

## City Council Action Report

To: The Mayor and Council

From: Cory Peterson, Interim Manger of Water and Environmental Services  
Kurt Kowar, Service Center Manger of Logistics

Subject: Hydraulic Modeling of Distribution and Collection Systems (Long Term Water Resources Planning)

Date: October 27, 2005

Strategic Council Goals: Goal #2 – Upgrade City Infrastructure and Facilities

### **Recommended Action:**

- Authorize the Mayor to execute the attached contract by and between the City of Northglenn and Integra Engineering of Denver, Colorado; and, authorize the City Manager to approve minor changes in the scope of work and execute relevant change orders up to a Council approved expenditure limit of \$109,113.00.

### **Background:**

- This project will evaluate the condition of the distribution and collection systems, allowing for potential problem to be proactively identified, enhance our current maintenance and operation abilities and to be prepared for future needs and demands.

### **Legal Considerations:**

- The Council is within its legal purview to accept bids and approve contracts.

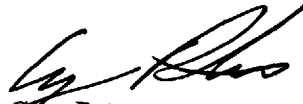
### **Policy Considerations:**

- The task proposed to be performed by Integra Engineering is essential in fulfilling a part of City Council Goal #2 – Upgrade City Infrastructure and Facilities, Objective 1: Adequate Water Supply for Northglenn.

### **Budget/Financial Considerations:**

- Staff is requesting Council approval for this contract in the amount of \$99,193.00 with a contingency of \$9,920.00 (10%), for a total of \$109,113.00.
- Total funding as described for this project is \$109,113 and total project cost is within available unencumbered Water and Sewer CIP funds.
- Funding is being used from budgeted Water and Sewer Rehabilitation funds.

Respectfully Submitted,



Cory Peterson,  
Interim Manager – WES

Respectfully Submitted,



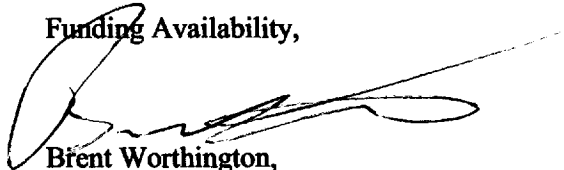
Kurt Kowar,  
Center Manager-Logistics

Approved for Submittal,



Phil Nelson,  
City Manager

Funding Availability,



Brent Worthington,  
Center Manager-FISS

COUNCIL ACTION: \_\_\_\_\_

## **AGREEMENT FOR PROFESSIONAL SERVICES**

THIS AGREEMENT is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2005, by and between the City of Northglenn, State of Colorado (hereinafter referred to as the "City") and Integra Engineering (hereinafter referred to as "Consultant").

### **RECITALS:**

- A. The City requires professional services.
- B. Consultant has held itself out to the City as having the requisite expertise and experience to perform the required work for the Project.

NOW, THEREFORE, it is hereby agreed for the consideration hereinafter set forth, that Consultant shall provide to the City, professional consulting services for the Project.

### **I. SCOPE OF SERVICES**

Consultant shall furnish all labor and materials to perform the work and services required for the complete and prompt execution and performance of all duties, obligations, and responsibilities for the Project which are described or reasonably implied from **Exhibit A** which is attached hereto and incorporated herein by this reference.

### **II. THE CITY'S OBLIGATIONS/CONFIDENTIALITY**

The City shall provide Consultant with reports and such other data as may be available to the City and reasonably required by Consultant to perform hereunder. No project information shall be disclosed by Consultant to third parties without prior written consent of the City or pursuant to a lawful court order directing such disclosure. All documents provided by the City to Consultant shall be returned to the City. Consultant is authorized by the City to retain copies of such data and materials at Consultant's expense.

### **III. OWNERSHIP OF WORK PRODUCT**

The City acknowledges that the Consultant's work product is an instrument of professional service. Nevertheless, the products prepared under this Agreement shall become the property of the City upon completion of the work.

