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EXECUTIVE SUMMARY

Glendo Water Supply
Level II Study

February 12, 2009

Submitted to:
Wyoming Water Development Commission
6920 Yellowtail Road
Cheyenne, Wyoming  82002

Prepared for:
Town of Glendo
P.O. Box 396
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Prepared by:
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710 Garfield, Suite 211
Laramie, Wyoming  82070

In Association with:
WWC Engineering, Laramie, Wyoming
I, Christopher G. Moody, a Wyoming registered Professional Geologist, certify that this Glendo Water Supply, Level II, Study was prepared by me or under my direct supervision.

Christopher G. Moody

I, Murray T. Schroeder, a Wyoming registered Professional Engineer, certify that this Glendo Water Supply, Level II, Study was prepared by me or under my direct supervision.

Murray T. Schroeder
EXECUTIVE SUMMARY

ES.1 Introduction

In the summer of 2005, the Town of Glendo (Glendo) experienced a drastic reduction in water supply. Irrigation wells along Horseshoe Creek caused seasonal head declines in the primary municipal water well, Downey Well No. 1, and forced the town to abandon its centripetal pump system and to install a submersible pump capable of producing 70 gallons per minute (gpm). The State Engineer’s Office (SEO) and the Wyoming Department of Environmental Quality (WDEQ) identified that the other water supply well, the Robbins Well, was not permitted as a municipal well. Consequently, Glendo’s water supply capacity had declined from about 290 gpm to only 70 gpm, and the town had to implement water use restrictions during the summer months.

The Glendo Water Supply, Level II, Study was sponsored by the Town of Glendo and funded by the Wyoming Water Development Commission (WWDC).

The objectives of the Level II study included:

- Enhance water production by making improvements to existing water supply wells and/or installing a new water supply well; and
- Prepare a water supply Master Plan to a 25-year (2031) planning horizon.

ES.2 Glendo Water Supply System

Glendo has a population of 229 and is located in northern Platte County, Wyoming, southwest of Glendo Reservoir and along the Interstate 25 / Burlington Northern/Santa Fe transportation corridor. As shown on Figure ES-1, the water system consists of two wells, 1.7 miles of transmission pipeline, 4 storage tanks, and approximately 24,000 feet of distribution piping. There are a total of 165 taps that serve 135 residences, 3 trailer courts, and 10 commercial facilities.

ES.3 Water Demand

Table ES-1 lists demand estimates in the summer and winter months based on water use in 2004. In the fall/winter/spring of 2004, the average day demand was approximately 23 gpm; whereas in the summer, the average day demand was
approximately 91 gpm (130,894 gals/day). A conservative estimate of summer maximum day demand is approximately 182 gpm (262,080 gallons) and the estimated winter maximum day demand is approximately 47 gpm (60,480 gallons).

Design demands during the high demand summer months are used to evaluate the adequacy of the water supply and to develop conceptual designs of system improvements. The design demands are the current demands plus demand increases anticipated to occur by the year 2031. The design average day demand and maximum day demand during the summer months are 122 gpm and 245 gpm, respectively.

**ES.4 Downey Well No. 1**

Downey Well No. 1 (S.C. 433) was drilled in 1941 and is located approximately 1.7 miles southwest of Glendo in the Horseshoe Creek drainage. Figure ES-2 shows well completion details. The well is contained in an at-grade wellhouse and is the primary water supply for Glendo. Downey Well No. 1 has an unadjudicated water right of 225 gpm and a priority date of November 16, 1941. The Town of Glendo is the assigned owner of the well and the well is permitted for municipal use.

The head in the Converse Sand at Downey Well No. 1 fluctuates in response to pumping/nonpumping of the municipal well and local irrigation wells along Horseshoe Creek. There are seven (7) wells permitted for irrigation use completed in the Converse Sand in the vicinity of Downey Well No. 1. These irrigation wells have the potential to effect the hydraulic head at Downey Well No. 1 due to their well completion, proximity, and high pump rate. These irrigation wells have a combined permitted instantaneous yield of about 3,375 gpm. The maximum depth to water in Downey Well No. 1 during municipal and irrigation well pumping in the 2007 and 2008 irrigation seasons was approximately 69 feet below ground surface.

