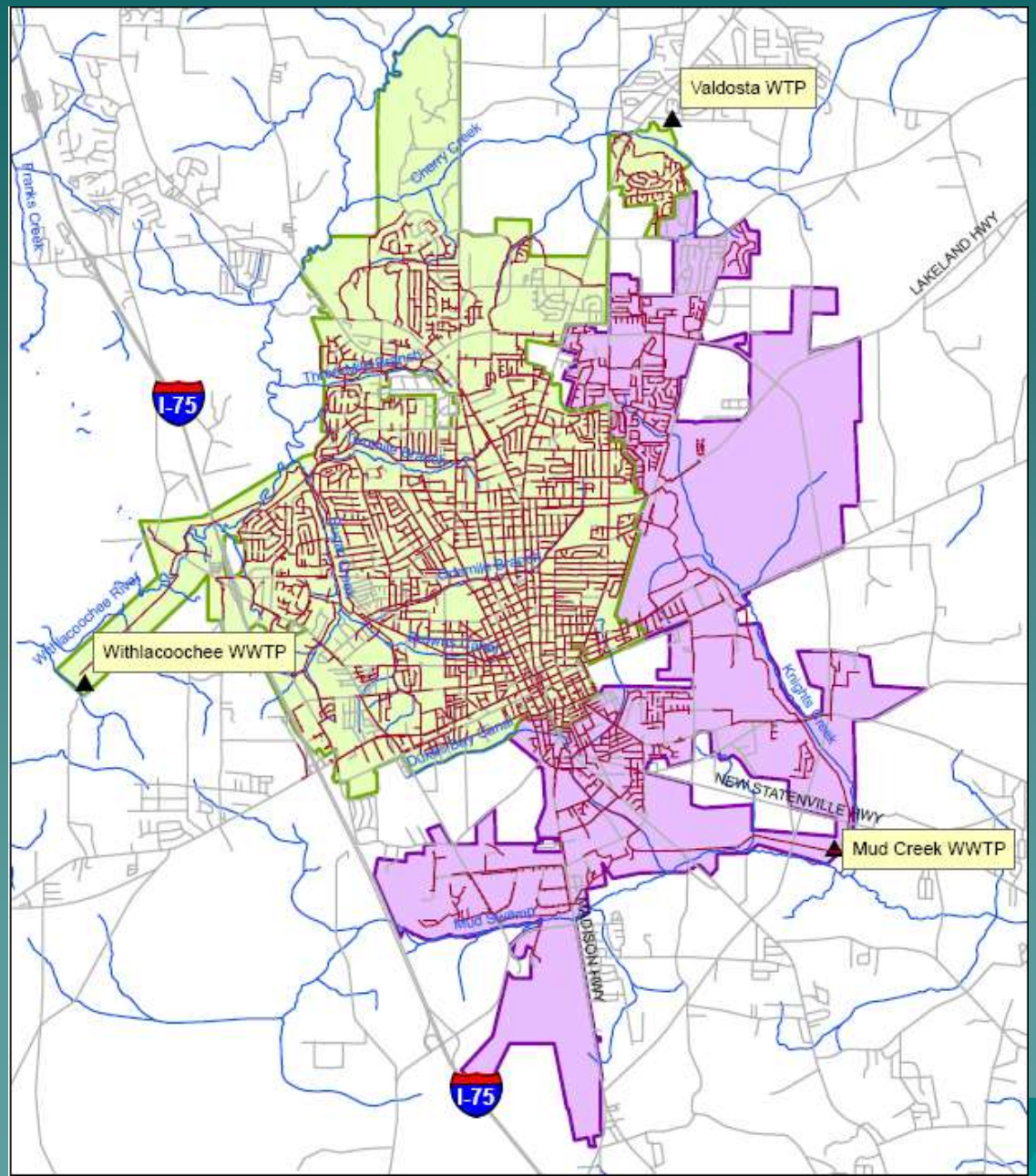
Facilities Plan for the City of Valdosta Mud Creek WPCP Expansion & Upgrade

October 7, 2008

Project Background and Study Area

- City owns and operates 2 WPCPs
  - Withlacoochee WPCP
    - 8 mgd (May-Dec)
    - 12 mgd (Jan-Apr)
  - Mud Creek WPCP – 3.22 mgd
- Both provide advanced secondary treatment of wastewater
- This presentation focuses on the Mud Creek WPCP

