Mile Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Influent Pump Station	
Pump type	Centrifugal
Number	4
Capacity, each	11.0 mgd
Capacity, total	44.0 mgd
Flow Equalization	
Number	3
Volume, each	5.5 MG
Volume, total	16.5 MG
Influent Screens	
Screen type	Perforated plate, chain driven
Screen opening	6 mm
Number	2
Capacity, each	10.25 mgd
Capacity, total	20.5 mgd
Grit Removal	
Type	Vortex
Number	2
Capacity, each	10.25 mgd
Capacity, total	20.5 mgd
Bioreactors (activated sludge process)	
Type	Plug flow
Number	3
Design SRT	10 days at 14˚C
Design MLSS	3,100 mg/L
Design dissolved oxygen concentration	2.0 mg/L
Volume, each	1.2 MG
Volume, total	3.6 MG
Process Aeration Blowers	
Type	Multi-stage centrifugal
Number	4
Capacity, each	2,850 scfm
Capacity, total	11,400 scfm
Secondary Clarifiers	
Type	Circular
Number	3
Diameter, each	107 ft

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TABLE 13-3
Five Mile Creek WWTP Design Data Summary
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Facility/Component	Parameter
Surface area, each	9,000 sf
Surface area, total	27,000 sf
Effluent Filters	
Type	Deep bed granular media
Number	18
Area, each	188 sf
Area, total	3,380 sf
Effluent UV	
Type	Low pressure, high output
Channels	2
Banks per Channel	4
Design Transmittance	65%
Design Dose	40 mJ/cm2
WAS Thickening	
Type	Gravity belt
Number	2
Size	2 m
Capacity, each	300 gpm
Capacity, total	600 gpm
Sludge Stabilization	
Type	Aerobic digestion
Number	2 trains of 3 digesters in series
Aeration system	Coarse bubble diffused aeration
Design SRT	33 days
Volume, each	0.125 MG
Volume, total	0.75 MG
Digested Sludge Dewatering	
Type	Centrifugal
Number	2
Capacity, each	100 gpm
Capacity, total	200 gpm
Emergency Generators	
Number	1
Capacity, each	3,100 kW
Capacity, total	3,100 kW

13.5 Predicted Performance

The predicted performance of the proposed facilities, at the design condition (11 mgd) and under winter conditions, is summarized below (see Table 13-4).

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TABLE 13-4
Five Mile Creek WWTP Predicted Effluent Quality
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

Pollutant Parameter	Concentration (mg/L)
$cBOD_5$	1.4
TSS	3.2
TKN	1.0
NH_3-N	0.1
TP	2.8

13.6 Cost Opinion

Cost estimates were prepared using the CPES. CPES is a cost estimating tool used to generate construction estimates at the conceptual level of design, using general arrangement plans for unit processes from past projects. The system generates a project-specific estimate using sizing input information that is particular to each project.

The estimate was prepared based on information available at the time of preparation, without the benefit of construction documents, and is; therefore, considered to be at the conceptual level. As such, the expected accuracy range is +50 percent/-30 percent. The estimated construction and capital costs for this facility are summarized in Table 13-5 based on 2012 dollars. Capital costs include allowances for non-construction costs such as permitting, engineering, services during construction, commissioning, and startup, in addition to the construction costs. A more detailed summary of estimated project costs is included as Appendix L at the end of this document.

TABLE 13-5
Five Mile Creek WWTP (Reduced Flow Projection) Construction and Capital Cost Estimates
Opinions of Cost for Jefferson County, Alabama Wastewater Treatment Plants

	Cost[a] ($)
Construction Cost	80,410,000
Capital Cost	98,930,000

[a] 2012 basis

The following assumptions were used in the preparation of the cost estimates:

1. Plant structures depth of burial was assumed, since a plant hydraulic profile was not prepared. Generally, it was assumed that the last structure (disinfection) was fully in ground, and the first treatment structure (headworks) was fully above ground, allowing gravity flow through the plant since the sites are generally flat. Influent pump stations were assumed to have a depth similar to the existing actual structure. Influent equalization (if included) was assumed to be above ground, with gravity flow back to the influent pump station, to return the stored flow to treatment.
2. UV disinfection was the method used for all facilities.

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3. Backup power generators were assumed to run the full plant critical loads.
4. Pump head pressures were estimated for each unit process.
5. Cascade post aeration was the method used for aeration before final discharge.
6. No odor control facilities were included, since the existing facilities do not generally have odor control.
7. Structure wall thicknesses were estimated using typical guidelines based on depth of water within the structure.
8. Overall site work, plant computer system, yard electrical, and yard piping were estimated as a typical percentage of construction cost.
9. Contractor markups were estimated as: 10 percent overhead, 5 percent profit, and 5 percent for mobilization/bonds/insurance.
10. A location adjustment factor was used for local conditions in Birmingham, Alabama.
11. Allowances based on experience and general knowledge of the sites were included for items such as rock excavation, pile foundations, dewatering, architectural treatments, and shoring.
12. Non-construction costs (permitting, engineering, services during construction, commissioning, and startup) were estimated as a typical percentage of construction costs.
13. Operations building and maintenance building sizes were assumed.
14. No contingency was included.

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SECTION 14
References

CDM. 2012. *Trussville WWTP Phase I & II TMDL Improvements Project Preliminary Design Report.*

CDM. 2011a. *County-Wide Biosolids Master Plan.*

CDM. 2011b. *Cahaba WWTP TMDL Improvements Project Preliminary Design Report.*

Hazen & Sawyer. 2012a. *Valley Creek Wastewater Treatment Plant Energy and Process Optimization Study*.

Hazen & Sawyer. 2012b. *Village Creek Wastewater Treatment Plant Energy and Process Optimization Study*.

Jefferson County. 2011a. *2011 Municipal Water Pollution Annual Report for the Valley Creek WWTP.*

Jefferson County. 2011b. *2011 Municipal Water Pollution Annual Report for the Village Creek WWTP*.

Jefferson County. 2011c. *2011 Municipal Water Pollution Annual Report for the Five Mile Creek WWTP*.

Jefferson County. 2011d. *2011 Municipal Water Pollution Annual Report for the Cahaba River WWTP.*

Jefferson County. 2011e. *2011 Municipal Water Pollution Annual Report for the Leeds WWTP.*

Jefferson County. 2011f. *2011 Municipal Water Pollution Annual Report for the Turkey Creek WWTP*.

Jefferson County. 2011g. *2011 Municipal Water Pollution Annual Report for the Trussville WWTP.*

Jefferson County. 2011h. *2011 Municipal Water Pollution Annual Report for the Prudes Creek WWTP.*

Jefferson County. 2011i. *2011 Municipal Water Pollution Annual Report for the Warrior WWTP.*

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Appendix A
Valley Creek Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 8/16/201

Click for CPES | To Concrete Wall Thickness Help | Summary Matri | To Unit Cost Database

Project Capactiy: >>>	85.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Valley WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Randy Boe
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	36
Mid-Point of Construction:	Jul/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributior

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: IPS		$17,510,000
	Yes	Screening and Grit: Headworks		$7,150,000
	Yes	Primary Sludge PS: Main		$1,360,000
	Yes	Round PC: Main		$12,290,000
	Yes	Aeration Basin: Main		$31,450,000
	Yes	Blowers: Main		$7,020,000
	Yes	Round SC: Main		$17,110,000
	Yes	RAS WAS PS: Main		$7,740,000
	Yes	Filters: Eff Filter		$25,440,000
	Yes	Fermenter: Gravity		$6,130,000
	Yes	Centrifuge Thick: GBT		$8,720,000
	Yes	Silo AnDig: Meso		$34,040,000
	Yes	Centrifuge Dew: BFP		$5,970,000
	Yes	Aerobic Digester: Blend Tank		$1,080,000
	Yes	O&M Building: Ops Bldg		$1,770,000
	Yes	LPHO UV: UV Disinf		$15,540,000
	Yes	Concrete Clearwell: Inf EQ		$57,800,000
	Yes	U.D. Facility: Post AB		$570,000
	Yes	Submersible IPS: Eff PS		$7,580,000
	Yes	O&M Building: Maint Bldg		$1,260,000
	Yes	Emergency Generator: Stdby Gen		$13,930,000
	Yes	Vertical Turbine PS: W3 System		$1,380,000
	Yes	Submersible IPS: Plnt Drain		$1,140,000
SUBTOTAL - PROJECT COST				$283,980,000
ADDITIONAL PROJECT COSTS:				
Demolition		0%		$0
Overall Sitework		5%		$14,200,000
Plant Computer System		1%		$2,840,000
Yard Electrical		5%		$14,200,000
Yard Piping		12%		$34,080,000
UD #1 Default Description		0%		$0
UD #2 Default Description		0%		$0
UD #3 Default Description		0%		$0
SUBTOTAL with Additional Project Costs				$349,300,000
TAX:		0.00%	$349,300,000	$0
SUBTOTAL with Tax				$349,300,000
CONTRACTOR MARKUPS:				
Overhead		10%	$349,300,000	$34,930,000
Subtotal				$384,230,000