### **IV. COMPENSATION**

A. In consideration for the completion of the services specified herein by Consultant, the City shall pay Consultant an amount not to exceed fifty nine thousand eight hundred and fourteen dollars (\$59,814). Payment shall be made in accordance with the schedule of charges in **Exhibit B** which is attached hereto and incorporated herein by this reference. Invoices will be itemized and include hourly breakdown for all personnel and other charges. The maximum fee specified herein shall include all fees and expenses incurred by Consultant in performing all services hereunder.

B. Consultant may submit monthly or periodic statements requesting payment. Such request shall be based upon the amount and value of the work and services performed by Consultant under this Agreement except as otherwise supplemented or accompanied by such supporting data as may be required by the City.

1. All invoices, including Consultant's verified payment request, shall be submitted by Consultant to the City no later than the twenty-fourth (24th) day of each month for payment pursuant to the terms of this Agreement. In the event Consultant fails to submit any invoice on or before the twenty-fourth (24th) day of any given month, Consultant defers its right to payment pursuant to said late invoice until the twenty-fourth (24th) day of the following month.
2. Progress payments may be claimed on a monthly basis for reimbursable costs actually incurred to date as supported by detailed statements, including hourly breakdowns for all personnel and other charges. The amounts of all such monthly payments shall be paid within thirty (30) days after the timely receipt of invoice as provided by this Agreement.

C. The City has the right to ask for clarification on any Consultant invoice after receipt of the invoice by the City.

D. In the event payment for services rendered has not been made within forty-five (45) days from the receipt of the invoice for any uncontested billing, interest will accrue at the legal rate of interest. In the event payment has not been made within ninety (90) days from the receipt of the invoice for any uncontested billing, Consultant may, after giving seven (7) days written notice and without penalty or liability of any nature, suspend all work on all authorized services specified herein. In the event payment in full is not received within thirty (30) days of giving the seven (7) days written notice, Consultant may terminate this Agreement. Upon receipt of payment in full for services rendered, Consultant will continue with all authorized services.

E. Final payment shall be made within sixty (60) calendar days after all data and reports (which are suitable for reproduction and distribution by the City) required by this Agreement have been turned over to and approved by the City and upon receipt by the City of Consultant's certification that services required herein by Consultant have been fully completed in accordance with this Agreement and all data and reports for the Project.

## **V. COMMENCEMENT AND COMPLETION OF WORK**

Within seven (7) days of receipt from the City of a Notice to Proceed, Consultant shall commence work on all its obligations as set forth in the Scope of Services or that portion of such obligations as is specified in said Notice. Except as may be changed in writing by the City, the Project shall be complete and Consultant shall furnish the City the specified deliverables as provided in Exhibit A.

## **VI. CHANGES IN SCOPE OF SERVICES**

A change in the Scope of Services shall constitute any material change or amendment of services or work which is different from or additional to the Scope of Services specified in Section I of this Agreement. No such change, including any additional compensation, shall be effective, or paid unless authorized by written amendment executed by the City. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum meruit or implied contract. Except as expressly provided herein, no agent, employee, or representative of the City shall have the authority to enter into any changes or modifications, either directly or implied by a course of action, relating to the terms and scope of this Agreement.

## **VII. PROFESSIONAL RESPONSIBILITY**

A. Consultant hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.

B. The work performed by Consultant shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community.

C. Consultant shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by Consultant under this Agreement. Consultant shall, without additional compensation, correct or resolve any errors or deficiencies in his designs, drawings, specifications, reports, and other services, which fall below the standard of professional practice, and reimburse the City for construction costs caused by errors and omissions which fall below the standard of professional practice.

D. Approval by the City of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve Consultant of responsibility for technical adequacy of the work. Neither the City's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this Agreement.

or of any cause of action arising out of the performance of this Agreement, and Consultant shall be and remain liable in accordance with applicable performance of any of the services furnished under this Agreement.

E. The rights and remedies of the City provided for under this Agreement are in addition to any other rights and remedies provided by law.

