

RESOLUTION NO. 15-1011

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
BLACK DIAMOND, KING COUNTY, WASHINGTON
AUTHORIZING THE MAYOR TO EXECUTE A
PROFESSIONAL SERVICES AGREEMENT WITH RH2
ENGINEERING, INC. FOR ASSISTANCE WITH THE
WATER COMPREHENSIVE PLAN UPDATE

WHEREAS, the Department of Health requires that the City update its water comprehensive plan every six years and the water comprehensive plan update is due; and

WHEREAS, the City has planned and budgeted for the Water Comprehensive Plan Update; and

WHEREAS, the City does not have sufficient staff resources to complete all aspects of the Water Comprehensive Plan Update; and

WHEREAS, RH2 Engineering, Inc. was competitively selected as the City's on-call water engineering consultant;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, WASHINGTON, DOES RESOLVE AS FOLLOWS:

Section 1. The Mayor is hereby authorized to execute a contract with RH2 Engineering, Inc. for assistance with the City's Water Comprehensive Plan Update, substantially in the form attached hereto.

PASSED BY THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, WASHINGTON, AT A REGULAR MEETING THEREOF, THIS 5TH DAY OF FEBRUARY, 2015.

CITY OF BLACK DIAMOND:



Carol Benson, Mayor

Attest:



Brenda L. Martinez, City Clerk

**CONSULTANT SERVICES CONTRACT
BETWEEN THE CITY OF BLACK DIAMOND AND
RH2 ENGINEERING, INC.**

THIS AGREEMENT is made by and between the City of Black Diamond, a Washington municipal corporation (hereinafter the "City"), and RH2 ENGINEERING, INC., (hereinafter the "Consultant,") a corporation organized under the laws of the State of Washington, located and doing business at 22722 29th Drive SE, Suite 210, Bothell, WA 98021.

RECITALS

WHEREAS, the City does not have sufficient staff resources to complete all work associated with the Water Comprehensive Plan Update; and

WHEREAS, the Consultant has agreed to provide engineering services related to the Water Comprehensive Plan Update as described herein;

WHEREAS, the City has advertised for on-call water and sewer engineering services and has selected RH2 Engineering, Inc. as the most qualified;

NOW, THEREFORE, in consideration of the mutual promises set forth herein, it is agreed by and between the parties as follows:

TERMS

I. Description of Work.

The Consultant shall perform all work described in Exhibit A, which is attached hereto and incorporated herein by this reference.

II. Payment

A. The City shall pay the Consultant an amount based on time and materials according to the list of billing rates and reimbursable expenses attached hereto as Exhibit C. The total amount of services under this contract shall not exceed seventy thousand seven hundred Dollars (\$70,700.00) as estimated in exhibit B for the services described in Section I herein. This is the maximum amount to be paid under this Agreement for the work described in Exhibit A, and shall not be exceeded without the prior written authorization of the City in the form of a negotiated and executed supplemental agreement. PROVIDED, HOWEVER, the City reserves the right to direct the Consultant's compensated services under the time frame set forth in Section IV herein before reaching the maximum amount.

B. The Consultant shall submit monthly invoices to the City after such services have been performed, and a final bill upon completion of all the services described in this Agreement. The City shall pay the full amount of an invoice within sixty (60) days of receipt. If the City objects to all or any portion of any invoice, it shall so notify the Consultant of the same within fifteen (15) days from the date of receipt and shall pay that portion of the invoice not in dispute, and the parties shall immediately make every effort to settle the disputed portion.

III. Relationship of Parties

The parties intend that an independent contractor-client relationship will be created by this Agreement. As the Consultant is customarily engaged in an independently established trade which encompasses the specific service provided to the City hereunder, no agent, employee, representative or sub-consultant of the Consultant shall be or shall be deemed to be the employee, agent, representative or sub-consultant of the City. In the performance of the work, the Consultant is an independent contractor with the ability to control and direct the performance and details of the work, the City being interested only in the results obtained under this Agreement. None of the benefits provided by the City to its employees including, but not limited to, compensation, insurance, and unemployment insurance are available from the City to the employees, agents, representatives, or sub-consultants of the Consultant. The Consultant will be solely and entirely responsible for its acts and for the acts of its agents, employees, representatives and sub-consultants during the performance of this Agreement. The City may, during the term of this Agreement, engage other independent contractors to perform the same or similar work that the Consultant performs hereunder.

IV. Duration of Work

The City and the Consultant agree that work will begin on the tasks described in Exhibit A immediately upon execution of this Agreement. The parties agree that the work described in Exhibit A shall be completed by December 31, 2015; provided however, that additional time shall be granted by the City for excusable days or extra work.

V. Termination

A. Termination of Agreement. The City may terminate this Agreement, for public convenience, the Consultant's default, the Consultant's insolvency or bankruptcy, or the Consultant's assignment for the benefit of creditors, at any time prior to completion of the work described in Exhibit A. If delivered to Consultant in person, termination shall be effective immediately upon the Consultant's receipt of the City's written notice or such date stated in the City's notice, whichever is later.

