


**PUBLIC WORKS DEPARTMENT  
MEMORANDUM #2012 – 29**

**DATE:** May 21, 2012  
**TO:** Honorable Mayor Joyce Downing and City Council Members  
**FROM:** William A. Simmons, City Manager   
David H. Willett, Director of Public Works  
**SUBJECT:** Wastewater Utility Plan – Ratify Addendums #2, #3, and #4

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**BACKGROUND**

On April 16, 2012 City Council was given an update on the approval process regarding the WWTP Utility Plan. The only major issue emanating from the initial review by North Front Range Water Quality Planning Association (NFRWQPA) was the length of the planning cycle and the coinciding comprehensive capital project plan. NFRWQPA conceded to allow the current planning cycle projects to be shown through five years and only the O&M through the full 10-year planning timeline.

At the April 16, 2012 meeting, staff also discussed the work additions and coinciding addendums. The summary as follows:

- Addendum #1 was under the contract contingency and approved by the City Manager.
- During a file review of the Wastewater Utility Plan project in December 2011, staff discovered that Addendums #2 and #3 (exceeding contract and contingency) had not received Council approval, but had been signed by the City Manager.
- Addendum #4 was presented to Council at the February 2, 2012 study session. Staff was directed to move forward with the work scope.

**BUDGET/TIME IMPLICATIONS**

Original Budget - \$133,680

1. Funding source matrix and workshop, 8/31/2009 - \$4,980
2. Update Wastewater Utility plan per Council comments, 11/18/2010 - \$19,490
3. Evaluation of Discharge to Metro Wastewater Reclamation District, 2/24/2011 - \$6,959
4. Financial Operations Evaluation per NFRWQPA and CDPHE, 2/2/2012 - \$9,700

Barring any unexpected comments from CDPHE, staff anticipates that the Wastewater Utility Plan update will not require any additional funding. Total cost is estimated at \$174,809.00

**Action Requested:** Staff is requesting that Council ratify Addendums #2 and #3, and approve Addendum #4. Adequate funding is available in the Water/Wastewater Capital Improvement Program (WWTP Master Plan).

**RECOMMENDATION**

Attached to this memorandum is a Resolution that, if approved, would:

- 1) Authorize the Mayor to execute contract addendums #2, #3, and #4 between the City of Northglenn and **HDR Corporation** for the **WWTP Utility Plan Update** in the amount of **\$36,149.00**.

Staff recommends approval of this Resolution.

**STAFF REFERENCE**

David H. Willett, P.E., Director of Public Works  
Ray Reling, Public Works Superintendent for Utilities

[dwillett@northglenn.org](mailto:dwillett@northglenn.org) or 303.450.8783  
[rreling@northglenn.org](mailto:rreling@northglenn.org) or 303.450.4049

SPONSORED BY: MAYOR DOWNING

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-65  
Series of 2012

\_\_\_\_\_  
Series of 2012

A RESOLUTION APPROVING ADDENDA #2, #3, AND #4 TO THE AGREEMENT BETWEEN THE CITY OF NORTHGLENN AND HDR CORPORATION FOR THE WASTEWATER TREATMENT FACILITY MASTER PLAN

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The City Council hereby approves the following addenda to the Agreement between the City of Northglenn and HDR Corporation for the Wastewater Treatment Facility Master Plan:

- (a) The ratification of Addendum #2 in the amount of \$19,490.00 for the Wastewater Utility Plan update amendment;
- (b) The ratification of Addendum #3 in the amount of \$6,959.00 for the evaluation of discharging wastewater to Metro Wastewater Reclamation District; and
- (c) The execution of Addendum #4 in the amount of \$9,700.00 for financial management evaluation and permit assistance.

DATED, at Northglenn, Colorado, this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

\_\_\_\_\_  
JOYCE DOWNING  
Mayor

ATTEST:

\_\_\_\_\_  
JOHANNA SMALL, CMC  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
COREY Y. HOFFMANN  
City Attorney

**ADDENDUM #2 TO AGREEMENT FOR PROFESSIONAL SERVICES**

THIS SECOND ADDENDUM TO AGREEMENT FOR PROFESSIONAL SERVICES is made and entered into this 15<sup>th</sup> day of FEBRUARY, 2011, by and between the CITY OF NORTHGLENN, State of Colorado (hereinafter referred to as the "City") and HDR Engineering, Inc. (hereinafter referred to as "Consultant").

**RECITALS:**

A. On June 11, 2009 the City and Consultant entered into an Agreement for Professional Services for civil engineering services (the "Agreement").

B. The parties desire to supplement the Agreement with this Addendum #2 to allow for an additional scope of services for the design services for:

**Exhibit A**, 2011 Wastewater Utility Plan Amendment for Update

**AGREEMENT**

NOW, THEREFORE, it is hereby agreed that for the consideration hereinafter set forth, that Consultant shall provide to the City, professional engineering services as needed in the manner provided in the Agreement.