### **VIII. COMPLIANCE WITH LAW**

The work and services to be performed by Consultant hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

### **IX. INDEMNIFICATION**

Consultant agrees to indemnify and hold harmless the City, its officers, employees, and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the negligent act, omission, error, professional error, mistake, negligence, or other fault of Consultant, any subconsultant of Consultant, or any officer, employee, representative, or agent of Consultant or of any subconsultant of Consultant, or which arise out of any workmen's compensation claim of any employee of Consultant or of any employee of any subconsultant of Consultant. Consultant agrees to investigate, handle, respond to, and to provide defense for and defend against any such liability, claims or demands at the sole expense of Consultant, or at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with, any such liability, claims, or demands. Consultant also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss, or damage was caused in whole or in part by the act, omission, or other fault of the City, its officers, or its employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission, or other fault of the City, its officers, or employees.

### **X. INSURANCE**

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by Consultant pursuant to paragraph A. above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section IX. Indemnification, above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

**B. Consultant shall procure and maintain, and shall cause any subconsultant of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX. Indemnification, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.**

- 1. Workmen's compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Agreement, and Employer's Liability insurance with minimum limits of five hundred thousand dollars (\$500,000) each accident, one million dollars (\$1,000,000) disease - policy limit, and one million dollars (\$1,000,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the workmen's compensation requirements of this paragraph.**
- 2. Commercial general liability insurance with minimum combined single limits of six hundred thousand (\$600,000) each occurrence and one million dollars (\$1,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall contain a severability of interests provision.**
- 3. Professional liability insurance with minimum limits of six hundred thousand dollars (\$600,000) each claim and one million dollars (\$1,000,000) general aggregate.**
- 4. The policy required by paragraph 2. above shall be endorsed to include the City and the City's officers, employees, and consultants as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, its employees, or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by paragraph 1. above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.**
- 5. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the**

Agreement. No other form of certificate shall be used. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

City of Northglenn  
11701 Community Center Drive  
Northglenn, Colorado 80233-8061  
Attn: Eve Craven

6. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement, or at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.
7. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
8. The parties hereto understand and agree that the City, its officers, and its employees, are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently one hundred fifty thousand dollars (\$150,000) per person and six hundred thousand dollars (\$600,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat. §24-10-101 et seq., 10 Colo. Rev. Stat., as from time to time amended, or otherwise available to the City, its officers, or its employees.

#### **XI. NON-ASSIGNABILITY**

Neither this Agreement, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.

#### **XII. TERMINATION**

This Agreement shall terminate at such time as the work in Section I is completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all work

previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

### **XIII. CONFLICT OF INTEREST**

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

### **XIV. VENUE**

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Adams, State of Colorado.

### **XV. INDEPENDENT CONTRACTOR**

Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

### **XVI. NO WAIVER**

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligation of this Agreement.

### **XVII. ENTIRE AGREEMENT**

This Agreement and the attached Exhibits A and B is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified, or changed, except as specified herein.



**XVIII. NOTICE**

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

The City:                   City of Northglenn  
                                  11701 Community Center Drive  
                                  Northglenn, Colorado 80233-8061

Consultant:                Integra Engineering  
                                  450 Decatur Street  
                                  Denver, CO 80204

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

**CITY OF NORTHGLENN, COLORADO**

By: \_\_\_\_\_  
Kathleen M. Novak, Mayor

ATTEST:

\_\_\_\_\_  
Diana Lentz, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Herbert C. Phillips, City Attorney

**CONSULTANT**

By: Michael P. Lutz

Principal 20 October 2005  
Title Date

WITNESS:

~~ATTEST:~~

Eve Chalk

Center Manager 10/20/05  
Title Date

## Exhibit A

**Task 1 — Project Management & Coordination.** Provide management and coordination of the efforts of the project team to ensure the project meets the needs of the City of Northglenn. The project will be initiated with a meeting to establish project goals and objectives. Progress meetings will be held for the duration of the project to maintain a close working relationship and facilitate coordination and review of interim work products. Within two weeks of receipt of Notice to Proceed we will prepare a project timeline for the project.