B. Rights Upon Termination. In the event of termination, the City shall pay for all services satisfactorily performed by the Consultant to the effective date of termination, as described on a final invoice submitted to the City. Said amount shall not exceed the

amount in Section II above. After termination, the City may take possession of all records and data within the Consultant's possession pertaining to this Agreement, which records and data may be used by the City without restriction. Upon termination, the City may take over the work and prosecute the same to completion, by contract or otherwise.

VI. Discrimination

In the hiring of employees for the performance of work under this Agreement or any sub-contract hereunder, the Consultant, its Subcontractors, or any person acting on behalf of such Consultant or sub-consultant shall not by reason of race, religion, color, sex, national origin, or the presence of any sensory, mental, or physical disability, discriminate against any person who is qualified and available to perform the work to which the employment relates.

VII. Indemnification

The Consultant shall defend, indemnify and hold the City, its officers, officials, employees, agents and volunteers harmless from any and all claims, injuries, damages, losses or suits, including all legal Costs and attorneys' fees, arising out of or in connection with the performance of this Agreement, except for injuries and damages caused by the sole negligence of the City. The City's inspection or acceptance of any of the Consultant's work when completed shall not be grounds to avoid any of these covenants of indemnification.

Should a court of competent jurisdiction determine that this Agreement is Subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, agents and Volunteers, the Consultant's liability hereunder shall be only to the extent of the Consultant's negligence.

IT IS FURTHER SPECIFICALLY AND EXPRESSLY UNDERSTOOD THAT THE INDEMNIFICATION PROVIDED HEREIN CONSTITUTES THE CONSULTANT'S WAIVER OF IMMUNITY UNDER INDUSTRIAL INSURANCE, TITLE 51 RCW, SOLELY FOR THE PURPOSES OF THIS INDEMNIFICATION. THE PARTIES FURTHER ACKNOWLEDGE THAT THEY HAVE MUTUALLY NEGOTIATED THIS WAIVER. THE CONSULTANT'S WAIVER OF IMMUNITY UNDER THE PROVISIONS OF THIS SECTION DOES NOT INCLUDE, OR EXTEND TO, ANY CLAIMS BY THE CONSULTANT'S EMPLOYEES DIRECTLY AGAINST THE CONSULTANT.

The provisions of this section shall survive the expiration or termination of this Agreement.

VIII. Insurance

A. The Consultant shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the Consultant's own work including the work of the Consultant's agents, representatives, employees, sub-consultants or sub-contractors.

B. Before beginning work on the project described in this Agreement, the Consultant shall provide evidence, in the form of a Certificate of Insurance, of the following insurance coverage and limits (at a minimum):

1. Business auto coverage for any auto no less than a \$1,000,000 each accident limit, and

2. Commercial General Liability insurance no less than \$1,000,000 per occurrence with a \$2,000,000 aggregate. Coverage shall include, but is not limited to, contractual liability, products and completed operations, property damage, and employers liability, and

3. Professional Liability insurance with no less than \$1,000,000. All policies and coverage's shall be on a claims made basis.

C. The Consultant is responsible for the payment of any deductible or self-insured retention that is required by any of the Consultant's insurance. If the City is required to contribute to the deductible under any of the Consultant's insurance policies, the Contractor shall reimburse the City the full amount of the deductible within ten (10) working days of the City's deductible payment.

D. The City of Black Diamond shall be named as an additional insured on the Consultant's commercial general liability policy. This additional insured endorsement shall be included with evidence of insurance in the form of a Certificate of Insurance for coverage necessary in Subsection B. The City reserves the right to receive a certified and complete copy of all of the Consultant's insurance policies.

E. Under this agreement, the Consultant's insurance shall be considered primary in the event of a loss, damage or suit. The City's own comprehensive general liability policy will be considered excess coverage with respect to defense and indemnity of the City only and no other party. Additionally, the Consultant's commercial general liability policy must provide cross-liability coverage as could be achieved under a standard ISO separation of insured's clause.

F. The Consultant shall request from his insurer a modification of the ACORD certificate to include language that prior written notification will be given to the City of Black Diamond at least thirty (30) days in advance of any cancellation, suspension or material change in the Consultant's coverage.

IX. Exchange of Information

The City warrants the accuracy of any information supplied by it to the Consultant for the purpose of completion of the work under this Agreement. The parties agree that the Consultant will notify the City of any inaccuracies in the information provided by the City as may be discovered in the process of performing the work, and that the City is entitled to rely upon any information supplied by the Consultant which results as a product of this Agreement.

X. Ownership and Use of Records and Documents

Original documents, drawings, designs and reports developed under this Agreement shall belong to and become the property of the City. All written information submitted by the City to the Consultant in connection with the services performed by the Consultant under this Agreement will be safeguarded by the Consultant to at least the same extent as the Consultant safeguards like information relating to its own business. If such information is publicly available or is already in Consultant's possession or known to it, or is rightfully obtained by the Consultant from third parties, the Consultant shall bear no responsibility for its disclosure, inadvertent or otherwise.

XI. City's Right of Inspection

Even though the Consultant is an independent contractor with the authority to control and direct the performance, and details of the work authorized under this Agreement, the work must meet the approval of the City and shall be subject to the City's general right of inspection to secure the satisfactory completion thereof. The Consultant agrees to comply with all federal, state, and municipal laws, rules, and regulations that are now effective or become applicable within the terms of this Agreement to the Consultant's business, equipment, and personnel engaged in operations covered by this Agreement or accruing out of the performance of such operations.

