Environmental Information Document

for

Alpine Meadows Water System

Submitted to the Alpine Meadows Water and Sewer District

December 2012

REVISED April 2013

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ENVIRONMENTAL INFORMATION DOCUMENT

ALPINE MEADOWS WATER SYSTEM

PROJECT NO. 41068

SUBMITTED TO THE:

ALPINE MEADOWS WATER AND SEWER DISTRICT

PROFESSIONAL ENGINEER
REGISTERED
11814
STATE OF IDAHO
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4/30/13

DECEMBER 2012

REVISED APRIL 2013

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COVER SHEET

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Project Cost and Funding

Estimated Construction Costs (for near-term projects):

Transmission and Distribution System	$ 986,700
Treatment	$ N/A
Storage	$ N/A
Source/Booster	$ 399,900
Total Estimated Cost	**$ 1,386,600**

Estimated Construction Costs (for all projects):

Transmission and Distribution System	$ 4,923,600[1]
Treatment	$ N/A
Storage	$ N/A
Source/Booster	$ 476,900
Total Estimated Cost	**$ 5,400,500**

[1]This includes both the distribution system improvements associated with Option A1 and the potential future improvements.

Funding[1] (near-term):

IDEQ Loan	$ 1,800,000
IDEQ Principal Subsidy[3]	$ 543,691
ICDBG Grant[2,3]	$ 350,000
Total Available Funding	**$ 2,693,691**

1. Funding shall include Engineering and Administration; refer to Section 4.1 of the Facility Plan in Appendix A for more information.
2. Kootenai County, on behalf of the District, has applied for and been approved for an Idaho Community Development Block Grant for up to $350,000. The District applied for this grant since the Revenue Bond Election scheduled November 6, 2012 was successful.
3. These funding sources will likely be used to reduce the rate increase seen by the users. The IDEQ Loan is intended to be used for the project costs (construction, engineering, and administration).

Future Funding[1] (for all projects):

Total Funding	**$ 6,925,900[2]**

1. Funding shall include Engineering, and Administration, refer to Section 4.1 of the Facility Plan in Appendix A for more information.
2. This includes all projects: the improvements associated with Option A1 in addition to the potential future improvements. This total funding amount has not been secured to date.

User Costs

Residents who receive water service from the Alpine Water and Sewer District will be assessed the cost of improving the source, booster, and distribution components of the system. Residents within the District boundary whom are not currently served by the water system will not be assessed the cost of these improvements. Therefore, the following fees will be assessed.

Estimated User Costs for Existing Service Area[1-3]:

Current Average Monthly User Charge per EDU	$ 49.71
Change in Operation and Maintenance Monthly Charge per EDU	$ 0.00
Change in Debt Service Monthly Charge per EDU[4]	$ 29.46
Future Average Monthly User Charge per EDU	**$ 79.17**

1. For near-term projects (and funding).
2. Financing terms of 1.25% for 30 years.
3. Cost per user assumes 103 users.
4. The IDEQ Principal Subsidy was utilized in this calculation (in order to reduce the rate increase to the users); thus, the rate accounts for the $543,691 subsidy, reducing the loan to $1,256,309. Additionally, Kootenai County, on behalf of the District, has secured a Block Grant in the amount of $350,000 which will be used to reduce the rate increase to $29.46.

Abstract

The September 2012 Water System Facility Plan for the Alpine Meadows Water and Sewer District recommends several improvements to the existing water system to meet Idaho Rules for Public Drinking Water Systems. The improvements are aimed at improving system reliability and conveyance of fire flows. This Environmental Information Document briefly addresses the expected environmental impacts of the proposed alternatives for the improvements. After receiving public input, the District selected the improvement alternatives to be included in the proposed project (Option A1 along with potential future improvements, both of which are covered under this document). The environmental impacts associated with the proposed project are assessed in this document. After consultation with environmental agencies, mitigation measures were identified to address items of concern. Mitigation measures include the following:

- Best Management Practices (BMPs) shall be developed as part of the project design and implemented during construction.
- A floodplain development permit will be required for construction activities and other development in the mapped flood hazard area.
- If artifacts (cultural and historic remains) are discovered during the course of construction, all work will stop and the Coeur d'Alene Indian Tribe and SHPO will be contacted. Mitigation may be further evaluated.
- The Contractor must mitigate fugitive dust. No burning of construction debris or vegetation will be allowed. Additional requirements will be necessary for the standby power (generator) to minimize air quality impacts.
- The District must obtain a well drilling permit and seek Idaho Department of Environmental Quality (IDEQ) approval for the well design (specifications and plans) for the secondary well.

1. BACKGROUND

1.1. SYSTEM BACKGROUND

The Alpine Meadows Water and Sewer District ("District") owns and operates the Alpine Meadows water system (PWS No. 1280002), located in Kootenai County, Idaho. The District is a Quasi Municipal District established for the mutual benefit of its members with an elected Board of Directors.

The system is currently fed by a single groundwater well, located at 1700 W. Garwood Road. This well pumps through approximately 13,100 linear feet of 6 inch transmission main into two ground level concrete reservoirs located at 2942 E. Grand Tour. The submersible booster pumps pull water from these reservoirs in order to pressurize the majority of the system. Refer to Appendix B for a map depicting the existing system (labeled Figure 2.1).

1.2. FACILITY PLAN INFORMATION

The purpose of the report was to analyze the existing system, identify deficiencies, and recommend the best alternatives for a safe, adequate and reliable water supply and distribution system. Additionally, the facility plan addresses other improvements that are necessary to bring the water system into compliance with current standards and Idaho Department of Environmental Quality (IDEQ) rules (which have been developed to protect public health and safety and water quality).

The analysis of the system components (source, boosting capacity, storage, and distribution) is based on the IDEQ requirements identified in the IDAPA 58.01.08 Rules for Public Drinking Water Systems. In addition, the local fire authority, Northern Lakes Fire Protection District, provided a fire flow requirement of 250 gallons per minute for a duration of 2 hours and recommended that the District pursue (if feasible) a fire flow of 500 gallons per minute for 1 hour[1]. In regard to the IDAPA rules and the fire authority's recommendations, deficiencies and recommendations were developed for each of the system components as follows:

- Source:
  - The current source capacity is deficient by 120 gallons per minute according to the 2009 IDAPA Ground Water Source Redundancy rule (58.01.08.501.17).
  - Currently, the District relies on a single production well, with no standby power, to serve the entire system. If this well were to fail, or there was a power outage, the potential for system de-pressurization and contamination would exist, which is a threat to public health and safety.
- Booster Capacity:
  - The booster station is deficient by 12 gallons per minute based on required fire flows and by 262 gallons per minute based on

[1] Refer to communications with the Fire District (Appendix P) for information on the fire flow requirement and recommendation.

recommended fire flows according to the 2009 IDAPA Redundant Fire Flow Capacity rule (58.01.05.501.18) (with the pump redundancy requirement eliminated by the local fire authority).

  - The booster station is deficient by 115 gallons per minute to supply the current PHP (Peak Hour Production) of the Boosted Datum[2] with any pump out of service.
  - Currently, the booster station is not equipped with standby power. Additionally, the boosters are relied upon completely to pressurize and serve the majority of the system. If the boosters were to fail or there was a power outage, the potential for system de-pressurization and contamination would exist, which is a threat to public health and safety.
- Storage:
  - The current storage reservoirs are deficient by 2,384 gallons to serve the system.
- Distribution:
  - The existing distribution system is sufficient to provide the current peak hour production and maintain a minimum pressure of 40 psi throughout the system except for at the following locations:
    - Within the 6 inch transmission main from the well from 1684 E. Hudlow to the reservoir (there are currently four residential connections on this portion of the line).
    - Pinewood Way south of Grand Tour (there are approximately seven residential connections currently on this portion of the system).
  - The existing distribution system is sufficient to supply the maximum day production plus required fire flows (250 gpm for 2 hours) while maintaining a minimum pressure of 20 psi throughout the system except for the following locations:
    - Glacier Road
    - Grand Tour Drive, east of Glacier Road
    - Pinewood Way
  - The entire existing distribution system is deficient to supply the maximum day production plus recommended fire flows (500 gpm for 1 hour) while maintaining a minimum pressure of 20 psi throughout the system.
  - The current distribution system consists of approximately 37,000 linear feet of waterline. Of this, approximately 15 percent (5,400 linear feet) is 2 inch line, and approximately 41 percent (15,000 linear feet) is 4 inch line.

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[2] There are essentially two pressure zones or datums in the system: Boosted Datum and Gravity Datum. The Boosted Datum is the area served/pressurized by the booster station, whereas the Gravity Datum is served by gravity without the use of the booster station.

The transmission main from the well to the reservoirs is 6 inch line and is approximately 13,100 feet long (35 percent). The majority of the system is aged glue joint PVC. System loss has been calculated at approximately 21.8 percent. Due to the age and condition of the system, there is risk for a large line break which could potentially cause de-pressurization and contamination of the system, which is a threat to public health and safety.

- There are ten fire hydrants on the system and seven of these are connected to 4 inch diameter water mains[3].

Refer to Section 2.8, 2.9 and Section 3.3 of the Facility Plan (Appendix A) for further information regarding the system deficiencies for the existing connections and projected growth, respectively.

1.3. Purpose and Need

The purpose of the proposed project is to protect public health and safety by addressing the deficiencies (per Idaho Rules for Public Drinking Water Systems and local fire authority recommendations). Several deficiencies with respect to the Idaho Rules for Public Drinking Water Systems were identified for source, booster capacity, and distribution system components (refer to Section 1.2 above). Thus the project addresses the public health and safety concerns identified with respect to Idaho Rules for Public Drinking Water Systems (which provide sufficient system capacity for emergency and everyday operation of a public drinking water system) and the local fire authority recommendations (which provide for adequate fire flow for firefighting needs). The improvements include a variety of options which include installation of a secondary well, increase in booster pump capacity, standby power, and waterline construction/replacement and are described in Section 2 and 3[4].

[3] IDAPA 58.01.08 requires hydrants to be fed by a 6-inch or larger water main.

[4] The improvements include the selected alternative (Option A1) and the potential <u>future</u> improvements. All of these improvements are covered under this document.

2. PROPOSED ALTERNATIVES

Detailed descriptions of the proposed alternatives have been summarized from Section 4 of the Facility Plan (Appendix A) and can be found in this section. Detailed cost estimates for these alternatives can be found in Appendix C. Each improvement alternative is shown in Appendix B.

2.1. DISTRIBUTION IMPROVEMENTS

2.1.1. DISTRIBUTION IMPROVEMENTS

The distribution improvements have been divided into several categories, as shown in Table 2-1 and can be completed as funding allows (refer to Appendix B for a map of these improvements, labeled Figure 4.1). Additionally, there are several meters currently located outside of the right-of-way that the District would like to re-locate to be within the right-of-way to reduce operation and maintenance costs[5] (refer to the map in Appendix B, labeled Figure 4.1). These improvements represent all distribution improvements being considered by the District for completion.

Table 2-1: Summary of Distribution Improvements

PROPOSED IMPROVEMENT		ESTIMATED PROJECT COST
No Improvements		$0.00
Replace Undersized Mains that Feed Fire Hydrants	11,800 LF	$1,874,000.00
Replace Transmission Main	11,900 LF	$1,956,000.00
Replace 2 and 4 Inch Mains not Feeding Fire Hydrants	4,750 LF	$633,000.00
Replace 2 and 4 Inch Dead End Lines	4,100 LF	$443,600.00
Replace 6 Inch Depreciated Mains	5,900 LF	$799,500.00
Potential Future Waterlines	3,650 LF	$537,000.00
Meter Replacement	9 EA	$30,000.00
Entire Distribution/Transmission System Replacement	42,100 LF	$6,273,100.00

2.1.1.1. DISTRIBUTION IMPROVEMENTS – ENVIRONMENTAL IMPACTS

The primary environmental impacts associated with the distribution improvements consist of trench excavation for approximately 42,100 linear feet of waterline replacement. The installation of the improvements would impact the following existing environmental conditions:

- Physical Aspects (minimal long-term impact and short-term impact for the waterline replacement),

[5] Relocating the meters to be within the right-of-way would make the meters more accessible and easier to read for the operator.

- Socioeconomics of the area (increased user rates will provide improved fire flow and service over the long-term),
- Floodplains (minor short-term impact due to waterline replacement along Grand Tour Drive within the Alpine Lake floodplain),
- Wetlands and water quality (minor short-term impact due to line replacement within wetland area, minor short-term impact to water quality due to ground disturbance, to be mitigated through appropriate best management practices (BMPs)),
- Cultural resources (potential impact due to waterlines in new areas),
- Flora and fauna (minor short-term impact due to construction activity),
- Air quality (minor short-term impact due to construction activity, energy (positive long-term impact due to improved efficiency due to reduced line loss), and
- Public health (positive impact to system service, reliability, and fire flow capacity in the long-term)

The majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.1.2. NO IMPROVEMENTS

The existing distribution system consists largely of aged, undersized mains. Replacement of these mains, therefore, is important for both system reliability (since aged mains present a risk for failure, system depressurization and contamination) and conveyance of fire flows (since the required fire flows cannot be delivered to a portion of the fire hydrants through the existing undersized mains). Thus, if no improvements are made to the distribution system, the mains could be at risk for failure, leading to potential system depressurization and contamination; in addition, undersized mains have a reduced ability to convey fire flows.

2.1.2.1. NO IMPROVEMENTS – ENVIRONMENTAL IMPACTS

Since there would be no action taken to improve the current system, there would be no environmental impacts from new construction. However, the District currently experiences a relatively high loss (approximately 21.8 percent), pointing to the existence of waterline leaks which could also become a source of system contamination. Additionally, a portion of the system cannot currently provide the required fire flows. Both the potential for contamination and insufficient fire flows pose a threat to public health and safety. Lastly, the District would have no potential for growth or expansion without first improving their existing system.

2.2. SOURCE, STORAGE, AND BOOSTER IMPROVEMENTS

2.2.1. INSTALLATION OF SECOND WELL

The District currently relies on a single production well, with no standby power, to serve the system. If this well were to fail, or there was a power outage, the potential for system de-pressurization and contamination would exist, which is a threat to public

health and safety. In order to address this issue, a second production well would be constructed and a pump capable of producing 160 gallons per minute (in order to mirror the pumping rate of the existing well) would be installed, ideally located adjacent to the existing well on the existing well site.