**Task 2 — Review Existing Data and Information.** Gather and review available data and information pertinent to the hydraulic modeling work. Review major water lines, pump stations, pressure reducing valves and other appurtenances and accurately reflect these components in the hydraulic models. This effort will include the following to be furnished by the City:

- GIS Land Use Maps and Utility Maps
- City of Northglenn Comprehensive Plan
- WaterCad Model of existing water distribution mains
- Raw Water System Plan
- As-builts

**Task 3 — Data Entry.** Enter distribution system information into Excel based spreadsheets for importation into the model. Data entry may be performed by the City or by Integra Engineering. If the City elects to perform this task, Integra Engineering will provide the base spreadsheets and formats required.

**Task 4 - Future Development Alternatives.** Allocate water demand for future service area demands in the model based on planned land use and population distribution. Identify, format, and print population maps and planned land use maps from the City's GIS system. Use information from the GIS maps to distribute water demands to be geographically consistent with existing and future population and land use plans. Weld County Section 36 can be added to the model using planning data in GIS format and topographic maps. After the future service areas have been added to the model., we will develop and evaluate future development scenarios that could affect the City's water resources, storage and conveyance systems and treatment facilities. Evaluate the following potential developments:

- Population growth to 41,000 at ultimate build out by year 2010
- Potential extension of water service to Section 36 in Weld County
- Possible conversion of Bull Reservoir to raw water storage
- Upgrade and expansion of the Northglenn Water Treatment Plant
- Non-potable irrigation systems for City parks and commercial areas
- Potential indirect potable reuse facility and conveyance from the Northglenn WWTP site to the City

- Service within the City under planned zoning and extension of service to Section 36 in Weld County which may affect total demand and require additional distribution and potential storage facilities
- Changes in planned land uses that may affect total demand, alter the distribution of demand, and require changes to distribution and storage facilities
- Changes in total demand as well as in distribution of demand may affect the planned future capacity of the Northglenn Water Treatment Plant (WTP) and a potential indirect potable reuse facility
- Changes in the relative proportions of raw water derived from Clear Creek and reclaimed water stored in Bull Reservoir as a new raw water source that may affect raw water storage, treatment, and distribution requirements

**Task 5 - Water System Model and Evaluation.** The City's existing WaterCad (Haested Methods or Bentley Systems) model will be converted to H2ONet (MWHSoft, Inc.) and updated to be consistent with current land use planning. Updating of the model will include reviewing fire flows and peak demand factors used in the existing model. Demand factors will be confirmed or revised as appropriate giving consideration to future water conservation efforts.

After the model has been updated and all demands have been allocated, model calibration against field data is generally recommended. A model is considered calibrated if the modeled result is within 10 percent of field data. In order to calibration, system-wide parameters must be known for a specific date and time. These parameters include finished water production, system-wide demand, pump flow and suction and discharge pressure, PRV settings, and storage tank levels. It is also useful to have spot pressures from various points in the system. Model calibration can be a considerable effort therefore, the cost for calibration is listed separately (Task 5.1) in Table 1 and can be removed from the scope of work upon request by the City.

Modeling will include dynamic extended period simulations as well as steady state conditions. Extended period simulations will be used to accurately reflect storage and pumping facilities operations. Steady state simulations will be used to test system-wide pressures under various operating conditions such as low pressure under maximum day demand conditions including fire flows.

The results of this task will be summarized in a Technical Memorandum presenting a detailed discussion of the modeling process and delineating water system deficiencies and recommendations. These results will be presented to City staff at one of three formal presentations.

**Task 6 — Final Report.** The results of the modeling work will be summarized in a comprehensive report that will present final results and recommendations. The Water Systems Evaluation will incorporate population and land use information from the 2003 Wastewater Utility Plan as appropriate and will confirm recommendations that are still valid, highlight

deviations, and identify impacts and changes that affect the water utilities. The Report will include applicable design parameters, identify problem areas in the water system and the proposed improvements with set priorities for each. Documentation will include maps of the water system at 1:2000 scale, model input data, model results, any other data used to develop final recommendations in both hard copy & digital formats.