XII. Consultant to Maintain Records to Support Independent Contractor Status

On the effective date of this Agreement (or shortly thereafter), the Consultant shall comply with all federal and state laws applicable to Independent contractors including, but not limited to the maintenance of a separate set of books and records that reflect all items of income and expenses of the Consultant's business, pursuant to the Revised Code of Washington (RCW) Section 51.08.195, as required to show that the services performed by the Consultant under this Agreement shall not give rise to an employer-employee relationship between the parties which is subject to RCW Title 51, Industrial Insurance.

XIII. Work Performed at the Consultant's Risk

The Consultant shall take all precautions necessary and shall be responsible for the safety of its employees, agents, and sub-consultants in the performance of the work

hereunder and shall utilize all protection necessary for that purpose. All work shall be done at the Consultant's own risk, and the Consultant shall be responsible for any loss of or damage to materials, tools, or other articles used or held by the Consultant for use in connection with the work.

XIV. Non-Waiver of Breach

The failure of the City to insist upon strict performance of any of the covenants and agreements contained herein, or to exercise any option herein conferred in one or more instances, shall not be construed to be a waiver or relinquishment of said covenants, agreements, or options and the same shall be and remain in full force and effect.

XV. Resolution of Disputes and Governing Law

Should any dispute, misunderstanding, or conflict arise as to the terms and conditions contained in this Agreement, the matter shall first be referred to the City of Black Diamond shall determine the term or provision's true intent or meaning. The City of Black Diamond shall also decide all questions which may arise between the parties relative to the actual services provided or to the sufficiency of the performance hereunder.

If any dispute arises between the City and the Consultant under any of the provisions of this Agreement which cannot be resolved by the Mayor or Administrator's determination in a reasonable time, or if the Consultant does not agree with the City's decision on the disputed matter, jurisdiction of any resulting litigation shall be filed in King County Superior Court, King County, Washington. This Agreement shall be governed by and construed in accordance with the laws of the State of Washington. The non-prevailing party in any action brought to enforce this Agreement shall pay the other parties' expenses and reasonable attorney's fees.

XVI. Written Notice

All communications regarding this Agreement shall be sent to the parties at the addresses listed on the signature page of the agreement, unless notified to the contrary. Unless otherwise specified, any written notice hereunder shall become effective upon the date of mailing by registered or certified mail, and shall be deemed sufficiently given if sent to the addressee at the address stated below:

CONSULTANT:

Attn: Geoff Dillard
RH2 Engineering, Inc.
22722 29th Drive SE, Suite 210
Bothell, WA 98021

CITY:

Attn: Seth Boettcher
City of Black Diamond
P.O. Box 599
24301 Roberts Drive
Black Diamond, WA 98010

With a copy to the "City Clerk" at the same address.

XVII. Assignment

Any assignment of this Agreement by the Consultant without the written consent of the City shall be void. If the City shall give its consent to any assignment, this paragraph shall continue in full force and effect and no further assignment shall be made without the City's consent.

XVIII. Modification and Severability

No waiver, alteration, or modification of any of the provisions of this Agreement shall be binding unless in writing and signed by a duly authorized representative of the City and the Consultant.

The provisions of this Agreement are declared to be severable. If any provision of this Agreement is for any reasons held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other provision.

XIX. Entire Agreement

The written provisions and terms of this Agreement, together with any Exhibits attached hereto shall supersede all prior verbal statements of any officer or other representative of the City, and such statements shall not be effective or be construed as entering into or forming a part of or altering in any manner whatsoever, this Agreement or the Agreement documents. The entire agreement between the parties with respect to the subject matter hereunder is contained in this Agreement and any Exhibits attached hereto, which may or may not have been executed prior to the execution of this Agreement. All of the above documents are hereby made a part of this Agreement and form the Agreement document as fully as if the same were set forth herein. Should any language in any of the Exhibits to this Agreement conflict with any language contained in this Agreement, then this Agreement shall prevail.

IN WITNESS WHEREOF, the parties have executed this Agreement on this 6 day of Feb, 2015.

CONSULTANT

CITY OF BLACK DIAMOND

By: *Goffey G. Bell*
Its

By: *Carol Benson*
Carol Benson, Mayor

Consultant: _____

APPROVED AS TO FORM:

City Attorney's Office

ATTEST:

Brenda L. Martinez
City Clerk

Exhibit A
City of Black Diamond
Comprehensive Water System Plan Update Assistance
SCOPE OF WORK
November 24, 2014

This Scope of Work includes tasks necessary to for RH2 Engineering, Inc., (RH2) update the City of Black Diamond's (City) Comprehensive Water System Plan (WSP) and evaluate the ability of the City's water system to meet the needs of existing and projected future water system customers throughout the 20-year planning period. This Scope of Work is based on published regulatory requirements for comprehensive water system plans and on the kick-off meeting with Department of Health (DOH) on November 7, 2014.

Available resources from the previous planning work (Last WSP prepared by PacWest Engineering, LLC in 2008) will be utilized to reduce the level of effort necessary for this WSP update. In addition, we understand that City staff will be undertaking a large number of the task necessary to complete this plan update. To reduce redundancy in effort, RH2 will rely on the accuracy and completeness of any data, information, or materials provided by the City or others in relation to the work. It is anticipated that the City will contract directly with its own financial consultant to prepare the financial analysis.

