

CIP DESIGN AND ENGINEERING MEMORANDUM
09-16

May 28, 2009

TO: Honorable Mayor Kathleen M. Novak and City Council Members

FROM: William Simmons, City Manager *WKS*
David Willett, Director of Public Works/Utilities *DW*
Raymond Reling, Chief Water Treatment Plant Operator *RR*
Mark Hofmeister, Civil Engineer I *MH*

SUBJECT: CB-1691 Appropriation Amendment for the Wastewater Treatment Facility Master Plan

RECOMMENDATION:

Attached to this memorandum is an ordinance which, if approved, would provide appropriation amendment of funds for the Wastewater Treatment Facility Master Plan. Staff recommends approval of the proposed Ordinance.

BACKGROUND:

The original Wastewater Treatment Facility (WWTF) was constructed in 1980 as an aerated lagoon system. Over the next few years, Staff began experiencing problems with ammonia and Whole Effluent Toxicity Testing parameters. In 2002, the Colorado Department of Public Health and Environment (CDPHE) issued a new permit, which included a compliance schedule for facility upgrades to meet ammonia and Whole Effluent Toxicity Testing limits. The City hired a consulting firm to develop a Wastewater Utility Plan evaluating the various wastewater treatment alternatives and options to meet the requirements of the new discharge permit. Once completed, the Wastewater Utility Plan recommended design and construction of a new WWTF including: preliminary treatment (headworks), primary treatment (primary clarifiers), secondary treatment (aeration basins, blowers, electrical equipment, and clarifiers), UV disinfection and a secondary pumping for the effluent going to Bull Reservoir.

On June 4, 2003, the City Council approved Staff Report No. 03-21 that executed a Professional Services Agreement to design a new WWTF based on the recommendations in the Wastewater Utility Plan. Construction of the project began in January 2005. Due to funding constraints, the project was scaled back to only include the construction of three aeration basins, two secondary clarifiers, a UV disinfection building, a secondary pump building with an electrical room and a blower room. It was assumed that the two lagoons from the existing facility would be used to accomplish the preliminary and primary treatment thus replacing the headworks and primary clarifiers.

Following the new facility coming online, Staff began experiencing operational difficulties including: trash throughout the new mechanical plant, large variability in pH in Bull Reservoir, and an increase in odor complaints. Based on the modified design of the new facility, it was assumed that the trash, would settle out of the waste stream in the existing WWTF lagoons. However, due to the aeration in the lagoons predominately for odor control, pieces of trash are remaining in suspension and passing through the treatment process. The second issue is the large variability in pH in Bull Reservoir which at times prevents Staff from discharging water to Big Dry Creek. In addition, there has been an increase in the number and frequency of odor complaints at the WWTF from the encroaching housing development.

In 2007, due to the growing number of odor complaints, CDPHE issued a Cease and Desist order to the City of Northglenn. In order to comply with the CDPHE's order, the City elected to inject odor-reducing chemicals into the system based on the recommendations of an odor evaluation of the system

Over the last ten years several studies, which directly relate to the Wastewater Treatment Facility have been completed with the exclusion of a Wastewater Treatment Facility Master Plan. A master plan is an essential

document, which incorporates all current information that directly impacts the treatment system. The proposed master plan would function as a planning tool for the facility by identifying capacity thresholds that trigger the requirement for future expansions, developing capital improvement projects to minimize operational costs and ensure future regulatory compliance, establishing implementation priorities, developing cost estimates for the recommended improvements, and identifying potential funding sources. The recommended capital improvement projects would then be included in the Water Rate Study to determine the projected budgetary requirements.

On May 4, 2009, the City accepted four (4) proposals for the Wastewater Treatment Facility Master Plan. HDR Engineering, Inc. (HDR) was the firm selected based on the Request for Proposal. HDR Engineering, Inc. proposal for the Wastewater Treatment Facility Master Plan is in the amount of \$133,680.00. It is further recommended that City Council authorize \$13,000.00 as a 10% contingency and authorize the City Manager to approve minor changes in the scope of work and execute relevant change orders up to an approved expenditure limit of \$146,680.00.

HDR is nationally recognized for their expertise in the wastewater treatment field. HDR is qualified to address the impacts of future regulations, and has extensive planning and design experience with a broad range of treatment systems. The proposed team of personnel from HDR has considerable knowledge in evaluating wastewater treatment plants, maximizing treatment capacity in existing facilities, and optimizing treatment processes.

BUDGET/TIME IMPLICATIONS:

There is no impact to the General Fund. An appropriation amendment from the 2009 Connection Charges Fund in the amount of \$146,680.00 is requested for this project. Any unspent funds will be return to the Connection Charges Fund. See attached fund balance sheet of the 2009 Connection Charges Fund furnished by the Finance Department.