1. The Scope of Services in the Agreement is hereby supplemented to include the scope of services for the design services attached hereto as **Exhibit A**, and incorporated herein by this reference (the "Additional Scope of Services"). Consultant shall commence work on the Additional Scope of Services within ten (10) days of the issuance of a Notice to Proceed.

2. Subparagraph A. of Article IV entitled "Compensation" is hereby amended to provide as follows:

A. Compensation shall not exceed \$19,490.00 for the work described in **Exhibit A** to this Addendum #2.

3. The original Agreement is in full force and effect and is hereby ratified by the City and the Consultant. The original Agreement and this Addendum constitute all of the agreements between the City and the Consultant.

IN WITNESS WHEREOF, the parties hereto each herewith subscribe to the same in duplicate.

CITY OF NORTHGLENN, COLORADO

By: William A. Simmons  
William A. Simmons  
Title: City Manager

ATTEST:

Johanna Small 2/24/11  
Johanna Small, City Clerk

APPROVED AS TO FORM:

Corey Hoff 2/27/11  
Corey Hoffmann, City Attorney

CONSULTANT

By: W. G. Lyg  
VICE PRESIDENT 2/14/11  
Title Date

ATTEST:

Bernice Toyne  
Project Controller 2/14/11  
Title Date

**EXHIBIT A**  
**City of Northglenn, Colorado**  
**2011 Wastewater Utility Plan**  
**Scope of Work – Amendment for Update**

<b>TASKS</b>	
<b>100</b>	Project Management
<b>200</b>	Basis of Planning
<b>300</b>	Evaluation of Wastewater Treatment Facility
<b>400</b>	System Recommendations and Capital Improvement Plan
<b>500</b>	<i>Water Reuse Feasibility – No Changes from Original Contract</i>
<b>600</b>	Wastewater Master Plan
<b>700</b>	Utility Plan Update
<b>800</b>	<i>Bull Reservoir Effluent Pumping Evaluation – No Changes from Original Contract</i>
<b>900</b>	<i>Potential External Funding Sources (Alternative Task Item) – No Changes from Original Contract</i>

**PROJECT OBJECTIVE:**

The purpose of this amendment is to address Northglenn City Council comments from November 18, 2010 council meeting and incorporate into the draft Northglenn Wastewater Utility Plan for submission to NFRWQPA and CDPHE for final approval. The Northglenn Wastewater Utility Plan was originally developed in June 2003 and was then updated under the original contract for this project. A final draft was delivered in October 2010 for submission to the Northglenn City Council. Recommendations in the draft Wastewater Utility Plan Update were discussed at the November 18, 2010 council meeting. At this meeting, the Northglenn City Council requested system improvements based on the constrained scenario be addressed prior to finalizing the report and submitting to the review agencies.

**PROJECT ASSUMPTIONS:**

- Basis of planning developed under the original contract will not be modified, i.e. the population projections in the NSA and SSA for the IGA constrained scenario and unconstrained scenario will remain the same.

**TASK 100. PROJECT MANAGEMENT**

**Objectives:**

Plan and execute the Wastewater Utility Plan Update amendment in accordance with an established schedule and budget while exceeding quality expectations.

#### HDR Subtasks:

- 101 **Project Coordination Meetings.** A final review meeting will be budgeted to ensure the amended Wastewater Utility Plan Update incorporates all the required changes requested by the City.
- 102 **Monitoring.** Monitor project progress, including work completed, work remaining, budget expended, schedule and estimated cost of work remaining and estimated cost at completion. Manage activities within task budgets. Prepare and submit a brief monthly progress memorandum and invoice. For the purposes of this amendment, it is assumed the project will be extended an additional four months.
- 103 **Quality Control.** Review all work activities and project deliverables for conformance with quality control requirements and project standards.

#### Deliverables:

- Memoranda and meeting notes as required.
- Project status memorandums and invoices.

## TASK 200. BASIS OF PLANNING

#### Objectives:

The Basis of Planning establishes the planning constraints, clarifies the issues that will impact planning decisions and provides a clear foundation for the development of the alternatives for the City's wastewater facilities. Planning documents and data such as the Northglenn Comprehensive Plan, Weld County Comprehensive Plan, current zoning and land use, census data, and the TAZ data will be utilized to develop future population estimates. Data will be gathered regarding current, planned, and potential land uses. Meetings will be held with City staff to develop a wastewater service area plan for the 208 boundary. The 208 boundary wastewater service area plan will develop a strategy for future sewer collection system and recommend potential lift station locations. The purpose of WWTF Master Planning work is to provide a comprehensive document which includes all of the relative objectives in this scope of work for the overall planning of the facility, to establish theoretical build-out conditions and provide a list of capital improvements implementation drivers and schedule for the next 20 years (2030). Master Planning will include evaluating current and future regulations, sludge disposal alternatives, and drivers for Capital Improvements.