On June 20, 2007, a new 6-inch submersible pump was set at 156 feet and approved wellhead improvements were completed in July 2007. Summer and winter pump rates are approximately 200 gpm and 230 gpm, respectively. The new pump allows Glendo to fully exercise the water right of 225 gpm; to meet current/future average day summer demand and current maximum day summer demand; and to almost satisfy estimated future maximum day summer demand. The pump set depth will provide
approximately 88 feet of water above the pump during the summer and will allow for further water level decline in the event that additional irrigation wells are installed in the Horseshoe Creek drainage in the future.

The condition and construction of Downey Well No. 1 was evaluated using downhole camera survey, geophysical logging, and long-term head/temperature monitoring. Despite the well’s age being beyond the normal life of a water well, the steel casing and open hole in Downey Well No. 1 appear to be in good condition. Since June 2007, the 6-inch submersible pump/motor has operated without a problem. It is anticipated that Downey Well No. 1 will continue to provide adequate water quantity and quality for enough time to justify the continued use of the well as a municipal water supply.

Since 1971, the combined effects of municipal/irrigation well pumping and natural variations in aquifer recharge have caused approximately 46 feet of head decline in the Converse Sand in the vicinity of Downey Well No. 1 in the Horseshoe Creek drainage.

ES.5 Robbins Well

The Robbins Well (UW 175017) was drilled in about 1947 and is located on C Street at the south end of town. Figure ES-3 shows well completion details. The well is contained in a below-grade wellhouse surrounded by a security fence. The wellhead is approximately five feet below ground surface. The well has an unadjudicated water right of 30 gpm and is used as a supplementary water supply.

Currently, the Robbins Well is permitted by both the SEO and the WDEQ as a municipal water supply well. The long-term use of the Robbins Well as a municipal water supply will require improvements to the wellhead, wellhouse, and water treatment system. If the specified improvements are not made by July 13, 2012, Glendo is not authorized to use the Robbins Well as a municipal water supply after that date.

The condition and construction of the Robbins Well was evaluated using downhole camera survey, geophysical logging, pump tests, and water quality testing. The condition of the Robbins Well casing uncertain due to the presence of abundant encrustation and limited visibility during the downhole camera survey. The lower 109
feet of the open hole has been lost due to caving or sediment infilling, resulting in only 44 feet of open hole. Continued loss of the open hole with time may reduce water production below its current pumping capacity of about 40 gpm. The physical condition of the wellhead and wellhouse is poor and in need of structural improvement.

With recent production capacity improvements at Downey Well No. 1, the Robbins Well can now be used as it has been in the past: as a short-term supplemental and emergency supply in the event that production from Downey Well No. 1 is reduced or interrupted. As such, the Robbins Well is currently a valuable water supply component. If and when Glendo enhances the water supply by incorporating another well into the water system, the value of the Robbins Well should be reexamined.

**ES.6 Water Storage, Distribution, and Treatment**

Figure ES-4 shows the current location, diameter, and pipeline materials for the water distribution system. System operators report that the distribution system is in sound condition, requiring only occasional repair or maintenance. There are no systematic problems with pipeline leaks and only occasional leaks at service connections. In general, the Glendo water system is in good condition and is well maintained.

The hydraulic adequacy of the current and future water system was evaluated using EPANET, a pressure pipe network model that incorporates the supply, transmission, storage, and distribution components of the water system. Water is distributed to users in one pressure zone with service pressures ranging from 43 to 60 psi, and the water distribution piping is of adequate size to meet future normal peak hour service needs.

Modeling of fire supply capacity indicated that there are three areas of the current distribution system (Figure ES-5) that should be considered for upgrade:

- At and around the Glendo School;
- At the southwest corner of town east of the railroad tracks; and
- At the northwest corner of town west of the railroad tracks.
Three new hydrant locations were identified that would benefit the system: southeast of the Glendo School, at the northwest corner of town, and on the pipeline to the southeast tank.