**Task 7 - Presentation of Results and Recommendations.** In addition to the regularly scheduled progress meetings, findings during the course of the project will be presented to City staff in two formal presentations on the H2ONet model and the final results and recommendations for the project.

Exhibit B

Task	Description	Total Cost, \$	Expense \$	Labor cost, \$	Labor, hours		
					P	Eng-3	AD
1	Project Management & Coordination	4,660	200	4,460	28		12
2	Review Existing Data and Information	1,680	0	1,680		16	
3	Data Entry	1,256	0	1,256		8	8
4	Future Development Alternatives	8,948	0	8,948	4	80	
5	Water System Model and Evaluation	21,840	0	21,840		208	
5.1	Model Calibration	8,400	0	8,400		80	
6	Final Report	7,156	100	7,056	4	60	4
7	Presentation of Results and Recommendations	2,378	150	2,228	4	16	
8	Progress Meetings	2,656	300	2,356	8	12	
9	Training	840	0	840		8	
	<b>Total</b>	<b>59,814</b>	<b>750</b>	<b>59,064</b>	<b>48</b>	<b>488</b>	<b>24</b>

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The work and services to be performed by Consultant hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

### **IX. INDEMNIFICATION**

Consultant agrees to indemnify and hold harmless the City, its officers, employees, and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the negligent act, omission, error, professional error, mistake, negligence, or other fault of Consultant, any subconsultant of Consultant, or any officer, employee, representative, or agent of Consultant or of any subconsultant of Consultant, or which arise out of any workmen's compensation claim of any employee of Consultant or of any employee of any subconsultant of Consultant. Consultant agrees to investigate, handle, respond to, and to provide defense for and defend against any such liability, claims or demands at the sole expense of Consultant, or at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with, any such liability, claims, or demands. Consultant also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss, or damage was caused in whole or in part by the act, omission, or other fault of the City, its officers, or its employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission, or other fault of the City, its officers, or employees.

### **X. INSURANCE**

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by Consultant pursuant to paragraph A. above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section IX. Indemnification,

above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. Consultant shall procure and maintain, and shall cause any subconsultant of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX. Indemnification, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workmen's compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Agreement, and Employer's Liability insurance with minimum limits of five hundred thousand dollars (\$500,000) each accident, one million dollars (\$1,000,000) disease - policy limit, and one million dollars (\$1,000,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the workmen's compensation requirements of this paragraph.
2. Commercial general liability insurance with minimum combined single limits of six hundred thousand (\$600,000) each occurrence and one million dollars (\$1,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall contain a severability of interests provision.
3. Professional liability insurance with minimum limits of six hundred thousand dollars (\$600,000) each claim and one million dollars (\$1,000,000) general aggregate.
4. The policy required by paragraph 2. above shall be endorsed to include the City and the City's officers, employees, and consultants as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, its employees, or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by paragraph 1. above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.

5. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the Agreement. No other form of certificate shall be used. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

City of Northglenn  
11701 Community Center Drive  
Northglenn, Colorado 80233-8061  
Attn: Eve Craven

6. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement, or at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.
7. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
8. The parties hereto understand and agree that the City, its officers, and its employees, are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently one hundred fifty thousand dollars (\$150,000) per person and six hundred thousand dollars (\$600,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat. §24-10-101 et seq., 10 Colo. Rev. Stat., as from time to time amended, or otherwise available to the City, its officers, or its employees.

#### **XI. NON-ASSIGNABILITY**

Neither this Agreement, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.

#### **XII. TERMINATION**

This Agreement shall terminate at such time as the work in Section I is completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all work previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

### **XIII. CONFLICT OF INTEREST**

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

### **XIV. VENUE**

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Adams, State of Colorado.

### **XV. INDEPENDENT CONTRACTOR**

Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

### **XVI. NO WAIVER**

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligation of this Agreement.

### **XVII. ENTIRE AGREEMENT**

This Agreement and the attached Exhibits A and B is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified, or changed, except as specified herein.