City of Valdosta Wastewater Service Area

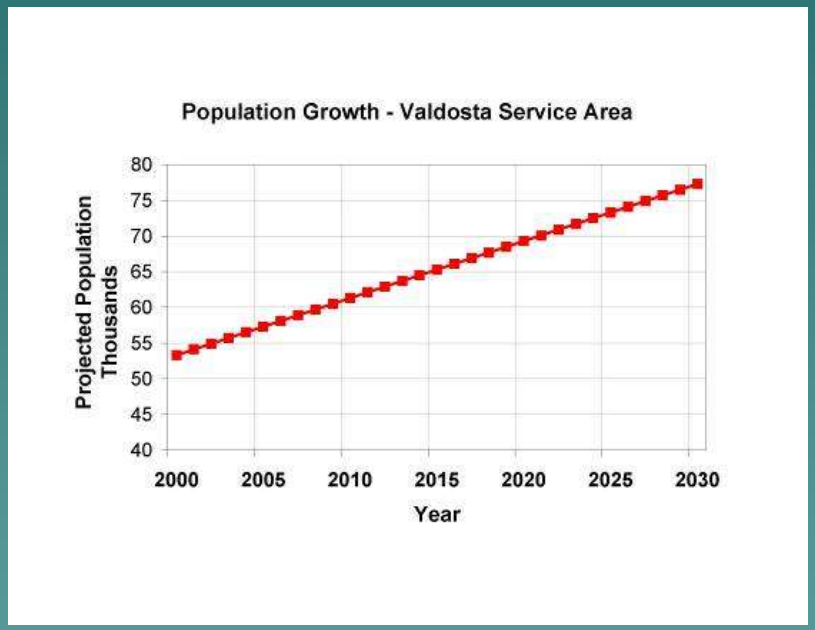


Mud Creek WPCP Overview

- Built in 1977 and expanded to present capacity in 1986
- Current average daily flow = 3.2 mgd
- Peak flow of 8.05 mgd
- Conventional activated sludge process
- Effluent discharge to Mud Creek
- Biosolids stabilization through unconventional process

Mud Creek WPCP Project Goals

- Rehabilitate the existing WPCP - Equipment is at the end of its useful life
- Expand the Mud Creek WPCP from 3.22 mgd to 5.7 mgd:
  - Plant is operating at capacity
  - New development areas / Industries continue to flourish
- New treatment technology to meet more stringent permit limits for effluent discharge
- Upgrade biosolids treatment to meet future regulations and improve reliability



Regulatory and Financing Approvals Require City Council Workshop and Public Hearing

- Facilities Plan
  - Analysis of existing plant & feasible alternatives for w/w treatment
  - Cost-effectiveness of the alternatives
  - Demonstrate facility is eligible for funding per Title II of CWA
  - Provide implementation plan
- EID
  - Anticipated impacts of expansion on local environmental, social and economic conditions

Four Liquid Treatment Alternatives Were Evaluated

- No Action – no cost, but may result in continued environmental degradation
- MLE w/Final Clarifiers
- A^2O w/Final Clarifiers
- MLE w/MBR