Modeling of fire flows on peak day shows that water storage is large enough to buffer peak demands; whether demands occur as a result of a maximum day demand or as fire demand. Based on regulatory and engineering criteria, Glendo’s water storage tank capacity of 501,000 gallons is adequate.

Groundwater from Downey Well No. 1 is chlorinated at the wellhouse. Chlorine treatment consists of the injection of a sodium hypochlorite solution directly into the supply pipeline at the wellhead. Groundwater from the Robbins Well is not chlorinated. A chlorine treatment system should be installed at the Robbins Well if the well is used as a drinking water supply.

Glendo has not had any violations associated with Environmental Protection Agency (EPA) drinking water compliance monitoring and has not been under any water quality related administrative order by the EPA or the WDEQ. Because the water supply is chlorinated, Glendo will need to comply with Stage 1 and Stage 2 Disinfectant and Disinfection Byproduct Rules.

**ES.7 Hartville Aquifer Field Study**

The objective of the Hartville Aquifer field study was to locate, install, and test a well with a production capacity of 200 to 300 gpm that can be used to supplement or replace Downey Well No. 1. A total of seven (7) pilot holes were drilled to depths ranging from 478 to 940 feet at the locations shown on Figure ES-6.

The pilot hole drilling program demonstrated that there are multiple locations in the Glendo area where groundwater production and quality from the Hartville Aquifer is suitable for municipal purposes. Adequate groundwater production for municipal purposes can occur in the sandstone of the Converse Sand, and in the breccia, solution features, and fractures of the carbonates that comprise the upper part of the Hartville Formation. Although penetration of the Converse Sand enhances the potential for an adequate well, the absence of the Converse Sand did not rule out the opportunity for adequate production (e.g., Pilot Hole #5).
The final results of the pilot hole drilling program were discussed in consideration of adequate production and water quality at Pilot Holes #2, #5, and #6, and #9. The Town Council decided to proceed with the installation of a test well at Pilot Hole #5 based on its location on the Thomas Memorial Airport (i.e., town ownership of the well site), easy access, flat topography, relative ease of pipeline construction, adequate chlorine contact time, and the desire to facilitate future development on the north side of town.

**ES.8 Test Well #5 / Thomas Memorial Well No. 1**

Test Well #5 (TW #5) was offset 19 feet southwest of Pilot Hole #5 and is located along the west-central edge of the Thomas Memorial Airport at the south end of existing airplane hangar buildings. TW #5 was drilled to a total depth of 537 feet and penetrated 296 feet of the Division I and Division II sections of the Hartville Formation. Figure ES-7 shows the as-built construction of Test Well #5.

A 7-day constant rate pump test at a rate of 200 gpm was performed at TW #5 from July 30 to August 6, 2008. By the end of the 7-day pump test, the well experienced 120 feet of drawdown with a corresponding depth to water of approximately 155 feet. A pump can be set at 230 feet which will provide adequate drawdown capacity to pump the well at 200 gpm over an extended time period. Water quality from TW #5 is similar to the water quality from Downey Well No. 1 and the Robbins Well. Water from TW #5 satisfies primary and secondary EPA drinking water standards.

Based on the results of the 7-day pump test, Test Well #5 can provide adequate water quantity (at least 200 gpm) and water quality as a municipal water supply for the Town of Glendo. The well is located 3.1 miles north of Horseshoe Creek and is in an area with minor use of groundwater from the Hartville Aquifer. Pumping from Test Well #5 will not adversely impact nearby domestic water wells. The well site and a large portion of the required pipeline are on town property associated with the Thomas Memorial Airport.