**XVIII. NOTICE**

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

**The City:** City of Northglenn  
11701 Community Center Drive  
Northglenn, Colorado 80233-8061

**Consultant:** Integra Engineering  
450 Decatur Street  
Denver, CO 80204

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

**CITY OF NORTHGLENN, COLORADO**

By: \_\_\_\_\_  
Kathleen M. Novak, Mayor

ATTEST:

\_\_\_\_\_  
Diana Lentz, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Herbert C. Phillips, City Attorney

**CONSULTANT**

By: Michael P. Lutz

Principal      20 October 2005  
Title                      Date

WITNESS:  
~~ATTEST:~~

Eric Craven

Center Manager      10/20/05  
Title                      Date

## Exhibit A

**Task 1 - Project Management & Coordination.** Provide management and coordination of the project to meet the needs of the City of Northglenn. We will conduct a project initiation meeting with the City to refine project goals and objectives. Progress meetings will be held for the duration of the project to maintain a close working relationship and facilitate coordination and review of interim work products. Within two weeks of receipt of Notice to Proceed we will prepare a project timeline for the project.

**Task 2 — Review Existing Data and Information.** Gather and review of all available data and information pertinent to the hydraulic modeling work. Review all major sewer lines, pump stations, and other appurtenances and accurately reflect these components in the hydraulic models. This effort will include the following to be furnished by the City:

- GIS Land Use Maps and Utility Maps
- Topographic Map of City
- City of Northglenn Comprehensive Plan
- Wastewater collection system data including
  - o City ID numbers for manholes, pipes, pumps, and wet wells
  - o Manhole rim elevations and locations
  - o Pipe lengths and diameters
  - o Pipe invert information
  - o Lift stations and force mains
  - o Pump station operational information (level on/off information, for example)
  - o Pump station flow records for past five years
  - o Pump curves

**Task 3 — Data Entry.** Enter collection system information into Excel based spreadsheets for importation into the model. Data entry may be performed by the City or by Integra Engineering. If the City elects to perform this task, Integra Engineering will provide the base spreadsheets and formats required.

**Task 4 — Future Development Alternatives.** Develop and evaluate future development scenarios that could affect the City's conveyance systems and treatment facilities for wastewater utilities. Evaluate the following potential developments:

- Population growth to 41,000 at ultimate build out by year 2010.
- Potential extension of sewer service to Section 36 in Weld County
- Possible wastewater conveyance and treatment for the Big Dry Creek basin within the City of Thornton
- Possible exchange of wastewater service between the Cities of Northglenn and Thornton
- Upgrade and expansion of the Northglenn Waste Water Treatment Plant



**Task 5 - Wastewater System Model and Evaluation.** The H20-MAP (MWH Soft, Inc.) model will be constructed to be consistent with current land use plans and potential changes in service arrangements.

The model construction will include review of wastewater flows and modeling criteria from the 2003 Wastewater Utility Plan with appropriate revisions if necessary. The modeling effort will include (1) major wastewater gravity sewers, (2) wastewater pumping facilities, and (3) wastewater force mains. Modeling will include steady state conditions as well as dynamic extended period simulations to accurately reflect pumping facilities operations. Peaking factors will be confirmed or revised from the 2003 Utility Plan as appropriate.

Allocate wastewater flows for existing and future service area demands in the H20 Sewer model based on planned land use and population distribution. Identify manholes along pipelines where wastewater flows should be allocated in the model. In developed areas, flows will be added to manholes at points where existing pipes connect to main lines. Identify, format, and print population maps and planned land use maps from the City's GIS system. Use information from the GIS maps to distribute wastewater flows geographically consistent with existing and future population and land use plans. After inputting the demand, test the model to find and resolve discrepancies with actual operation.

The results of this task will be summarized in a Technical Memorandum presenting a detailed discussion of the modeling process and delineating deficiencies identified in the wastewater collection system and recommended improvements.