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	A	B	C	D	E
65	***Profit***		5%	$384,230,000	$19,220,000
66	***Subtotal***				$403,450,000
67	***Mob/Bonds/Insurance***		5%	$403,450,000	$20,180,000
68	***Subtotal***				$423,630,000
69	***Contingency***		0%	$423,630,000	$0
70	***SUBTOTAL with Markups***				$423,630,000
71					
72	***ESCALATION (to Mid-Point of Construction***		4.6%	$423,630,000	$19,490,000
73	***SUBTOTAL with Escalation***				$443,120,000
74					
75	***LOCATION ADJUSTMENT FACTOR***		87.4	$443,120,000	$387,290,000
76	***SUBTOTAL - with Local Adjustment Factor***				$387,290,000
77					
78	***RED FLAGS:***				
79	***1***	***Rock Excavation***			$10,000,000
80	***2***	***Pile Foundations***			$2,500,000
81	***3***	***Seismic Foundations***			
82	***4***	***Dewatering Conditions***			$3,500,000
83	***5***	***Wetlands Mitigation***			
84	***6***	***Weather Impacts***			
85	***7***	***Depth of Structures***			$5,000,000
86	***8***	***Local Building Code Restrictions***			
87	***9***	***Coatings or Finishes***			
88	***10***	***Building or Architectural Considerations***			$5,000,000
89	***11***	***Client Material Preferences***			
90	***12***	***Client Equipment Preferences***			
91	***13***	***Piping Galleries, Piping Trenches, Piping Racks***			
92	***14***	***Yard Piping Complexity***			
93	***15***	***Existing Site Utilities (New, Retrofit, and Complexity)***			
94	***16***	***I & C Automation (New or Retrofit)***			
95	***17***	***Electrical Feed (New or Retrofit)***			
96	***18***	***Electrical Distribution***			
97	***19***	***Shoring***			$8,000,000
98	***20***	***Contamination***			
99	***21***	***User Defined Red Flag 1***			
100	***22***	***User Defined Red Flag 2***			
101	***23***	***User Defined Red Flag 3***			
102	***24***	***User Defined Red Flag 4***			
103	***25***	***User Defined Red Flag 5***			
104	***26***	***User Defined Red Flag 6***			
105	***27***	***User Defined Red Flag 7***			
106	***TOTAL - RED FLAGS***				$34,000,000
107					
108	***SUBTOTAL - CONSTRUCTION COST with Red Flags***				$421,290,000
109					
110	***MARKET ADJUSTMENT FACTOR***		0%	$421,290,000	$0
111	***SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor***				$421,290,000
112	***Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:***				
113	***Name of Process Reviewer***			Goodwin	Click for Rev
114	***Name of Estimator Reviewer***			Bredehoeft	
115	***MAXIMUM CONSTRUCTION COST***				$421,290,000
116					
117	***NON-CONSTRUCTION COSTS:***				
118	***Permitting***		2%	$421,290,000	$8,430,000
119	***Engineering***		10%	$421,290,000	$42,130,000
120	***Services During Construction***		8%	$421,290,000	$33,710,000
121	***Commissioning & Startup***		3%	$421,290,000	$12,640,000
122	***Land / ROW***		0%	$421,290,000	$0
123	***Legal / Admin***		0%	$421,290,000	$0
124	***Other Default Description***		0%	$421,290,000	$0
125	***SUBTOTAL - Non-Construction Costs***				$96,910,000
126					
127	***TOTAL - CAPITAL COST***				$518,200,000
128					
129	***Currency Conversion of TOTAL CAPITAL COST:***				
130		***Currency***	***Unit of Measure***	***Conversion Rate***	***Converted Amount***
131		None	U.S.Dollar	1	518,200,000

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Appendix B
Village Creek Opinion of Cost Summary

	A	B	C	D	E

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/201

Click for CPES | To Concrete Wall Thickness Help | t Summary Matri | To Unit Cost Database

Row	A	B	C	D	E
6	Project Capactiy: >>>	60.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Row	Field	Value
8	Project Name:	Village WWTP
9	Project Number:	458937
10	Project Manager:	Ken McGraw
11	Estimator:	Jamie Zivich
12	Project Description:	Jefferson County WW Asset Estimate
13	Project Location (City):	Birmingham
14	Project Location (State):	ALABAMA
15	Project Location (Country):	USA
16	Construction Start (Month):	Jan
17	Construction Start (Year):	2012
18	Construction Duration (months):	36
19	Mid-Point of Construction:	Jul/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distribution

This Report is for EXTERNAL Distributio

Row	Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT	Cost
22		Yes	Submersible IPS: Inf_PS	$20,390,000
23		Yes	Screening and Grit: Headworks	$6,130,000
24		Yes	Primary Sludge PS: Main	$1,250,000
25		Yes	Round PC: Main	$8,560,000
26		Yes	Aeration Basin: Main	$23,110,000
27		Yes	Blowers: Main	$5,150,000
28		Yes	Round SC: Main	$14,480,000
29		Yes	RAS WAS PS: Main	$7,200,000
30		Yes	Filters: Eff_Filter	$23,450,000
31		Yes	Fermenter: Gravity	$5,150,000
32		Yes	Silo AnDig: Meso	$25,110,000
33		Yes	O&M Building: Ops_Bldg	$1,770,000
34		Yes	U.D. Facility: Post_AB	$540,000
35		Yes	LPHO UV: Disin	$15,540,000
36		Yes	Concrete Clearwell: Inf_EQ	$43,200,000
37		Yes	Submersible IPS: Eff_PS	$6,970,000
38		Yes	Aerobic Digester: Blend_Tank	$810,000
39		Yes	Centrifuge Thick: CentrThick	$8,680,000
40		Yes	O&M Building: Maint_Bldg	$1,260,000
41		Yes	Emergency Generator: Gen	$13,190,000
42		Yes	Centrifuge Dew: Centrifuge	$5,541,306
43		Yes	Submersible IPS: Plnt_Drain	$1,110,000
44		Yes	Vertical Turbine PS: W3_System	$1,250,000
45				
46	SUBTOTAL - PROJECT COST			$239,841,306
47				
48	ADDITIONAL PROJECT COSTS:			

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	A	B	C	D	E
49	Demolition		0.0%		$0
50	Overall Sitework		8.0%		$19,190,000
51	Plant Computer System		1.0%		$2,400,000
52	Yard Electrical		5.0%		$12,000,000
53	Yard Piping		12.0%		$28,790,000
54	UD #1 Default Description		0.0%		$0
55	UD #2 Default Description		0.0%		$0
56	UD #3 Default Description		0.0%		$0
57	SUBTOTAL with Additional Project Costs				$302,221,306
58					
59	TAX:		0.00%	$302,221,306	$0
60	SUBTOTAL with Tax				$302,221,306
61					
62	CONTRACTOR MARKUPS:				
63	Overhead		10.0%	$302,221,306	$30,230,000
64	Subtotal				$332,451,306
65	Profit		5.0%	$332,451,306	$16,630,000
66	Subtotal				$349,081,306
67	Mob/Bonds/Insurance		5.0%	$349,081,306	$17,460,000
68	Subtotal				$366,541,306
69	Contingency		0.0%	$366,541,306	$0
70	SUBTOTAL with Markups				$366,541,306
71					
72	ESCALATION (to Mid-Point of Construction)		4.6%	$366,541,306	$16,870,000
73	SUBTOTAL with Escalation				$383,411,306
74					
75	LOCATION ADJUSTMENT FACTOR		87.4	$383,411,306	$335,110,000
76	SUBTOTAL - with Local Adjustment Factor				$335,110,000
77					
78	RED FLAGS:				
79	1	Rock Excavation			$10,000,000
80	2	Pile Foundations			$2,500,000
81	3	Seismic Foundations			
82	4	Dewatering Conditions			$3,500,000
83	5	Wetlands Mitigation			
84	6	Weather Impacts			
85	7	Depth of Structures			$5,000,000
86	8	Local Building Code Restrictions			
87	9	Coatings or Finishes			
88	10	Building or Architectural Considerations			$5,000,000
89	11	Client Material Preferences			
90	12	Client Equipment Preferences			
91	13	Piping Galleries, Piping Trenches, Piping Racks			
92	14	Yard Piping Complexity			
93	15	Existing Site Utilities (New, Retrofit, and Complexity)			
94	16	I & C Automation (New or Retrofit)			
95	17	Electrical Feed (New or Retrofit)			
96	18	Electrical Distribution			
97	19	Shoring			$8,000,000
98	20	Contamination			

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	A	B	C	D	E
99	21	User Defined Red Flag 1			
100	22	User Defined Red Flag 2			
101	23	User Defined Red Flag 3			
102	24	User Defined Red Flag 4			
103	25	User Defined Red Flag 5			
104	26	User Defined Red Flag 6			
105	27	User Defined Red Flag 7			
106	TOTAL - RED FLAGS				$34,000,000
107					
108	SUBTOTAL - CONSTRUCTION COST with Red Flags				$369,110,000
109					
110	MARKET ADJUSTMENT FACTOR		0%	$369,110,000	$0
111	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$369,110,000
112	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
113	Name of Process Reviewer			Goodwin	Click for Rev
114	Name of Estimator Reviewer			Bredehoeft	
115	MAXIMUM CONSTRUCTION COST				$369,110,000
116					
117	NON-CONSTRUCTION COSTS:				
118		Permitting	2.0%	$369,110,000	$7,390,000
119		Engineering	10.0%	$369,110,000	$36,920,000
120		Services During Construction	8.0%	$369,110,000	$29,530,000
121		Commissioning & Startup	3.0%	$369,110,000	$11,080,000
122		Land / ROW	0.0%	$369,110,000	$0
123		Legal / Admin	0.0%	$369,110,000	$0
124		Other Default Description	0.0%	$369,110,000	$0
125	SUBTOTAL - Non-Construction Costs				$84,920,000
126					
127	TOTAL - CAPITAL COST				$454,030,000
128					
129	Currency Conversion of TOTAL CAPITAL COST:				
130		Currency	Unit of Measure	Conversion Rate	Converted Amount
131		None	U.S.Dollar	1	454,030,000

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Appendix C
Five Mile Creek Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/201

Click for CPES | To Concrete Wall Thickness Help | Summary Matri | To Unit Cost Database

Project Capactiy: >>>	30.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	FIve Mile WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	30
Mid-Point of Construction:	Apr/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distribution

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: Inf_PS		$6,220,000
	Yes	Screening and Grit: Headworks		$3,880,000
	Yes	Aeration Basin: Main		$8,040,000
	Yes	Blowers: Main		$5,640,000
	Yes	Round SC: Main		$6,720,000
	Yes	RAS WAS PS: Main		$2,820,000
	Yes	Filters: Main		$13,440,000
	Yes	GBT: GBT		$3,740,000
	Yes	Aerobic Digester: AerDig1		$1,880,000
	Yes	O&M Building: Ops_Bldg		$1,770,000
	Yes	O&M Building: Maint_Bldg		$1,260,000
	Yes	Emergency Generator: Em_Gen		$3,870,000
	Yes	Concrete Clearwell: Inf_EQ		$18,410,000
	Yes	Submersible IPS: Filter_PS		$3,340,000
	Yes	U.D. Facility: Post_Aer		$250,000
	Yes	Aerobic Digester: AerDig2		$1,400,000
	Yes	Aerobic Digester: AerDig3		$1,420,000
	Yes	LPHO UV: Disinf		$8,230,000
	Yes	Centrifuge Dew: Centrifuge		$3,110,000
	Yes	Submersible IPS: Plnt_Drain		$820,000
	Yes	Vertical Turbine PS: W3_System		$950,000
SUBTOTAL - PROJECT COST				$97,210,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		5.0%		$4,870,000
Plant Computer System		1.0%		$980,000
Yard Electrical		5.0%		$4,870,000
Yard Piping		12.0%		$11,670,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0
SUBTOTAL with Additional Project Costs				$119,600,000
TAX:		0.00%	$119,600,000	$0
SUBTOTAL with Tax				$119,600,000
CONTRACTOR MARKUPS:				
Overhead		10.0%	$119,600,000	$11,960,000
Subtotal				$131,560,000
Profit		5.0%	$131,560,000	$6,580,000
Subtotal				$138,140,000