The original permit for Test Well #5 (UW 186068) was for construction of a test well with no beneficial use of water and no water right. In anticipation of the future purchase and use of Test Well #5 by the Town of Glendo, the WWDC submitted an
application to appropriate groundwater for municipal use to the SEO under the name of Thomas Memorial Well No. 1. The permit application for Thomas Memorial Well No. 1 has a designated maximum instantaneous rate of 200 gpm and maximum annual volume of 80 acre-feet.

**ES.9 Economics and Financing**

The estimated cost associated with a conceptual design to integrate Thomas Memorial Well No. 1 into the Glendo water system is $980,000 (Table ES-2). This cost estimate includes a system-wide SCADA system to automate well pump operation in response to storage tank water level.

The water distribution system needs simple line replacement improvements to provide a uniform level of fire protection throughout the service area. These upgrades are probably not as important as the other proposed water supply upgrades. Proposed pipeline and hydrant improvements have a cost estimate of approximately $700,000.

Per conditions stated in the As-Built Permit to Construct issued by the WDEQ for the Robbins Well, before July 13, 2012, the existing well pit must be replaced with an above-grade wellhouse, the well casing extended above the ground surface, and water disinfection equipment installed. Required improvements to the Robbins Well have a cost estimate of $230,000.

In the fall of 2006, Glendo committed to obtaining Level III construction funding from the WWDC grant/loan program without financial assistance from the Rural Utilities Service (RUS) or the State Revolving Fund (SRF). This decision was based primarily on the desire to avoid potential project delays associated with RUS and SRF funding.

On September 3, 2008, construction costs, financing options, and anticipated increases in monthly water service fees associated with the integration of Thomas Memorial Well No. 1 into the water system were presented to the Town Council. Table ES-3 summarizes the grant/loan mix options using the WWDC, RUS, and the contribution from the Consensus Block Grant. In consideration of available financial resources, the Town Council decided to pursue additional Level III construction project funding with the WWDC and to reduce the loan portion by $200,000 using available Consensus Block Grant funds.
On September 18, 2008, the Town of Glendo submitted an application to the WWDC for additional Level III construction funds. This request will be considered for funding by the 2009 legislature. To summarize, Glendo has applied for a Level III WWDC grant of $656,600 and a loan of $123,400. In addition, Glendo has applied for a WWDC loan of $58,965.06 to purchase Thomas Memorial Well No. 1 from the WWDC. To maintain the self-supporting nature of the water system, the debt obligation from the proposed Level III construction project and well purchase will require Glendo to increase the monthly water service fee per tap by approximately $5.67.

ES.10 Recommendations

The Level II study project team provides the following recommendations for the Town of Glendo to consider regarding the water system.

- Enhance the Glendo water supply by purchasing the Thomas Memorial Well No. 1 from the WWDC and proceed with the final design and construction of infrastructure needed to integrate the well into the water system.

- Install a pressure transducer in Thomas Memorial Well No. 1 to define natural water level fluctuations in the well prior to municipal development.

- Install a basic SCADA system at Downey Well No. 1 designed to automate pump operation in response to water levels in the storage tanks. This system wide improvement is part of the proposed Level III construction project for Thomas Memorial Well No. 1.

- Upgrade portions of the distribution system piping and install three new fire hydrants when funds are available.

- Adjudicate all of the Town water rights (Downey Well No. 1, Robbins Well, and Cemetery Well No. 1). Adjudication maps should include Thomas Memorial Well No. 1.

- Continue to collect and evaluate the wellhead pressure/water level data at Downey Well No. 1.

- Continue to manually record water production and pump run times at Downey Well No. 1.

- Install a security fence around the Downey Well No. 1 wellhouse.
• Install a flow meter and chlorination system at the Robbins Well. Begin manual recordkeeping on water production and pump run times.

• Maintain the Robbins Well as a municipal water supply until Thomas Memorial Well No. 1 is operational. At such time, Glendo should consider abandoning (plugging) the Robbins Well or using the well only for nondrinking purposes (e.g., load out facility, boat wash, town park irrigation) thereby avoiding the expense of required wellhouse improvements. Wellhouse improvements may not be warranted given the estimated cost of improvements and the low production, advanced age, and uncertain condition of the well.