2.2.1.1. INSTALLATION OF SECOND WELL – ENVIRONMENTAL IMPACTS

The primary environmental impacts associated with installation of a second well consist of drilling for the new well. The installation of the improvements would impact the following existing environmental conditions:

- Physical aspects (minor long-term impact due to excavation for the new well and well house),
- Socioeconomics of the area (increased user rates will provide improved service over the long-term),
- Water quality (minor short-term impact to water quality due to ground disturbance, to be mitigated through appropriate BMPs),
- Flora and fauna (minor short-term impact due to construction activity),
- Air quality (minor short-term impact due to construction activity),
- Energy (improved overall system efficiency), and
- Public health (positive impact to system service and reliability in the long-term)

The majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.2.2. INCREASE BOOSTER CAPACITY

The existing booster station is deficient by 115 gallons per minute to supply the current PHP (peak hour production) of the Boosted Datum with any pump out of service. The booster station is also deficient by 12 gallons per minute based on required fire flows (250 gpm for 2 hours) and by 262 gallons per minute based on recommended fire flows (500 gpm for 1 hour). Lastly, the booster station is not equipped with standby power, and the boosters are relied upon completely to pressurize and serve the majority of the system. If the boosters were to fail or there was a power outage, the potential for system de-pressurization and contamination would exist, which is a threat to public health and safety.

In order to address these deficiencies, additional pumping capacity and standby power would be added to the booster station. The additional pumping capacity would be a minimum of be 115 gallons per minute or up to 262 gallons per minute (in order to provide the recommended fire flows).

2.2.2.1. INCREASE BOOSTER CAPACITY – ENVIRONMENTAL IMPACT

The primary environmental impacts associated with increasing booster capacity are minor since the pumps will be installed in the existing reservoir structure and piping would be installed within the existing booster station building. The installation of the improvements would impact the following existing environmental conditions:

- Socioeconomics of the area (increased user rates will provide improved fire flow and service over the long-term),
- Air quality (intermittent long-term impact due to standby generator),
- Energy (improved overall system efficiency, but additional pumping due to increased pumping capacity resulting in negligible impact), and
- Public health (positive impact to system service, reliability, and fire flow capacity in the long-term).

The majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.2.3. NO IMPROVEMENTS

As indicated above, the District currently relies on a single production well, with no standby power, to serve the entire system. The District also relies completely on the boosters to pressurize and serve the majority of the system. If either the well or the boosters were to fail, or there was a power outage, the potential for system de-pressurization and contamination would exist, which is a threat to public health and safety. Storage improvements were not deemed necessary at this time as the deficiency is very small.

2.2.3.1. NO IMPROVEMENTS – ENVIRONMENTAL IMPACTS

Since there would be no action taken to improve the current system, there would be no environmental impacts due to new construction. However, the majority of the system is pressurized by booster pumps (since no storage is available by gravity) that do not have standby power or redundant pumping capacity. Thus, the system is at risk for contamination through system de-pressurization in the event of a power outage or pump failure. Additionally, a portion of the system cannot currently provide the required fire flows. Lastly, the District would have no potential for growth or expansion without first improving their existing system.

2.3. IMPROVEMENT OPTIONS

As was discussed in previous sections, the system is currently deficient. Several improvement options were developed (aggregating the source, booster, and distribution improvements) and presented to the District for consideration. Each option is described below and addresses system source, booster and distribution system deficiencies based on current demands. These options were presented at the April 24, 2012 Board of Directors meeting. Refer to Appendix C for the Engineer's Opinion of Probable Project Costs.

2.3.1. IMPROVEMENT OPTION A – ACHIEVE REQUIRED FIRE FLOW

Under this improvement option, the system would remain in its current configuration and the deficiencies with respect to providing current demands and the required fire flow of 250 gallons per minute for 2 hours would be addressed. A second production well would be constructed and a pump capable of producing 160 gallons per minute (in order to mirror the pumping rate of the existing well) would be installed.

An additional 115 gallons per minute of pumping capacity and standby power would be added at the booster station. The existing 2 inch waterlines in Glacier and Grand Tour (approximately 3,400 linear feet) would be replaced with 8 inch waterline. Additionally, the District intends to complete replacement of the remaining aged meters within the system. Refer to Appendix B for a map of the proposed improvements for Option A (labeled Figure 4.2).

Completion of these improvements would provide system reliability (i.e. ability to pressurize the system and meet demand in the event of a power outage or pump failure), as well as meeting the fire flow requirement of 250 gallons per minute for 2 hours (without pump redundancy, as established by the local fire authority). The estimated project cost for Improvement Option A is approximately $1,093,400 (refer to Appendix C). This option would result in a negligible difference in operation and maintenance cost (increased pumping but increased efficiency). Note that these improvements are based on current demands and would not provide for growth.

Table 2-2 provides an illustration of potential phasing of Improvement Option A.

Table 2-2: Option A Phasing (5-Year Project)

Year End		2013	2014	2015	2016	2017
		Estimated Project Expenditure				
SOURCE/BOOSTER						
Booster Station Improvements (Add Pump & Install Generator)		$106,650				
Construct Second Well		$7,000			$405,750	
DISTRIBUTION						
Replace Undersized Mains that Feed Fire Hydrants (Fire Flow to Boosted Datum)						
Meter Replacements						$30,000
Replace Existing 2 Inch Line (Grand Tour from Glacier Dr. to Pinewood Way) with 8 Inch Line	1400 LF		$224,500			
Replace Existing 2 Inch Line (Glacier from Grand Tour to Beginning of 4 Inch) with 8 Inch Line	2000 LF			$319,500		
ACCUMULATED ESTIMATED PROJECT COST		$113,650	$338,150	$657,650	$1,063,400	$1,093,400

2.3.1.1. Improvement Option A – Environmental Impacts

The primary environmental impacts associated with Option A consist of drilling for the new well and trench excavation for approximately 3,400 linear feet of waterline replacement. The installation of the improvements would impact the following existing environmental conditions:

- Physical aspects (minor long-term impact due to excavation for the new well and well house, and short-term impact for the waterline replacement),

- Socioeconomics of the area (increased user rates will provide improved fire flow and service over the long-term),
- Floodplains (minor short-term impact due to waterline replacement along Grand Tour Drive within the Alpine Lake floodplain),
- Wetlands and water quality (minor short-term impact due to line replacement within wetland area, minor short-term impact to water quality due to ground disturbance, to be mitigated through appropriate BMPs),
- Flora and fauna (minor short-term impact due to construction activity),
- Air quality (minor short-term impact due to construction activity, potential intermittent long-term impact due to standby generator),
- Energy (improved efficiency by replacing aged meters, but additional pumping due to additional booster capacity resulting in negligible impact), and
- Public health (positive impact to system service, reliability, and fire flow capacity in the long-term).

The majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.3.2. Improvement Option A1 – Achieve Required Fire Flow With Additional Distribution Improvements

The District is currently listed as eligible to receive IDEQ construction loan money up to $1,800,000 with up to $543,691 principal forgiveness. Thus, Option A1 represents the improvements listed in Option A, which are needed in order to achieve the required fire flow of 250 gallons per minute for 2 hours, plus the estimated lineal footage of waterline replacement (approximately 4,400 lineal feet additional) that would bring the estimated project cost of Option A to $1,800,000. Although the additional waterline replacement is not required to meet the fire flow requirement, the system experiences a significant line loss and is generally undersized and depreciated. As can be seen in the Option A1 improvement map in Appendix B, a logical location for the additional waterline replacement would be along Grand Tour, since this is a 4 inch main feeding fire hydrants in the core area of the system. However, the District may choose to complete any of the waterline replacement projects shown in the distribution improvement map in Appendix B (labeled Figure 4.2).

Completion of these improvements would provide system reliability (i.e. ability to pressurize the system and meet demand in the event of a power outage or pump failure), as well as meeting the fire flow requirement of 250 gallons per minute for 2 hours (without pump redundancy, as established by the local fire authority). The estimated project cost for Improvement Option A1 is approximately $1,800,000 (refer to Appendix C). This option would result in a negligible difference in operation and maintenance cost (increased pumping but increased efficiency). Note that these improvements are based on current demands and would not provide for growth. Refer to Appendix B for a map of the proposed improvements for Option A1.

Table 2-3 provides an illustration of potential phasing of Improvement Option A1.

Table 2-3: Option A1 Phasing (5-Year Project)

Year End		2013	2014	2015	2016	2017
		Estimated Project Expenditure				
SOURCE/BOOSTER						
Booster Station Improvements (Add Pump & Install Generator)		$106,650				
Construct Second Well		$7,000			$405,750	
DISTRIBUTION						
Replace Undersized Mains that Feed Fire Hydrants (Fire Flow to Boosted Datum)						
Meter Replacements						$30,000
Replace Existing 4 Inch Line (Grand Tour from Glacier to 2350 Grand Tour) with 8 Inch Line	4400 LF		$706,600			
Replace Existing 2 Inch Line (Grand Tour from Glacier Dr. to Pinewood Way) with 8 Inch Line	1400 LF			$224,500		
Replace Existing 2 Inch Line (Glacier from Grand Tour to Beginning of 4 Inch) with 8 Inch Line	2000 LF			$319,500		
ACCUMULATED ESTIMATED PROJECT COST		$113,650	$820,250	$1,364,250	$1,770,000	$1,800,000

2.3.2.1. IMPROVEMENT OPTION A1 – ENVIRONMENTAL IMPACTS

The primary environmental impacts associated with Option A1 consist of the impacts for Option A discussed above as well as impacts associated with the additional distribution improvements (approximately 4,400 additional linear feet, for a total of approximately 7,800 linear feet) discussed here. The installation of the additional distribution improvements would impact the following existing environmental conditions:

- Physical aspects (minor long-term impact due to excavation for waterline replacement),
- Socioeconomics of the area (minor additional increase in user rates allowing for improved service over the long-term),
- Water quality (minor short-term impact to water quality due to ground disturbance, to be mitigated through appropriate BMPs),
- Flora and fauna (minor short-term impact due to construction activity),
- Air quality (minor short-term impact due to construction activity), and
- Public health (positive impact to system service and reliability in the long-term).

Depending on the selected location of the additional distribution improvements, there may be impacts to wetlands (minor short-term impact due to distribution improvements within wetland area).

Again, the majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.3.3. Improvement Option B – Achieve Recommended Fire Flow

Under this improvement option, the system would remain in its current configuration and the deficiencies with respect to providing current demands and the recommended fire flow of 500 gallons per minute for 1 hour would be addressed. A second production well would be constructed and a pump capable of producing 160 gallons per minute (in order to mirror the pumping rate of the existing well) would be installed. The booster station would be upsized to provide an additional 262 gallons per minute. The existing 2 inch waterlines in Glacier and Grand Tour and the existing 4 inch waterlines in Grand Tour would be replaced with 8 inch waterlines (approximately 11,100 linear feet). Additionally, the District intends to complete replacement of the remaining aged meters within the system. Refer to Appendix B for a map of the proposed improvements for Option B (labeled Figure 4.3).

Completion of these improvements would provide both system reliability and the recommended fire flow of 500 gallons per minute for 1 hour. The estimated project cost for Improvement Option B is approximately $2,344,800 (refer to Appendix C). This option would result in a negligible difference in operation and maintenance cost (increased pumping but increased efficiency). Note that these improvements are based on current demands and would not provide for growth.

Table 2-4 provides an illustration of potential phasing of Improvement Option B.

Table 2-4: Option B Phasing (5-Year Project)

Year End		2013	2014	2015	2016	2017
		Estimated Project Expenditure				
SOURCE/BOOSTER						
Booster Station Improvements (Add Pump & Install Generator)		$125,550				
Construct Second Well		$7,000			$405,750	
DISTRIBUTION						
Replace Undersized Mains that Feed Fire Hydrants (Fire Flow to Boosted Datum)						
Meter Replacements			$30,000			
Replace Existing 4 Inch Line (Grand Tour from Boosters to Maxwell Dr.) with 8 Inch Line	2300 LF					$367,500
Replace Existing 4 Inch Line (Grand Tour from Maxwell Dr. to 1320 E. Grand Tour) with 8 Inch Line	2600 LF			$414,600		
Replace Existing 4 Inch Line (Grand Tour from Boosters to Glacier Dr.) with 8 Inch Line	2400 LF				$383,900	
Replace Existing 2 Inch Line (Grand Tour from Glacier Dr. to Pinewood Way) with 8 Inch Line	1400 LF		$224,500			
Replace Existing 4 Inch Line (Glacier Dr. from Pinewood Way to Beginning of 2 Inch) with 8 Inch Line	400 LF	$66,500				
Replace Existing 2 Inch Line (Glacier from Grand Tour to Beginning of 4 Inch) with 8 Inch Line	2000 LF			$319,500		
ACCUMULATED ESTIMATED PROJECT COST		$199,050	$453,550	$1,187,650	$1,977,300	$2,344,800

2.3.3.1. IMPROVEMENT OPTION B – ENVIRONMENTAL IMPACTS

The primary environmental impacts associated with Option B consist of drilling for the new well and trench excavation for approximately 11,100 linear feet of waterline replacement. The installation of the improvements would impact the following existing environmental conditions:

- Physical aspects (minor long-term impact due to excavation for the new well and well house, and short-term impact for the waterline replacement),
- Socioeconomics of the area (increased user rates will provide improved fire flow, reliability and service over the long-term),
- Floodplains (minor short-term impact due to line replacement along Grand Tour Drive within the Alpine Lake floodplain),
- Wetlands and water quality (minor short-term impact due to line replacement within wetland area, minor short-term impact to water

quality due to ground disturbance, to be mitigated through appropriate BMPs),

- Flora and fauna (minor short-term impact due to construction activity),
- Air quality (minor short-term impact due to construction activity, potential intermittent long-term impact due to standby generator),
- Energy (improved efficiency by replacing aged waterlines and reducing system loss, but additional pumping due to increased booster capacity resulting in negligible impact), and
- Public health (positive impact to system service, reliability, and fire flow capacity in the long-term).

The majority of these impacts is expected to be short-term and is not anticipated to create long-term, indirect, or cumulative impacts.

2.3.4. IMPROVEMENT OPTION C - NO IMPROVEMENTS

Under this improvement option, the system would remain as is, with no major improvements. As discussed in previous sections, the existing system has significant deficiencies with respect to supplying current demands in accordance with IDAPA rules (thus under this option, the system would not meet current Idaho Rules for Public Drinking Water Systems). Although this is the least cost option (since no improvements would be made), it is important to note that this option does not provide system reliability or required fire flows and growth would not be recommended.