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	A	B	C	D	E
65	Mob/Bonds/Insurance		5.0%	$138,140,000	$6,910,000
66	Subtotal				$145,050,000
67	Contingency		0.0%	$145,050,000	$0
68	SUBTOTAL with Markups				$145,050,000
69					
70	ESCALATION (to Mid-Point of Construction		3.8%	$145,050,000	$5,520,000
71	SUBTOTAL with Escalation				$150,570,000
72					
73	LOCATION ADJUSTMENT FACTOR		87.4	$150,570,000	$131,600,000
74	SUBTOTAL - with Local Adjustment Factor				$131,600,000
75					
76	RED FLAGS:				
77	1	Rock Excavation			$5,000,000
78	2	Pile Foundations			$1,500,000
79	3	Seismic Foundations			
80	4	Dewatering Conditions			$2,000,000
81	5	Wetlands Mitigation			
82	6	Weather Impacts			
83	7	Depth of Structures			$1,500,000
84	8	Local Building Code Restrictions			
85	9	Coatings or Finishes			
86	10	Building or Architectural Considerations			$2,000,000
87	11	Client Material Preferences			
88	12	Client Equipment Preferences			
89	13	Piping Galleries, Piping Trenches, Piping Racks			
90	14	Yard Piping Complexity			
91	15	Existing Site Utilities (New, Retrofit, and Complexity)			
92	16	I & C Automation (New or Retrofit)			
93	17	Electrical Feed (New or Retrofit)			
94	18	Electrical Distribution			
95	19	Shoring			$2,500,000
96	20	Contamination			
97	21	User Defined Red Flag 1			
98	22	User Defined Red Flag 2			
99	23	User Defined Red Flag 3			
100	24	User Defined Red Flag 4			
101	25	User Defined Red Flag 5			
102	26	User Defined Red Flag 6			
103	27	User Defined Red Flag 7			
104	TOTAL - RED FLAGS				$14,500,000
105					
106	SUBTOTAL - CONSTRUCTION COST with Red Flags				$146,100,000
107					
108	MARKET ADJUSTMENT FACTOR		0%	$146,100,000	$0
109	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$146,100,000
110	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
111	Name of Process Reviewer			Goodwin	Click for Rev
112	Name of Estimator Reviewer			Bredehoeft	
113	MAXIMUM CONSTRUCTION COST				$146,100,000
114					
115	NON-CONSTRUCTION COSTS:				
116	Permitting		2.0%	$146,100,000	$2,930,000
117	Engineering		10.0%	$146,100,000	$14,610,000
118	Services During Construction		8.0%	$146,100,000	$11,690,000
119	Commissioning & Startup		3.0%	$146,100,000	$4,390,000
120	Land / ROW		0.0%	$146,100,000	$0
121	Legal / Admin		0.0%	$146,100,000	$0
122	Other Default Description		0.0%	$146,100,000	$0
123	SUBTOTAL - Non-Construction Costs				$33,620,000
124					
125	TOTAL - CAPITAL COST				$179,720,000
126					
127	Currency Conversion of TOTAL CAPITAL COST:				
128		Currency	Unit of Measure	Conversion Rate	Converted Amount
129		None	U.S.Dollar	1	179,720,000

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Appendix D
Cahaba River Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 8/16/201 | Click for CPES | To Concrete Wall Thickness Help | Summary Matri | To Unit Cost Database

Project Capactiy: >>>	12.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Cahaba WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Randy Boe
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	30
Mid-Point of Construction:	Apr/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: IPS		$9,500,000
	Yes	Screening and Grit: Headworks		$3,010,000
	Yes	Primary Sludge PS: Main		$630,000
	Yes	Round PC: Main		$2,570,000
	Yes	Aeration Basin: Main		$5,740,000
	Yes	Blowers: Main		$2,330,000
	Yes	Round SC: Main		$2,940,000
	Yes	RAS WAS PS: Main		$1,400,000
	Yes	Filters: Eff Filter		$6,780,000
	Yes	Fermenter: Gravity		$3,110,000
	Yes	GBT: GBT		$3,400,000
	Yes	Silo AnDig: Meso		$12,520,000
	Yes	Liquid Chemical: DEW FC		$310,000
	Yes	Centrifuge Dew: BFP		$2,670,000
	Yes	Aerobic Digester: Blend Tank		$620,000
	Yes	O&M Building: Ops Bldg		$1,770,000
	Yes	O&M Building: Maint Bldg		$1,260,000
	Yes	U.D. Facility: Post Aer		$80,000
	Yes	In-Plant PS: Flter Feed		$1,250,000
	Yes	Concrete Clearwell: Inf EQ		$11,040,000
	Yes	Emergency Generator: Stdby Gen		$1,220,000
	Yes	LPHO UV: UV Disinf		$3,350,000
	Yes	Liquid Chemical: SC Chem		$340,000
	Yes	Submersible IPS: Plnt Drain		$720,000
	Yes	Vertical Turbine PS: W3 System		$840,000
SUBTOTAL - PROJECT COST				$79,400,000
ADDITIONAL PROJECT COSTS:				
Demolition		0%		$0
Overall Sitework		8%		$6,360,000
Plant Computer System		1%		$800,000
Yard Electrical		8%		$6,360,000
Yard Piping		12%		$9,530,000
UD #1 Default Description		0%		$0
UD #2 Default Description		0%		$0
UD #3 Default Description		0%		$0
SUBTOTAL with Additional Project Costs				$102,450,000
TAX:		0.00%	$102,450,000	$0
SUBTOTAL with Tax				$102,450,000
CONTRACTOR MARKUPS:				

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	A	B	C	D	E
65	Overhead		10%	$102,450,000	$10,250,000
66	Subtotal				$112,700,000
67	Profit		5%	$112,700,000	$5,640,000
68	Subtotal				$118,340,000
69	Mob/Bonds/Insurance		5%	$118,340,000	$5,920,000
70	Subtotal				$124,260,000
71	Contingency		0%	$124,260,000	$0
72	SUBTOTAL with Markups				$124,260,000
73					
74	ESCALATION (to Mid-Point of Construction		3.8%	$124,260,000	$4,730,000
75	SUBTOTAL with Escalation				$128,990,000
76					
77	LOCATION ADJUSTMENT FACTOR		87.4	$128,990,000	$112,740,000
78	SUBTOTAL - with Local Adjustment Factor				$112,740,000
79					
80	RED FLAGS:				
81	1	Rock Excavation			$3,000,000
82	2	Pile Foundations			$1,000,000
83	3	Seismic Foundations			
84	4	Dewatering Conditions			$1,500,000
85	5	Wetlands Mitigation			
86	6	Weather Impacts			
87	7	Depth of Structures			$1,000,000
88	8	Local Building Code Restrictions			
89	9	Coatings or Finishes			
90	10	Building or Architectural Considerations			$2,000,000
91	11	Client Material Preferences			
92	12	Client Equipment Preferences			
93	13	Piping Galleries, Piping Trenches, Piping Racks			
94	14	Yard Piping Complexity			
95	15	Existing Site Utilities (New, Retrofit, and Complexity)			
96	16	I & C Automation (New or Retrofit)			
97	17	Electrical Feed (New or Retrofit)			
98	18	Electrical Distribution			
99	19	Shoring			$1,000,000
100	20	Contamination			
101	21	User Defined Red Flag 1			
102	22	User Defined Red Flag 2			
103	23	User Defined Red Flag 3			
104	24	User Defined Red Flag 4			
105	25	User Defined Red Flag 5			
106	26	User Defined Red Flag 6			
107	27	User Defined Red Flag 7			
108	TOTAL - RED FLAGS				$9,500,000
109					
110	SUBTOTAL - CONSTRUCTION COST with Red Flags				$122,240,000
111					
112	MARKET ADJUSTMENT FACTOR		0%	$122,240,000	$0
113	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$122,240,000
114	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
115	Name of Process Reviewer			Goodwin	Click for Rev
116	Name of Estimator Reviewer			Bredehoeft	
117	MAXIMUM CONSTRUCTION COST				$122,240,000
118					
119	NON-CONSTRUCTION COSTS:				
120	Permitting		2%	$122,240,000	$2,450,000
121	Engineering		10%	$122,240,000	$12,230,000
122	Services During Construction		8%	$122,240,000	$9,780,000
123	Commissioning & Startup		3%	$122,240,000	$3,670,000
124	Land / ROW		0%	$122,240,000	$0
125	Legal / Admin		0%	$122,240,000	$0
126	Other Default Description		0%	$122,240,000	$0
127	SUBTOTAL - Non-Construction Costs				$28,130,000
128					
129	TOTAL - CAPITAL COST				$150,370,000
130					
131	Currency Conversion of TOTAL CAPITAL COST:				
132		Currency	Unit of Measure	Conversion Rate	Converted Amount
133		None	U.S.Dollar	1	150,370,000

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Appendix E
Leeds Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012

Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	2.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Leeds WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	18
Mid-Point of Construction:	Oct/2012

Roundup to the nearest: $10,000

This Report is for INTERNAL Distribution

This Report is for EXTERNAL Distribution

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: IPS		$2,380,000
	Yes	Screening and Grit: Headworks		$1,610,000
	Yes	Aeration Basin: Main		$2,210,000
	Yes	Blowers: Main		$1,860,000
	Yes	Round SC: Main		$1,530,000
	Yes	RAS WAS PS: Main		$1,140,000
	Yes	Cloth Disk Filter: Main		$1,830,000
	Yes	GBT: GBT		$1,400,000
	Yes	Aerobic Digester: AerDig1		$610,000
	Yes	WWTP BFP: BFP		$1,610,000
	Yes	LPHO UV: Disinf		$1,420,000
	Yes	Aerobic Digester: AerDig2		$540,000
	Yes	Aerobic Digester: AerDig3		$620,000
	Yes	Concrete Clearwell: Inf EQ		$1,510,000
	Yes	U.D. Facility: Post Aer		$30,000
	Yes	Vertical Turbine PS: PlntWtrSys		$710,000
	Yes	Emergency Generator: Stdby Gen		$370,000
	Yes	O&M Building: Ops Bldg		$1,010,000
	Yes	O&M Building: Maint Bldg		$760,000
	Yes	Submersible IPS: Plnt Drain		$530,000
	Yes	Liquid Chemical: FerricSyst		$380,000
SUBTOTAL - PROJECT COST				$24,060,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		5.0%		$1,210,000
Plant Computer System		1.0%		$250,000
Yard Electrical		6.0%		$1,450,000
Yard Piping		12.0%		$2,890,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0

