

**DAY ENGINEERING  
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**RECEIVED**  
JAN 26 2010  
DEPARTMENT OF ADMINISTRATION  
OFFICE OF THE DIRECTOR  
BUDGET AND PLANNING DIVISION

January 21, 2010

RE: Ruth Water Study  
Subject: Options for supplying Ruth with a Reliable Permanent Water Source

To whom it May Concern,

This document supersedes the document dated December 7, 2009. Day Engineering has added a 6th option to the water study to supply Ruth with a reliable, permanent water source. The 6th Option is to pump water from existing RW2P well currently operated by Quadra Mining. Quadra Mining and the McGill-Ruth Water & Sewer General Improvements District are currently drafting an Agreement for Quadra Mining to continue to supply Ruth with water from the RW2P well, and in the event that the mine closes operation, Ruth will continue to have water from that well. Option 6 is proposed to construct about 1 mile of permanent underground pipeline and well house to be a permanent facility.

We apologize for not including this option in the original request. At that time, this option was not considered a reliable option due to the location on mine property. However, Quadra Mining re-opened this option.

A brief description of all six options and a map are included with this letter.

We would appreciate a response within 30 days. If you need further information, please contact me.

Sincerely,



Andrew E. Whittaker, P.E.  
Day Engineering

# RUTH WATER STUDY

## OPTIONS 1 through 6 (See Exhibit A)

### **Option 1. New Well and Water Transmission Line from Kimberly/Copper Flats to Intersection of Pine Street and Stevens Street**

- a) Water Production / Water Rights: A well will need to be drilled and a pump installed near Kimberly Mountain and Copper Flats. A well house will need to be constructed. Power will need to be brought to site approximately one mile. Water rights will need to be transferred from wells within the existing basin.
- b) Water Transmission / Distribution / Connection: About 5 miles of 8" transmission water pipe will need to be constructed from the intersection of Pine Street and Stevens Street in Ruth, north to County Road 44, west along County Road 44 near the existing Weary Well (currently operated by Quadra Mining), and north along dirt roads to proposed well site. The water line connection would be at intersection of Stevens Street and Pine Street.
- c) Water Treatment: A chlorination system will need to be installed at the proposed well house.
- d) Water Pump Stations: No pump station is necessary.
- e) Water Storage: No additional water storage necessary.
- f) Right-of-Way / Easements: Right-of-way and/or easements will need to be established for areas within the pipeline alignment, power transmission line alignment and well location.

### **Option 2. Permanently Pump Water from Ely to Ruth**

- a) Water Production / Water Rights: An agreement with the City of Ely to permanently pump water from Ely to Ruth will need to be made. A well will need to be drilled somewhere in Steptoe Valley. Water rights would need to be transferred from Ely to Ruth or Ruth would have to purchase water from Ely as a typical customer.
- b) Water Transmission / Distribution / Connection: The existing 2 miles of 8" steel pipe will need to be replaced from Murry Summit to Tonopah Canyon, and construct approx. 1 miles of 8" pipe downhill of existing Murry Springs Booster Pump. The connection point is at the end of the existing 8" PVC pipe near Tonopah Canyon and at the existing pipeline at the existing booster pump station in Murry Canyon.

- c) Water Treatment: No additional improvements water treatment improvements necessary.
- d) Water Pump Stations: A new Booster Pump Station will need to be constructed downhill of existing booster pump station to eliminate cavitation. The location of the booster pump station could be near the wye at Murry Street and Mill Street. The existing Booster Pump Station will need to be demolished.
- e) Water Storage: No additional water storage improvements are necessary.
- f) Right-of-Way / Easements: Right-of-way and/or easements may need to be established for the pipeline from the existing Booster Pump Station to the proposed Booster Pump Station.

**Option 3. Pump Water from Existing McGill Well on Pole Line Road and Basset Lake Road to Ruth**

- a) Water Production / Water Rights: Water rights are established but must be re-apportioned to the town of Ruth.
- b) Water Transmission / Distribution / Connection: About 7 miles of 12" water transmission pipe will need to be constructed along Pole Line Road from the existing McGill well house to proposed Booster Pump Station near Cross Timbers. About 5 miles of 10" water transmission pipe will need to be constructed along Pole Line Road from proposed booster pump station proposed tank near Garnet Hill. About 2 miles of 12" water transmission main will need to be constructed from the proposed water tank to the existing 8" PVC water line at the intersection of Main Street and Sunshine Street. The point of connection is at the intersection of Main St. and Sunshine Street. in Ruth.
- c) Water Treatment: No additional improvements are necessary; the existing McGill well has an existing chlorination system.
- d) Water Pump Stations: A Booster Pump Station is required to pump the water approximately 600 feet in elevation over Garnet Hill. The pump station location will be near Pole Line Road west of Lackawanna Road.
- e) Water Storage: A water storage tank will be required near Garnet Hill at the same elevation as the existing water tank in Ruth.
- f) Right-of-Way / Easements: Right-of-way and/or easements are established for the pipeline from the existing McGill well to the Ruth; however, right-of-way or easements must be dedicated for the tank on Garnet Hill and the booster pump station and tank near Cross Timbers.