2.3.4.1. IMPROVEMENT OPTION C – ENVIRONMENTAL IMPACTS

Since there would be no action taken to improve the current system, there would be no environmental impacts due to new construction. However, the existing system relies on a single production well with no standby power and the majority of the system is pressurized by booster pumps (since no storage is available by gravity) that also do not have standby power or redundant pumping capacity. Thus, the system is at risk for contamination through system de-pressurization in the event of a power outage or pump failure. It should also be noted that the District currently experiences a relatively high loss (approximately 21.8 percent), pointing to the existence of waterline leaks which could also become a source of system contamination. Additionally, a portion of the system cannot currently provide the required fire flows. Lastly, the District would have no potential for growth or expansion without first improving their existing system.

2.4. ALTERNATIVE COMPARISON

An additional comparison of the alternatives has been included in Appendix C. This comparison highlights the major impacts anticipated for each alternative discussed above. Of the aggregate improvement options (A, A1, B, C), Option A is the least expensive (of the improvement options, not including Option C which does not include any improvements). The major difference between these alternatives is that Option B will have significantly more distribution improvements (as compared to A and A1 in order to work towards the recommended fire flow whereas Options A and A1

focus on the required fire flow). Option C will have the least amount of impact to the environment due to new construction, but with potential significant detriment to public health and safety due to continued deficiencies in service, reliability, and fire flow.

3. PROPOSED ACTION/SELECTED ALTERNATIVES

3.1. SELECTED ALTERNATIVE

The District has selected Option A1 (refer to Appendix B for a map of these proposed improvements[6], labeled "Proposed Water System Improvements") for implementation based on the comments received during the public comment period (refer to Section 6 for more information on the public comment period). The total estimated project cost of this option is approximately $1,800,000 (refer to Appendix C for the cost estimate). The District is currently eligible to apply for a loan from IDEQ for up to $1,800,000. This loan would be paid back over a 30 year term with 1.25% interest and up to $543,691 in principal forgiveness. Additionally, the District completed an income survey and is eligible for up to $350,000 in Idaho Community Development Block Grant (ICDBG) funds. The estimated rate increase per connection associated with completion of Option A1 (funded by the IDEQ loan through a revenue bond) is $29.46 per month (which accounts for the IDEQ loan of $1.8 million with principal forgiveness of $543,691 and ICDBG funds of $350,000).

It's important to note that the District may elect to complete additional improvements, as funding allows or with future funding:

- Distribution improvements (shown on Figure 4.1 in Appendix B and on the "Proposed Water System Improvements" map in Appendix B)
- Booster capacity up to the full 262 gallons per minute to meet recommended fire flows (shown on "Proposed Water System Improvements" map in Appendix B)[7]
- Standby power at the well site (shown on "Proposed Water System Improvements" map in Appendix B)[8]

These improvements are not specifically included in the "near-term" improvements, but may be completed if funding is available. Thus, *all* these improvements are included in this document and are shown on the selected improvements map in Appendix B (labeled "Proposed Water System Improvements").

3.2. COST ESTIMATES FOR THE SELECTED PLAN (A1)

Cost estimates for the selected improvements are based on the estimates for the alternatives. The expected construction costs for the water improvement project are summarized in the following table. A detailed opinion of costs for the selected near-term project is presented in Appendix C (the detailed opinion of costs for the additional improvements are also included in Appendix C). Table 3-1 presents the estimated construction costs for the improvements and Table 3-2 presents the total project costs of the improvements. Table 2-3 in Section 2 (presenting costs for Option A1)

[6] Meter replacement is shown on the map of improvements but is incidental (in cost) to other items within the near-term project estimates.

[7] This was not included in Option A, A1, or B

[8] This was not included in Option A, A1, or B

presented the total project costs (including construction, engineering, and funding assistance/administration).

Table 3-1: Estimated Construction Costs (A1)

Booster Station Improvements	$80,900
Construct Second Well	$319,000
Distribution Improvements	$986,700
Total Project Construction Cost	$1,386,600

Table 3-2: Estimated Project Costs

Construction	$1,386,600
Engineering	$331,200
Funding Assistance / Project Administration	$82,200
Project Sub Total	$1,800,000

4. AFFECTED ENVIRONMENT AND ANTICIPATED IMPACTS

4.1. SERVICE AREA / AREA OF POTENTIAL EFFECT / PROPOSED PROJECT PLANNING AREA

The Alpine Meadows Water and Sewer District's water system is located approximately 8 miles northeast of the City of Coeur d'Alene in Kootenai County, Idaho. The majority of the system is bordered to the west by US Highway 95 and surrounds the northern portion of Alpine Lake. The District provides water to residents around Alpine Lake. The majority of the connections are single-family residences. The system and service area are located within parts of Sections 26 and 25 of Township 52N, Range 4W and parts of Section 30 in Township 52N, Range 3W.

The current service area generally surrounds the northern portion of Alpine Lake. The area consists primarily of flatter treed and agricultural areas with steeper hillsides bordering the eastern portion of the District. The elevation of the system varies from 2260 near the source on Garwood to 2600 in the eastern portion. Additionally, a steep hillside separates the majority of the District from US Highway 95 toward the western portion of the District. The area is primarily forested with some flatter agricultural areas northeast of the Lake. The service area consists of primarily residential development with some commercial customers. Alpine Lake is the primary surface water body within the service area.

For the purpose of the environmental review, an Area of Potential Effect (APE) and a Proposed Project Planning Area (PPPA) have been developed. These areas delineate the expected effect area and project planning area. For this District, the APE/PPPA will consist of the existing service area, growth areas, and existing well site and transmission main. As is implied, the APE and PPPA are one and the same for this District and proposed project. This boundary is delineated on a map (Environmental Review Area) in Appendix B.

4.2. PHYSICAL ASPECTS

4.2.1. AFFECTED ENVIRONMENT

4.2.1.1. TOPOGRAPHY

The existing topography is variable throughout the District area. There are flatter areas in the majority of the District area with steeper hillsides in the eastern portion of the District. The elevation changes abruptly through the western portion of the District, separating it from US Highway 95. There are wetlands bordering Alpine Lake, which are discussed in more detail in Section 4.7. Refer to Appendix D for a topographical map.

4.2.1.2. GEOLOGY

The surface geology in the area has been mapped (Lewis et al., 2002). The types of rock present are:

- Holocene Deposits – Fluvial gravel (Pleistocene and Holocene)

- Catastrophic Flood Deposits and Reworked Outwash – Gravel of Garwood (Pleistocene); Gravel of Green Ferry, bar facies (Pleistocene); Gravel of Hayden Lake (Pleistocene)
- Older Sediments – Sediment (Miocene)
- Columbia River Basalt Group, Wanapum Formation – Priest Rapids Member (Miocene)

Detailed description of these deposits and bedrock can be found in Appendix D. There are no faults in the APE/PPPA, there are faults near the District area.

4.2.1.3. Soils

The soils in the area are mapped as silt loam to gravelly loam by the USDA Soil Survey. These soils are generally well drained and have a moderate shrink-swell potential. The majority of the soils have a low possibility of erosion due to the moderate grain size. There is a small percentage (~12 percent) of soils that have a possibility of erosion since they are silt loams, specifically Potlatch silt loam, with low portions of larger grain sizes. The soils have a possibility of erosion due to the fine grained particle size. A Natural Resources Conservation Service, Web Soil Survey map and soil descriptions are provided in Appendix D. In addition, the erosion potential survey is included in Appendix D.

4.2.2. Environmental Impacts

4.2.2.1. Topography

The proposed project will primarily consist of improvements within the existing structures or within previously disturbed areas. There are some improvements in areas that have not been previously disturbed, which are shown on the proposed improvement map in Appendix B. The booster pump capacity improvement will be installed within the existing structure. The generator(s) and second well will be installed adjacent to existing structures. The distribution improvements consist primarily of replacement (replacing an existing waterline in a previously disturbed area) with some potential for re-alignment and/or future waterlines (in non-previously disturbed areas).

Therefore, short-term direct impacts due to ground disturbance (waterline construction, generator pads, and installation of the second well) are anticipated, but no long-term, indirect, or cumulative impacts are anticipated.

4.2.2.2. Geology

No active fault lines or unusual geological features that may impact the proposed project were identified within the project planning area. Therefore, no impacts (short-term, long-term, direct, indirect, or cumulative) to geology are anticipated.

4.2.2.3. Soils

The soils in the area mapped as silt loam to gravelly loam by the USDA Soil Survey. The soils have a possibility of erosion due to the fine grained particle size. Best

Management Practices (BMPs) will be implemented during construction to minimize the potential for the soils to erode and leave the construction site.

Therefore, there will be short-term direct impacts due to ground disturbance (waterline construction, generator pads, and installation of the second well) are anticipated, but long-term, indirect, or cumulative impacts are not anticipated.

4.3. CLIMATE

4.3.1. AFFECTED ENVIRONMENT

The following climate information for the Alpine Lake area (Hayden, Idaho) was obtained from weather.com, based on monthly averages:

- Average Annual Temperature High – 58° F
- Average Annual Temperature Low – 39° F
- Average Annual Precipitation – 25.8 inches
- Average Annual Snow Fall – 32.5 inches[9]

The prevailing wind in the area is North, Northeast, according to the Western Regional Climate Center. Minimum frost depth (according to Kootenai County residential building permit requirements and Idaho Association of Building Officials for Hayden, Idaho) is 24 inches.

4.3.2. ENVIRONMENTAL IMPACTS

There are no known special or unusual meteorological constraints that would affect the feasibility of the proposed project. All distribution improvements will be installed below minimum frost depth. Therefore, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.4. POPULATION AND FLOW PROJECTIONS

4.4.1. AFFECTED ENVIRONMENT

There are an estimated 117 active EDU[10]s within the Alpine Meadows water system as of 2011. This number was determined based on the number of connections (103). Five of these connections (Alpine Store, Greenhouse, Creative Concrete, and J&D Automotive) were identified as commercial connections with multiple EDUs for each connection, in some cases. Thus, 98 of these connections are residential. The

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[9] Average annual snow fall for Alpine Lake was obtained from NOAA, for the Coeur d'Alene station.

[10] An EDU is defined in The Idaho Rules for Public Drinking Water Systems – IDAPA 58. Title 01, chapter 8 as a unit of measure that standardizes all land use types (housing, retail, office, etc.) to the level of demand created by a single-family detached housing unit within a water system. The demand for one EDU is equivalent to the amount of water provided to the average single-family detached housing unit within a water system. For example, if a typical single-family household within a given system uses 300 gallons per day (i.e. one EDU equals 300 gpd) and a particular commercial connection uses 600 gallons per day, the commercial connection would account for 2 EDUs within that system. For this system, one EDU equals 319 gpd.

average consumption per residential connection was used to determine the amount of water consumed per single-family household (EDU). From this value and the consumption information provided for the other connections, the number of equivalent dwelling units for each of these connections was determined. The following table provides the current number of EDUs within the system.

Table 4-1: 2010 EDU Summary

	May 2010 through April 2011			
	Total Consumption (gallons)	Total Connections	Average Daily Consumption per Connection (gpd)	Equivalent EDUs
Total Residential Connections	11,417,301	98	319	98
Total Commercial Connections	2,167,960	5	1,188	19
Alpine Store (2 meters)	1,655,670	2	2,268	14.2
Greenhouse	329,950	1	904	2.8
Creative Concrete	83,540	1	229	0.7
J&D Automotive	98,800	1	271	0.8

As shown in Table 4-1, there are 117 active equivalent dwelling units within the system. The District has also agreed to serve four existing parcels (assumed to represent 1 EDU each) not currently connected to the system. This results in 117 active EDUs for 2011 with the possibility of 121 EDUs if the additional parcels were connected to the system.

The current population in the District's water system can be estimated using the U.S. Census Bureau's estimate for average persons per household in Kootenai County (2.45 for 2010) multiplied by the connections served by the District. Thus, the population served by the District's water system (counting the additional parcels discussed above) is approximately 250 people (based on total connections).

Growth for the system has been categorized into three phases; Growth A, B, and C[11]. These phases are used to organize and express expected growth according to its nature and location. The parcels identified as part of each growth phase are shown on the map included Appendix B (labeled Figure 2.2). Each growth phase is defined below:

- Growth A: This is the growth expected for buildout of the existing parcels within the District boundary. This includes the currently vacant lots as well as occupied lots that are not currently served by the District.

[11] It is recommended that, prior to approving growth, the District require the developer to fund a detailed hydraulic analysis and any necessary water system improvements required to provide service to the new development without decreasing the level of service provided to the existing service area.

- Growth B: This growth is the result of future subdivision of existing large parcels that are within the District boundary or currently served by the system (there is one parcel that is currently served but outside the boundary). A minimum lot size of 5 acres was assumed, based on zoning, to determine the number of EDUs associated with this growth phase.
- Growth C: This is the growth expected to occur outside the current District Boundary within the Future Growth Area identified by the District. The number of expected connections within this area was based on existing parcels and a minimum lot size of 5 acres where those parcels were large enough to be subdivided.

It was assumed that each previously subdivided lot will represent one connection. The number of anticipated connections for large parcels that have not been previously subdivided was determined based on a lot size of 5 acres. The number of EDUs expected for buildout of each growth phase was determined assuming all new connections would be residential and would therefore represent 1 EDU. Table 4-2 below summarizes the number of EDUs that currently exist and that are expected for each growth phase. It should be noted here that four of the residential connections currently connected to the Gravity Datum should be connected to the Boosted Datum in order to maintain adequate pressures (refer to Section 2.9.4.2 of the Facility Plan in Appendix A). The resulting change in EDU distribution between the two datums has been applied to analyses within this section.

Table 4-2: Summary of Future EDUs

	Current EDUs	Growth A EDUs	Growth B EDUs	20-Year EDUs	Growth C EDUs
Gravity Datum	16	19	20	31	35
Boosted Datum	105	114	119	198	229
Total System	**121**	**133**	**139**	**223**	**264**

The Kootenai County Comprehensive Plan (approved December, 2010) states that "an average annual growth rate of at least 2% for the next ten years would not be unreasonable to assume for the planning process." The District chose to utilize a growth rate of 2% for years 2010 through 2020 and a growth rate of 4% for 2021 forward. Based on these growth rates, it is estimated that the system will reach buildout of Growth A in 2016, Growth B in 2018, and Growth C in 2036.