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	A	B	C	D	E
55	***SUBTOTAL with Additional Project Costs***				**$29,860,000**
56					
57	***TAX:***		**0.00%**	**$29,860,000**	**$0**
58	***SUBTOTAL with Tax***				**$29,860,000**
59					
60	***CONTRACTOR MARKUPS:***				
61	***Overhead***		**10.0%**	**$29,860,000**	**$2,990,000**
62	***Subtotal***				**$32,850,000**
63	***Profit***		**5.0%**	**$32,850,000**	**$1,650,000**
64	***Subtotal***				**$34,500,000**
65	***Mob/Bonds/Insurance***		**5.0%**	**$34,500,000**	**$1,730,000**
66	***Subtotal***				**$36,230,000**
67	***Contingency***		**0.0%**	**$36,230,000**	**$0**
68	***SUBTOTAL with Markups***				**$36,230,000**
69					
70	***ESCALATION (to Mid-Point of Construction)***		**2.3%**	**$36,230,000**	**$840,000**
71	***SUBTOTAL with Escalation***				**$37,070,000**
72					
73	***LOCATION ADJUSTMENT FACTOR***		**87.4**	**$37,070,000**	**$32,400,000**
74	***SUBTOTAL - with Local Adjustment Factor***				**$32,400,000**
75					
76	***RED FLAGS:***				
77	***1***	***Rock Excavation***			**$500,000**
78	***2***	***Pile Foundations***			**$125,000**
79	***3***	***Seismic Foundations***			
80	***4***	***Dewatering Conditions***			**$250,000**
81	***5***	***Wetlands Mitigation***			
82	***6***	***Weather Impacts***			
83	***7***	***Depth of Structures***			**$125,000**
84	***8***	***Local Building Code Restrictions***			
85	***9***	***Coatings or Finishes***			
86	***10***	***Building or Architectural Considerations***			**$250,000**
87	***11***	***Client Material Preferences***			
88	***12***	***Client Equipment Preferences***			
89	***13***	***Piping Galleries, Piping Trenches, Piping Racks***			
90	***14***	***Yard Piping Complexity***			
91	***15***	***Existing Site Utilities (New, Retrofit, and Complexity)***			
92	***16***	***I & C Automation (New or Retrofit)***			
93	***17***	***Electrical Feed (New or Retrofit)***			
94	***18***	***Electrical Distribution***			
95	***19***	***Shoring***			**$125,000**
96	***20***	***Contamination***			
97	***21***	***User Defined Red Flag 1***			
98	***22***	***User Defined Red Flag 2***			
99	***23***	***User Defined Red Flag 3***			
100	***24***	***User Defined Red Flag 4***			
101	***25***	***User Defined Red Flag 5***			
102	***26***	***User Defined Red Flag 6***			
103	***27***	***User Defined Red Flag 7***			
104	***TOTAL - RED FLAGS***				**$1,380,000**
105					
106	***SUBTOTAL - CONSTRUCTION COST with Red Flags***				**$33,780,000**
107					
108	***MARKET ADJUSTMENT FACTOR***		**0%**	**$33,780,000**	**$0**
109	***SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor***				**$33,780,000**
110	***Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:***				
111	***Name of Process Reviewer***			**Goodwin**	**Click for Reviewe**
112	***Name of Estimator Reviewer***			**Bredehoeft**	

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	A	B	C	D	E
113	***MAXIMUM CONSTRUCTION COST***				**$33,780,000**
114					
115	***NON-CONSTRUCTION COSTS:***				
116	***Permitting***		**2.0%**	**$33,780,000**	**$680,000**
117	***Engineering***		**10.0%**	**$33,780,000**	**$3,380,000**
118	***Services During Construction***		**8.0%**	**$33,780,000**	**$2,710,000**
119	***Commissioning & Startup***		**3.0%**	**$33,780,000**	**$1,020,000**
120	***Land / ROW***		**0.0%**	**$33,780,000**	**$0**
121	***Legal / Admin***		**0.0%**	**$33,780,000**	**$0**
122	***Other Default Description***		**0.0%**	**$33,780,000**	**$0**
123	***SUBTOTAL - Non-Construction Costs***				**$7,790,000**
124					
125	***TOTAL - CAPITAL COST***				**$41,570,000**
126					
127	***Currency Conversion of TOTAL CAPITAL COST:***				
128		***Currency***	***Unit of Measure***	***Conversion Rate***	***Converted Amount***
129		**None**	**U.S.Dollar**	**1**	**41,570,000**

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Appendix F
Turkey Creek Opinion of Cost Summary

C H2M HILL P arametric Cost E stimating S ystem (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	5.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Turkey WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	24
Mid-Point of Construction:	Jan/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT	Cost
	Yes	Submersible IPS: Inf PS	$2,240,000
	Yes	Screening and Grit: Headworks	$2,170,000
	Yes	Aeration Basin: Main	$2,850,000
	Yes	Blowers: Main	$2,400,000
	Yes	Round SC: Main	$2,530,000
	Yes	RAS WAS PS: Main	$1,770,000
	Yes	Cloth Disk Filter: Main	$3,120,000
	Yes	GBT: GBT	$1,360,000
	Yes	Aerobic Digester: AerDig1	$580,000
	Yes	Aerobic Digester: AerDig2	$560,000
	Yes	Aerobic Digester: AerDig3	$650,000
	Yes	WWTP BFP: BFP	$1,400,000
	Yes	O&M Building: Ops Bldg	$1,010,000
	Yes	O&M Building: Main Bldg	$760,000
	Yes	U.D. Facility: Post Aer	$80,000
	Yes	LPHO UV: Disinf	$3,890,000
	Yes	Vertical Turbine PS: WaterSyst	$770,000
	Yes	Emergency Generator: EM Gen	$780,000
	Yes	Concrete Clearwell: Inf EQ	$6,720,000
	Yes	Submersible IPS: Plnt Drain	$570,000
	Yes	Liquid Chemical: FerricSyst	$380,000

SUBTOTAL - PROJECT COST		$36,590,000
ADDITIONAL PROJECT COSTS:		
Demolition	0.0%	$0
Overall Sitework	5.0%	$1,830,000
Plant Computer System	1.0%	$370,000
Yard Electrical	8.0%	$2,930,000
Yard Piping	12.0%	$4,400,000
UD #1 Default Description	0.0%	$0
UD #2 Default Description	0.0%	$0
UD #3 Default Description	0.0%	$0

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	A	B	C	D	E
55	***SUBTOTAL with Additional Project Costs***				**$46,120,000**
56					
57	***TAX:***		**0.00%**	**$46,120,000**	**$0**
58	***SUBTOTAL with Tax***				**$46,120,000**
59					
60	***CONTRACTOR MARKUPS:***				
61	***Overhead***		**10.0%**	**$46,120,000**	**$4,620,000**
62	***Subtotal***				**$50,740,000**
63	***Profit***		**5.0%**	**$50,740,000**	**$2,540,000**
64	***Subtotal***				**$53,280,000**
65	***Mob/Bonds/Insurance***		**5.0%**	**$53,280,000**	**$2,670,000**
66	***Subtotal***				**$55,950,000**
67	***Contingency***		**0.0%**	**$55,950,000**	**$0**
68	***SUBTOTAL with Markups***				**$55,950,000**
69					
70	***ESCALATION (to Mid-Point of Construction)***		**3.0%**	**$55,950,000**	**$1,680,000**
71	***SUBTOTAL with Escalation***				**$57,630,000**
72					
73	***LOCATION ADJUSTMENT FACTOR***		**87.4**	**$57,630,000**	**$50,370,000**
74	***SUBTOTAL - with Local Adjustment Factor***				**$50,370,000**
75					
76	***RED FLAGS:***				
77	***1***	***Rock Excavation***			**$1,000,000**
78	***2***	***Pile Foundations***			**$250,000**
79	***3***	***Seismic Foundations***			
80	***4***	***Dewatering Conditions***			**$500,000**
81	***5***	***Wetlands Mitigation***			
82	***6***	***Weather Impacts***			
83	***7***	***Depth of Structures***			**$250,000**
84	***8***	***Local Building Code Restrictions***			
85	***9***	***Coatings or Finishes***			
86	***10***	***Building or Architectural Considerations***			**$500,000**
87	***11***	***Client Material Preferences***			
88	***12***	***Client Equipment Preferences***			
89	***13***	***Piping Galleries, Piping Trenches, Piping Racks***			
90	***14***	***Yard Piping Complexity***			
91	***15***	***Existing Site Utilities (New, Retrofit, and Complexity)***			
92	***16***	***I & C Automation (New or Retrofit)***			
93	***17***	***Electrical Feed (New or Retrofit)***			
94	***18***	***Electrical Distribution***			
95	***19***	***Shoring***			**$250,000**
96	***20***	***Contamination***			
97	***21***	***User Defined Red Flag 1***			
98	***22***	***User Defined Red Flag 2***			
99	***23***	***User Defined Red Flag 3***			
100	***24***	***User Defined Red Flag 4***			
101	***25***	***User Defined Red Flag 5***			
102	***26***	***User Defined Red Flag 6***			
103	***27***	***User Defined Red Flag 7***			
104	***TOTAL - RED FLAGS***				**$2,750,000**
105					
106	***SUBTOTAL - CONSTRUCTION COST with Red Flags***				**$53,120,000**
107					
108	***MARKET ADJUSTMENT FACTOR***		**0%**	**$53,120,000**	**$0**
109	***SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor***				**$53,120,000**
110	***Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:***				
111	***Name of Process Reviewer***			**Goodwin**	**Click for Reviewe**
112	***Name of Estimator Reviewer***			**Bredehoeft**	