NOTE: It is anticipated that task items that are *italicized* will be accomplished by City staff and should only require a minimal amount of effort to complete (e.g., already completed as part of 2008 WSP or other ongoing efforts). Non-italicized task items will be accomplished by RH2 and are included in the attached Fee Estimate.

ACTIVITY 1 – INTRODUCTION AND EXISTING WATER SYSTEM DESCRIPTION

Task:

1. Coordinate with City staff during the data collection process. This includes coordination with City staff over the telephone and reviewing data provided by the City.
2. *Describe the water system ownership and management. Include the system type, system ID number, address, and contact person.*
3. *Describe the authorization and purpose of the plan, and provide a summary of the plan contents*
4. *Provide a definition of terms and list of abbreviations used in the plan.*
5. *Review previous plans, existing system information and data, and facility as-builts.*
6. *Provide a brief overview of the history of the water system from information provided in the previous plan. Include the current numbers of existing and approved service connections.*
7. *Describe the physical characteristics of the existing water service area and its effects on water system planning including topography, geology, sensitive areas and flood zones.*

8. Describe the City's existing and future service areas including the Urban Growth Area and water service agreements. Include the City's plans for expanding the current service area.
9. Summarize the City's current position on being a Satellite Management Agency and discuss the potential impacts of the program on the City.
10. Provide a brief overview of the operation of the existing water system.
11. Describe each pressure zone and all existing facilities including sources of supply, booster pump stations, pressure reducing stations, pipelines, reservoirs, interties, and telemetry and supervisory control.
12. Provide a table of water main inventory that includes total lengths, diameters, materials, and age, based on available data.
13. Review adjacent water systems and provide a brief description of the adjacent water systems' and the potential for emergency and seasonal interties.
14. Prepare color figures of the following:
 - Existing Water System
 - Existing System Hydraulic Profile
 - Service Area and Adjacent Systems

ACTIVITY 2 - LAND USE AND POPULATION

Task:

1. Prepare an inventory of related plans and review each to provide a summary of the impacts on the water system. Include the County Land Use Plan, Coordinated Water System Plan, and the Growth Management Act (GMA) impacts on the City.
2. Identify existing and future land use patterns and their impacts on existing and future facilities for the water system.
3. Identify current and projected housing trends and household sizes within the City's service area, based on available information from the City staff and from County and State population data.
4. Include a table of 6-year, 10-year, and 20-year population projections that comply with the Growth Management Act.
5. Include a color figure of the following:
 - City Land Use
 - County Land Use
 - City Zoning
 - County Zoning

ACTIVITY 3 - WATER DEMANDS**Task:**

1. RH2 and City staff to meet and discuss water availability protocols. *City will include updated criteria and procedures to be used for issuing Certificates of Water Availability, in accordance with GMA.*
2. *Tabulate yearly totals of metered consumption for each customer class and the average number of accounts in service for each year from 2008 through 2014.*
3. *Tabulate the ten largest water users and the total water use of each for the year 2014.*
4. *Tabulate yearly totals of water production from each supply facility from 2008 through 2014.*
5. *Calculate per capita demands based on the average day demand and population data from 2008 through 2014.*
6. *Calculate the number of equivalent residential units (ERU's) within the system based on the water consumption and supply data.*
7. *Identify the distribution system loss (DSL) by analyzing the differences between billing consumption records and supply records.*
8. *Calculate the approximate demand by pressure zone.*
9. *Calculate the system average day demand based on the yearly water supply data from 2008 through 2014.*
10. Review available telemetry and field records for the supply and storage facilities and compute the system's maximum day demand (MDD) and peak hour demand (PHD).
11. *Prepare a table of general fire flow requirements of each land use classification and identify buildings with the largest fire flow requirements within the service area.*
12. *Document the historical demands from 2008 through 2014.*
13. *Develop 1 through 20-year demand projections based on projected population data and historical per capita demands. Demand projections shall be tabulated with and without additional water use reductions from conservation.*

ACTIVITY 4 - POLICIES AND DESIGN CRITERIA**Task:**

1. Review and evaluate existing City standards pertaining to water department policies and criteria. Make recommendations on potential updates and modifications.

2. *Identify existing policies and recommend additional policies or revise as necessary to ensure that future City facilities meet minimum and acceptable design standards and criteria. Use State Department of Health, Environmental Protection Agency, American Water Works Association, and standard engineering practices as the bases for identifying facility construction policies, criteria, and requirements.*
3. *Summarize each policy and design criteria.*
4. Review City construction standards and make recommendations on potential updates and modifications.
5. *Discuss the City's existing construction standards and include a copy in the appendix.*

ACTIVITY 5 - WATER SOURCE AND QUALITY

Task:

1. *Provide a detailed description of the existing water sources and treatment.*
2. Summarize the results of recent water supply studies, recommendations and planned improvements. This shall include the recently completed corrosion control improvements for the spring sources.
3. Summarize the current water rights in the City using records provided by the City.
4. Perform a water rights evaluation that compares current water rights with existing and projected demands.
5. Provide an overview of existing and future drinking water regulations, the Safe Drinking Water Act (SDWA), and the Endangered Species Act (ESA). Describe the impacts of the regulations on the City.
6. Identify the water quality monitoring requirements for the City's water system.
7. *Summarize the results and compliance status of recent source and distribution system water quality monitoring.*

ACTIVITY 6 – WATER SYSTEM ANALYSES

Task:

1. Examine each of the existing pressure zones and identify areas of low and high pressures. Include a table showing each existing zone, the maximum and minimum service elevation and service pressures (at static conditions).
2. Calculate the quantity of water supply required for the existing and future conditions and compare to the existing supply capability of the system.
3. Identify and describe supply facility deficiencies.