The estimates for future demands are based on the assumption that the demand per EDU will remain constant throughout the growth period. It should be noted, however, that if several large users are added to the system or system loss is decreased significantly, these estimates may change. Table 4-3, on the following page, shows the estimated future demand that has been used for the purposes of this report. It should be recognized that growth and demand have been estimated and will not likely occur exactly as shown in Table 4-3.

Table 4-3: Future EDUs and Demand

	Total System				
	EDUs	Population[1]	ADP (gpd)	MDP (gpd)	PHP (gpm)
2011	121	250	56,870	172,667	339
2012	123	255	57,810	175,521	344
2013	126	260	59,220	179,802	353
2014	128	265	60,160	182,656	358
2015	131	270	61,570	186,937	367
Growth A	133	274	62,510	189,791	372
2016	134	277	62,980	191,218	375
2017	136	282	63,920	194,072	381
Growth B (2018)	139	287	65,330	198,353	389
2019	142	294	66,740	202,634	398
2020	145	299	68,150	206,915	406
2021	151	311	70,970	215,477	423
2022	157	323	73,790	224,039	440
2023	163	336	76,610	232,601	456
2024	170	350	79,900	242,590	476
2025	176	363	82,720	251,152	493
2026	183	377	86,010	261,141	512
2027	191	394	89,770	272,557	535
2028	198	409	93,060	282,546	554
2029	206	426	96,820	293,962	577
2030	215	443	101,050	306,805	602
2031	223	461	104,810	318,221	624
2032	232	478	109,040	331,064	650
2033	241	497	113,270	343,907	675
2034	251	517	117,970	358,177	703
2035	261	539	122,670	372,447	731
Growth C	264	404	124,080	376,728	739
2036	272	561	127,840	388,144	762

[1]Based on residential connections

As can be seen in the table above, the 20 year population estimation is approximately 311 people (127 residential connections x 2.45 people per household, total EDUs is 151). Growth projections have not been made for the 40-year scenario since the system's components (other than distribution) would need to be modified to handle this capacity.

4.4.2. Environmental Impacts

The improvements will support the anticipated growth for the District, and the growth is not anticipated to be excessive. The Idaho Division of Financial Management's statewide projected 2010-2030 annual growth rate is 1.57 percent. The projected District's estimated growth over that time period is 102 EDUs. When compared to the statewide projections for that time period (increase of 85 EDUs), the District's growth is approximately 20 percent higher than the statewide projection (the District assumed a 2-4 percent growth scenario during that time period). However, the estimated growth for the District is less than 500 EDUs over the life of the project.

Since the estimated growth does not meet both criteria (growth rate in excess of the statewide projection and growth in excess of 500 EDUs over the life of the project), the District's growth is not considered excessive.

Therefore, the direct and indirect impacts to the population should be positive in the long-term since the improvements will support the anticipated growth for the District. Short-term and cumulative impacts are not anticipated.

4.5. Economic and Social Profile

4.5.1. Affected Environment

The system serves a population of approximately 296[12] residents through 121 EDUs. The population of the service area is fairly stable, but is expected to grow. The majority of the homes served by the Alpine Meadows Water and Sewer District are primary, year-round single family dwelling units. Although no social-economic data is available specifically for this project planning area, the US Census Bureau reports that 11.9 percent of the population in Kootenai County is below the poverty level. The median household income in 2010 was reported as $46,336.

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. The Alpine Water and Sewer District will seek the input of all persons within the Area of Potential Effects through public meetings. All members of the community will be treated the same and have equal access to the District's public services and decision-making process.

The residents within the District will benefit from the proposed project by receiving a reliable and good quality supply of drinking water. In addition, the project will allow for future growth and economic expansion within this area.

4.5.2. Environmental Impacts

The residents within the District will benefit from the proposed project by receiving a reliable supply of clean drinking water and improved fire protection. The budgeted project will increase the user rates to 2.35 percent of their monthly income; the rate is currently 1.29 percent. The project will also allow for future growth and economic expansion within this area, which is a positive long-term impact associated with the project.

Therefore, the direct and indirect impacts to economic and social profile (allowing for future growth and economic expansion but increased rates) should be both positive and negative in the long-term. Short-term and cumulative impacts are not anticipated.

[12] Average persons per household for 2010 for Kootenai County multiplied by the number of EDUs equaling an approximate population.

4.6. LAND USE

4.6.1. AFFECTED ENVIRONMENT

Both land use and zoning information is included in this section[13]. The District area is zoned as agriculture-suburban, agriculture, commercial, light industrial, and rural. The zoning map for the APE/PPPA (derived from Kootenai County zoning designations) can be found in Appendix E. The existing land use in the area consist of rural residential and borders a rural land use (as established by the Kootenai County Comprehensive Plan – Land Use). The land use map for the APE/PPPA (derived from Kootenai County land use designations) can be found in Appendix E.

4.6.2. ENVIRONMENTAL IMPACTS

The completion of the improvements is not anticipated to negatively impact the current land use.

The Kootenai County Community Development department was contacted regarding the proposed work. They noted that the District has an existing conditional use permit at the storage tank site that may require a "minor modification" for the proposed work (and existing structures). Thus, the District will work with the County to complete any necessary modifications to the existing conditional use permit for the storage tank site.

The District will work with the County to complete any necessary modifications to the existing conditional use permit, but it is not anticipated that the land use will be negatively impacted by the proposed work. Therefore, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.7. FLOODPLAINS AND WETLANDS

4.7.1. AFFECTED ENVIRONMENT

FEMA (Federal Emergency Management Agency) has determined floodplain boundaries which are founded in the Flood Insurance Rate Maps (FIRMs). These boundaries were utilized to determine if the District is in the floodplain. The Kootenai County, Idaho and Incorporated Areas Flood Insurance Rate Map, dated May 3, 2010 was used to determine if the proposed improvements were located within floodplain areas. A portion of the floodplain map with the proposed improvements is provided in Appendix F. There is one distribution line improvement that is located within the 100 year floodplain for Alpine Lake (in Zone A, where no base floods have been determined). This is a waterline replacement, which will replace the pre-existing waterline within the previously disturbed area.

United States Fish and Wildlife Service provided a National Wetlands Inventory database[14]. A map of wetlands within the project area was prepared using the

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[13] Land Use information reflects the pattern of development that the community (in this case Kootenai County) desires to see in specific areas. Zoning establishes the actual use of land (and ordinances establish density, intensity, height, and form of development).

[14] The geodatabase is only effective as of the date of extraction (2012). Also the dataset represents the extent, approximate location and type of wetlands and deepwater habitats in the

database and is included in Appendix F. There are several distribution improvements that are located within designated wetland areas.

4.7.2. Environmental Impacts

Best management practices (BMPs) will be utilized to protect the water quality of the wetlands and floodplains and to prevent sediment from leaving the construction site.

The Idaho Department of Water Resources was consulted regarding the impact of the improvements on floodplains in the project area. They identified improvements that are located within the northern tip of the Alpine Lake Flood Zone A. Because this line replacement will occur with Zone A, it will need to be permitted by Kootenai County with a floodplain development permit. Kootenai County was consulted and they confirmed that a floodplain development permit would be required; the project will not create a permanent encroachment in the floodplain, but will be short-term disturbance and thus necessitating a development permit. In sum, a floodplain development permit will be required for construction activities in the mapped flood hazard area.

The Army Corps of Engineers also provided consultation regarding the wetland locations for this project. Several of the improvements are in located within wetland areas; however, the Corps indicated that the wetland may not be jurisdictional. The Corps submitted further research and documentation to the Corps Headquarters and EPA for a determination on the jurisdiction of the wetland. After 21 days, it was determined that the wetland is not jurisdictional. Both Idaho Department of Water Resources and Idaho Department of Lands were contacted for further comments on impacts to wetlands. Both entities indicated they did not have jurisdiction and provided no further comments.

Therefore, short-term direct impacts are anticipated for floodplains or wetlands due to potential for sediment to leave the construction site and enter wetlands and floodplains near to the proposed project sites (which will be mitigated through best management practices (BMPs). In addition, submittal of and compliance with a floodplain development permit from Kootenai County will be required for the construction activities. Indirect, long-term positive impacts are expected since existing water sources will be protected by improving the overall system reliability. Cumulative impacts are not anticipated.

4.8. Wild and Scenic Rivers

4.8.1. Affected Environment

The nearest designated Wild and Scenic River is a segment of the Saint Joe River approximately 60 miles to the southeast of the District, according to the National Wild and Scenic Rivers database. Therefore, no designated Wild and Scenic Rivers are located within the APE/PPPA. A map of the Wild and Scenic Rivers in the United States can be found in Appendix G as well as an enlargement of this map to show the District area and the Saint Joe River.

US. Refer to http://www.fws.gov/wetlands/Data/Wetlands-Geodatabase-User-Caution.html for more information on the geodatabse.

4.8.2. *Environmental Impacts*

Since there are no designated wild and scenic rivers in the project area, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.9. Cultural Resources

4.9.1. *Affected Environment*

There are no known historic resources within the District area. A search of the Kootenai County, Idaho sites listed on National Register of Historic Places, provided in Appendix H, shows the nearest site located within the Hayden Lake area (approximately 4 miles away) and the Rathdrum area (approximately 6 miles away). A list of the properties located in Hayden Lake and Rathdrum are included with the map. In addition, the District is not located in a tribal reservation area.

4.9.2. *Environmental Impacts*

Since the majority of the improvements will occur within existing structures or previously disturbed areas, impacts to cultural resources are not anticipated.

The State Historic Preservation Office was consulted regarding the impact to cultural resources from this project. They indicated that since there was little new disturbance, no effect to cultural resources is anticipated and an archeological survey will not be required. The Coeur d'Alene Tribe was also consulted regarding this project and did not respond with any comments. If artifacts are discovered during construction of the project, the SHPO and the Coeur d'Alene Tribe shall be contacted immediately and all work must stop. Mitigation will be consulted with these two agencies before construction re-commences.

Therefore no impacts (short-term, long-term, direct, indirect, and cumulative) to cultural resources are anticipated.

4.10. Plants and Wildlife

4.10.1. *Affected Environment*

The area is treed and is home to many wildlife species. A list of endangered, threatened, and candidate species for Kootenai County was obtained from the US Fish and Wildlife Services website and is included in Appendix I. Threatened species include the following: Canada Lynx, Bull Trout, Spalding's Catchfly, and Water Howellia. Candidate species include the following: Yellow-billed Cuckoo. Proposed species include the following: North American Wolverine. In addition, critical habitat has been identified in the Columbia River Basin for the protection of Bull Trout. After consulting the US Fish and Wildlife Services Critical Habitat Mapper[15], the District is not in a critical habitat area for Bull Trout. Refer to Appendix I for a map of the critical habitat for Bull Trout in the area.

Essential fish habitat (EFH) for ocean going fish was also examined for the

[15] The US Fish and Wildlife Service Critical Habitat Mapper does not contain all designated habitat, but provides a reference.

District. Chinook Salmon and Coho Salmon are identified as an ocean going fish in the state of Idaho (primarily in central Idaho). After reviewing a map of EFH in Idaho, provided by IDEQ, the District is outside of this habitat area. Refer to Appendix I for the map of EFH in Idaho.

4.10.2. ENVIRONMENTAL IMPACTS

As mentioned above, the project area is not located in a critical habitat area and it is not anticipated that the species or habitat areas will be affected by the project. The Idaho Fish and Wildlife Office provided consultation for this project. They did not anticipate that Federally listed, proposed, or candidate species are likely to occur in the vicinity of the project.

IDEQ also provided a determination and consultation on the threatened and endangered species for the project and anticipated no effect as a result of the proposed improvements. This consultation is provided in Appendix O.

Therefore, no impacts to plants and wildlife (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.11. RECREATION AND OPEN SPACE

4.11.1. AFFECTED ENVIRONMENT

The project is not located in recreational open spaces, parks, or areas of recognized scenic or recreational value.

4.11.2. ENVIRONMENTAL IMPACTS

Since there are no designated recreational open spaces, parks, or areas of recognized scenic or recreational value in the project area, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.12. AGRICULTURAL LANDS

4.12.1. AFFECTED ENVIRONMENT

Prime agricultural classification is provided as part of the USDA Soil Survey conducted for the soil information in Section 4.2.1. According to the Soil Survey, "farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops." There are soils listed as prime farmland if irrigated within the District area. A map of the USDA Soil Survey information for the Association is provided in Appendix J. These soils consist of approximately 25 percent of the area and several improvements are located within these soils.

4.12.2. ENVIRONMENTAL IMPACTS

The improvements which are located in the prime farmland soils will either be replacing existing waterlines or will occur in already "converted to non-agricultural use" areas (i.e. installation of the second well on the well lot, which is currently not used for agricultural purposes).

The USDA Natural Resources Conservation Services (NRCS) provided consultation for this project. They indicated that did not have any concerns regarding the project since most waterline improvements would be replacing existing waterlines with minimal disturbance.

Since the improvements will occur within previously disturbed areas or in areas that have already been converted to non-agricultural purposes, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.13. Air Quality

4.13.1. Affected Environment

The State of Idaho has been delegated authority to regulate air quality through the EPA and the Clean Air Act. The State Implementation Plan provides the rules and regulation to maintain acceptable air quality standards within the state and site specific plans delineating areas that do not meet air quality standards. Areas that do not meet specific air quality standards are known as Nonattainment Areas. A map showing Nonattainment Areas and Areas of Concern for the State of Idaho is provided in Appendix K. The District is not located in a Nonattainment area or an area of concern. Noise from the existing facilities is not disruptive and has not been an issue amongst residents.

4.13.2. Environmental Impacts

The IDEQ was consulted, and they require that reasonable controls be implemented during construction and maintenance to prevent fugitive dust during all phases of the project. The project plans should also describe the proper disposal of any demolition and construction debris in accordance with solid waste regulations. Open burning of demolition or construction debris is not allowed. Vegetation/land clearing should be accomplished using mechanical methods to avoid generation of smoke. Demolition and construction debris must be treated in accordance with solid waste regulations.

Additionally, the facility's standby power (generator) is exempted from permitting requirements (limited by IDAPA 58.01.01.222.02.d, shown below) if the generator meets these requirements.

> "Stationary internal combustion engines used exclusively for emergency purposes which are operated less than five hundred (500) hours per year and are fueled by natural gas, propane gas, liquefied petroleum gas, distillate fuel oils, residual fuel oils, and diesel fuel; waste oil, gasoline, or refined gasoline shall not be used".