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Case 11-05736-TBB9 Doc 2216-45 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc
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	A	B	C	D	E
113	***MAXIMUM CONSTRUCTION COST***				**$53,120,000**
114					
115	***NON-CONSTRUCTION COSTS:***				
116	***Permitting***		**2.0%**	**$53,120,000**	**$1,070,000**
117	***Engineering***		**10.0%**	**$53,120,000**	**$5,320,000**
118	***Services During Construction***		**8.0%**	**$53,120,000**	**$4,250,000**
119	***Commissioning & Startup***		**3.0%**	**$53,120,000**	**$1,600,000**
120	***Land / ROW***		**0.0%**	**$53,120,000**	**$0**
121	***Legal / Admin***		**0.0%**	**$53,120,000**	**$0**
122	***Other Default Description***		**0.0%**	**$53,120,000**	**$0**
123	***SUBTOTAL - Non-Construction Costs***				**$12,240,000**
124					
125	***TOTAL - CAPITAL COST***				**$65,360,000**
126					
127	***Currency Conversion of TOTAL CAPITAL COST:***				
128		***Currency***	***Unit of Measure***	***Conversion Rate***	***Converted Amount***
129		**None**	**U.S.Dollar**	**1**	**65,360,000**

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R-002712
Case 11-05736-TBB9 Doc 2216-45 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc C.344_Part200 Page 36 of 53

Appendix G
Trussville Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	4.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Trussville WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	24
Mid-Point of Construction:	Jan/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT	Cost
	Yes	Submersible IPS: Inf PS	$1,530,000
	Yes	Screening and Grit: Headworks	$2,010,000
	Yes	Aeration Basin: Main	$2,980,000
	Yes	Blowers: Main	$2,180,000
	Yes	Round SC: Main	$2,400,000
	Yes	RAS WAS PS: Main	$1,550,000
	Yes	Cloth Disk Filter: Main	$2,880,000
	Yes	GBT: GBT	$2,020,000
	Yes	Aerobic Digester: AerDig1	$680,000
	Yes	Aerobic Digester: AerDig2	$660,000
	Yes	Aerobic Digester: AerDig3	$720,000
	Yes	WWTP BFP: BFP	$1,550,000
	Yes	LPHO UV: Disinf	$2,120,000
	Yes	O&M Building: Ops Bldg	$1,010,000
	Yes	O&M Building: Maint Bldg	$760,000
	Yes	Emergency Generator: EM Gen	$790,000
	Yes	Vertical Turbine PS: WtrSystm	$780,000
	Yes	U.D. Facility: Post Aer	$30,000
	Yes	Liquid Chemical: ChemFeed	$570,000
	Yes	Submersible IPS: Plnt Drain	$560,000
SUBTOTAL - PROJECT COST			$27,780,000
ADDITIONAL PROJECT COSTS:			
Demolition		0.0%	$0
Overall Sitework		5.0%	$1,390,000
Plant Computer System		1.0%	$280,000
Yard Electrical		8.0%	$2,230,000
Yard Piping		12.0%	$3,340,000
UD #1 Default Description		0.0%	$0
UD #2 Default Description		0.0%	$0
UD #3 Default Description		0.0%	$0
SUBTOTAL with Additional Project Costs			$35,020,000

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R-002716

	A	B	C	D	E
55					
56	***TAX:***		**0.00%**	**$35,020,000**	**$0**
57	***SUBTOTAL with Tax***				**$35,020,000**
58					
59	***CONTRACTOR MARKUPS:***				
60	***Overhead***		**10.0%**	**$35,020,000**	**$3,510,000**
61	***Subtotal***				**$38,530,000**
62	***Profit***		**5.0%**	**$38,530,000**	**$1,930,000**
63	***Subtotal***				**$40,460,000**
64	***Mob/Bonds/Insurance***		**5.0%**	**$40,460,000**	**$2,030,000**
65	***Subtotal***				**$42,490,000**
66	***Contingency***		**0.0%**	**$42,490,000**	**$0**
67	***SUBTOTAL with Markups***				**$42,490,000**
68					
69	***ESCALATION (to Mid-Point of Construction)***		**3.0%**	**$42,490,000**	**$1,280,000**
70	***SUBTOTAL with Escalation***				**$43,770,000**
71					
72	***LOCATION ADJUSTMENT FACTOR***		**87.4**	**$43,770,000**	**$38,260,000**
73	***SUBTOTAL - with Local Adjustment Factor***				**$38,260,000**
74					
75	***RED FLAGS:***				
76	***1***	***Rock Excavation***			**$1,000,000**
77	***2***	***Pile Foundations***			**$250,000**
78	***3***	***Seismic Foundations***			
79	***4***	***Dewatering Conditions***			**$500,000**
80	***5***	***Wetlands Mitigation***			
81	***6***	***Weather Impacts***			
82	***7***	***Depth of Structures***			
83	***8***	***Local Building Code Restrictions***			
84	***9***	***Coatings or Finishes***			
85	***10***	***Building or Architectural Considerations***			**$500,000**
86	***11***	***Client Material Preferences***			
87	***12***	***Client Equipment Preferences***			
88	***13***	***Piping Galleries, Piping Trenches, Piping Racks***			
89	***14***	***Yard Piping Complexity***			
90	***15***	***Existing Site Utilities (New, Retrofit, and Complexity)***			
91	***16***	***I & C Automation (New or Retrofit)***			
92	***17***	***Electrical Feed (New or Retrofit)***			
93	***18***	***Electrical Distribution***			
94	***19***	***Shoring***			**$250,000**
95	***20***	***Contamination***			
96	***21***	***User Defined Red Flag 1***			
97	***22***	***User Defined Red Flag 2***			
98	***23***	***User Defined Red Flag 3***			
99	***24***	***User Defined Red Flag 4***			
100	***25***	***User Defined Red Flag 5***			
101	***26***	***User Defined Red Flag 6***			
102	***27***	***User Defined Red Flag 7***			
103	***TOTAL - RED FLAGS***				**$2,500,000**
104					
105	***SUBTOTAL - CONSTRUCTION COST with Red Flags***				**$40,760,000**
106					
107	***MARKET ADJUSTMENT FACTOR***		**0%**	**$40,760,000**	**$0**
108	***SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor***				**$40,760,000**
109	***Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:***				
110	***Name of Process Reviewer***			**Goodwin**	**Click for Reviewe**
111	***Name of Estimator Reviewer***			**Bredehoeft**	

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	A	B	C	D	E
112	***MAXIMUM CONSTRUCTION COST***				**$40,760,000**
113					
114	***NON-CONSTRUCTION COSTS:***				
115		***Permitting***	**2.0%**	**$40,760,000**	**$820,000**
116		***Engineering***	**10.0%**	**$40,760,000**	**$4,080,000**
117		***Services During Construction***	**8.0%**	**$40,760,000**	**$3,270,000**
118		***Commissioning & Startup***	**3.0%**	**$40,760,000**	**$1,230,000**
119		***Land / ROW***	**0.0%**	**$40,760,000**	**$0**
120		***Legal / Admin***	**0.0%**	**$40,760,000**	**$0**
121		***Other Default Description***	**0.0%**	**$40,760,000**	**$0**
122	***SUBTOTAL - Non-Construction Costs***				**$9,400,000**
123					
124	***TOTAL - CAPITAL COST***				**$50,160,000**
125					
126	***Currency Conversion of TOTAL CAPITAL COST:***				
127		***Currency***	***Unit of Measure***	***Conversion Rate***	***Converted Amount***
128		**None**	**U.S.Dollar**	**1**	**50,160,000**

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Appendix H
Prudes Creek Opinion of Cost Summary

C H2M HILL P arametric Cost E stimating S ystem (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	0.90	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Prudes WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	18
Mid-Point of Construction:	Oct/2012

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: Inf_PS		$1,040,000
	Yes	Screening and Grit: Headworks		$1,060,000
	Yes	Aeration Basin: Main		$840,000
	Yes	Blowers: Main		$980,000
	Yes	Round SC: Main		$1,080,000
	Yes	RAS WAS PS: Main		$960,000
	Yes	Cloth Disk Filter: Main		$1,000,000
	Yes	GBT: GBT		$770,000
	Yes	Aerobic Digester: AerDig1		$200,000
	Yes	Aerobic Digester: AerDig2		$200,000
	Yes	Aerobic Digester: AerDig3		$200,000
	Yes	WWTP BFP: BFP		$830,000
	Yes	O&M Building: Ops_Bldg		$760,000
	Yes	O&M Building: Main_Bldg		$760,000
	Yes	U.D. Facility: Post_Aer		$30,000
	Yes	Emergency Generator: EM_Gen		$280,000
	Yes	LPHO UV: Disinf		$950,000
	Yes	U.D. Facility: W3_System		$160,000
	Yes	Submersible IPS: Plnt_Drain		$320,000
SUBTOTAL - PROJECT COST				$12,420,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		5.0%		$630,000
Plant Computer System		1.0%		$130,000
Yard Electrical		8.0%		$1,000,000
Yard Piping		12.0%		$1,500,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0
SUBTOTAL with Additional Project Costs				$15,680,000
TAX:		0.00%	$15,680,000	$0
SUBTOTAL with Tax				$15,680,000
CONTRACTOR MARKUPS:				
Overhead		10.0%	$15,680,000	$1,570,000
Subtotal				$17,250,000
Profit		5.0%	$17,250,000	$870,000
Subtotal				$18,120,000
Mob/Bonds/Insurance		5.0%	$18,120,000	$910,000