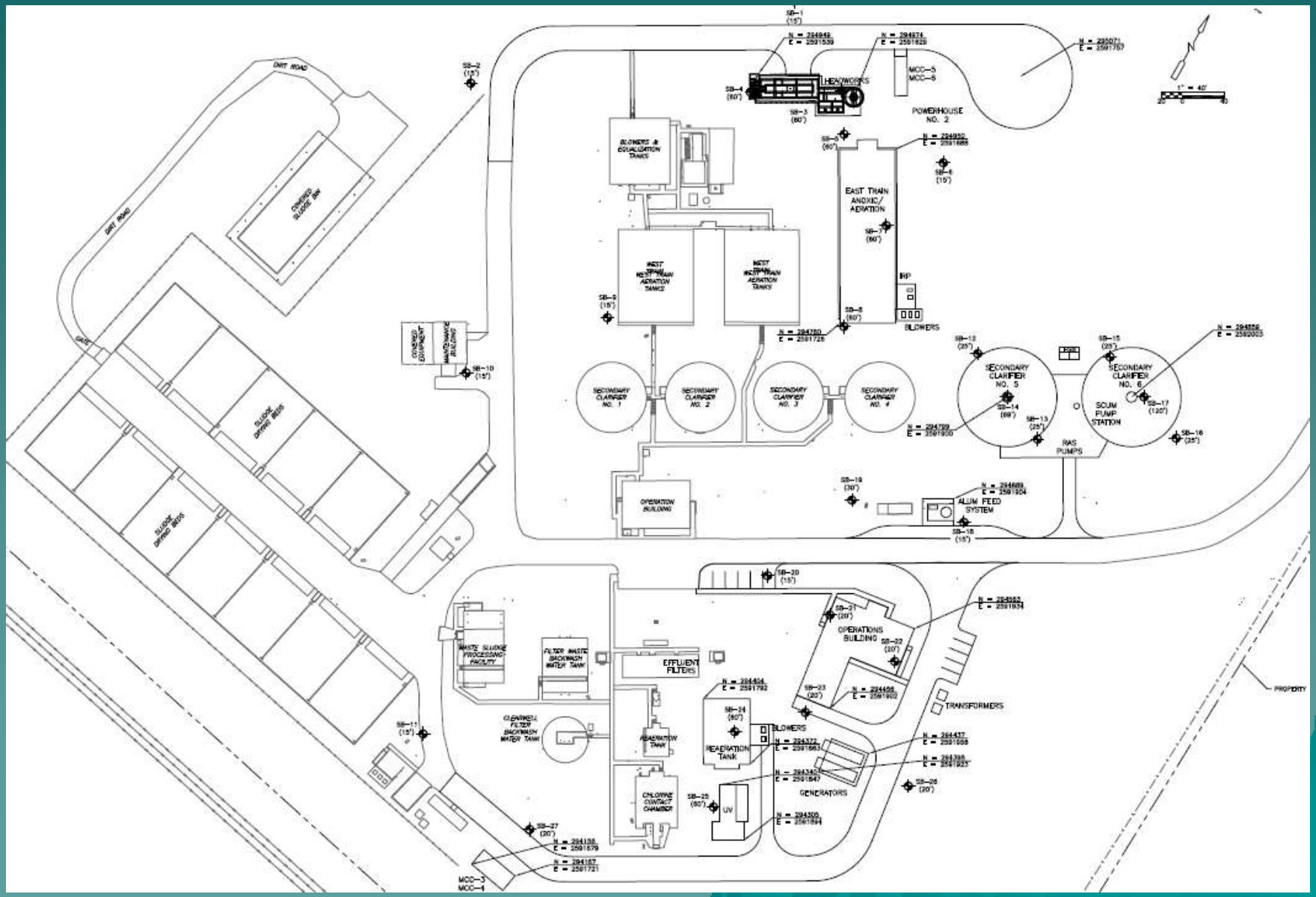
Six Biosolids Treatment Alternatives Were Evaluated

- No Action – no cost, but may result in continued environmental degradation
- Aerobic Digestion
- Anaerobic Digestion
- ATAD
- Thermal Drying w/Digestion