This is a Category II exemption (according to the IDAPA referenced above). Documentation of total hours of operation per year, available to IDEQ at any time, is required for compliance.

The standby power must also meet National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE rule). After

completing the web-based tool[16], the applicable federal standards are 40 CFR part 60, subpart IIII (for compression ignition) or 40 CFR part 60, subpart JJJJ (for spark ignition).

Short-term impacts are anticipated in association with construction emissions; however, the impact to air quality is not anticipated to exceed state or federal limits. Long-term, indirect or cumulative impacts are not anticipated, but documentation of exemption compliance (total hours of operation per year) must be available for IDEQ at any time.

4.14. Energy Production/Consumption

4.14.1. Affected Environment

The District currently meters individual water consumption with service meters at all connections monthly for April through October. Users are billed based on their monthly consumption. Additional fees are charged for water use in excess of the base allotment of water. The rate structure discourages wasteful use of water and reduces overall water and energy consumption.

Completion of the proposed improvements will not significantly increase the water systems energy consumption. When selecting new pumps as part of the proposed improvements, the efficiency of the pump and motor will be considered during the selection process to ensure that the pumping equipment is as energy efficient as possible. However, pumping will be increased overall.

4.14.2. Environmental Impacts

The impacts associated with energy consumption are anticipated to be positive since new, higher efficiency components will be installed. However, overall pumping will increase, thus increase energy consumption. Thus, the improvements are anticipated to have a negligible effect on energy consumption. In addition, the District will continue to monitor individual water consumption to discourage wasteful use of water and overall energy consumption.

Therefore, no impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.15. Regionalization

4.15.1. Affected Environment

The District does not currently have an intermunicipal agreement with any surrounding communities for water services. A connection with the nearest water system in the area, Garwood, was considered during the facility planning process. The cost, configuration, and capacity of that water system to serve the Alpine Meadows system suggest that connecting to this system in lieu of the proposed improvements is not economically feasible for the District at this time.

[16] http://www.epa.gov/ttn/atw/rice/output/quiz.html

4.15.2. Environmental Impacts

Since no regionalization scheme is in place and connection to the nearest water system, Garwood, does not seem feasible, no impacts (short-term, long-term, direct, indirect, or cumulative) to regionalization are anticipated.

4.16. Water Quality

4.16.1. Affected Environment

4.16.1.1. Water Rights

The District holds one water right for the diversion of groundwater, as can be seen in Table 4-4.

Table 4-4: Inventory of Water Rights

Water Right No.	Basis	Beneficial Use	Period of Use	Priority Date	Diversion Rate	Volume Limitation
95-07782	License	Irrigation	March 15 to Nov. 15	9/8/1977	0.33 cfs	150 AFA
		Industrial	Jan. 1 to Dec. 31		0.02 cfs	0.2 AFA
		Commercial	Jan. 1 to Dec. 31		0.08 cfs	2 AFA
		Domestic	Jan. 1 to Dec. 31		0.33 cfs	57 AFA
Maximum Diversion for License:					**0.33 cfs**	**209.02 AFA**

The Idaho Department of Water Resources (IDWR) is currently conducting an adjudication of all the water rights (that were put into beneficial use on or prior to November 12, 2008) in the Coeur d'Alene and Spokane River water systems. The District filed an adjudication claim with IDWR for the licensed right in November, 2009. It should be noted that the claim was filed based on changing the beneficial use to Municipal during the adjudication.

4.16.1.2. Source

The system is supplied by a single production well located at 1700 W. Garwood Road. Table 4-5 provides a summary of the well.

Table 4-5: Inventory of Source

	Year Drilled[1]	Year Current Pump/ Motor Installed	Casing Dia. (inch)	Static Water Level (ft)	Motor HP	Pump Model	Pump Operating Point (gpm)	Back-up Power Supply	Pump Type	Screen Capacity[2] (gpm)
Production Well	1977	June 2002	12	262	30	Grundfos 150S300-17	160	None	Submersible	1,000

[1] Available well logs and pump curves are included in Appendix C.

[2] Screened source capacity according to 1978 Well Improvements record drawings prepared by Lepard & Frame.

The well pumps to the two reservoirs, and is controlled by floats. During the winter, the well turns on at a reservoir level of 3 feet and off at a level of 6 feet. During the summer, the well turns on at a level of 4 feet and off at 6 feet. The system operator runs the reservoir level down to 6 inches about twice a month in order to prevent water stagnation issues.

Well Building.

Wellhead and Mechanical Piping.

4.16.1.3. WATER QUALITY

The District follows sampling regulations stipulated by IDEQ. The 2010 Drinking Water Quality Report, attached as Appendix M for reference, notes that levels of regulated contaminants were below state and federal standards. Water from the well is chlorinated prior to being pumped to the system. The last positive coliform sample was taken in May 2009.

4.16.1.4. SURFACE WATER IN THE AREA

The primary surface water body in within the District is Alpine Lake. The Lake is most likely of good water quality and is listed as an "unassessed water" in the 2010 Integrated Report by IDEQ. There are other small streams in the area with two springs noted in the northern portion of the District. Refer to the topographical map in Appendix D for an overview of the surface water in the APE/PPPA.

During construction, BMPs will be developed and implemented to protect the quality of the nearby surface water bodies from degradation.

4.16.1.5. GROUND WATER IN THE AREA

The system is supplied by a single production well at 1700 W. Garwood Road. The well draws from the Spokane Valley-Rathdrum Prairie Aquifer (see Appendix L for a map of the Aquifer). The Aquifer is classified as a sole source aquifer by the US Environmental Protection Agency (EPA). A sole source aquifer classification indicates that the aquifer supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. Extensive analysis of the ground water in the area, water quality, and water rights is included in previous sections.

4.16.2. ENVIRONMENTAL IMPACTS

4.16.2.1. SURFACE WATER

The primary surface water body in within the District is Alpine Lake. The Lake is most likely of good water quality. There are other small streams in the area with two springs noted in the northern portion of the District.

The IDEQ was consulted, and they require the protection of surface water and control of erosion and sedimentation by the use of acceptable best management practices (BMPs). If the project disturbs an area greater than 1 acre and drains to a water of the United States, the project will need to comply with the most recent edition of the Construction General Permit, a permit administered by the EPA. The project will not need a Stormwater Pollution Prevention Plan, which complies with the Construction General Permit since the disturbance is estimated to be greater than 1 acre[17] but the area does not drain to a water of the United States (Alpine Lake is not a water of the United States, as determined by the Army Corps of Engineers).

Therefore, potential short-term impacts to water quality (surface water) are anticipated due to ground disturbance near surface water bodies, but the surface water bodies will be protected utilizing BMPs during construction, as required by IDEQ. Indirect, long-term positive impacts are expected since existing water sources will be protected by improving the overall system reliability. Cumulative impacts are not anticipated.

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[17] It is estimated that the disturbance from the near-term distribution improvements is approximately 3.5 acres; the disturbance from the total, potential, future distribution improvements is approximately 19.5 acres (which includes the near-term distribution improvements)

4.16.2.2. GROUND WATER

The well that supplies the system draws from the Spokane Valley-Rathdrum Prairie Aquifer (see Appendix L for a map of the Aquifer). The Aquifer is classified as a sole source aquifer by the EPA.

The project is not anticipated to affect water rights or the quantity of ground water available for private drinking water wells. It is also not anticipated to affect the water rights for the District since the existing well will not be expanded or upsized and the new well is proposed for redundancy purposes.

The IDEQ was consulted, and they require the protection of ground water and control of erosion and sedimentation by the use of acceptable best management practices (BMPs).

The Idaho Department of Water Resources provided consultation for the project. They will require the District to obtain a well drilling permit prior to construction and IDEQ approval of plans and specifications for the well design.

The EPA was consulted, and they indicated that the project would not have a significant adverse impact on the Aquifer.

Thus, short-term, long-term, direct and indirect positive impacts to water quality and sole source aquifer (ground water) are potential since the project will improve overall system reliability. Potential short-term impacts are anticipated but will be mitigated through the use of BMPs, as required by IDEQ. The District will also need to obtain a well drilling permit and seek IDEQ approval of the plans and specifications for the well design. Cumulative adverse impacts are not anticipated.

5. ENVIRONMENTAL IMPACTS SUMMARY

Section	Environmental Impact
4.2 Physical Aspects	Short-term direct impacts due to ground disturbance (waterline construction, generator pads, and installation of the second well) are anticipated, but no long-term, indirect, or cumulative impacts are anticipated.
4.3 Climate	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.4 Population and Flow Projections	POSITIVE direct and indirect impacts to the population in the long-term since the improvements will support the anticipated growth for the District. Short-term and cumulative impacts are not anticipated. *No mitigation required for the positive impacts.*
4.5 Economic and Social Profile	POSITIVE direct and indirect impacts to economic and social profile (allowing for future growth and economic expansion). Long-term direct and indirect impacts anticipated due to increased rates. Short-term and cumulative impacts are not anticipated.
4.6 Land Use	The District will work with the County to complete any necessary modifications to the existing conditional use permit, but it is not anticipated that the land use will be negatively impacted by the proposed work. No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.7 Floodplains and Wetlands	Short-term direct impacts are anticipated for floodplains or wetlands due to potential for sediment to leave the construction site and enter wetlands and floodplains near to the proposed project sites (which will be mitigated through BMPs, refer to Section 4.16). In addition, submittal of and compliance with a floodplain development permit from Kootenai County will be required for the construction activities. POSITIVE indirect, long-term positive impacts are expected since existing water sources will be protected by improving the overall system reliability. *No mitigation required for the positive impacts.* Cumulative impacts are not anticipated.
4.8 Wild and Scenic Rivers	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.9 Cultural Resources	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated. But, if artifacts are discovered during the course of construction, the Coeur d'Alene Indian Tribe and SHPO will be contacted and all work will stop. Mitigation may be further evaluated.
4.10 Plants and Wildlife	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.11 Recreation and Open Space	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.12 Agricultural Lands	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.

4.13 Air Quality	Short-term impacts are anticipated in association with construction emissions; however, the impact to air quality is not anticipated to exceed state or federal limits. Long-term, indirect or cumulative impacts are not anticipated, but documentation of exemption compliance (total hours of operation per year) must be available for IDEQ at any time.
4.14 Energy Production/Consumption	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.15 Regionalization	No impacts (short-term, long-term, direct, indirect, or cumulative) are anticipated.
4.16 Water Quality	Surface Water: potential short-term impacts to water quality (surface water) are anticipated due to ground disturbance near surface water bodies, but the surface water bodies will be protected utilizing BMPs during construction, as required by IDEQ. POSITIVE indirect, long-term impacts are expected since existing water sources will be protected by improving the overall system reliability. *No mitigation required for the positive impacts.* Cumulative impacts are not anticipated. Ground Water: potential short-term impacts are anticipated but will be mitigated through the use of BMPs, as required by IDEQ. The District will also need to obtain a well drilling permit and seek IDEQ approval of the plans and specifications for the well design. POSITIVE short-term, long-term, direct and indirect impacts to water quality and sole source aquifer (ground water) are potential since the project will improve overall system reliability. *No mitigation required for the positive impacts.* Cumulative impacts are not anticipated.

6. ENVIRONMENTAL IMPACT MITIGATION

Section	Regulatory Agency	Mitigation
4.2 Physical Aspects AND 4.16 Water Quality	Idaho Department of Environmental Quality	Stormwater controls (BMPs) will need to be developed that adequately protect surface waters and ground water from being impacted during and after construction. This is also to mitigate ground disturbance.
4.5 Economic and Social Profile	Alpine Meadows Water District	The District anticipates utilizing ICDBG grant funds to subsidize the rate increase for their users in order to reduce this impact.
4.6 Land Use	Kootenai County	The existing conditional use permit for the storage tank site may need to be modified for the proposed work. The District will need to work with Kootenai County to determine the necessary modifications.
4.7 Floodplains and Wetlands	Kootenai County	A floodplain development permit will be required for construction activities in the mapped flood hazard area.
4.9 Cultural Resources	Idaho SHPO and Coeur d'Alene THPO	If artifacts are discovered during the course of construction, the Coeur d'Alene Indian Tribe and SHPO will be contacted and all work will stop. Mitigation may be further evaluated.
4.13 Air Quality	Idaho Department of Environmental Quality	The contractor must mitigate fugitive dust as a result of construction of this project using reasonable controls in accordance with IDEQ regulations and should be advised during the preconstruction conference of the requirements to keep dust to a minimum. The project plans should also describe the proper disposal of any demolition, construction, or cleared vegetation debris. Open burning of debris is not allowed. Demolition and construction debris must be treated in accordance with solid waste regulations. The District's standby power is exempted from permitting requirements per IDAPA 58.01.01.222.02.d. Documentation of hours of operation per year must be kept and made available to Idaho IDEQ at any time for determination of continued compliance. The standby power must also meet the applicable federal requirements: 40 CFR part 60, subpart IIII (for compression ignition) or 40 CFR part 60, subpart JJJJ (for spark ignition).
4.16 Water Quality	Idaho Department of Water Resources	The District will need to obtain a well drilling permit for the additional well. They will also need to seek IDEQ approval of the specification and plans for the well design. These items must be completed prior to construction of the additional well.

7. PUBLIC PARTICIPATION

The DRAFT Facility Plan and Options A, A1 and B were presented to the public on June 19th, 2012. The presentation included a discussion of the proposed improvements, costs, funding options and impacts to rates. A May newsletter was sent to the District's constituents in order to notify them of the public meeting and a follow-up newsletter was sent after the meeting addressing questions that came up at the meeting. In addition, a notice of the public meeting and public comment period was published in the Coeur d'Alene Press prior to the meeting. A copy of these newsletters, publications, presentations, and meeting sign-in sheets is included in Appendix N.

A public comment period was held from June 20th to July 20th, during which time a total of 13 comments were received. A summary of these comments is provided in Table 6-1.

Table 7-1: Summary of Public Comments

Total Number received	13
Number indicating approval for Option A	3
Number indicating approval for Option A1	5
Number indicating approval for Option B	5
Number indicating approval for Do Nothing	
No Comment	1

The comments received have been compiled and are included in Appendix N.

On September 11, 2012 at a regularly scheduled District meeting, the Board identified and selected the alternative for the project, based on public comments and board member input (they announced this meeting in a bill insert sent out prior to the meeting). The Board selected Option A1 for the near-term improvements. Ultimately, the other distribution improvements could be included at a future date. These improvements are covered under this document. The September 11th meeting is described and documented in meeting minutes, which are included in Appendix N; the bill insert is also included in Appendix N.