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	A	B	C	D	E
64	*Subtotal*				$19,030,000
65	*Contingency*		0.0%	$19,030,000	$0
66	*SUBTOTAL with Markups*				$19,030,000
67					
68	*ESCALATION (to Mid-Point of Construction*		2.3%	$19,030,000	$440,000
69	*SUBTOTAL with Escalation*				$19,470,000
70					
71	*LOCATION ADJUSTMENT FACTOR*		87.4	$19,470,000	$17,020,000
72	*SUBTOTAL - with Local Adjustment Factor*				$17,020,000
73					
74	*RED FLAGS:*				
75	*1*	*Rock Excavation*			$750,000
76	*2*	*Pile Foundations*			$150,000
77	*3*	*Seismic Foundations*			
78	*4*	*Dewatering Conditions*			$250,000
79	*5*	*Wetlands Mitigation*			
80	*6*	*Weather Impacts*			
81	*7*	*Depth of Structures*			
82	*8*	*Local Building Code Restrictions*			
83	*9*	*Coatings or Finishes*			
84	*10*	*Building or Architectural Considerations*			$250,000
85	*11*	*Client Material Preferences*			
86	*12*	*Client Equipment Preferences*			
87	*13*	*Piping Galleries, Piping Trenches, Piping Racks*			
88	*14*	*Yard Piping Complexity*			
89	*15*	*Existing Site Utilities (New, Retrofit, and Complexity)*			
90	*16*	*I & C Automation (New or Retrofit)*			
91	*17*	*Electrical Feed (New or Retrofit)*			
92	*18*	*Electrical Distribution*			
93	*19*	*Shoring*			$250,000
94	*20*	*Contamination*			
95	*21*	*User Defined Red Flag 1*			
96	*22*	*User Defined Red Flag 2*			
97	*23*	*User Defined Red Flag 3*			
98	*24*	*User Defined Red Flag 4*			
99	*25*	*User Defined Red Flag 5*			
100	*26*	*User Defined Red Flag 6*			
101	*27*	*User Defined Red Flag 7*			
102	*TOTAL - RED FLAGS*				$1,650,000
103					
104	*SUBTOTAL - CONSTRUCTION COST with Red Flags*				$18,670,000
105					
106	*MARKET ADJUSTMENT FACTOR*		0%	$18,670,000	$0
107	*SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor*				$18,670,000
108	*Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:*				
109	*Name of Process Reviewer*			Goodwin	Click for Reviewe
110	*Name of Estimator Reviewer*			Bredehoeft	
111	*MAXIMUM CONSTRUCTION COST*				$18,670,000
112					
113	*NON-CONSTRUCTION COSTS:*				
114	*Permitting*		2.0%	$18,670,000	$380,000
115	*Engineering*		10.0%	$18,670,000	$1,870,000
116	*Services During Construction*		8.0%	$18,670,000	$1,500,000
117	*Commissioning & Startup*		3.0%	$18,670,000	$570,000
118	*Land / ROW*		0.0%	$18,670,000	$0
119	*Legal / Admin*		0.0%	$18,670,000	$0
120	*Other Default Description*		0.0%	$18,670,000	$0
121	*SUBTOTAL - Non-Construction Costs*				$4,320,000
122					
123	*TOTAL - CAPITAL COST*				$22,990,000
124					
125	*Currency Conversion of TOTAL CAPITAL COST:*				
126		*Currency*	*Unit of Measure*	*Conversion Rate*	*Converted Amount*
127		None	U.S.Dollar	1	22,990,000

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Case 11-05736-TBB9 Doc 2216-45 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc
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Appendix I
Warrior Opinion of Cost Summary

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	0.10	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Warrior WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	18
Mid-Point of Construction:	Oct/2012

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio
This Report is for EXTERNAL Distributic

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: Inf_PS		$380,000
	Yes	Screening and Grit: Headworks		$500,000
	Yes	Aeration Basin: Main		$650,000
	Yes	Blowers: Main		$910,000
	Yes	Round SC: Main		$420,000
	Yes	RAS WAS PS: Main		$470,000
	Yes	Cloth Disk Filter: Main		$480,000
	Yes	Aerobic Digester: AerDig1		$270,000
	Yes	Aerobic Digester: AerDig2		$270,000
	Yes	WWTP BFP: BFP		$840,000
	Yes	O&M Building: Ops_Bldg		$510,000
	Yes	O&M Building: Main_Bldg		$380,000
	Yes	Emergency Generator: EM_Gen		$190,000
	Yes	U.D. Facility: Post_Aer		$20,000
	Yes	LPHO UV: Disinf		$370,000
	Yes	U.D. Facility: W3_System		$90,000
	Yes	U.D. Facility: Plnt_Drain		$90,000
SUBTOTAL - PROJECT COST				$6,840,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		8.0%		$550,000
Plant Computer System		1.0%		$70,000
Yard Electrical		10.0%		$690,000
Yard Piping		12.0%		$830,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0
SUBTOTAL with Additional Project Costs				$8,980,000
TAX:		0.00%	$8,980,000	$0
SUBTOTAL with Tax				$8,980,000
CONTRACTOR MARKUPS:				
Overhead		10.0%	$8,980,000	$900,000
Subtotal				$9,880,000
Profit		5.0%	$9,880,000	$500,000
Subtotal				$10,380,000
Mob/Bonds/Insurance		5.0%	$10,380,000	$520,000
Subtotal				$10,900,000
Contingency		0.0%	$10,900,000	$0

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	A	B	C	D	E
64	***SUBTOTAL with Markups***				$10,900,000
65					
66	***ESCALATION (to Mid-Point of Construction***		2.3%	$10,900,000	$260,000
67	***SUBTOTAL with Escalation***				$11,160,000
68					
69	***LOCATION ADJUSTMENT FACTOR***		87.4	$11,160,000	$9,760,000
70	***SUBTOTAL - with Local Adjustment Factor***				$9,760,000
71					
72	***RED FLAGS:***				
73	*1*	*Rock Excavation*			$400,000
74	*2*	*Pile Foundations*			$100,000
75	*3*	*Seismic Foundations*			
76	*4*	*Dewatering Conditions*			$100,000
77	*5*	*Wetlands Mitigation*			
78	*6*	*Weather Impacts*			
79	*7*	*Depth of Structures*			
80	*8*	*Local Building Code Restrictions*			
81	*9*	*Coatings or Finishes*			
82	*10*	*Building or Architectural Considerations*			$150,000
83	*11*	*Client Material Preferences*			
84	*12*	*Client Equipment Preferences*			
85	*13*	*Piping Galleries, Piping Trenches, Piping Racks*			
86	*14*	*Yard Piping Complexity*			
87	*15*	*Existing Site Utilities (New, Retrofit, and Complexity)*			
88	*16*	*I & C Automation (New or Retrofit)*			
89	*17*	*Electrical Feed (New or Retrofit)*			
90	*18*	*Electrical Distribution*			
91	*19*	*Shoring*			$50,000
92	*20*	*Contamination*			
93	*21*	*User Defined Red Flag 1*			
94	*22*	*User Defined Red Flag 2*			
95	*23*	*User Defined Red Flag 3*			
96	*24*	*User Defined Red Flag 4*			
97	*25*	*User Defined Red Flag 5*			
98	*26*	*User Defined Red Flag 6*			
99	*27*	*User Defined Red Flag 7*			
100	***TOTAL - RED FLAGS***				$800,000
101					
102	***SUBTOTAL - CONSTRUCTION COST with Red Flags***				$10,560,000
103					
104	***MARKET ADJUSTMENT FACTOR***		0%	$10,560,000	$0
105	***SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor***				$10,560,000
106	***Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:***				
107	***Name of Process Reviewer***			Goodwin	Click for Reviewe
108	***Name of Estimator Reviewer***			Bredehoeft	
109	***MAXIMUM CONSTRUCTION COST***				$10,560,000
110					
111	***NON-CONSTRUCTION COSTS:***				
112	***Permitting***		2.0%	$10,560,000	$220,000
113	***Engineering***		10.0%	$10,560,000	$1,060,000
114	***Services During Construction***		8.0%	$10,560,000	$850,000
115	***Commissioning & Startup***		3.0%	$10,560,000	$320,000
116	***Land / ROW***		0.0%	$10,560,000	$0
117	***Legal / Admin***		0.0%	$10,560,000	$0
118	***Other Default Description***		0.0%	$10,560,000	$0
119	***SUBTOTAL - Non-Construction Costs***				$2,450,000
120					
121	***TOTAL - CAPITAL COST***				$13,010,000
122					
123	***Currency Conversion of TOTAL CAPITAL COST:***				
124		*Currency*	*Unit of Measure*	*Conversion Rate*	*Converted Amount*
125		None	U.S.Dollar	1	13,010,000

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R-002727
Case 11-05736-TBB9 Doc 2216-45 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc
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Appendix J
Valley Creek Opinion of Cost Summary, Plant Sizing Based on Current 20-Year Flow Projections

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	35.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Valley Creek WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	36
Mid-Point of Construction:	Jul/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: Inf PS		$6,680,000
	Yes	Screening and Grit: Headworks		$5,690,000
	Yes	Primary Sludge PS: Main		$1,020,000
	Yes	Round PC: Main		$6,250,000
	Yes	Aeration Basin: Main		$18,780,000
	Yes	Blowers: Main		$3,750,000
	Yes	Round SC: Main		$12,170,000
	Yes	RAS WAS PS: Main		$3,940,000
	Yes	Filters: Eff Filter		$18,140,000
	Yes	Fermenter: Gravity		$3,240,000
	Yes	Centrifuge Thick: GBT		$3,420,000
	Yes	Silo AnDig: Meso		$17,350,000
	Yes	Centrifuge Dew: BFP		$3,730,000
	Yes	O&M Building: Ops Bldg		$1,510,000
	Yes	O&M Building: Main Bldg		$2,020,000
	Yes	Concrete Clearwell: Inf EQ		$56,790,000
	Yes	LPHO UV: Disinf		$13,250,000
	Yes	Submersible IPS: Eff PS		$5,330,000
	Yes	Submersible IPS: Plnt Drain		$1,000,000
	Yes	Vertical Turbine PS: W3 System		$800,000
	Yes	Aerobic Digester: Blend Tank		$670,000
	Yes	U.D. Facility: Post Aer		$370,000
	Yes	Emergency Generator: EM Gen		$7,020,000
SUBTOTAL - PROJECT COST				$192,920,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		5.0%		$9,650,000
Plant Computer System		1.0%		$1,930,000
Yard Electrical		6.0%		$11,580,000
Yard Piping		12.0%		$23,160,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0
SUBTOTAL with Additional Project Costs				$239,240,000
TAX:		0.00%	$239,240,000	$0
SUBTOTAL with Tax				$239,240,000
CONTRACTOR MARKUPS:				
Overhead		10.0%	$239,240,000	$23,930,000
Subtotal				$263,170,000

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R-002730
Case 11-05736-TBB9 Doc 2216-46 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc C.344_Part201 Page 1 of 11