4. Calculate the quantity of water storage required for the existing and future system and compare to the existing storage capacity of the system. Identify and briefly describe storage deficiencies.
5. Update the hydraulic model to verify the input data and facility settings. Add pipe material and year data into the model. Calibrate the model with flow and pressure test data measured in the field.
6. Using the hydraulic model of the City's water system, perform a steady-state hydraulic analysis of the system simulating a peak hour demand condition with no fire flows to determine the pressures and flow distribution during this demand condition.
7. Perform a steady-state fire flow analysis for each node in the system while simulating peak day demands to determine the capability of the existing system to provide adequate flows and pressures and to identify existing system deficiencies.
8. Input future demand data into the hydraulic model's nodes using the results from the future water demand evaluation. Demand distribution shall be based on estimates of future growth allocations.
9. Based on the results of the existing system hydraulic analysis and identification of deficiencies, identify and input proposed water system improvements into the model.
10. Perform a steady-state fire flow analysis for each node in the system while simulating future peak day demands to verify that the proposed improvements eliminate existing system deficiencies and are sized properly to accommodate anticipated growth based on meeting the policies and design criteria of the City. Repeat the analyses until all existing system deficiencies have been eliminated.
11. Prepare a table that summarizes the results of the existing system and future system fire flow analyses.
12. Identify and describe distribution system deficiencies and the results of the hydraulic analyses.
13. Evaluate the City's existing telemetry and supervisory control system and identify deficiencies.
14. Perform a "System Capacity" analysis of the existing system to determine the unused available system capacity, expressed in ERU's. Document the criteria and results of the analysis.
15. Meet with City staff to discuss the system analyses, deficiencies, and recommended improvements.

ACTIVITY 7 - OPERATIONS AND MAINTENANCE

Task:

1. *Document the current water staff organization and prepare an organizational chart.*
2. *Prepare a table listing all water operations personnel, their position, and certification.*

3. *Provide a brief description of the key responsibilities of the water operations personnel.*
4. *Provide a list of all major equipment, supplies, and chemicals used by the water system.*
5. *Document the current operations and maintenance programs and suggest operational improvements to improve reliability and service, and identify their associated cost impacts.*
6. *Comment on the general impacts and effects of changing water quality requirements regarding operations and maintenance responsibilities.*
7. *Identify safety procedures that must be followed for potential work place hazards.*
8. *Identify procedures for keeping and compiling records and reports. Provide a list of records on file and identify where they are filed.*
9. *Identify maintenance schedules for each facility.*
10. *Evaluate staffing requirements and document recommendations.*
11. *Identify operations and maintenance improvements.*

ACTIVITY 8 – WATER SYSTEM IMPROVEMENTS

Task:

1. *Briefly describe water system improvements that have been completed since the last comprehensive plan update.*
2. *Prepare a list of proposed water system improvements based on the results of the existing system and proposed system analyses. Briefly describe each group of related improvements and the purpose/benefit of the improvements.*
3. *Prepare an approximate cost estimate for each improvement based on current industry prices.*
4. *Coordinate with City staff and establish criteria for prioritizing and scheduling improvements. Prioritization and scheduling to consider other scheduled projects based on information provided by the City.*
5. *Schedule all improvements based on the criteria established above in previous tasks.*
6. *Prepare a table of improvements that includes an improvement identification number, a brief description of each improvement, the associated cost estimate, and the scheduling of the improvements on an annual basis for the 6-year, 10-year, and 20-year planning period.*
7. *Describe the criteria and procedures used for prioritizing and scheduling improvements.*
10. *Prepare color figures of the following:*

- *Proposed Water System Improvements* (overall map prepared by City with pipe overlay from RH2)
 - *Proposed Improvements Hydraulic Profile*
11. Meet with City staff to discuss the water system improvements and proposed schedule of implementation.