On October 16, 2012 the District held a second public meeting, which was announced in the September newsletter to the District's constituents. The meeting was held to present the proposed improvements and associated rate impacts, discuss the revenue bond election, discuss the block grant funding, and request feedback on how the block grant funding should be spent (either additional improvements or reducing the rate increase of the project). The September newsletter, October 16th meeting presentation and meeting sign-in sheet are included in Appendix N.

8. REFERENCES CONSULTED

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9. AGENCY CONSULTATION

The following table provides a list of agencies that were contacted August 23, 2012 via mail to request their comments, concerns, or any potential impacts of the proposed project. Clarifications were issued on August 30, 2012 and September 13, 2012 and all agencies were contacted either through email or phone. The request letters, clarification, and their responses are located in Appendix O.

Agency	Contact	Address
US Army Corps of Engineers, Coeur d'Alene Regulatory Office	Beth Reinhart/Mike Burgan	2065 W. Riverstone Drive, Ste. 201 Coeur d'Alene, ID 83814
US Fish and Wildlife Service	State Supervisor/ Bryon Holt	11103 East Montgomery Drive Spokane, WA 99206
Idaho Department of Environmental Quality, Coeur d'Alene Regional Office	Katy Baker-Casile/ John Tindall	2110 Ironwood Parkway Coeur d'Alene, ID 83814
US EPA, Coeur d'Alene Field Office	Don Martin	1910 NW Blvd., Suite 208 Coeur d'Alene, ID 83814
US EPA, Idaho Operations Office	James Werntz/ Cyndi Grafe	1435 North Orchard Boise, ID 83706
EPA Region 10	Mike Lidgard, Manager	1200 6th Avenue, OWW 130 Seattle, WA 98101
EPA Region 10, Office of Environmental Assessment (OEA-095)	Sue Eastman, Hydrogeologist	1200 6th Avenue, OWW 136 Seattle, WA 98101
USDA-NRCS	Mark Addy, District Conservationist/Aubrey Woodcock	7830 Meadowlark Way, Suite C1 Coeur d'Alene, ID 83815
Idaho Department of Water Resources	Mary McGown, State NFIP Coordinator	322 East Front Street, PO Box 83720 Boise, ID 83720
Idaho Department of Water Resources	Allen Beardslee	7600 Mineral Drive, Ste. 100 Coeur d'Alene, ID 83815
Idaho Department of Fish and Game, SE Region	Regional Nongame Biologist/ Charles Cosi	2750 Kathleen Avenue Coeur d'Alene, ID 83815
Idaho Department of Agriculture	Gary Bahr	PO Box 790 Boise, ID 83701
Department of Lands, Northern Operations	Roger Jansson, Operations Chief – North	3780 Industrial Avenue South Coeur d'Alene, ID 83815
USDA-RD	Howard Lunderstadt, Rural Development Specialist	7830 Meadowlark Way, Suite C3 Coeur d'Alene, ID 83815
Idaho Department of Commerce	Dennis Porter, State Program Manager/Tony Tenne	700 West State Street, PO Box 83720 Boise, ID 83720
Idaho State Historical Society	Suzi Pengilly, Deputy SHPO	210 Main Street Boise, ID 83702
Coeur d'Alene Tribe of Idaho	Jill Wagner, PhD, THPO, Cultural Resource Program (contacted through IDEQ – Ester Ceja)	PO Box 408 Plummer, ID 83851

10. MAILING LIST

The mailing list for this project includes both the agencies consulted (see Section 8), and the residents who were contacted with the newsletter (see Appendix N for list of newsletter recipients). Meeting attendees have been summarized and listed in Appendix N as well.

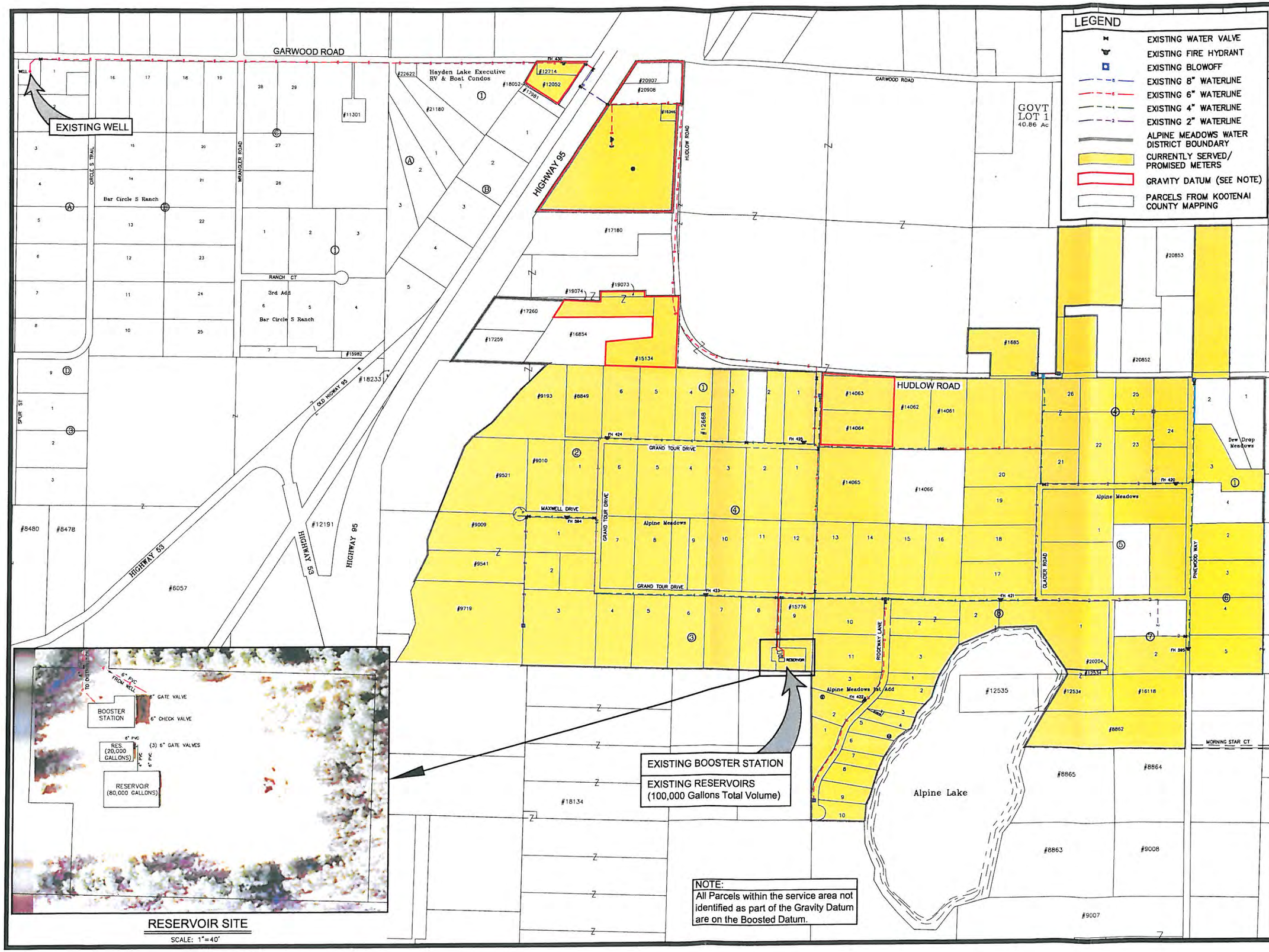
APPENDIX A

Alpine Meadows Water and Sewer District
Water System Facility Plan (SEPARATE FILE)

APPENDIX B

Maps of the System

- Service Area and Existing System Overview
- Service Area Growth Map
- Recommended Improvements Maps
- Selected Alternative Overview Maps



LEGEND

- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING BLOWOFF
- EXISTING 8" WATERLINE
- EXISTING 6" WATERLINE
- EXISTING 4" WATERLINE
- EXISTING 2" WATERLINE
- ALPINE MEADOWS WATER DISTRICT BOUNDARY
- CURRENTLY SERVED/ PROMISED METERS
- GRAVITY DATUM (SEE NOTE)
- PARCELS FROM KOOTENAI COUNTY MAPPING

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NO.	DATE	REVISION DESCRIPTION	BY

ALPINE MEADOWS WATER AND SEWER DISTRICT
EXISTING SERVICE AREA MAP

FIGURE 2.1

PROJECT NO.:	41068
DESIGNED BY:	K.J.O.
DRAWN BY:	J.A.L.
CHECKED BY:	
DWG NAME:	ACAD-41068PL02.DWG
DATE:	05-11-12
SHEET NO:	

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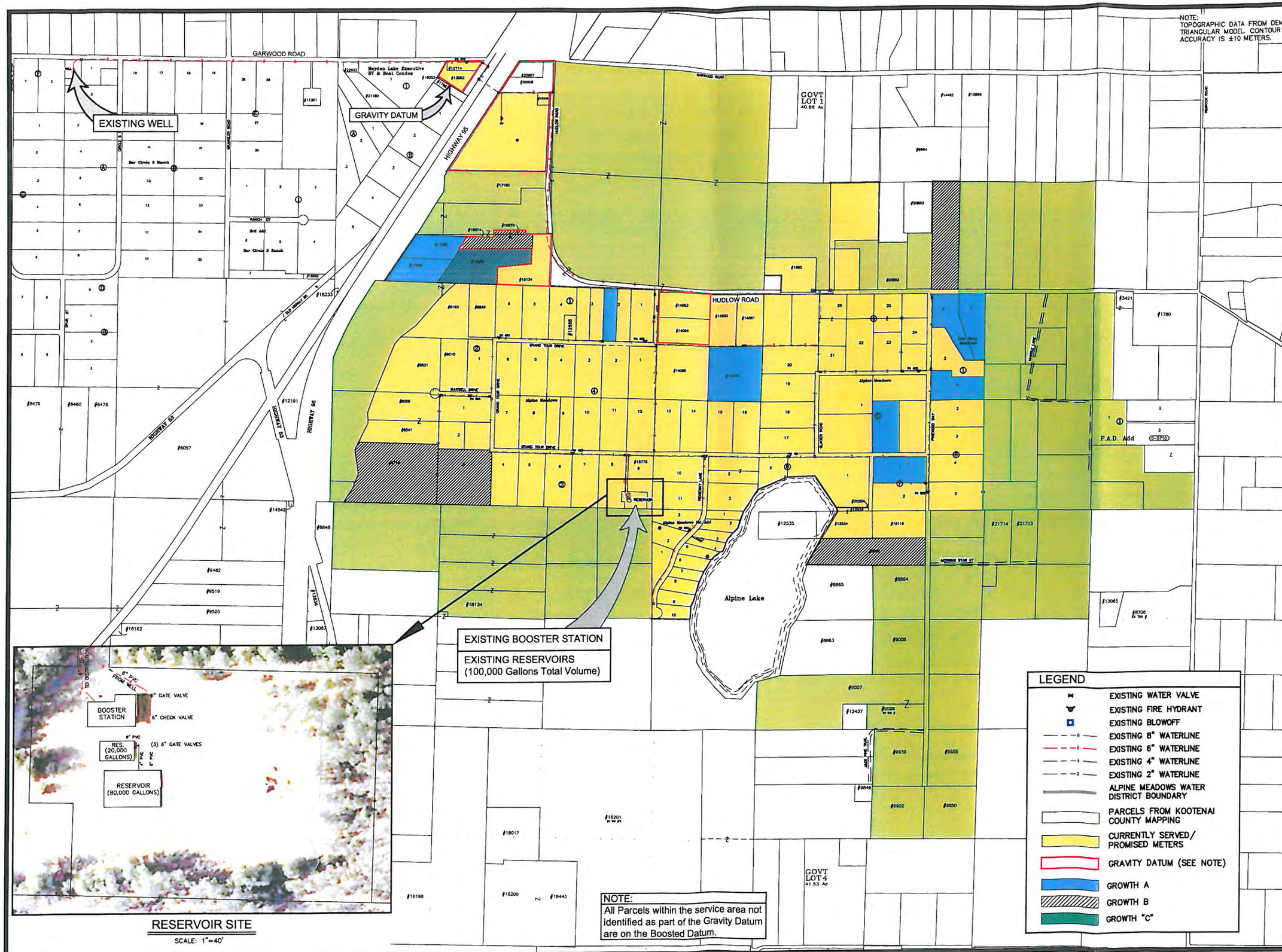

NOTE:
All Parcels within the service area not identified as part of the Gravity Datum are on the Boosted Datum.

NOTE:
TOPOGRAPHIC DATA FROM DEM TRIANGULAR MODEL. CONTOUR ACCURACY IS ±10 METERS.