	A	B	C	D	E
65	Profit		5.0%	$263,170,000	$13,160,000
66	Subtotal				$276,330,000
67	Mob/Bonds/Insurance		5.0%	$276,330,000	$13,820,000
68	Subtotal				$290,150,000
69	Contingency		0.0%	$290,150,000	$0
70	SUBTOTAL with Markups				$290,150,000
71					
72	ESCALATION (to Mid-Point of Construction):		4.6%	$290,150,000	$13,350,000
73	SUBTOTAL with Escalation				$303,500,000
74					
75	LOCATION ADJUSTMENT FACTOR		87.4	$303,500,000	$265,260,000
76	SUBTOTAL - with Local Adjustment Factor				$265,260,000
77					
78	RED FLAGS:				
79	1	Rock Excavation			$5,000,000
80	2	Pile Foundations			$1,250,000
81	3	Seismic Foundations			
82	4	Dewatering Conditions			$1,750,000
83	5	Wetlands Mitigation			
84	6	Weather Impacts			
85	7	Depth of Structures			$2,500,000
86	8	Local Building Code Restrictions			
87	9	Coatings or Finishes			
88	10	Building or Architectural Considerations			$2,500,000
89	11	Client Material Preferences			
90	12	Client Equipment Preferences			
91	13	Piping Galleries, Piping Trenches, Piping Racks			
92	14	Yard Piping Complexity			
93	15	Existing Site Utilities (New, Retrofit, and Complexity)			
94	16	I & C Automation (New or Retrofit)			
95	17	Electrical Feed (New or Retrofit)			
96	18	Electrical Distribution			
97	19	Shoring			$4,000,000
98	20	Contamination			
99	21	User Defined Red Flag 1			
100	22	User Defined Red Flag 2			
101	23	User Defined Red Flag 3			
102	24	User Defined Red Flag 4			
103	25	User Defined Red Flag 5			
104	26	User Defined Red Flag 6			
105	27	User Defined Red Flag 7			
106	TOTAL - RED FLAGS				$17,000,000
107					
108	SUBTOTAL - CONSTRUCTION COST with Red Flags				$282,260,000
109					
110	MARKET ADJUSTMENT FACTOR		0%	$282,260,000	$0
111	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$282,260,000
112	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
113	Name of Process Reviewer			Goodwin	Click for Reviewe
114	Name of Estimator Reviewer			Bredehoeft	
115	MAXIMUM CONSTRUCTION COST				$282,260,000
116					
117	NON-CONSTRUCTION COSTS:				
118	Permitting		2.0%	$282,260,000	$5,650,000
119	Engineering		10.0%	$282,260,000	$28,230,000
120	Services During Construction		8.0%	$282,260,000	$22,590,000
121	Commissioning & Startup		3.0%	$282,260,000	$8,470,000
122	Land / ROW		0.0%	$282,260,000	$0
123	Legal / Admin		0.0%	$282,260,000	$0
124	Other Default Description		0.0%	$282,260,000	$0
125	SUBTOTAL - Non-Construction Costs				$64,940,000
126					
127	TOTAL - CAPITAL COST				$347,200,000
128					
129	Currency Conversion of TOTAL CAPITAL COST:				
130		Currency	Unit of Measure	Conversion Rate	Converted Amount
131		None	U.S.Dollar	1	347,200,000

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R-002731
Case 11-05736-TBB9 Doc 2216-46 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc
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Appendix K
Village Creek Opinion of Cost Summary, Plant Sizing Based on Current 20-Year Flow Projections

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	38.00	Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	Village WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	36
Mid-Point of Construction:	Jul/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributio

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT		Cost
	Yes	Submersible IPS: Inf PS		$14,850,000
	Yes	Screening and Grit: Headworks		$4,020,000
	Yes	Primary Sludge PS: Main		$1,010,000
	Yes	Round PC: Main		$6,100,000
	Yes	Aeration Basin: Main		$20,810,000
	Yes	Blowers: Main		$3,900,000
	Yes	Round SC: Main		$10,110,000
	Yes	RAS WAS PS: Main		$3,790,000
	Yes	Filters: Eff Filter		$20,280,000
	Yes	Fermenter: Gravity		$3,020,000
	Yes	Centrifuge Thick: GBT		$4,210,000
	Yes	Silo AnDig: Meso		$17,450,000
	Yes	Centrifuge Dew: BFP		$3,790,000
	Yes	Aerobic Digester: Blend Tank		$630,000
	Yes	Concrete Clearwell: Inf EQ		$41,120,000
	Yes	LPHO UV: Disinf		$14,300,000
	Yes	O&M Building: Ops Bldg		$1,770,000
	Yes	O&M Building: Main Bldg		$1,260,000
	Yes	Submersible IPS: Eff PS		$5,590,000
	Yes	Submersible IPS: Plnt Drain		$1,050,000
	Yes	Vertical Turbine PS: W3 System		$950,000
	Yes	Emergency Generator: EM Gen		$7,020,000
	Yes	U.D. Facility: Post Aer		$380,000
SUBTOTAL - PROJECT COST				$187,410,000
ADDITIONAL PROJECT COSTS:				
Demolition		0.0%		$0
Overall Sitework		8.0%		$15,000,000
Plant Computer System		1.0%		$1,880,000
Yard Electrical		5.0%		$9,380,000
Yard Piping		15.0%		$28,120,000
UD #1 Default Description		0.0%		$0
UD #2 Default Description		0.0%		$0
UD #3 Default Description		0.0%		$0
SUBTOTAL with Additional Project Costs				$241,790,000
TAX:		0.00%	$241,790,000	$0
SUBTOTAL with Tax				$241,790,000
CONTRACTOR MARKUPS:				
Overhead		10.0%	$241,790,000	$24,180,000
Subtotal				$265,970,000

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R-002734

	A	B	C	D	E
65	Profit		5.0%	$265,970,000	$13,300,000
66	Subtotal				$279,270,000
67	Mob/Bonds/Insurance		5.0%	$279,270,000	$13,970,000
68	Subtotal				$293,240,000
69	Contingency		0.0%	$293,240,000	$0
70	SUBTOTAL with Markups				$293,240,000
71					
72	ESCALATION (to Mid-Point of Construction):		4.6%	$293,240,000	$13,490,000
73	SUBTOTAL with Escalation				$306,730,000
74					
75	LOCATION ADJUSTMENT FACTOR		87.4	$306,730,000	$268,090,000
76	SUBTOTAL - with Local Adjustment Factor				$268,090,000
77					
78	RED FLAGS:				
79	1	Rock Excavation			$6,700,000
80	2	Pile Foundations			$1,700,000
81	3	Seismic Foundations			
82	4	Dewatering Conditions			$2,300,000
83	5	Wetlands Mitigation			
84	6	Weather Impacts			
85	7	Depth of Structures			$3,300,000
86	8	Local Building Code Restrictions			
87	9	Coatings or Finishes			
88	10	Building or Architectural Considerations			$3,300,000
89	11	Client Material Preferences			
90	12	Client Equipment Preferences			
91	13	Piping Galleries, Piping Trenches, Piping Racks			
92	14	Yard Piping Complexity			
93	15	Existing Site Utilities (New, Retrofit, and Complexity)			
94	16	I & C Automation (New or Retrofit)			
95	17	Electrical Feed (New or Retrofit)			
96	18	Electrical Distribution			
97	19	Shoring			$5,300,000
98	20	Contamination			
99	21	User Defined Red Flag 1			
100	22	User Defined Red Flag 2			
101	23	User Defined Red Flag 3			
102	24	User Defined Red Flag 4			
103	25	User Defined Red Flag 5			
104	26	User Defined Red Flag 6			
105	27	User Defined Red Flag 7			
106	TOTAL - RED FLAGS				$22,600,000
107					
108	SUBTOTAL - CONSTRUCTION COST with Red Flags				$290,690,000
109					
110	MARKET ADJUSTMENT FACTOR		0%	$290,690,000	$0
111	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$290,690,000
112	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
113	Name of Process Reviewer			Goodwin	Click for Reviewe
114	Name of Estimator Reviewer			Bredehoeft	
115	MAXIMUM CONSTRUCTION COST				$290,690,000
116					
117	NON-CONSTRUCTION COSTS:				
118	Permitting		2.0%	$290,690,000	$5,820,000
119	Engineering		10.0%	$290,690,000	$29,070,000
120	Services During Construction		8.0%	$290,690,000	$23,260,000
121	Commissioning & Startup		3.0%	$290,690,000	$8,730,000
122	Land / ROW		0.0%	$290,690,000	$0
123	Legal / Admin		0.0%	$290,690,000	$0
124	Other Default Description		0.0%	$290,690,000	$0
125	SUBTOTAL - Non-Construction Costs				$66,880,000
126					
127	TOTAL - CAPITAL COST				$357,570,000
128					
129	Currency Conversion of TOTAL CAPITAL COST:				
130		Currency	Unit of Measure	Conversion Rate	Converted Amount
131		None	U.S.Dollar	1	357,570,000

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R-002735
Case 11-05736-TBB9 Doc 2216-46 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc C.344_Part201 Page 6 of 11

Appendix L
Five Mile Creek Opinion of Cost Summary, Plant Sizing Based on Current 20-Year Flow Projections

CH2M HILL Parametric Cost Estimating System (CPES)

FACILITIES DESIGN & CONSTRUCTION COST MODULE

File Version: 9/12/2012 | Click for CPES QA/ QC | To Concrete Wall Thickness Help | To Cost Summary Matrix | To Unit Cost Database

Project Capactiy: >>>	11.00		Project Unit: >>>	mgd	(For example: MGD, HP, GPM...)

Project Name:	FIve Mile WWTP
Project Number:	458937
Project Manager:	Ken McGraw
Estimator:	Jamie Zivich
Project Description:	Jefferson County WW Asset Estimate
Project Location (City):	Birmingham
Project Location (State):	ALABAMA
Project Location (Country):	USA
Construction Start (Month):	Jan
Construction Start (Year):	2012
Construction Duration (months):	30
Mid-Point of Construction:	Apr/2013

Roundup to the nearest: $10,000

This Report is for INTERNAL Distributio

This Report is for EXTERNAL Distributic

Item	Is This Facility Included in Project? (Yes or No)	SCOPE OF PROJECT	Cost
	Yes	Submersible IPS: Inf_PS	$2,960,000
	Yes	Screening and Grit: Headworks	$3,180,000
	Yes	Aeration Basin: Main	$4,280,000
	Yes	Blowers: Main	$3,170,000
	Yes	Round SC: Main	$3,470,000
	Yes	RAS WAS PS: Main	$1,700,000
	Yes	GBT: GBT	$2,320,000
	Yes	Aerobic Digester: AerDig1	$920,000
	Yes	Aerobic Digester: AerDig2	$830,000
	Yes	Aerobic Digester: AerDig3	$940,000
	Yes	Centrifuge Dew: BFP	$1,620,000
	Yes	LPHO UV: Disinf	$4,030,000
	Yes	O&M Building: Ops_Bldg	$1,770,000
	Yes	O&M Building: Main_Bldg	$1,260,000
	Yes	U.D. Facility: Post_Aer	$140,000
	Yes	Emergency Generator: EM_Gen	$1,770,000
	Yes	Submersible IPS: Plnt_Drain	$670,000
	Yes	Submersible IPS: Filter_PS	$1,990,000
	Yes	Concrete Clearwell: Inf_EQ	$7,150,000
	Yes	Vertical Turbine PS: WS_PS	$700,000
	Yes	Filters: Eff_Filter	$9,150,000