• Obtain a water sample from the Robbins Well to verify the presence of trace concentration of toluene and ensure that benzene is not present.

• Inform the EPA that the water supply is chlorinated and prepare for distribution system sampling of disinfection byproducts per the Stage 1 and the Stage 2 Disinfectants and Disinfection Byproducts Rules.

• Conduct a winter-time water sampling program that involves sampling for residual chlorine at water storage tanks.

• Resolve land ownership issues at the 3-tank site and attempt to locate easement/land ownership documents at the southeast storage tank.
### Table ES-1: Current and Future Water Demands to the Year 2031 for the Town of Glendo, Wyoming; Glendo Water Supply, Level II, Study

**10/9/2008**

<table>
<thead>
<tr>
<th>DEMAND PARAMETERS</th>
<th>CURRENT METERED AND UNMETERED DEMAND(1)</th>
<th>FUTURE DEMAND INCREASE TO YEAR 2031(2)</th>
<th>DESIGN DEMAND(3)</th>
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<tr>
<td></td>
<td>gpd gpm gpdpc(4)</td>
<td>gpd gpm gpd gpd gpd gpd gpm gpm gpd</td>
<td></td>
</tr>
<tr>
<td>SUMMER (3 months)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Average Daily Demand, ADD</td>
<td>130,894 91 443</td>
<td>2,660 902 4,000 37,655 45,217 31 122 176,111</td>
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<tr>
<td>Maximum Daily Demand, MDD(5)</td>
<td>261,788 182 1,143</td>
<td>63 245 352,222</td>
<td></td>
</tr>
<tr>
<td>Peak Hour Demand, PHD</td>
<td>--- 285 ---</td>
<td>85 370 ---</td>
<td></td>
</tr>
<tr>
<td>WINTER (9 months)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Average Daily Demand, ADD</td>
<td>33,681 23 147</td>
<td>2,660 225 4,000 12,502 19,387 13 37 53,068</td>
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<td>Maximum Daily Demand, MDD(5)</td>
<td>67,362 47 294</td>
<td>74 106,135</td>
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<tr>
<td>Peak Hour Demand, PHD</td>
<td>--- 285 ---</td>
<td>85 370 ---</td>
<td></td>
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<tr>
<td>ANNUAL AVERAGE DAILY DEMAND</td>
<td>58,356 41 222</td>
<td></td>
<td>53 76,908</td>
</tr>
</tbody>
</table>

---

1. Data source: 2004 monthly metered and unmetered water use obtained from Town of Glendo (See Table 2-1). Data used to estimate ADD.
2. Estimated using a population of 229 from the 2000 U.S. Census Data and excluding unmetered use.
3. Demand increase accounts for a population increase of approximately 85 people for the 25 year planning horizon, WYDOT traffic increase along I-25, increases in visitation to Glendo State Park, and the installation of a boat/carwash and load-out facility.
4. MDD = ADD x 2.0
5. Total Demand = 2004 water use level + Future demand increase

**Acronyms**

- gpd = gallons per day
- gpm = gallons per minute
- gpdpc = gallons per day per capita
FIGURE ES-2
DOWNEY WELL NO. 1
(MODIFIED JUNE 2007)

GLENDO WATER SUPPLY,
LEVEL II, STUDY

WYOMING
GROUNDWATER, LLC

ALL DEPTHS RELATIVE TO WELLSHOUSE FLOOR
FIGURE ES-3
ROBBINS WELL AS-BUILT CONSTRUCTION AND GEOLOGY

GLENDO WATER SUPPLY,
LEVEL II, STUDY

WYOMING GROUNDWATER, LLC
FIGURE ES-5
PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS

LEGEND
EXISTING WATER MAIN AND SIZE
EXISTING FIRE HYDRANT
PROPOSED WATER MAIN AND SIZE
PROPOSED FIRE HYDRANT

STEEL STORAGE TANK
286,000 GALLONS

ROBBINS WELL

TO SOUTH STORAGE TANKS
TEST WELL #5

GROUND ELEV = 4661.2 FT AMSL

DTW = 33.5’ REL. GRD.
(4627.7 FT AMSL) (7/29/08)