ACTIVITY 9 - CROSS-CONNECTION CONTROL PLAN

Task:

1. *Review the City's existing cross-connection control ordinance and other available program information.*
2. *Coordinate with the City to discuss the cross-connection control requirements contained in WAC 246-290-490 and identify the type of program that is desired by the City.*
3. *Document the responsibility of each City department for implementing the program and their relationship with one another and outside agencies.*
4. *Identify the primary and backup staff positions delegated the responsibility for the organization and implementation of the cross-connection control program.*
5. *Identify the qualifications required for personnel working in the cross-connection control program.*
6. *Document procedures and schedules for prioritizing and conducting surveys of existing facilities to identify all existing and potential cross-connections.*
7. *Document procedures and schedules for evaluating new service connections to assess for potential cross-connections.*
8. *Document procedures and schedules for prioritizing and implementing the elimination or control of cross-connections.*
9. *Document guidelines for assessing the degree of hazard and selection of appropriate backflow assemblies.*
10. *Document standard requirements for installation and testing of approved backflow assemblies.*
11. *Describe the record keeping system requirements for the cross-connection control program.*
12. *Describe the methods or processes that will provide information (public education, etc.) regarding the cross-connection control program to the existing and future system customers.*
13. *Document procedures for responding to backflow incidents.*

ACTIVITY 10 - EMERGENCY RESPONSE PLAN

This activity is limited to tasks accomplished in the office and is not intended to fulfill the vulnerability assessment and emergency response planning requirements imposed by the 2002 Bioterrorism Response Act.

Task:

1. *Identify, in ranked order, water system personnel responsible for making decisions in emergency situations. Include job titles, phone numbers, and water system responsibilities and expertise.*
2. *Describe procedures for quickly notifying system customers, the public, the local health department, and DOH of water quality emergencies.*
3. *Briefly describe the vulnerability assessment that the City will be undertaking in 2003 or 2004 to comply with the Federal requirements.*
4. *Identify a contingency plan for responding to potential emergency events for each facility.*
5. *Identify design criteria for future improvements to minimize seismic vulnerability.*
6. *Provide the following tables, each integrated with the chapter text:*
 - *Water System Personnel Emergency Call-up List*
 - *Water System Support Services Call-up List*
 - *Emergency Notification Contact List*
 - *Priority Customers Contact List*

ACTIVITY 11 – WATER QUALITY MONITORING PLAN

Task:

1. *Update the description of the water system, as required by the DOH Coliform Monitoring Plan requirements.*
2. *Document source water quality monitoring requirements and procedures.*
3. *Document distribution system water quality monitoring requirements and procedures, including a schedule for coliform monitoring.*
4. *Provide the following tables, each integrated with the chapter text:*
 - *Pressure Zones*
 - *Water Sources*
5. *Water Storage*
 - *Pressure Reducing Stations*
 - *Coliform Monitoring Schedule*

6. Prepare a color figure of the following:
- Coliform Monitoring Locations

ACTIVITY 12 – WATER SOURCE PROTECTION PLAN

Task:

1. Prepare a summary of the State's Water Source Protection Program and regulatory requirements.
2. Document the City's past efforts towards protection of its water sources and include a summary of the results of the wellhead protection study ongoing since 1998.
3. Document water quality trends from past records of source water quality monitoring.
4. Document the results of the City's susceptibility assessment in the mid-1990's and the monitoring waivers that were granted.
5. Update the inventory of potential contaminant sources within the delineated areas using available databases maintained by DOE and EPA, and document the results of the inventory findings.
6. Update the list of owners and operators of known and potential sources of water contamination, businesses, regulatory agencies and local governments, emergency response agencies, and City customers that must be notified of the City's source protection program.
7. Document normal system operation and a contingency plan for operating the water system in the event of contamination of one of the City's sources or other source related emergency.
8. Document implementation of the Water Source Protection Program and provide recommendations.
9. Provide the following tables, each integrated with the chapter text:
 - Potential Sources of Contamination
 - Notification Recipients
10. Prepare a color figure of the following showing the existing water system, watershed protection areas, and areas of known and potential sources of water contamination:
 - Source Protection Areas

ACTIVITY 13 – WATER USE EFFICIENCY PLAN

Task:

1. Describe the recently implemented Water Use Efficiency Rule and its impact on the City. Prepare a summary of recent regional water use efficiency planning efforts.
2. Document the City's past water use efficiency efforts.

3. Evaluate the reduction in water use from implementation of water use efficiency efforts during the past 6 years and describe the water use efficiency improvements.
4. Describe the previous water use efficiency efforts that will be discontinued, if any. Identify why the continuation of these efforts would be ineffective or discuss the program's prescribed end date or savings level.
5. Assist the City in establishing water use efficiency goals through a public process as required by the Water Use Efficiency Rule.
6. Identify and evaluate water use efficiency measures for appropriateness and cost-effectiveness.
7. Prepare a water use efficiency program that includes goals and objectives; evaluation and selection of alternative measures; descriptions of selected measures; and estimates of water use savings for each measure. Update information from the 2005 WSP.
8. Expand the evaluation of water use efficiency measures to include an analysis of the cost effectiveness of the measures and the effect that the costs have on the selection of measures. Determine if the measures will be cost-effective if the costs are shared with other entities.
9. Describe the approach to monitoring and evaluation of the water use efficiency measures to ensure that they remain economical and effective. Develop an annual reporting process to document progress.
10. Complete the Water Reclamation Checklist per the Municipal Water Law.
11. Prepare a schedule for implementation of the water use efficiency measures and cost estimates for each measure.
12. Develop a Water Loss Control Action Plan since distribution system leakage is greater than 10 percent. Include water loss control methods that will be implemented, an estimated schedule for achieving the distribution system leakage standard, a budget for the program, and identification of technical or economic concerns that may prevent the City from meeting the distribution system leakage standard.