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ALPINE MEADOWS WATER AND SEWER DISTRICT
FUTURE SERVICE AREA MAP

FIGURE 2.2

PROJECT NO.:	41068
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DWG NAME:	ACAD-41068PL02.DWG
DATE:	05-11-12
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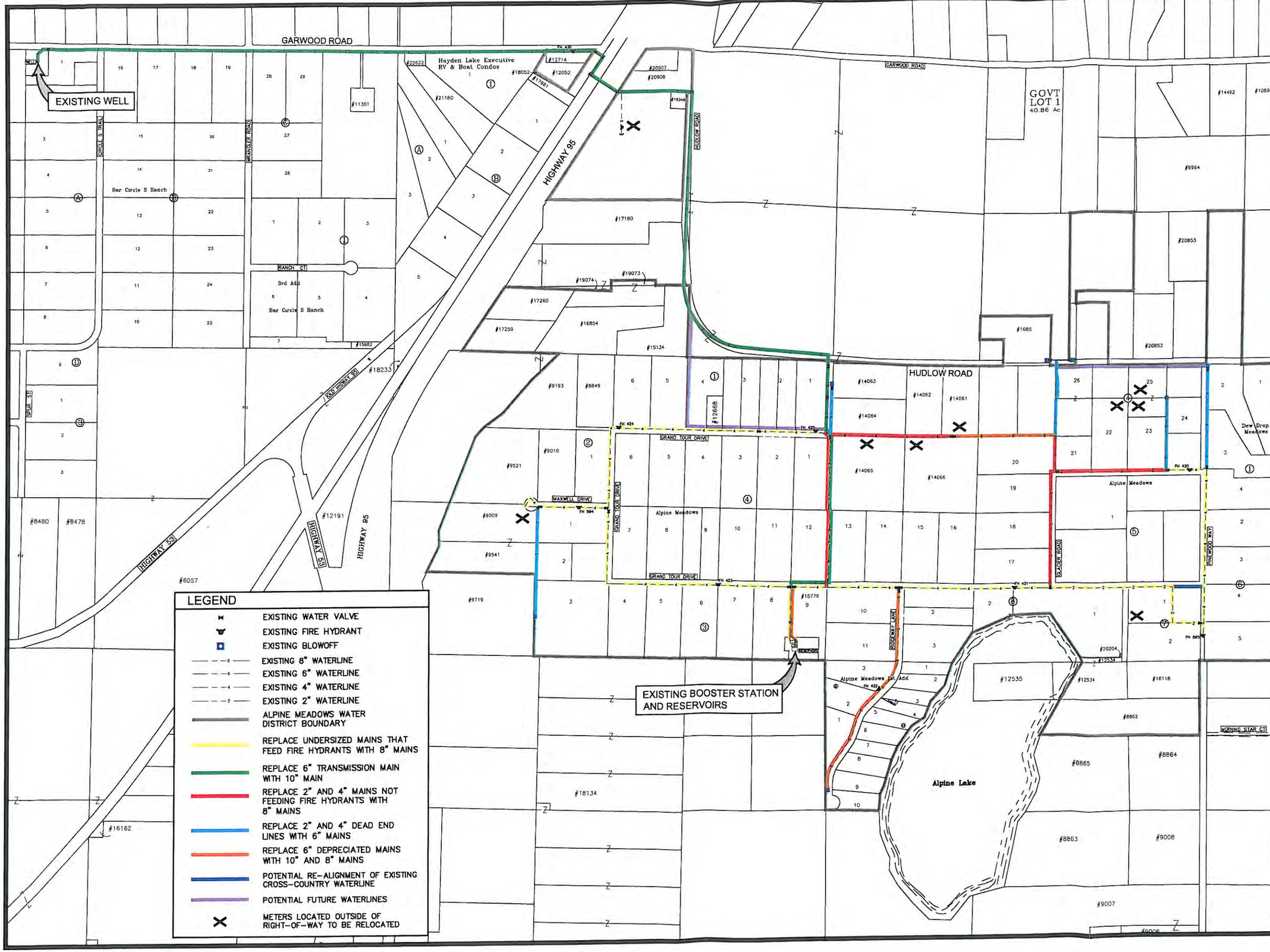

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ALPINE MEADOWS DISTRIBUTION IMPROVEMENTS

FIGURE 4.1

PROJECT NO.:	41068
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DWG NAME:	ACAD-41068PL03.DWG
DATE:	05-11-12
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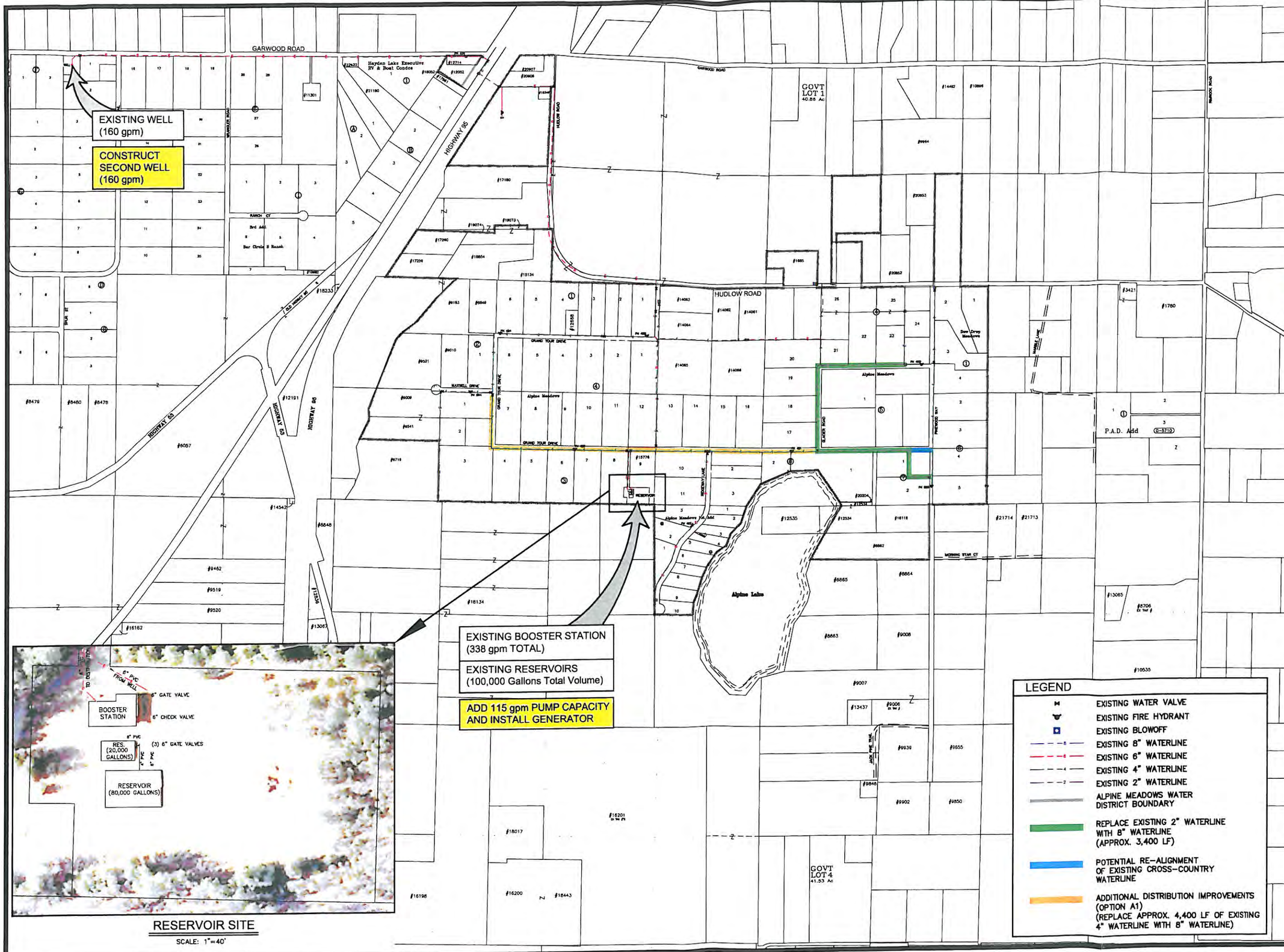

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GRAPHIC SCALE

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ALPINE MEADOWS WATER AND SEWER DISTRICT

IMPROVEMENT OPTION A / A1

FIGURE 4.2

PROJECT NO.:	41068
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DWG NAME:	ACAD-41068PL05.DWG
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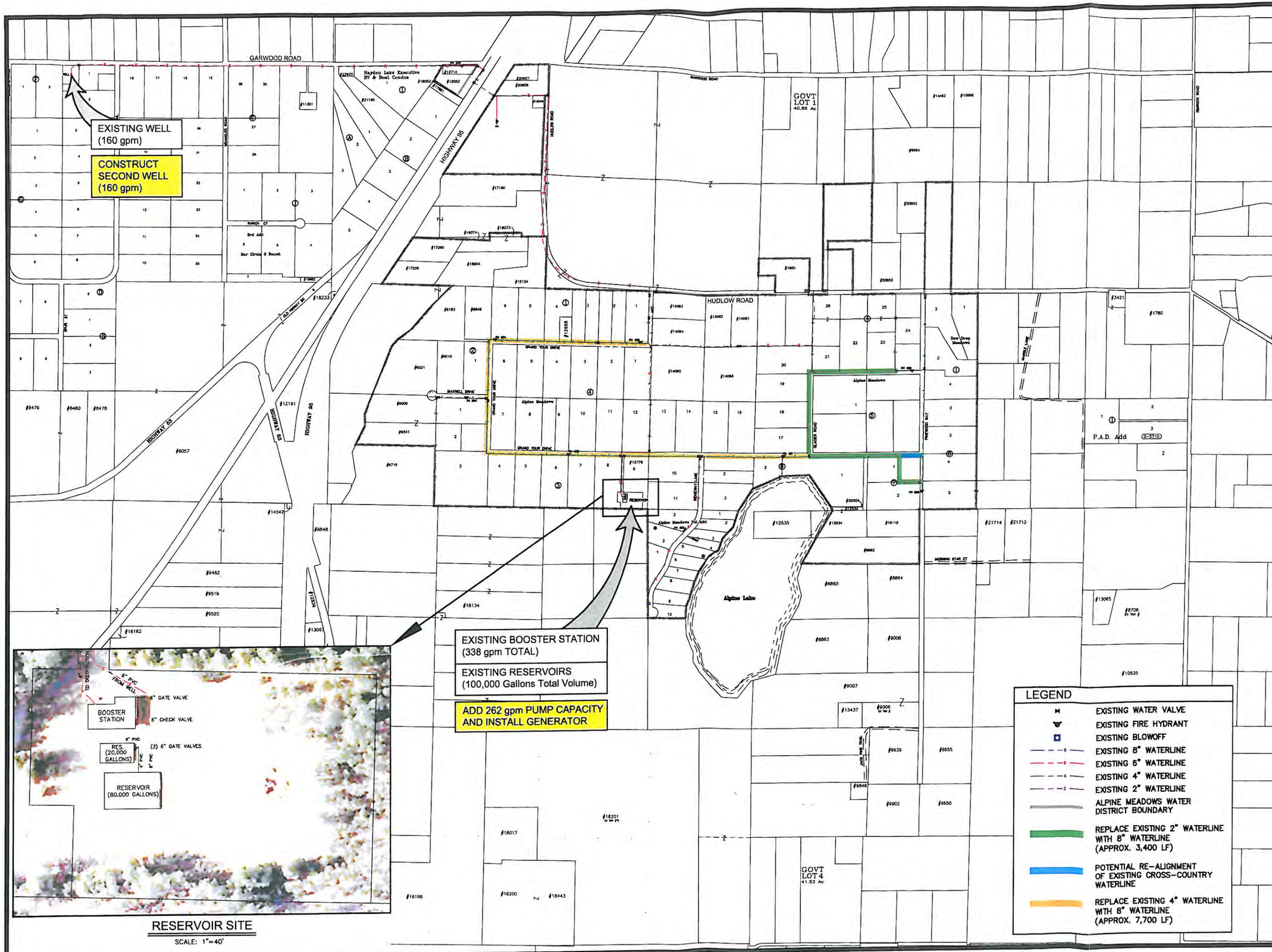

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ALPINE MEADOWS WATER AND SEWER DISTRICT

IMPROVEMENT OPTION B

FIGURE 4.3

PROJECT NO.:	41068
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DWG NAME:	ACAD-41068PL05.DWG
DATE:	05-11-12
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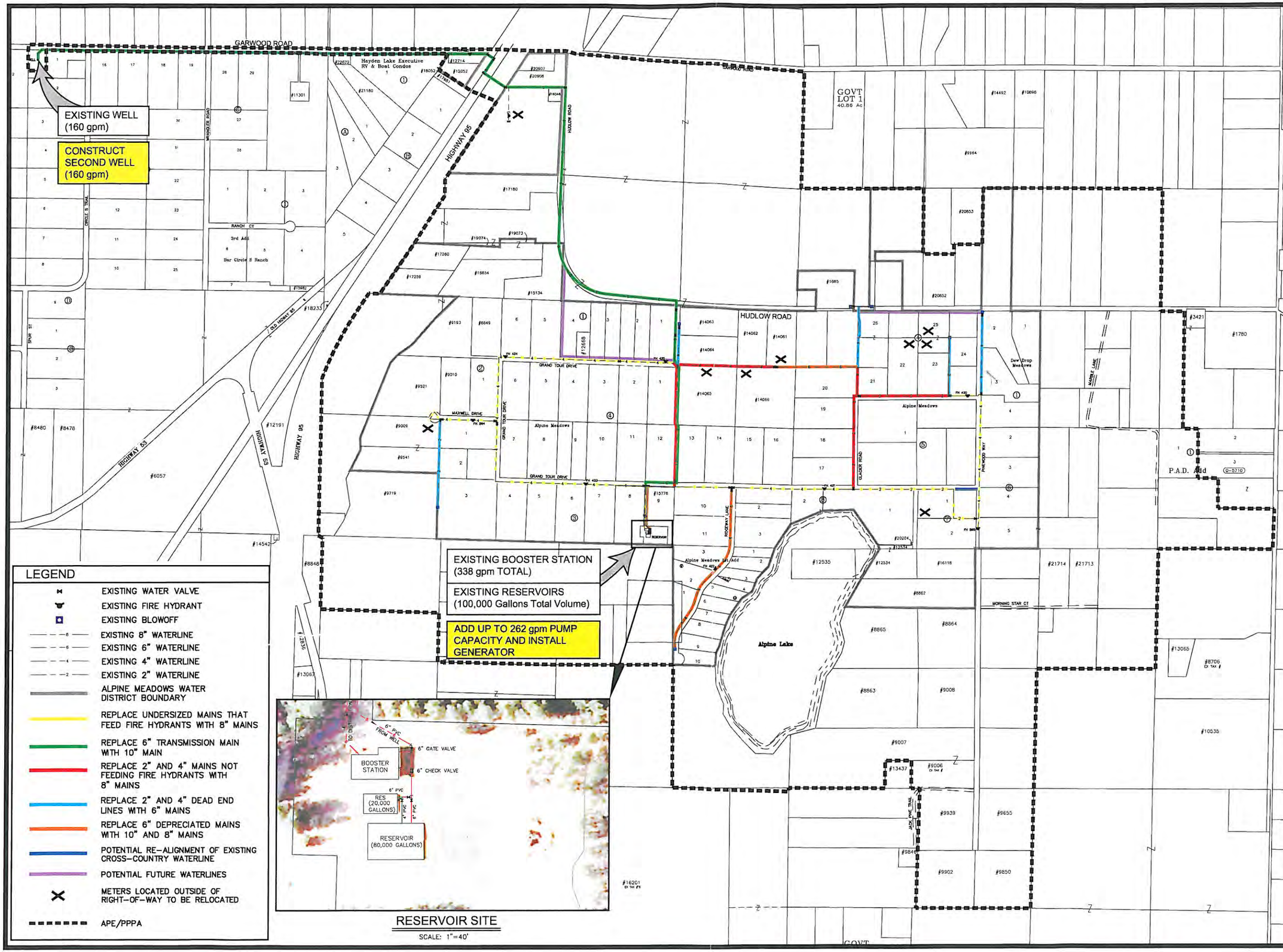