#### HDR Subtasks:

- 201 **Develop a Wastewater Service Area Plan.** Update NSA service area figures (Figure 2.1, Figure 2.4, Figure 2.8, and Figure 2.9) to identify IGA "Settlement Agreement Area".
- 202 **Develop Land Use and Population Projections.** No changes to this subtask from original contract. Completed.
- 203 **Characterize Wastewater Flows.** No changes to this subtask from original contract. Completed.

**204 Develop Wastewater Flow Projections.** No changes to this subtask from original contract. Completed.

**205 Prepare a Basis of Planning Technical Memorandum.** No changes to this subtask from original contract. Completed.

**City Involvement:**

- Review and comment on updated Figures.

**Deliverables:**

- Updated Chapter 2 – Basis of Planning.

## **TASK 300. EVALUATION OF WASTEWATER TREATMENT FACILITY**

**Objectives:**

Using volumetric flow, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), phosphorous and nitrogen loading developed on a per capita basis, project average flow and load conditions for the next 20-years, and theoretical buildout planning period for the wastewater treatment facility. Projected flow and loading conditions will be compared to the existing and currently planned design capacity of the treatment facilities and solids handling systems to determine the adequacy of each treatment facility to treat the updated flow and loading from the planned population, commercial, and industrial uses developed in Task 200. The comprehensive evaluation of the existing Wastewater Treatment Facility will include structures, pipelines, pump stations and control devices which provide treatment, storage, or affects the wastewater's quality, levels of pollutants, odors, treatability, and conveyance. Standards for evaluation will include the CDPHE Policy 96-1, Design Criteria considered in the Review of Wastewater Treatment Facilities.

**HDR Subtasks:**

**301 Existing Sewage Flows and Loadings.** No changes to this subtask from original contract. Completed.

**302 Existing Plant Utilization.** The Wastewater Utility Plan Update will be modified to include the capacity of the existing WWTF and the requirements to meet operational needs including hydraulic and process redundancy. Improvements required to bring the facility into regulatory compliance and separate the BNR treatment system from the lagoon treatment system will also be identified. The analysis will include process flow diagrams identifying the improvements required and the cost for construction. Additionally, the capacity of the WWTF will be evaluated based on the constrained IGA scenario and the unconstrained IGA scenario as developed in Task 200. The analysis will identify capacity restrictions in the unit process and will determine when they will occur for each population alternative. A treatment plant utilization schedule (table) will be developed that will be used for projection of current capacity utilization and remaining capacity for each population alternative. The table will highlight the improvements needed which are based on operational needs, permitting, and finally capacity due to growth.

- 303 **Regulatory Requirements and Future Wastewater Discharge and Disposal Analysis.** No changes to this subtask from original contract. Completed.
- 304 **Odor Control.** No changes to this subtask from original contract. Completed.
- 305 **Future Plant Requirements.** Determine treatment requirements and capacity for the WWTF based on operational needs, permitting, and finally capacity based on the IGA constrained and unconstrained scenarios. Update the plan developed under the original contract to include a Capital Improvements Schedule that projects required treatment plant upgrades that are tied to operational needs, permitting, and finally capacity due to growth. Additionally, further evaluate alternatives for solids stabilization and handling to allow for decommissioning of the lagoon system including the addition of primary clarification, thickening, and anaerobic digestion. Include this under section 4.6.9 and incorporate into summary. Finally, modify the recommendation for improvements to the administration/lab building to reduce costs.
- 306 **Cost Estimating and Implementation Plan.** Develop costs for treatment plant improvements and solids handling to meet operational needs, permitting, and finally for the IGA constrained and unconstrained scenarios as developed in Task 200 and evaluated in Tasks 302 and 305. Develop a table identifying the design and construction sequencing of the recommended improvements and an implementation plan for how to operate the existing facility during construction. Update the table/graph developed under the original contract for capital project costs versus planning period for future budgeting purposes.

**Deliverables:**

- Six copies of the amended draft Wastewater Utility Plan Update.
- Six copies of the amended final Wastewater Utility Plan Update.

**TASK 400. SYSTEM RECOMMENDATIONS AND CAPITAL IMPROVEMENT PLAN**

**Objectives:**

The objective of this task is to select a recommended plan for the wastewater treatment systems from the analysis performed in previous tasks. The recommended capital improvements will be documented and a capital improvement schedule (CIP) will be prepared.

**HDR Subtasks:**

- 401 **Develop Rating Criteria.** No changes to this subtask from original contract. Completed.
- 402 **Alternative Evaluation Workshop.** No changes to this subtask from original contract. Completed.
- 403 **Capital Improvement and Implementation Plan Development.** Update plan prepared under original contract for implementation of the recommended alternatives. Plan will include a description of the recommended projects and their priorities developed in Tasks 302 and 305. Additionally, include construction of a parallel forcemain from Lift Station A to the WWTF and the improvement recommendations for Lift Station A developed by URS. Develop capital improvements schedule that includes prioritization, capital costs, and potential external funding sources.