ACTIVITY 14 - FINANCIAL ANALYSIS

Task:

1. *Document the past financial performance of the water utility and develop an itemized 3-year summary (2000-2002) of system revenue and expenses.*
2. *Document the long-term debt of the City's water utility.*
3. *Describe the existing water rates and connection charges and anticipated future rates and charges.*

4. *Describe financing of system improvements in the past and planned financing in the future.*
5. *Identify the anticipated annual revenue for the 6-year planning period.*
6. *Identify the anticipated annual expenses for the 6-year planning period.*
7. *Prepare a table that summarizes the anticipated revenue and expenses and capital funding balance before and after the capital improvement expenditures for the 6-year planning period.*
8. *Prepare a table of improvements from the water system improvements activity that identifies the costs of improvements for the 6-year planning period and the planned source of financing.*
9. *Document the results of the financial analysis.*

ACTIVITY 15 - APPENDICES

Task:

1. *Obtain SEPA Checklist and Determination of Non-Significance (DNS) to be prepared by the City and include in the appendix.*
2. *Obtain from the City all service area and intertie agreements and include in the appendix.*
3. *Obtain copies of applicable City ordinances and include in the appendix.*
4. *Include copy of Water Facilities Inventory (WFI) Forms.*
5. *Include copy of City construction standards.*
6. *Include copy of water right certificates and permits.*

ACTIVITY 16 – WSP REVIEW

Task:

1. Review WSP after it has been prepared in draft form by the City.

At the completion of Activities 1 - 21, the Plan will be in a final format, ready for review by the regulatory agencies and adjacent water purveyors. The number of comments, number of meetings, and amount of required Plan modifications from the review of the regulatory agencies and adjacent water purveyors are difficult to predict. Therefore, RH2 Engineering will prepare a separate scope of work and fee estimate to address review comments, review meetings, and final Plan modifications upon receipt of all review comments from the County, Departments of Ecology and Health, and the adjacent cities and water districts.

EXHIBIT B
City of Black Diamond
Comprehensive Water System Plan Update Assistance
January 2015
Estimate of Time and Expense

Description	Principal	Project Manager	Project Engineer	Staff Engineer	Word Processor	Total Hours	Total Labor	Total Expense	Total Cost
Activity 1 Data Collection and DOH Coordination									
1.1 Coordination with City and collect data	16	3	3	3	3	48	\$ 3,015	\$ 261	\$ 8,277
1.14 Prepare existing hydraulic profile and assist with existing system	2	-	2	10	-	14	\$ 2,208	\$ 271	\$ 2,479
Subtotal	18	3	5	13	3	62	\$ 10,224	\$ 531	\$ 10,755
Activity 3 Water Demands									
3.1 Strategize on water availability protocols	4	-	-	-	-	4	\$ 932	\$ 35	\$ 967
3.10 Review telemetry data and calculate MDD and PHD	40	-	10	10	-	60	\$ 11,440	\$ 303	\$ 11,743
Subtotal	44	-	10	10	-	64	\$ 12,272	\$ 338	\$ 12,610
Activity 4 Policies and Design Criteria									
4.1 Review existing City policies	8	3	3	-	-	24	\$ 4,464	\$ 127	\$ 4,591
4.4 Review existing City construction standards	2	2	2	-	-	6	\$ 1,116	\$ 28	\$ 1,144
Subtotal	10	5	5	-	-	30	\$ 5,580	\$ 155	\$ 5,735
Activity 5 Water Source and Quality									
5.2 Summarize results of recent water quality studies	8	-	-	-	2	10	\$ 1,844	\$ 48	\$ 1,892
5.3 Summarize existing water rights	4	-	-	-	-	6	\$ 1,012	\$ 27	\$ 1,039
5.4 Perform water rights evaluation	2	-	-	-	2	4	\$ 596	\$ 16	\$ 612
5.5 Provide overview of SDWA impacts	8	-	-	-	2	10	\$ 1,844	\$ 48	\$ 1,892
5.6 Identify water quality monitoring requirements	4	2	-	-	-	6	\$ 1,200	\$ 31	\$ 1,231
Subtotal	26	2	-	-	8	36	\$ 6,496	\$ 169	\$ 6,665
Activity 6 Water System Analyses									
6.1 Evaluate pressure zones	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.2 Evaluate current supply capability and future projections	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.3 Identify supply deficiencies	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.4 Evaluate water storage	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.5 Update hydraulic model	1	1	4	-	-	6	\$ 1,056	\$ 35	\$ 1,091
6.6 Perform PHD modeling	1	1	6	-	-	8	\$ 1,388	\$ 43	\$ 1,431
6.7 Perform fire flow modeling	1	1	6	-	-	8	\$ 1,388	\$ 43	\$ 1,431
6.8 Input future demand	1	1	6	-	-	8	\$ 1,388	\$ 43	\$ 1,431
6.9 Update hydraulic model with proposed improvements	1	1	5	-	-	7	\$ 1,222	\$ 39	\$ 1,261
6.10 Perform future modeling	1	1	5	-	-	7	\$ 1,222	\$ 39	\$ 1,261
6.11 Summarize model results	1	1	5	-	-	7	\$ 1,222	\$ 39	\$ 1,261
6.12 Identify distribution deficiencies	1	1	5	-	-	7	\$ 1,222	\$ 39	\$ 1,261
6.13 Evaluate telemetry	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.14 Perform system capacity analysis	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
6.15 Meet with City staff to discuss results	1	1	-	2	3	7	\$ 954	\$ 32	\$ 986
Subtotal	15	15	42	14	21	107	\$ 16,786	\$ 604	\$ 17,390
Activity 8 Water System Improvements									
8.2 List and description of proposed improvements	1	2	-	2	1	6	\$ 954	\$ 31	\$ 989
8.3 Prepare approximate cost estimates	1	4	3	6	1	20	\$ 3,238	\$ 88	\$ 3,326
8.4 Establish ranking criteria with City	1	2	-	2	1	6	\$ 954	\$ 31	\$ 989
8.5 Schedule improvements	1	2	-	4	1	8	\$ 1,250	\$ 39	\$ 1,289
8.6 Prepare table of improvements	1	2	-	4	1	8	\$ 1,250	\$ 39	\$ 1,289
8.10 Prepare Improvements Hydraulic Profile	1	-	-	6	-	7	\$ 1,084	\$ 143	\$ 1,227
8.11 Meet with City to discuss improvements	2	-	-	-	-	2	\$ 416	\$ 71	\$ 487
Subtotal	8	12	8	24	5	57	\$ 9,154	\$ 441	\$ 9,595
Activity 13 Water Use Efficiency Plan									
13.1 Describe the WUE rule and efficiency planning efforts	-	-	-	1	-	1	\$ 146	\$ 6	\$ 152
13.2 Describe past conservation efforts	-	-	-	1	-	1	\$ 146	\$ 6	\$ 152
13.3 Evaluate water use reduction	-	-	-	2	-	2	\$ 292	\$ 10	\$ 302
13.4 Describe discontinued water use efficiency efforts	-	-	-	1	-	1	\$ 146	\$ 6	\$ 152
13.5 Assist in establishing WUE Rule goals with City	-	-	-	2	-	2	\$ 292	\$ 10	\$ 302
13.6 Evaluate water use efficiency measures	-	-	-	1	-	1	\$ 146	\$ 6	\$ 152
13.7 Prepare WUE program	-	-	-	3	-	3	\$ 438	\$ 14	\$ 452
13.8 Cost evaluation of WUE measures	-	-	-	2	-	2	\$ 292	\$ 10	\$ 302
13.9 Document the approach to monitoring WUE measures	-	-	-	1	1	2	\$ 236	\$ 9	\$ 245
13.10 Prepare water reclamation checklist	-	-	-	2	1	3	\$ 382	\$ 12	\$ 394
13.11 Schedule for WUE measures implementation	-	-	-	1	-	1	\$ 146	\$ 6	\$ 152
13.12 Develop water loss control action plan	-	-	2	1	1	4	\$ 568	\$ 53	\$ 621
Subtotal	-	-	2	18	3	23	\$ 3,230	\$ 150	\$ 3,380
Activity 16 WSP Review									
16.1 Review WSP draft prepared by City	20	-	-	-	2	22	\$ 4,340	\$ 230	\$ 4,570
Subtotal	20	-	-	-	2	22	\$ 4,340	\$ 230	\$ 4,570
PROJECT TOTAL	141	47	82	84	47	401	\$ 68,082	\$ 2,618	\$ 70,700