**Option 4 Pump Water from the Existing Weary Flats Well Currently Operated by Quadra Mining**

- a) Water Production / Water Rights: The existing well would need to be transferred from Quadra Mining to McGill-Ruth Consolidated. A well house would need to be constructed. Power would need to be brought to well site approximately 1mile. Water Rights will need to be transferred from wells within the existing basin.
- b) Water Transmission / Distribution / Connection: About 1/2 mile of 8" water transmission main will need to be constructed from the intersection of Stevens St.. and Pine S. in Ruth north to County Road 44 and west to the existing Weary Flats well. The connection point is at the intersection of Stevens St. and Pine St.
- c) Water Treatment: A chlorination system will need to be constructed in the proposed well house.
- d) Water Pump Stations: No pump station is necessary.
- e) Water Storage: No additional water storage necessary.
- f) Right-of-Way / Easements: Right-of-way and/or easements will need to be established for areas within the pipeline alignment, power transmission line alignment and well location.

**Option 5. Replace Existing 4" and 8" Steel Pipe and Rehab Ward Mountain Springs**

- a) Water Production / Water Rights: The 5 existing springs on Ward Mountain will need to be rehabilitated. Water rights are already established.
- b) Water Transmission / Distribution / Connection: About 8 miles of 8" and 5 miles of 4" steel pipe will need to be replaced with larger pipe from Tonopah Canyon, across Hwy 6 near Murry Summit to the Ward Mountain Springs. The connection point is at the end of the existing 8" PVC pipe near Tonopah Canyon.
- c) Water Treatment: No additional water treatment improvements are necessary.
- d) Water Pump Stations: No pump stations are required. The entire system will be gravity fed.
- e). Water Storage: No water storage necessary; use existing Ruth water tank.
- f) Right-of-Way / Easements: Right-of-way and/or easements may need to be established for the existing pipeline alignment from Tonopah Canyon to the Murry Springs. The existing pipeline was constructed in approximately 1920 so it is unlikely the right-of-way and/or easements were established.

## **Option 6 Pump Water from the Existing RW2P Well Currently Operated by Quadra Mining**

- a) Water Production / Water Rights: The existing well is used for dewatering efforts for mine operation. Quadra Mining also supplies potable water to the Town of Ruth when necessary. Water rights for McGill-Ruth GID are established. A well house would need to be constructed. Mt. Wheeler Power would need to be brought to well site approximately 3 mile or Quadra Mining would have to turn power lines over to Mt. Wheeler Power.
- b) Water Transmission / Distribution / Connection: Approximately 1 mile of 8" water transmission main will need to be constructed from the RW2P well to the existing 8" PVC transmission line that currently connects Ward Mountain Springs and Murry Springs to Ruth. A portion of the 8-inch steel pipe will need to be replaced with new pipe. The connection point is at the intersection near the County dirt road that connects Country Road 44 to Highway 6.
- c) Water Treatment: A chlorination system will need to be constructed in the proposed well house.
- d) Water Pump Stations: No pump station is necessary.
- e) Water Storage: No additional water storage necessary.
- f) Right-of-Way / Easements: Right-of-way and/or easements will need to be established for areas within the pipeline alignment, power transmission line alignment and well location.

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January 21, 2010

Department of Administration  
Nevada State Clearinghouse  
ATTN: R. Tietje  
209 E. Musser Street, Room 200  
Carson City, Nevada 89701

RE: Preliminary Engineering Report in Town of Ruth, White Pine County, Nevada  
SUBJ: Information Request

Mr. Tietje,

Our firm is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental effect(s) of the attached (new) sixth option (as described in the enclosed information) in the Town of Ruth, White Pine County, Nevada. The project is being proposed to secure a dependable water supply for the Town of Ruth. Enclosed is a proposed project map showing each alternative's construction activities and a description of the work involved.

We request the assistance of your office in identifying historic properties that are listed or eligible for listing on the National Register of Historic Places and that may be affected by the new proposed option. Please provide any recommendations you may have to mitigate or avoid these impacts to properties that may be affected.

We would appreciate a response within 30 days. If you need further information or wish to discuss our project, please contact me.

Sincerely,



Andrew Whittaker, P.E.  
Day Engineering

Original deposited in USPS mail