- 404 Identify Potential Funding Sources.** No changes to this subtask from original contract. Completed.

## **TASK 500. WATER REUSE FEASIBILITY**

No changes to this task from the original contract. Completed.

## **TASK 600. WASTEWATER MASTER PLAN REPORT**

No changes to this task from the original contract. Update based on additional scope items in this amendment.

## **TASK 700. UTILITY PLAN UPDATE**

Update the existing Utility Plan to correlate with the Wastewater Treatment Facility Master Plan, the Water Treatment Plant Master Plan Update, the Integrated Water Resource Plan, City of Northglenn and Weld County Comprehensive Plans, and the Odor Control Plan.

### **HDR Subtasks:**

- 701 Draft Wastewater Utility Plan.** Update Draft Wastewater Utility Plan developed under original contract with additional scope items listed previously. Revise the Executive Summary developed under the original contract to describe the treatment plant upgrades that are tied to operational needs and regulatory requirements. Then describe the improvements required for Lift Station A and the forcemain. Finally, describe the capacity increase due to growth based on the IGA constrained and unconstrained scenarios. Show continuity between Wastewater Utility Plan Update and the Original Utility Plan developed in 2003. Draft versions of the Wastewater Utility Plan will be submitted to the City, NFRWQPA, and CDPHE for review and comment.
- 702 Prepare and Deliver Final Wastewater Utility Plan to City of Northglenn.** Based on review comments received, revisions to the draft report will be made and the final report will be assembled. Six copies will be delivered to the City.

### **City Involvement:**

- Review and comment on draft Wastewater Utility Plan.

### **Deliverables:**

- Draft Utility Plan (6) six copies.
- Final Utility Plan (6) six copies.

## **TASK 800. BULL RESERVOIR EFFLUENT PUMPING EVALUATION**

No changes to this task from the original contract. Completed.

**TASK 900. POTENTIAL EXTERNAL FUNDING SOURCES (ALTERNATIVE TASK ITEM)**

No changes to this task from the original contract. Completed.