WHITE RIVER FORMATION
0-241’
- LIGHT BROWN TO BUFF SILTSTONE
AND CLAYSTONE

24” DRILLED
HOLE
0-60’
CEMENT

16” STEEL
SURFACE CASING
0-60’

14.75” DRILLED
HOLE
60-258’
CEMENT, CLASS G,
15.8 #/GAL
6-257”

8.62” O.D., 0.322” WALL
STEEL PRODUCTION
CASING
+1.8-257’
- WELDED JOINTS, (6) 42.1’
SECTS .+(1) 6.2’ SECT.

233.4’ –

258’ –

273.4’ –

HARTVILLE FORMATION
241-537’
- VARIEGATED LIMESTONE/DOLomite
WITH OCCASIONAL SANDSTONE
AND SHALE

7.87” OPEN HOLE

OPEN HOLE LINER, 5” PVC,
CERTAINTED, SDR21
SCREEN: 0.32” SLOT
273.4-533.4’
BLANK RISER: 233.4-273.4’

RED SHALE MARKER BED
445’

533.4’ TOP OF SLOUGH—
DRILLED TD = 537’ (4124 FT AMSL)

FIGURE ES-7
TEST WELL #5
AS-BUILT CONSTRUCTION

GLENDO WATER SUPPLY,
LEVEL II, STUDY

WYOMING
GROUNDWATER, LLC
Table ES-2: Cost Estimate for Thomas Memorial Well No. 1 Infrastructure. Glendo Water Supply, Level II, Study

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit Cost</th>
<th>Quantity</th>
<th>Cost</th>
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<tr>
<td>A MOBILIZATION AND BONDS (8% of B+C)</td>
<td>LS</td>
<td>8%</td>
<td>$47,897</td>
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<td>B CONSTRUCTION ITEMS</td>
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<tr>
<td>1 Pump, Drop Pipe, Wire, &amp; Controls</td>
<td>LS</td>
<td>$30,000</td>
<td>1</td>
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<tr>
<td>2 Wellhead Appurtenances</td>
<td>LS</td>
<td>$40,000</td>
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<td>3 Wellhouse</td>
<td>LS</td>
<td>$80,000</td>
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<td>4 SCADA, Electrical &amp; Mechanical</td>
<td>LS</td>
<td>$125,000</td>
<td>1</td>
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<tr>
<td>5 Chlorination</td>
<td>LS</td>
<td>$10,000</td>
<td>1</td>
</tr>
<tr>
<td>6 Pipeline to Distribution System</td>
<td>LF</td>
<td>$56</td>
<td>4,200</td>
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<tr>
<td>7 Pipeline appurtenances</td>
<td>LS</td>
<td>$10,000</td>
<td>1</td>
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<tr>
<td>8 Revegetation &amp; Restoration</td>
<td>LS</td>
<td>$10,000</td>
<td>1</td>
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<tr>
<td>9 Power to New Well</td>
<td>LS</td>
<td>$30,000</td>
<td>1</td>
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<td>C UNLISTED ITEMS (% of B)</td>
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<td>5%</td>
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<td>D CONSTRUCTION SUBTOTAL (A+B+C)</td>
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<td>$646,607</td>
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<td>E CONSTRUCTION ENGINEERING (% OF D)</td>
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<td>10%</td>
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<tr>
<td>F CONTINGENCY (% OF D+E)</td>
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<td>G CONSTRUCTION TOTAL (D+E+F)</td>
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<td>Design Engineering (% of D) (Include Mapping, Geotech)</td>
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<td>10%</td>
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<td>Permitting and Mitigation</td>
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<td>Legal Fees</td>
<td>(LS)</td>
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<td>$5,000</td>
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<tr>
<td>Acquisition of Access and Easements</td>
<td>(LS)</td>
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<td>$10,000</td>
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<td>I PROJECT SUBTOTAL (G + H)</td>
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<td>J INFLATION FOR 2009 CONSTRUCTION (% OF I)</td>
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<td>K TOTAL PROJECT COST (I + J)</td>
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<td>$980,228</td>
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ROUNDED TOTAL PROJECT COST $980,000
### Table ES-3: Level III Project Financing Option Summary. Glendo Water Supply, Level II, Stud