**Task 6 - Final Report.** The results of the modeling work will be summarized in a comprehensive report that will present final results and recommendations. The Wastewater System Evaluation will incorporate information from the 2003 Wastewater Utility Plan as appropriate and will confirm recommendations that are still valid, highlight deviations, and identify impacts and changes that affect wastewater utilities. The Report will include applicable design parameters, identify problem areas in the wastewater system and the proposed improvements with set priorities for each. Documentation will include maps of the sewer system 1:2000 scale, model input data, model results, any other data used to develop final recommendations in both hard copy & digital formats.

**Task 7 — Presentation of Results and Recommendations.** In addition to the regularly scheduled progress meetings, findings during the course of the project will be presented to City staff in three formal presentations on the H20-MAP sewer model, and the final results and recommendations for the project.

Exhibit B

Task	Description	Total Cost, \$	Expense \$	Labor cost, \$	Labor, hours			
					P	ENV	Eng-3	AD
1	Project Management & Coordination	1,856	100	1,756	8			12
2	Review Existing Data and Information	2,904	0	2,904		24		
3	Data Entry	880	0	880				16
4	Future Development Alternatives Wastewater System Model and	4,420	0	4,420	4	32		
5	Evaluation	16,456	0	16,456		136		
6	Final Report Presentation of Results and	7,623	100	7,523	4	35	24	4
7	Recommendations	1,424	150	1,274	4	6		
8	Progress Meetings	2,848	300	2,548	8	12		
9	Training	968	0	968		8		
	<b>Total</b>	<b>39,379</b>	<b>650</b>	<b>38,729</b>	<b>16</b>	<b>229</b>	<b>24</b>	<b>32</b>



**Logistics Service Center**  
11701 Community Center Drive  
Northglenn, CO 80233-8061  
Phone: 303.450.8774  
Cell: 303.349.3772  
Fax: 303.450.8708  
Email: [kkowar@northglenn.org](mailto:kkowar@northglenn.org)

## **Memorandum**

**To:** The Mayor & City Council  
**From:** Kurt Kowar, Logistics Center Manager  
**Date:** October 20, 2005  
**Subject:** **Integrated Water Resources Master Plan**

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Staff is hereby presenting to the Mayor & Council a team of consultants that, working with staff will solidify the future of the City's long term water resources.

It is essential that as growth occurs along the Front Range and competition for water resources and opportunity for partnerships increase that the City of Northglenn is positioned to take full advantage. Our sustainability is tied to creating a long term plan that sets in place the mechanisms to ensure our future needs. Staff is proposing to move forward looking at our water and wastewater as a whole to use each to its maximum benefit that it can provide.

Three consultants are being recommended to the Mayor & Council, each with their own distinct area of expertise and knowledge. In addition to those characteristics, they are also being selected because of the intimate knowledge they bring of our neighboring city's and an idea of how partnerships could best be formed. It is important not to downplay this component as it is an asset to begin conversations with common relationships that have a developed trust and credibility.

Camp Dresser & McKee will work with staff, Council, and the community, to understand our goals and available opportunities. Staff will work with them to look outside the box at water resources and partnerships that can enhance our long term solutions. The process will look at water, wastewater, and all combinations in between.

Red Oak will work with staff and council to look across our resources and understand our true costs of doing business now and in the long term. The outcome will include rate structures that support our current business and future alternatives. In addition, the findings will include methods for implementing any solutions that will minimize impacts to the community.

Integra Engineering will work with staff to complete the mapping and modeling of our collection system, distribution system, water plant, and wastewater plant. Using the baseline data created, Integra and staff will explore the various alternatives that would affect our systems and understand the impacts to the existing infrastructure. In addition, the mapping and models completed during this process will become the foundation for our utility asset management.

It is important that we stress this is a team approach that will incorporate the consultants, staff, Council, and our community in moving through this process. The key component of that being "team", in which the synergy created from our collective expertise, knowledge, ideas, contacts, and partnerships will ensure a beneficial outcome to the residents of Northglenn.

Staff thanks you in advance for your time and consideration on the recommendations made for this important policy direction of the City.