Exhibit B

City of Northglenn Wastewater Master Plan Fee Estimate- Scope of Services - Amendment	HDR Engineering															Total Expenses	HDR Fee	Total Fee
	QA/QC-Stu Oppenheim	PW-Matt Gough	Process Engineer- Mario Benisch	Senior Engineer Total	Project Engineer- Trish Quigley	Bryon Wood	Project Engineer Total	CAD/GIS Total	Project Admin & Clerical	Hours	Labor	Technology Charge	Printing & Publications	Travel				
Task Description																		
<b>Task 100 – Project Management</b>																		
101 Project Coordination Meeting (1)		2		0	2		2	0		4	\$ 517	\$ 15		\$ 60	\$ 75	\$ 591	\$ 591	
102 Project Management Plan				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
103 Monitoring		4		0			0	0	2	6	\$ 803	\$ 22		\$ 22	\$ 826	\$ 826	\$ 826	
104 Quality Control	2			0			0	0	2	2	\$ 400	\$ 7		\$ 7	\$ 407	\$ 407	\$ 407	
<b>Sub-total</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>\$ 1,720</b>	<b>\$ 44</b>	<b>\$ -</b>	<b>\$ 60</b>	<b>\$ 104</b>	<b>\$ 1,824</b>	<b>\$ 1,824</b>	
<b>Task 200 – Basis of Planning</b>																		
201 Define the Wastewater Planning Boundaries				0			6	6		6	\$ 651	\$ 22		\$ 22	\$ 673	\$ 673	\$ 673	
202 Develop Land Use and Population Projections				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
203 Characterize Wastewater Flows				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
204 Develop Wastewater Flow Projections				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
205 Prepare a Basis of Planning TM				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>\$ 651</b>	<b>\$ 22</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 22</b>	<b>\$ 673</b>	<b>\$ 673</b>	
<b>Task 300 – Evaluation of Wastewater Treatment Facility</b>																		
301 Existing Sewage Flows and Loadings				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
302 Existing Plant Utilization			4	4	12		12	0		20	\$ 2,401	\$ 74		\$ 74	\$ 2,475	\$ 2,475	\$ 2,475	
303 Regulatory Requirements and Future Wastewater Discharge and Disposal				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
304 Odor Control				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
305 Future Plant Expansion Requirements	2	8	8	8	16		16	16		50	\$ 5,880	\$ 185		\$ 185	\$ 6,065	\$ 6,065	\$ 6,065	
306 Cost Estimating and Implementation Plan		8		0	12		12	0	4	24	\$ 2,822	\$ 89	\$ 200	\$ 289	\$ 3,111	\$ 3,111	\$ 3,111	
<b>Sub-total</b>	<b>2</b>	<b>20</b>	<b>12</b>	<b>12</b>	<b>40</b>	<b>0</b>	<b>40</b>	<b>16</b>	<b>4</b>	<b>94</b>	<b>\$ 11,104</b>	<b>\$ 348</b>	<b>\$ 200</b>	<b>\$ -</b>	<b>\$ 548</b>	<b>\$ 11,652</b>	<b>\$ 11,652</b>	
<b>Task 400 – System Recommendations and Capital Improvement Plan</b>																		
401 Develop Rating Criteria				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
402 Alternative Evaluation Workshop				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
403 Capital Improvement and Implementation Plan Development		4		0	12		12	0		16	\$ 1,843	\$ 59	\$ 200	\$ 259	\$ 2,103	\$ 2,103	\$ 2,103	
404 Identify Potential Funding Sources				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>\$ 1,843</b>	<b>\$ 59</b>	<b>\$ 200</b>	<b>\$ -</b>	<b>\$ 259</b>	<b>\$ 2,103</b>	<b>\$ 2,103</b>	
<b>Task 500 - Water Reuse Feasibility</b>																		
501 Reuse Water Strategy Workshop				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
502 Economic Analysis				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
503 Council and Stakeholder Presentation				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Task 600 – Wastewater Master Plan Report</b>																		
601 Draft Wastewater Master Plan				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
602 Prepare and Deliver Final Wastewater Master Plan to City of Northglenn				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Task 700 – Utility Plan Update</b>																		
701 Draft Utility Plan		4		0	4		4	0	2	10	\$ 1,209	\$ 37	\$ 250		\$ 287	\$ 1,496	\$ 1,496	
702 Prepare and Deliver Final Utility Plan to City of Northglenn		4		0	4		4	0	2	10	\$ 1,209	\$ 37	\$ 500		\$ 537	\$ 1,746	\$ 1,746	
<b>Sub-total</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>20</b>	<b>\$ 2,417</b>	<b>\$ 74</b>	<b>\$ 750</b>	<b>\$ -</b>	<b>\$ 824</b>	<b>\$ 3,241</b>	<b>\$ 3,241</b>	
<b>Task 800 - Bull Reservoir Effluent Pumping Evaluation</b>																		
801 Evaluate Pumping Alternatives				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Alternative Task 900 - Potential External Funding Sources</b>																		
901 Funding Source Matrix				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
902 Funding Source Workshop				0			0	0		0	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Hours</b>	<b>4</b>	<b>38</b>	<b>12</b>	<b>12</b>	<b>62</b>	<b>6</b>	<b>68</b>	<b>16</b>	<b>10</b>	<b>148</b>								
<b>Fee</b>	<b>\$800</b>	<b>\$5,966</b>	<b>\$1,674</b>	<b>\$1,674</b>	<b>\$6,279</b>	<b>\$651</b>	<b>\$6,930</b>	<b>\$1,488</b>	<b>\$877</b>	<b>\$ 17,736</b>	<b>\$ 548</b>	<b>\$ 1,150</b>	<b>\$ 60</b>	<b>1,758</b>	<b>\$ 19,493</b>			
<b>Total Fee (Rounded)= \$ 19,490</b>																		

### ADDENDUM #3 TO AGREEMENT FOR PROFESSIONAL SERVICES

THIS THIRD ADDENDUM TO AGREEMENT FOR PROFESSIONAL SERVICES is made and entered into this 24<sup>th</sup> day of February, 2011, by and between the CITY OF NORTHGLENN, State of Colorado (hereinafter referred to as the "City") and HDR Engineering, Inc. (hereinafter referred to as "Consultant").

#### RECITALS:

- A. On June 11, 2009 the City and Consultant entered into an Agreement for Professional Services for civil engineering services (the "Agreement").
- B. The parties desire to supplement the Agreement with this Addendum #3 to allow for an additional scope of services for the design services for:

**Exhibit A, EVALUATION OF DISCHARGING NORTHGLENN WASTEWATER TO METRO WASTEWATER RECLAMATION DISTRICT**

#### AGREEMENT

NOW, THEREFORE, it is hereby agreed that for the consideration hereinafter set forth, that Consultant shall provide to the City, professional engineering services as needed in the manner provided in the Agreement.

1. The Scope of Services in the Agreement is hereby supplemented to include the scope of services for the design services attached hereto as **Exhibit A**, and incorporated herein by this reference (the "Additional Scope of Services"). Consultant shall commence work on the Additional Scope of Services within ten (10) days of the issuance of a Notice to Proceed.
2. Subparagraph A. of Article IV entitled "Compensation" is hereby amended to provide as follows:
  - A. Compensation shall not exceed \$6,959.00 for the work described in **Exhibit A** to this Addendum #2.
3. The original Agreement is in full force and effect and is hereby ratified by the City and the Consultant. The original Agreement and this Addendum constitute all of the agreements between the City and the Consultant.

IN WITNESS WHEREOF, the parties hereto each herewith subscribe to the same in duplicate.