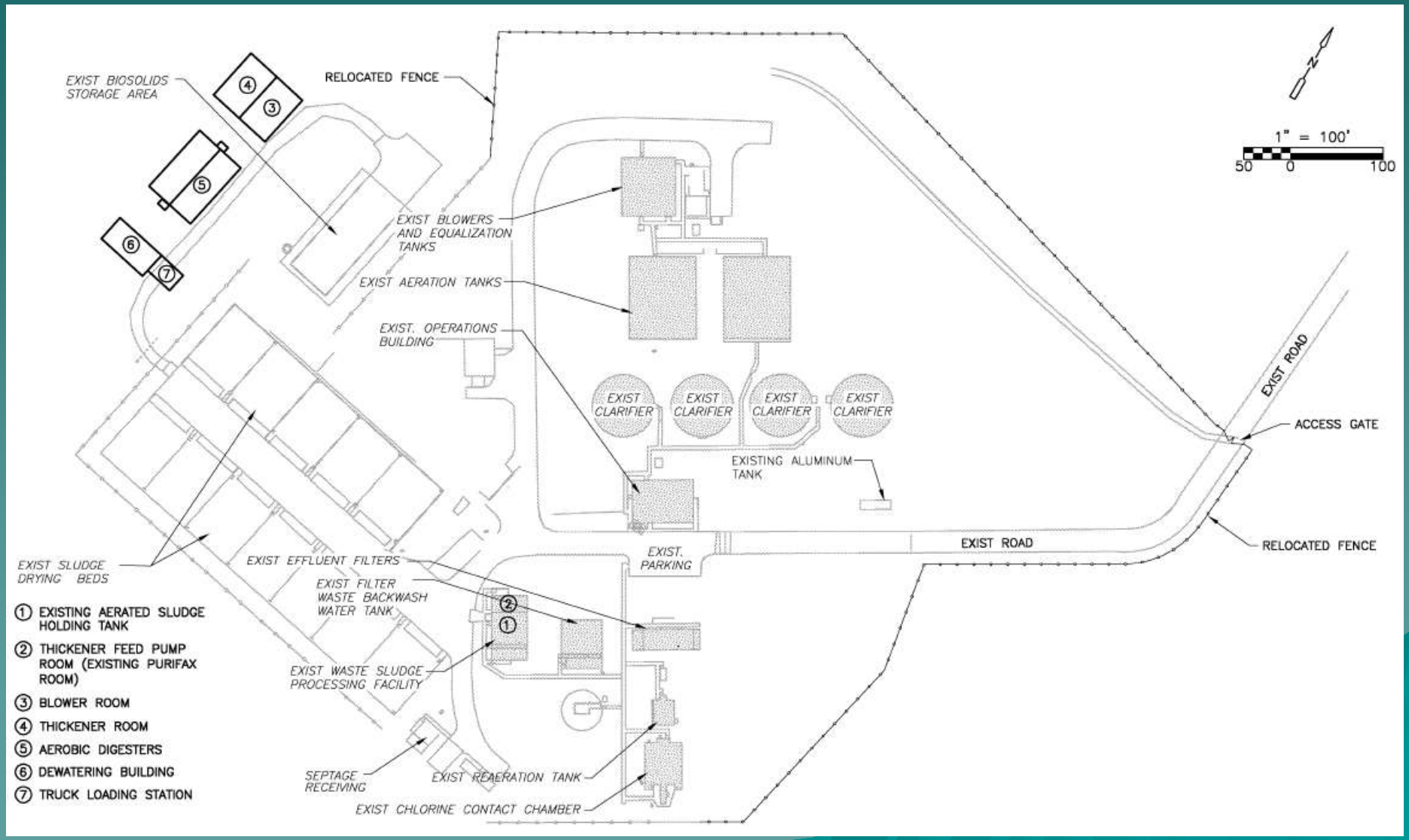
MLE Biological Process & Aerobic Digestion Selected as Preferred Alternative

- MLE allows City to meet future permit limits
  - Allows maximum use of existing facilities
  - Proven technology
- Aerobic Digestion provides City with a flexible & reliable solids treatment system
  - Relatively easy to operate
  - Stable end product meeting Class B requirements
- Lowest overall cost alternative – Estimated $47.5 million total costs

Mud Creek Liquid Treatment Plan Upgrades



Mud Creek Solids Treatment Plan Upgrades



Environmental Impacts Assessment

- No action is not a viable option
  - Plant currently operating at capacity
  - Would not allow further development
  - City subject to fines by EPD if they cannot meet permit limits
  - Does not put public health and safety as a priority
- Expansion is within the proposed property area and surrounding lands will not be disturbed
- CDM has completed Anti-Degradation Report

Environmental Impacts Assessment

- Social Factors
  - Expansion does not impose significant adverse impacts
    - Temporary increase in traffic during construction
    - Increased generation of solid waste
  - Increased capacity will allow increasing growth within the community & surrounding area
  - Assure community's concerns related to clean water and quality of life are preserved

Estimated Cost for Liquid Treatment System for the Mud Creek WPCP

Description	Total
*Construction Subtotal	$ 23,860,000
Bonds and Insurance (9.68%)	$ 2,310,000
Total Construction Cost	26,172,000
Contingency (20%) and Escalation (8%)	$ 7,328,000
Total Estimated Conceptual Construction Cost	***$33,500,000***

* Cost includes upgrade or replacement of several existing facilities in addition to the upgrade to the biological process

Estimated Cost for Solids Treatment System for the Mud Creek WPCP

Description	Total
Construction Subtotal	$ 8,761,000
Escalation Bonds and Insurance (9.68%)	$ 848,000
Total Construction Cost	$ 9,610,000
Contingency (20%) and Escalation (8%)	$2,691,000
Total Estimated Conceptual Construction Cost	***$12,300,000***