STAFF REFERENCE:

Please contact Raymond Reling Chief Water Treatment Plant Operator at rreling@northglenn.org, or (303) 450-4049.

**WATER & WASTEWATER - CONNECTION CHARGES FUND
COMPARATIVE BUDGET STATEMENT**

	2009 Adopted Budget	#1 Proposed Amended Budget 04/09/09	#2 Proposed Amended Budget 05/28/09
Revenues			
Connection Charges	-		
Investment Earnings	125,000	125,000	125,000
Total Revenues	125,000	125,000	125,000
Expenses			
General & Administrative	-	-	-
Total Expenses	-	-	-
Excess (Deficiency) Revenues over Expenses	125,000	125,000	125,000
Other Financing Sources (Uses)			
Capital Improvements	(2,200,000)	(2,330,416)	(2,477,096)
Excess (Deficiency) of Revenues and Other Sources Over (Under) Expenditures and Other Uses	(2,075,000)	(2,205,416)	(2,352,096)
Beginning Funds Available	3,048,936	3,048,936	3,048,936
Ending Funds Available	973,936	843,520	696,840

References page 17 of the Budget Document.

2009 - WWTF Master Plan RFP Pricing Summary				
	Arber	CH2M HILL	HDR	JT/JB Wright
Total Cost	\$206,700.00	\$182,438.00	\$133,680.00	\$161,410.00

Reference Check

Project: Wastewater Treatment Facility Master Plan
Consultant/Contractor: HDR
Date: 5/20/09
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Project Name:	Contact for Reference:	Contact Phone Number:	Reference:
City of Bozeman Wastewater Facility Plan	Tom Adams	(406) 586-9159	HDR did exceptionally well, the Design team is great to work with.
City of Boulder Utility Plan	Douglas Sullivan	(303) 441-3244	Highly recommend. The City has worked with HDR for the last four years.
Columbia Falls WWTF Plan	Gary Root	(406) 892-4391	HDR is good technically. Good with schedule.

SPONSORED BY: MAYOR NOVAK

COUNCILMAN'S BILL

ORDINANCE NO.

No. CB-1691
Series of 2009

Series of 2009

A BILL FOR A SPECIAL ORDINANCE AMENDING THE 2009 BUDGET RECOGNIZING REVENUES AND APPROPRIATING EXPENDITURES BY APPROPRIATION AMENDMENT, FOR THE PAYMENT OF THE COSTS AND EXPENSES OF THE MUNICIPAL GOVERNMENT, AGENCIES AND OFFICES OF THE CITY OF NORTHGLENN, COLORADO, FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2009.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT THE 2009 BUDGET SHALL BE AMENDED AS FOLLOWS:

Section 1. Appropriation amendments, transfer of appropriations and recognition of revenues.

(a) Connection Charges Fund. Amend the 2009 Connection Charges Fund budget to increase expenditure appropriations in the amount of \$146,680.00, as follows:

(Item 1) \$146,680.00 to finance the Wastewater Treatment Facility Master Plan.

Recognize a decrease in 2009 Connection Charges Fund balance in the amount of \$146,680 for expenditures represented by the above appropriation amendment for a total fund balance of \$696,840.

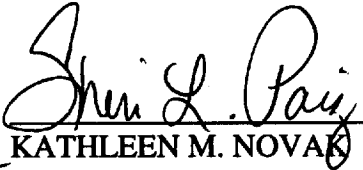
Section 2. The City Council of the City of Northglenn, Colorado, hereby finds and declares that in making appropriations provided by this ordinance:

- (a) No appropriation for debt service has been reduced or transferred.
- (b) No appropriation has been reduced below any amount required by law to be appropriated.
- (c) No appropriation has been reduced by more than the unencumbered balance thereof.
- (d) In the case of each transfer of all or part of any unencumbered appropriation, such transfer has been requested and approved by the City Manager.
- (e) In the case of each reduction of an appropriation, the City Manager has rendered his report and recommendations thereon and has requested and approved such reduction.

- (f) In the case of the appropriation amendment, the City Manager has certified that there are funds available for appropriation.

Section 3. This Ordinance and each part, provision and section thereof, shall take effect on _____ of June, 2009.

INTRODUCED, READ AND ORDERED POSTED THIS 28th DAY OF May,
2009.


for KATHLEEN M. NOVAK
Mayor

ATTEST:


JOHANNA SMALL, CMC
City Clerk


PASSED ON SECOND AND FINAL READING THIS _____ DAY OF _____,
2009.

KATHLEEN M. NOVAK
Mayor

ATTEST:

JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:


COREY Y. HOFFMANN
City Attorney