**CITY OF NORTHGLENN, COLORADO**

By: William A. Simmons  
William A. Simmons  
Title: City Manager

ATTEST:

Johanna Small 2/24/11  
Johanna Small, City Clerk

APPROVED AS TO FORM:

Corey Y. Hoffmann 2/24/11  
Corey Y. Hoffmann, City Attorney

**CONSULTANT**

By: W. J. Ly  
VICE PRESIDENT 2/14/11  
Title Date

ATTEST:

Bevin Tycum  
Project Controller 2/14/11  
Title Date



ONE COMPANY | *Many Solutions*<sup>SM</sup>

February 10, 2011

Mr. David Willett  
Public Works Director  
11701 Community Center Drive  
Northglenn, CO 80233

**SUBJECT: EVALUATION OF DISCHARGING NORTHGLENN WASTEWATER TO METRO  
WASTEWATER RECLAMATION DISTRICT**

Dear Mr. Willett:

In response to the City of Northglenn's (City) request for assistance, HDR Engineering, Inc. (HDR) is pleased to provide you with this proposal to provide an evaluation for discharging Northglenn wastewater to Metro Wastewater Reclamation District for treatment at the Robert W. Hite Treatment Facility (RWHTF) through the existing Thornton Interconnect.

Our proposed scope of services is attached for your review. We look forward to discussing our scope of services with you. Should you have any questions about our approach or any information contained herein, please call me at 303-902-2109. Thank you again for the opportunity to provide these additional services to the City. We look forward to hearing from you.

Sincerely yours,  
HDR ENGINEERING, INC.

Matt Gough, PE  
Project Manager

Ken Lowrey, PE  
Water Section Manager



## Section 1

### Project Understanding, Approach and Schedule

#### 1.1 Introduction

HDR Engineering, Inc. (HDR) proposes to assist the City of Northglenn in evaluation of discharging raw wastewater from Northglenn to Metro Wastewater Reclamation District for treatment at the RWHTF, eliminating the need for the Northglenn WWTP and Lift Station A. Our proposal provides our understanding of the City's goals and objectives in conducting this work and our proposed approach to achieve the desired results.

#### 1.2 Goals and Objectives

As we understand, the City's primary goal in pursuing this project is to gain an understanding of the "order of magnitude" implications of sending the City's wastewater to MWRD for treatment through the existing Thornton Sewer Interconnect. This task order includes developing level of effort to send flow to the RWHTF, required upgrades to the Thornton system, determination of the MWRD connection charge, and planning level cost for the user fee associated with using the Thornton system. HDR is currently completing the Wastewater Utility Plan update and has developed a 20 year capital improvements plan for the wastewater system. Required improvements to the existing collection, transmission and treatment system exceed \$30 million. The purpose of this evaluation is to determine if the City of Northglenn should further evaluate if connecting to the MWRD system makes sense for the long-term needs of the City, in order to determine if further investigation is justified.

Given these goals and objectives, a scope of services has been developed to meet the City's needs.

#### 1.3 Proposed Scope of Services

##### Task 100 — Project Management

*Task Objective: Plan and execute the evaluation in accordance with an established schedule and budget while exceeding quality expectations.*

*HDR Subtasks:*

- 101 **Project Coordination Meeting.** A project coordination meeting will be budgeted to discuss the results from this evaluation with the City.
- 102 **Monitoring.** Monitor project progress, including work completed, work remaining, budget expended, schedule and estimated cost of work remaining and estimated cost at completion. Manage activities within task budgets. Prepare and submit a brief monthly progress memorandum and invoice. For the purposes of this amendment, it is assumed the project will last two months.
- 103 **Quality Control.** Review all work activities and project deliverables for conformance

with quality control requirements and project standards.

**Deliverables:**

- Memoranda and meeting notes as required.
- Project status memorandums and invoices.

**Task 200 — Evaluation**

*Task Objective: Evaluate discharging Northglenn wastewater to the MWRD through the existing Thornton Sewer Interconnect located at Lift Station A and flowing to the RWHTF.*

*HDR Subtasks:*

- 201 Evaluate Discharge to MWRD.** Determine the planning level requirements for connecting permanently to the Thornton Sewer Interconnect and sending flow the MWRD RWHTF. With the construction of the new MWRD NTP in 2015, Thornton will be transferring flow from the Brantner Gulch Lift station to the new treatment facility freeing up capacity in the south portion of their collection system. This alternative will evaluate sending flow by gravity from Lift Station A location through the Thornton sewer system to the RWHTF. Evaluation will include a preliminary determination of Thornton sewer system capacity and required improvements, estimate of MWRD connection charges, and planning level cost for the user fee associated with using the Thornton system.
- 202 Cost Estimating and Implementation Plan.** Develop order of magnitude costs and identify level of effort for discharging Northglenn wastewater to the RWHTF through the Thornton Sewer Interconnect. Develop table identifying an implementation plan and the CDPHE and NFRWPA implications for the change.

**Deliverables:**

- Six copies of the draft and final technical memorandums.