SUBTOTAL - PROJECT COST			$54,020,000
ADDITIONAL PROJECT COSTS:			
Demolition	0.0%		$0
Overall Sitework	5.0%		$2,710,000
Plant Computer System	1.0%		$550,000
Yard Electrical	5.0%		$2,710,000
Yard Piping	12.0%		$6,490,000
UD #1 Default Description	0.0%		$0
UD #2 Default Description	0.0%		$0
UD #3 Default Description	0.0%		$0
SUBTOTAL with Additional Project Costs			$66,480,000
TAX:	0.00%	$66,480,000	$0
SUBTOTAL with Tax			$66,480,000
CONTRACTOR MARKUPS:			
Overhead	10.0%	$66,480,000	$6,650,000
Subtotal			$73,130,000
Profit	5.0%	$73,130,000	$3,660,000

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R-002738
Case 11-05736-TBB9 Doc 2216-46 Filed 11/15/13 Entered 11/15/13 13:17:28 Desc C.344_Part201 Page 9 of 11

	A	B	C	D	E
64	Subtotal				$76,790,000
65	Mob/Bonds/Insurance		5.0%	$76,790,000	$3,840,000
66	Subtotal				$80,630,000
67	Contingency		0.0%	$80,630,000	$0
68	SUBTOTAL with Markups				$80,630,000
69					
70	ESCALATION (to Mid-Point of Construction		3.8%	$80,630,000	$3,070,000
71	SUBTOTAL with Escalation				$83,700,000
72					
73	LOCATION ADJUSTMENT FACTOR		87.4	$83,700,000	$73,160,000
74	SUBTOTAL - with Local Adjustment Factor				$73,160,000
75					
76	RED FLAGS:				
77	1	Rock Excavation			$2,500,000
78	2	Pile Foundations			$750,000
79	3	Seismic Foundations			
80	4	Dewatering Conditions			$1,000,000
81	5	Wetlands Mitigation			
82	6	Weather Impacts			
83	7	Depth of Structures			$750,000
84	8	Local Building Code Restrictions			
85	9	Coatings or Finishes			
86	10	Building or Architectural Considerations			$1,000,000
87	11	Client Material Preferences			
88	12	Client Equipment Preferences			
89	13	Piping Galleries, Piping Trenches, Piping Racks			
90	14	Yard Piping Complexity			
91	15	Existing Site Utilities (New, Retrofit, and Complexity)			
92	16	I & C Automation (New or Retrofit)			
93	17	Electrical Feed (New or Retrofit)			
94	18	Electrical Distribution			
95	19	Shoring			$1,250,000
96	20	Contamination			
97	21	User Defined Red Flag 1			
98	22	User Defined Red Flag 2			
99	23	User Defined Red Flag 3			
100	24	User Defined Red Flag 4			
101	25	User Defined Red Flag 5			
102	26	User Defined Red Flag 6			
103	27	User Defined Red Flag 7			
104	TOTAL - RED FLAGS				$7,250,000
105					
106	SUBTOTAL - CONSTRUCTION COST with Red Flags				$80,410,000
107					
108	MARKET ADJUSTMENT FACTOR		0%	$80,410,000	$0
109	SUBTOTAL - CONSTRUCTION COST with Market Adjustment Factor				$80,410,000
110	Your CPES Estimate MUST be reviewed by a Process person AND an Estimator:				
111	Name of Process Reviewer			Goodwin	Click for Reviewe
112	Name of Estimator Reviewer			Bredehoeft	
113	MAXIMUM CONSTRUCTION COST				$80,410,000
114					
115	NON-CONSTRUCTION COSTS:				
116	Permitting		2.0%	$80,410,000	$1,610,000
117	Engineering		10.0%	$80,410,000	$8,050,000
118	Services During Construction		8.0%	$80,410,000	$6,440,000
119	Commissioning & Startup		3.0%	$80,410,000	$2,420,000
120	Land / ROW		0.0%	$80,410,000	$0
121	Legal / Admin		0.0%	$80,410,000	$0
122	Other Default Description		0.0%	$80,410,000	$0
123	SUBTOTAL - Non-Construction Costs				$18,520,000
124					
125	TOTAL - CAPITAL COST				$98,930,000
126					
127	Currency Conversion of TOTAL CAPITAL COST:				
128		Currency	Unit of Measure	Conversion Rate	Converted Amount
129		None	U.S.Dollar	1	98,930,000

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No. 716] AN ACT [H. 361

To authorize and require the board of revenue of Jefferson county to issue negotiable bonds of said county to an amount not exceeding five hundred thousand dollars for the purpose of sanitation in said county, and to require said board to levy and set aside a county tax of 1-20 of 1% to provide for the payment of interest on said bonds, and to provide a sinking fund for said bonds, and for maintaining a sanitary system and protecting water supplies.

Bonds.

SECTION 1. Be it enacted by the General Assembly of Alabama, That the board of revenue of the county of Jefferson be, and it is hereby authorized and required to issue negotiable bonds of Jefferson county, to an amount not exceeding five hundred thousand dollars, for the purpose of raising funds for sanitation in Jefferson county, which bonds shall be designated "Sanitary bonds."

When payable.

SEC. 2. Be it further enacted, That said bonds shall be made payable at a time not exceeding fifty years from the date of the issuance thereof, and shall bear interest at a rate not exceeding five per cent. per annum, with interest payable semi-annually, and evidenced by coupons attached.

Use of proceeds.

SEC. 3. Be it further enacted, That the proceeds arising from the sale of said bonds shall be paid to and remain in the custody of the county treasurer of Jefferson county and shall be kept separate by said treasurer as a fund to be known

as the "Sanitary Fund," and shall not be paid out by said treasurer except upon warrants ordered and drawn by the said board of revenue, and the requisition of the "Jefferson County Sanitary Commission," but the purchaser or purchasers of said bonds shall not be required to see to the application of the purchase money paid therefor, nor shall any misappropriation of the funds so received by the said treasurer in anywise affect the holders of said bonds or the validity of said bonds.

Form of bonds.

SEC. 4. Be it further enacted, That it shall be the duty of the Jefferson county sanitary commission to prepare and submit to the said board of revenue, a form for said bonds, which bonds and interest coupons thereto attached shall be payable to bearer in gold coin of the United States of America, of the present standard weight and fineness at some bank in the city of New York, or at such other place as said commission may deem best and may contain such terms and conditions and provisions as the said commission may deem best within the limitations prescribed in paragraph two of this act and the said board of revenue shall cause said bonds to be prepared in accordance with the form summitted by said sanitary commission and in such denominations as said commission may request, and from time to time shall execute said bonds in such quantities and in such denominations as the said commission shall request; the bonds as executed shall be delivered to the county treasurer of said county and he shall execute to the said board of revenue a receipt for all bonds delivered to him.

Sale of bonds.

SEC. 5. Be it further enacted, That this said Jefferson county sanitary commission shall sell said bonds at such times, in such quantities and at such price, not less than par, as it may deem best, and upon each sale of bonds being made the said commissioner shall in writing order the county treasurer to deliver the bonds sold to the purchaser upon the receipt by the treasurer of

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the price to be paid therefor, and in said order the said commission shall state the amount of bonds sold and the price at which the bonds are sold, and said commission shall also make a written report of each sale of bonds to the said board of revenue, stating the amount of bonds sold and the price of sale.

Where payable.

SEC. 6. Be it further enacted, That the said bonds and interest coupons may be made payable at such place as said commission may deem best, and said commission may put in said bonds such provisions for call or redemption as said commission may deem best.

Signed by

SEC. 7. Be it further enacted, That said bonds shall be signed by the chairman of the board of revenue and countersigned by the treasurer of said county, and the coupons to said bonds shall be authenticated by the engraved or lithographed signature of the treasurer of said county, and the seal of the county shall be affixed to said bonds and no bonds shall be valid as an obligation of the county until signed and sealed as above provided; and said bonds shall not be signed and sealed as above provided, except on the order of the board of revenue acting on the request of said sanitary commission, and then only in the amount ordered and requested.

Duty of county treasurer.

SEC. 8. Be it further enacted, That the county treasurer is required to keep a correct account of all bonds signed, as above provided, and a correct account of all bonds issued, and said treasurer shall be liable upon his official bond for the safe custody of all bonds delivered to him and for the safe custody of all moneys received from the sale of bonds, and for all moneys received by him for or on account of the sanitary fund.

Reports of sales.

SEC 9. Be it further enacted, That the said commission as often as it makes a sale of sanitary bonds shall make a written report of the sale to the said board of revenue, stating the price at which the bonds are sold and the said board of revenue may as often as it deems necessary, make a requisition upon the probate judge of the county to require the county treasurer to increase his official bond to such an amount as the board of revenue may state in the requisition is deemed necessary, and the said judge of probate shall require the county treasurer to increase his official bond to the designated amount under the same penalty and under the same terms and provisions as are prescribed for a failure to give an additional bond when duly and legally required to do so, such increased bond to be approved by the probate judge under the same provisions or laws as apply to an additional bond. The official bond of the county treasurer shall stand as security for the faithful discharge of his duty in respect to all sanitary funds which come into his custody the same as it secures the faithful discharge of his duty in regard to other county funds.

Additional bond by treasurer.

Bond of treasurer.

Authority

SEC. 10. Be it further enacted, That said board of revenue of said county is hereby authorized to do any and all things authorized under the provisions of this act which may be necessary to carry out the powers expressed by this act whether through themselves or any agent or agents duly appointed by them for that purpose at any term of said board, whether regular or special and if done at a special term of said board it shall as valid to all intents and purposes as if done at a regular term and no technicality, informality, irregularity, neglect or omission in the proceedings or records of said board of revenue shall in any wise vitiate or annul said bonds or coupons which shall have all the protection and properties of commercial paper.

Special tax.

SEC. 11. Be it further enacted, That the board of revenue of Jefferson county shall for the tax year commencing October 1st, 1900, and ending September 30th, 1901, and each and every tax year thereafter levy a special tax of one-twentieth of one per cent on the value of all taxable property in said county as assessed for revenue for the State; the tax so levied and collected to

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