**EXHIBIT C
RHD ENGINEERING, INC.
SCHEDULE OF RATES AND CHARGES**

2015 HOURLY RATES

CLASSIFICATION	GRADE	RATE	CLASSIFICATION	GRADE	RATE
Professional	IX	\$208.00	Technician	IV	\$134.00
Professional	VIII	\$208.00	Technician	III	\$126.00
Professional	VII	\$199.00	Technician	II	\$94.00
			Technician	I	\$89.00
Professional	VI	\$184.00			
Professional	V	\$176.00	Administrative	V	\$125.00
Professional	IV	\$166.00	Administrative	IV	\$105.00
			Administrative	III	\$90.00
Professional	III	\$155.00	Administrative	II	\$75.00
Professional	II	\$146.00	Administrative	I	\$63.00
Professional	I	\$134.00			

IN-HOUSE SERVICES

In-house copies (each)	8.5" X 11"	\$0.09	CAD Plots	Large	\$25.00
In-house copies (each)	8.5" X 14"	\$0.14	CAD Plots	Full Size	\$10.00
In-house copies (each)	11" X 17"	\$0.20	CAD Plots	Half Size	\$2.50
In-house copies (color) (each)	8.5" X 11"	\$0.90	CAD System	Per Hour	\$27.50
In-house copies (color) (each)	8.5" X 14"	\$1.20	GIS System	Per Hour	\$27.50
In-house copies (color) (each)	11 X 17"	\$2.00	Technology Charge		2.5% of Direct Labor
			Mileage		Current IRS Rate

OUTSIDE SERVICES

Outside services to provide the reports, maps, data, photographs, computer files, and other data related to the project are billed at the current market rate for the location of the project and for the specific identified service. The vendor will be invoiced for all.

All subcontractors are to be billed at a 15% fee.

MECHANICAL RATES

Rates for labor are adjusted monthly for changes in the cost of materials and other items. For billing purposes, payments for work completed shall be based on the hours and expenses incurred at the time of billing as reflected on the bill.