**1.4 Project Cost Proposal**

Based upon the estimated labor needed to complete the tasks described above in the scope of services and the hourly rates of staff assigned to this project, HDR has developed a fee estimate for the City's project. Given the scope of services described above, the total estimated fees for this project are \$6959.00. Below is a detailed breakdown of the fee.



# Proposal for Evaluation of Discharging Northglenn Wastewater to Metro Wastewater Reclamation District

City of Northglenn Evaluation of Discharging Northglenn Wastewater to Metro Wastewater Reclamation District	HDR Engineering											Total Fee	
	QA/QC Site Opportunities	PM-Matt Gough	Senior Engineer- Gary Fuller	Senior Engineer Total	Project Engineer- Byron Wood	Project Engineer Total	CAD/GIS Total	Project Admin & Clerical	Hours	Labor	Total Expenses		HDR Fee
<b>Task Description</b>	\$ 200	\$ 157	\$ 200	\$ 200	\$ 110.78	\$ 111	\$ 83	\$ 85					
<b>Task 100 - Project Management</b>													
101 Project Coordination Meeting		2	0	0	2	2	0		4	\$ 536	\$ 75	\$ 610	\$ 610
102 Monitoring		2	0	0	0	0	0	2	4	\$ 489	\$ 15	\$ 504	\$ 504
103 Quality Control		2	0	0	0	0	0	2	2	\$ 400	\$ 7	\$ 407	\$ 407
<b>Sub-total</b>	2	4	0	0	2	2	0	2	10	\$ 1,425	\$ 97	\$ 1,522	\$ 1,522
<b>Task 200 - Evaluation</b>													
201 Evaluate Discharge To MWRD		8	4	4	10	10	4		26	\$ 3,536	\$ 98	\$ 3,632	\$ 3,632
202 Cost Estimating and Implementation Plan		6	0	0	4	4	0	2	12	\$ 1,561	\$ 244	\$ 1,805	\$ 1,805
<b>Sub-total</b>	0	14	4	4	14	14	4	2	38	\$ 5,096	\$ 341	\$ 5,437	\$ 5,437
<b>Hours</b>	2	18	4	4	16	16	4	4	48				
<b>Fee</b>	\$400	\$2,826	\$800	\$800	\$1,772	\$1,772	\$372	\$351	\$ 6,821	438	\$ 6,959		
<b>Total Fee (Rounded)=</b>												<b>\$ 6,959</b>	

HDR is willing to enter into a time and materials, fixed fee contract for this project, not to exceed \$6959.00. HDR will invoice the City for time and materials expended in completion of the scope of services on a monthly basis. Along with each monthly invoice the City will receive a progress report stating progress, work completed, status, milestones and work planned for the following month. This will enable the City's Project Manager to monitor progress.

Should additional services be requested, they will be agreed to in writing prior to commencing work and those services will be billed on a time and material basis.



Exhibit B

City of Northglenn Evaluation of Discharging Northglenn Wastewater to Metro Wastewater Reclamation District	HDR Engineering										Total Fee		
	QA/QC-Stu Oppenheim	PM-Matt Gough	Senior Engineer- Gary Fuller	Senior Engineer Total	Project Engineer- Bryon Wood	Project Engineer Total	CAD/GIS Total	Project Admin & Clerical	Hours	Labor		Total Expenses	HDR Fee
	\$ 200	\$ 157	\$ 200	\$ 200	\$ 110.78	\$ 111	\$ 93	\$ 88					
<b>Task Description</b>													
<b>Task 100 – Project Management</b>													
101 Project Coordination Meeting		2		0	2	2	0		4	\$ 536	\$ 75	\$ 610	\$ 610
102 Monitoring		2		0		0	0		4	\$ 489	\$ 15	\$ 504	\$ 504
103 Quality Control		2		0		0	0		2	\$ 400	\$ 7	\$ 407	\$ 407
<b>Sub-total</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>10</b>	<b>\$ 1,425</b>	<b>\$ 97</b>	<b>\$ 1,522</b>	<b>\$ 1,522</b>
<b>Task 200 - Evaluation</b>													
201 Evaluate Discharge To MWRD		8	4	4	10	10	4		26	\$ 3,536	\$ 96	\$ 3,632	\$ 3,632
202 Cost Estimating and Implementation Plan		6		0	4	4	0	2	12	\$ 1,561	\$ 244	\$ 1,805	\$ 1,805
<b>Sub-total</b>	<b>0</b>	<b>14</b>	<b>4</b>	<b>4</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>38</b>	<b>\$ 5,096</b>	<b>\$ 341</b>	<b>\$ 5,437</b>	<b>\$ 5,437</b>
<b>Hours</b>	<b>2</b>	<b>18</b>	<b>4</b>	<b>4</b>	<b>16</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>48</b>				
<b>Fee</b>	<b>\$400</b>	<b>\$2,826</b>	<b>\$800</b>	<b>\$800</b>	<b>\$1,772</b>	<b>\$1,772</b>	<b>\$372</b>	<b>\$351</b>		<b>\$ 6,521</b>	<b>438</b>	<b>\$ 6,959</b>	
<b>Total Fee (Rounded)=</b>												<b>\$ 6,959</b>	

**ADDENDUM #4 TO AGREEMENT FOR PROFESSIONAL SERVICES**

THIS FOURTH ADDENDUM TO AGREEMENT FOR PROFESSIONAL SERVICES is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2012, by and between the CITY OF NORTHGLENN, State of Colorado (hereinafter referred to as the "City") and HDR ENGINEERING, INC. (hereinafter referred to as "Consultant").