<table>
<thead>
<tr>
<th></th>
<th>WWDC Funding</th>
<th>WWDC and RUS Funding</th>
<th>WWDC and Town CBG Funding</th>
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<td><strong>Grants and Loans</strong></td>
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<td>A Project Cost Estimate from Table 8-1</td>
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<td>$980,000</td>
<td>$980,000</td>
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<tr>
<td>1 Bonds</td>
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<tr>
<td>2 One Additional Year Inflation of Project Estimate @ 8%</td>
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<td>3 Allowance for NEPA Compliance Surveys and Eng Rept Update</td>
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<tr>
<td><strong>TOTAL PROJECT VALUE</strong></td>
<td>$980,000</td>
<td>$1,073,400</td>
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<td><strong>Grants</strong></td>
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<td>2 WWDC Grant (67% of B1)</td>
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<td>3 Amount Left to Fund</td>
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<td>$323,400</td>
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<tr>
<td>4 RUS Grant 30% of Amount Left to Fund (Item B3)</td>
<td></td>
<td>$106,267</td>
<td>-</td>
</tr>
<tr>
<td>5 Grant Total (B2+B4)</td>
<td>$656,600</td>
<td>$825,445</td>
<td>$656,600</td>
</tr>
<tr>
<td>C Sponsor (Cash)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 From County Capital Facilities Tax (% of A)</td>
<td>0%</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>2 Consensus Block Grant (CBG) Allocation</td>
<td>$-</td>
<td>$-</td>
<td>$200,000</td>
</tr>
<tr>
<td><strong>Loans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 WWDC Loan Amount (A4-B5-C1-C2)</td>
<td>$323,400</td>
<td>$123,400</td>
<td>$182,365</td>
</tr>
<tr>
<td>WWDC Well Construction Loan Amount</td>
<td>$60,000</td>
<td>$60,000</td>
<td>$58,965</td>
</tr>
<tr>
<td><strong>Total WWDC Loans</strong></td>
<td>$383,400</td>
<td>$183,400</td>
<td>$141,330</td>
</tr>
<tr>
<td>2 RUS Loan Amount (A4-B5-C1-C2)</td>
<td>$-</td>
<td>$247,955</td>
<td>-</td>
</tr>
<tr>
<td><strong>User Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Annual Loan Payments</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 WWDC Loan I, interest 4.00% n, years 30</td>
<td>$22,172</td>
<td>$3,470</td>
<td>$10,546</td>
</tr>
<tr>
<td>2 RUS Loan I, interest 3.63% n, years 30</td>
<td>$-</td>
<td>$13,694</td>
<td>-</td>
</tr>
<tr>
<td>3 Existing Obligations</td>
<td>$-</td>
<td>$-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL Annual Loan Payments</strong></td>
<td>$22,172</td>
<td>$17,163</td>
<td>$10,546</td>
</tr>
<tr>
<td><strong>Reserve</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set as percentage of loan repayment</td>
<td>0%</td>
<td>$-</td>
<td>-</td>
</tr>
<tr>
<td><strong>O&amp;M Costs - Annual</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Basic Costs - Table 9-2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Fees (Assumes Average Monthly Water Bill = $30.00)</td>
<td>$-</td>
<td>$-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Annual Costs</strong></td>
<td>$22,172</td>
<td>$17,163</td>
<td>$10,546</td>
</tr>
<tr>
<td><strong>Estimated Increase in Monthly Water Service Fee Based on Number of Taps</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 155 | $11.92 | $9.23 | $5.67 |