Capital Financing for Project

- Financing will be obtained through a combination of State Revolving Fund (SRF) grant financing, SPLOST and an Increase in Rates

Items	Project Costs
Mud Creek Water Pollution Control Plant	
Liquids Treatment	$26,172,000
Biosolids Treatment	$9,610,000
Subtotal	$35,782,000
Contingency (20%) and Escalation (8%)	$10,018,000
Total Construction Costs	**$45,800,000**

(a) The schedule and costs identified in this table are subject to change based upon completion of the preliminary design report.

Financing of Selected Plan with SRF or Revenue Bonds

ITEMS	WITH SRF LOAN	REVENUE BONDS BORROWING
PROJECT COST (a)	$45,800,000	$45,800,000
Subtotal	$45,800,000	$45,800,000
SRF Service Fee (2%) (b)	$916,000	0
Capitalized Interest (c)	$2,936,781	0
Finance Costs-Revenue Bonds (d)		934,690
Par Amount of Loan	$45,800,000	$46,734,690
Annual Debt Service (e)	**$3,062,000**	**$3,881,920**
Phase 1 - Maximum of $25 million	**$1,671,400**	
Phase 2 - Balance	**$1,390,000**	

(a) Total construction costs include contingency (20%) and escalation (8%)

(b) SRF service fee for GEFA administration 2% of amount borrowed, which is a one time fee, payable upon 30 days notice.

(c) Capitalized interest on SRF loan for 46 months depending on time period from start of drawdown to substantial completion. Interest accrues on amount drawdown only. The revenue bond was assumed to have no capitalized interest.

(d) Revenue bond financing costs include 2% for issuance costs, increasing size of issue.

(e) Annual Debt Service for SRF based on 20 years at 3% interest; annual debt service for revenue bonds based on 20 year bonds at 5.5% average coupon interest.

Annual Cost of Selected Plan with SRF Bonds

	Annual Costs
Annual Debt Service for SRF Phase I Project :	$3,062,000
Operating Expenses (Net of Depreciation) 2012 (b)	7,205,349
Plus: Existing Debt Service (‘c)	2,044,403
Less: Non-Operating Revenue (d)	(702,050)
Net Operating Revenue Requirement	$11,609,702
Sewer User Fees - 2012 at Existing Rates	7,348,900
Percentage User Fee Increase Required	58%
Total Annual Cost Per ERU-Existing (e)	$260.00
Total Monthly Cost Per ERU - Existing (e)	$21.67
Total Annual Cost Per ERU-Projected (f)	$411.00
Total Monthly Cost Per ERU - Projected (f)	$34.25

(b) Annual O&M Cost for 2012 estimated at $8,116,956 less 50% of depreciation ($2,929,446) plus 50% of Operating Transfer (1,106,232).

(‘c) The existing debt service of $261,713 plus the debt service payment for GEFA Loan of $24.091 million (at 3.77% for the first $10 million and 4.27% for balance over 20 years = $1,782,690)

(d) Non-Operating Revenue for 2012 estimated at Non-User Fee Revenue of $195,050 plus 50% of Late Fees ($564,000) Plus Sewer Interest ($225,000)

(e) Calculation based on monthly water use of 100 ccf/month from 2007 data times $2.30/ccf + $2.50/month.

(f) Annual Projected Cost equals the existing $260 annual or $21.67 monthly cost increased by 69%.

Estimated Project Schedule for Construction

Task	Date
Facilities Plan and Capital Finance Plan Completed	August 2008
Public Hearing	October 8, 2008
EPD Review, Planning Document Approved	October 2008
Design Complete	November 2008
Execution of Loan Agreement	November 2008
Construction Start	February 2009
Substantial Completion	August 2010

Summary of Facilities Planning and Environmental Information Documents

- No action not an alternative
- MLE and Aerobic Digestion provide nutrient removal and permit compliance at lowest overall costs
- No adverse environmental, social, or economic impacts
- Implementation plan is financially affordable

Recommendations for City Council Consideration

- Accept public comment on the plan
- Accept recommendations of staff and CDM
- Approve and adopt Mud Creek WPCP Facilities Plan and Environmental Information Document

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