**RECITALS:**

A. On June 11, 2009, the City and Consultant entered into an Agreement for Professional Services for civil engineering services (the "Agreement").

B. The parties desire to supplement the Agreement with this Addendum #4 to allow for an additional scope of services for the design services for:

**Exhibit A, Financial Management Evaluation and Permit Assistance**

**AGREEMENT**

NOW, THEREFORE, it is hereby agreed that for the consideration hereinafter set forth, that Consultant shall provide to the City, professional engineering services as needed in the manner provided in the Agreement.

1. The Scope of Services in the Agreement is hereby supplemented to include the scope of services for the design services attached hereto as **Exhibit A**, and incorporated herein by this reference (the "Additional Scope of Services"). Consultant shall commence work on the Additional Scope of Services within ten (10) days of the issuance of a Notice to Proceed.

2. Subparagraph A. of Article IV entitled "Compensation" is hereby amended to provide as follows:

A. Compensation shall not exceed \$9,700.00 for the work described in **Exhibit A** to this Addendum #4.

3. The original Agreement is in full force and effect and is hereby ratified by the City and the Consultant. The original Agreement and this Addendum constitute all of the agreements between the City and the Consultant.

IN WITNESS WHEREOF, the parties hereto each herewith subscribe to the same in duplicate.

**CITY OF NORTHGLENN, COLORADO**

By: \_\_\_\_\_  
Joyce Downing                      Date  
Title: Mayor

ATTEST:

\_\_\_\_\_  
Johanna Small,CMC                      Date  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Corey Y. Hoffmann,                      Date  
City Attorney

**CONSULTANT  
HDR Engineering, Inc.**

By: [Signature]  
Vice President                      5/10/12  
Title                                      Date

ATTEST:

[Signature]  
Project Manager                      5-10-12  
Title                                      Date

**EXHIBIT A**  
**City of Northglenn**  
**WWTF Master Plan**  
**Amendment #4**  
**Financial Management Evaluation and Permit Assistance**

The purpose of this memorandum is to document the additional scope items for Amendment #4 as part of the WWTF Master Plan Project. The budget change is included in the spreadsheet at the end of this section.

**Additional Scope Items**

Below is a summary of the scope items which were added or amended to the project. Table 1 provides a summary of the costs for each scope item. This Amendment represents the following:

- Preparation of financial management evaluation to meet requirements of NFRWQPA Utility Plan submittal. Additional budget equating to \$5,400.
- Permit assistance and final submittal of Northglenn WWTF Master Plan to CDPHE. Additional budget equating to \$4,300.

Below is a description of the additional scope items.

**Financial Management Evaluation**

A simplified revenue requirement analysis will be developed to assess the impact of the projected O&M and capital infrastructure. Summary conclusions of the potential financial and rate impacts of the Wastewater Master Plan will be provided. Recommendations for modifications to existing fees and alternative rate structures will be provided.

Existing rates and fees will be reviewed for conformity with contemporary rate making principles. This will include a review of the current wastewater rates and fees. Alternative rate structures will be discussed along with the current rate making trends in the wastewater industry. In addition, the current miscellaneous fees will be reviewed and additional fees recommended as needed. Finally, the development and analysis of the current connection, or impact, fees will be reviewed in relationship to the future capital planning period.

Summarize recommended capital improvements made as part of the Capital Improvements Plan (CIP). Summarize on an annual basis. Allocate the planned capital improvements between expenditures for system expansion (growth) versus expenditures for enhancing the current system. Utilize previous work efforts performed for the City as a starting point for the analysis. Develop a simple revenue model for projecting annual rate adjustments and provide a strategy for implementing rate and growth impact fee adjustments. The cost for this additional effort is \$5,400.00.

**Deliverables:**

- Capital improvement and rate impact summary for inclusion in Chapter 8.
- Simple revenue requirement model for inclusion in Chapter 8.
- Project financial management section for inclusion in Chapter 8.
- Projected annual rate adjustments for inclusion in Chapter 8.

**Permit Assistance**

HDR will submit the final Northglenn WWUP to CDPHE for final approval. This task includes a meeting with CDPHE to discuss the contents of the WWUP and status of the Site Application. The cost for this additional effort is \$4,300.00. Time spent on this task will as needed based on meeting with CDPHE.