LEGEND

- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING BLOWOFF
- EXISTING 8" WATERLINE
- EXISTING 6" WATERLINE
- EXISTING 4" WATERLINE
- EXISTING 2" WATERLINE
- ALPINE MEADOWS WATER DISTRICT BOUNDARY
- REPLACE UNDERSIZED MAINS THAT FEED FIRE HYDRANTS WITH 8" MAINS
- REPLACE 6" TRANSMISSION MAIN WITH 10" MAIN
- REPLACE 2" AND 4" MAINS NOT FEEDING FIRE HYDRANTS WITH 8" MAINS
- REPLACE 2" AND 4" DEAD END LINES WITH 6" MAINS
- REPLACE 6" DEPRECIATED MAINS WITH 10" AND 8" MAINS
- POTENTIAL RE-ALIGNMENT OF EXISTING CROSS-COUNTRY WATERLINE
- POTENTIAL FUTURE WATERLINES
- METERS LOCATED OUTSIDE OF RIGHT-OF-WAY TO BE RELOCATED
- APE/PPPA

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ALPINE MEADOWS WATER DISTRICT

PROPOSED WATER SYSTEM IMPROVEMENTS

PROJECT NO.:	41068
DESIGNED BY:	K.J.O.
DRAWN BY:	J.A.L.
CHECKED BY:	
DWG NAME:	ACAD-41068PL08.DWG
DATE:	07-27-12
SHEET NO:	

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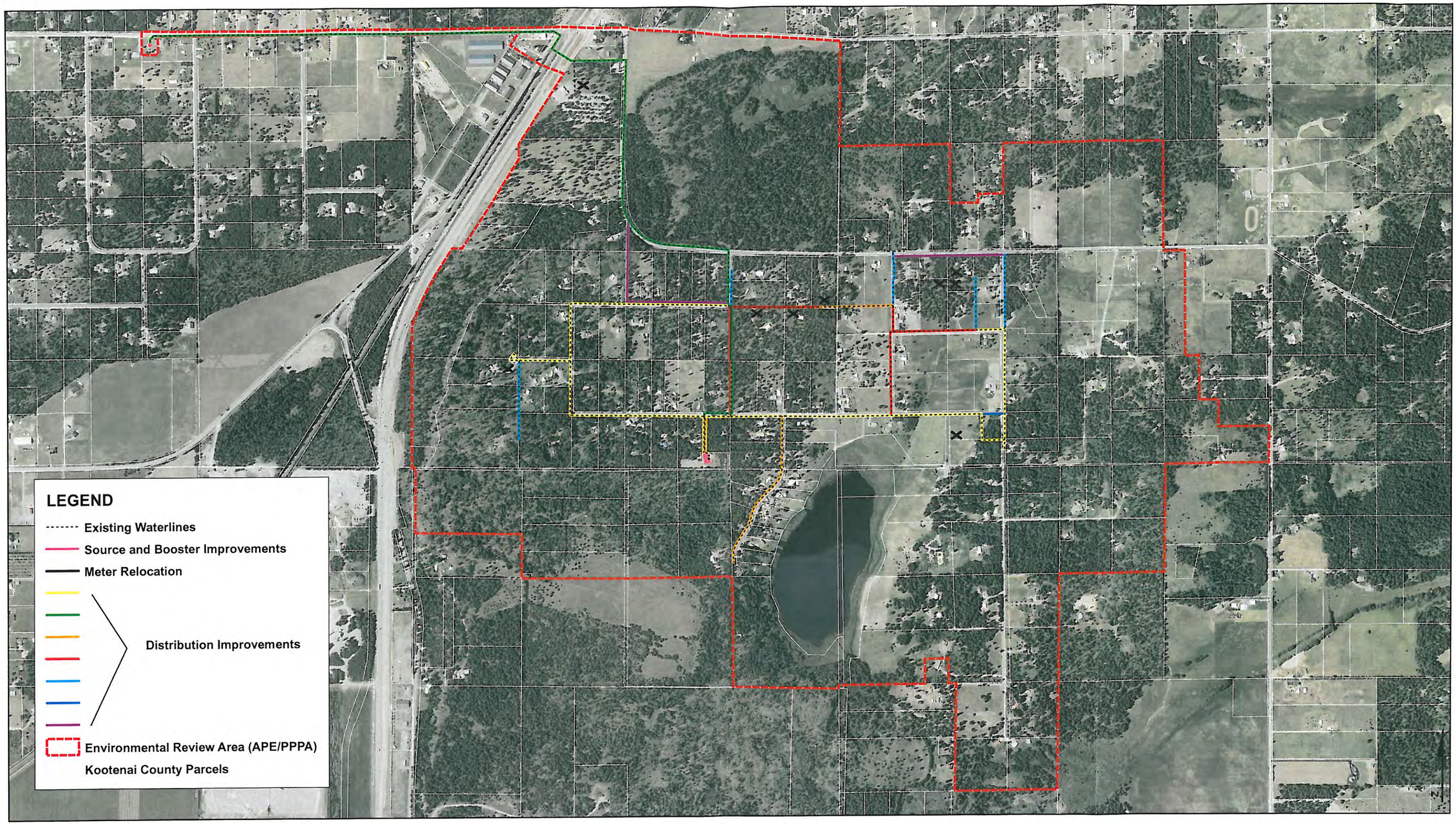

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Alpine Meadows Water and Sewer District

Proposed Water System Improvements

Sources:
Kootenai County GIS Department
USDA, NAIP 2009

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Selected_Improv_11x17L_083012
DATE.....8/30/12

APPENDIX C

Cost Information and Alternative Comparison Tables

- Alternative Cost Information
- Selected Alternative Cost Information
- Alternative Comparison Tables

Alpine Meadows Water and Sewer District
Improvement Option A (Source, Storage and Booster Improvements)
ENGINEER's OPINION OF PRELIMINARY PROJECT COSTS

Prepared By: Karen J. Osterdock Date: May 11, 2012
Project Manager: Date:

Description	Unit	Quantity	Unit Price	Total
CONSTRUCT SECOND WELL				
Drill New 12 Inch Well	VF	350	$ 200.00	$ 70,000.00
New Well Pump (160 gpm)	EA	1	$ 60,000.00	$ 60,000.00
Electrical	LS	1	$ 25,000.00	$ 25,000.00
Site Piping	LS	1	$ 15,000.00	$ 15,000.00
Mechanical Piping	LS	1	$ 45,000.00	$ 45,000.00
Well Building	LS	1	$ 75,000.00	$ 75,000.00
				$ 290,000.00
ADD BOOSTER PUMP				
Booster Pump (115 gpm)	EA	1	$ 3,500.00	$ 3,500.00
Electrical	LS	1	$ 15,000.00	$ 15,000.00
Piping Modifications	LS	1	$ 15,000.00	$ 15,000.00
				$ 33,500.00
INSTALL GENERATOR AT BOOSTER STATION				
Generator	LS	1	$ 40,000.00	$ 40,000.00
			Subtotal =	$363,500.00
			10% Contingency =	$36,400.00
			Total Estimated Construction =	$399,900.00
New Water Right/Conservation Plan	LS	1	$ 7,000.00	$ 7,000.00
Funding Assistance/Project Administration (1% legal, 1.5% administrative)	LS	1	$ 10,000.00	$ 10,000.00
Design Phase Engineering	LS	1	$ 55,000.00	$ 55,000.00
Bid Phase Engineering	LS	1	$ 10,500.00	$ 10,500.00
Construction Phase Engineering	LS	1	$ 37,000.00	$ 37,000.00
			Total Estimated Project =	**$519,400.00**

Alpine Meadows Water and Sewer District

Improvement Option B (Source, Storage and Booster Improvements)

ENGINEER's OPINION OF PRELIMINARY PROJECT COSTS

Prepared By: Karen J. Osterdock Date: May 11, 2012
Project Manager: Date:

Description	Unit	Quantity	Unit Price	Total
CONSTRUCT SECOND WELL				
Drill New 12 Inch Well	VF	350	$ 200.00	$ 70,000.00
New Well Pump (160 gpm)	EA	1	$ 60,000.00	$ 60,000.00
Electrical	LS	1	$ 25,000.00	$ 25,000.00
Site Piping	LS	1	$ 15,000.00	$ 15,000.00
Mechanical Piping	LS	1	$ 45,000.00	$ 45,000.00
Well Building	LS	1	$ 75,000.00	$ 75,000.00
				$ 290,000.00
ADD BOOSTER PUMP				
Booster Pump (131 gpm)	EA	2	$ 4,000.00	$ 8,000.00
Electrical	LS	1	$ 20,000.00	$ 20,000.00
Piping Modifications	LS	1	$ 20,000.00	$ 20,000.00
				$ 48,000.00
INSTALL GENERATOR AT BOOSTER STATION				
Generator	LS	1	$ 40,000.00	$ 40,000.00
			Subtotal =	$378,000.00
			10% Contingency =	$37,800.00
			Total Estimated Construction =	$415,800.00
New Water Right/Conservation Plan	LS	1	$ 7,000.00	$ 7,000.00
Funding Assistance/Project Administration (1% legal, 1.5% administrative)	LS	1	$ 10,000.00	$ 10,000.00
Design Phase Engineering	LS	1	$ 57,000.00	$ 57,000.00
Bid Phase Engineering	LS	1	$ 10,500.00	$ 10,500.00
Construction Phase Engineering	LS	1	$ 38,000.00	$ 38,000.00
			Total Estimated Project =	**$538,300.00**

Alpine Meadows Water and Sewer District
Improvement Option A1
ENGINEER's OPINION OF PRELIMINARY PROJECT COSTS

Prepared By: Karen J. Osterdock, E.I.T. — Date: October 29, 2012
Project Manager: Necia M. Maiani, P.E. — Date:

Description	Unit	Quantity	Unit Price	Total
PHASE 1 IMPROVEMENTS				
CONSTRUCT SECOND WELL				
Drill New 12 Inch Well	VF	350	$ 200.00	$ 70,000.00
New Well Pump (160 gpm, 30 HP, VFD)	EA	1	$ 60,000.00	$ 60,000.00
Electrical	LS	1	$ 25,000.00	$ 25,000.00
Site Piping	LS	1	$ 15,000.00	$ 15,000.00
Mechanical Piping	LS	1	$ 45,000.00	$ 45,000.00
Well Building	LS	1	$ 75,000.00	$ 75,000.00
				$ 290,000.00
ADD BOOSTER PUMP				
Booster Pump (115 gpm, 7.5 HP, VFD)	EA	1	$ 3,500.00	$ 3,500.00
Electrical	LS	1	$ 15,000.00	$ 15,000.00
Piping Modifications	LS	1	$ 15,000.00	$ 15,000.00
				$ 33,500.00
INSTALL GENERATOR AT BOOSTER STATION				
Generator	LS	1	$ 40,000.00	$ 40,000.00
			Subtotal =	$ 363,500.00
			10% Contingency =	$36,400.00
			Total Estimated Construction =	$ 399,900.00
New Water Right/Conservation Plan	LS	1	$ 7,000.00	$ 7,000.00
Legal Fees (approximately 1%)	LS	1	$ 4,000.00	$ 4,000.00
District Administration (approximately 1%)	LS	1	$ 4,000.00	$ 4,000.00
Design Phase Engineering	LS	1	$ 54,600.00	$ 54,600.00
Bid Phase Engineering	LS	1	$ 4,500.00	$ 4,500.00
Construction Phase Engineering	LS	1	$ 36,300.00	$ 36,300.00
Block Grant Administration	LS	1	$ 35,000.00	$ 35,000.00
Project Contingency (Additional Bidding Phase, Permitting, General Legal Council)	LS	1	$ 7,400.00	$ 7,400.00
Wage Monitoring/ IDEQ Loan Administration (0.5%)	LS	1	$ 1,900.00	$ 1,900.00
			Total Estimated Phase 1 =	**$ 554,600.00**
PHASE 2 IMPROVEMENTS				
DISTRIBUTION IMPROVEMENTS				
Replace Existing 2 Inch Line (Grand Tour from Glacier Dr. to Pinewood Way) with 8 inch Line	LF	1400	$ 115.00	$ 161,000.00
Replace Existing 2 Inch Line (Glacier from Grand Tour to Beginning of 4 Inch) with 8 Inch Line	LF	2000	$ 115.00	$ 230,000.00
Replace Existing 4 Inch Line (Grand Tour from Boosters to Glacier Dr.) with 8 Inch Line	LF	2400	$ 115.00	$ 276,000.00
Replace Existing 4 Inch Line (Grand Tour from Boosters to 2350 Grand Tour) with 8 Inch Line	LF	2000	$ 115.00	$ 230,000.00
				$ 897,000.00
			Subtotal =	$ 897,000.00
			10% Contingency =	$89,700.00
			Total Estimated Construction =	$ 986,700.00
Legal Fees (approximately 1%)	LS	1	$ 9,000.00	$ 9,000.00
District Administration (approximately 1%)	LS	1	$ 9,000.00	$ 9,000.00
Design Phase Engineering	LS	1	$ 98,700.00	$ 98,700.00
Bid Phase Engineering	LS	1	$ 4,500.00	$ 4,500.00
Construction Phase Engineering	LS	1	$125,600.00	$ 125,600.00
Project Contingency (Additional Bidding Phase, Permitting, General Legal Council)	LS	1	$ 7,400.00	$ 7,400.00
Wage Monitoring/ IDEQ Loan Administration (0.5%)	LS	1	$ 4,500.00	$ 4,500.00
			Total Estimated Phase 2 =	**$ 1,245,400.00**
			Total Estimated Project =	**$ 1,800,000.00**

Notes:

1. Costs depicted include Davis Bacon wages.
2. Distribution improvement costs are based on waterline installation and asphalt restoration for half the road (2 inches AC on 6 inches base) where necessary. All efforts will be made to install waterline outside the roadway prism, depending on existing right of way.
3. Interim interest (approximately $30,450 based on proposed project phasing) is not included as a project cost because the District intends to phase rate increases beginning in 2013 in order to build up a reserve and pay interim interest at loan close-out.

Alpine Meadows Water and Sewer District

Additional Improvements

ENGINEER's OPINION OF PRELIMINARY PROJECT COSTS

Prepared By: Karen J. Osterdock, E.I.T. Date: April 19, 2013
Project Manager: Necia M. Maiani, P.E. Date:

Description	Unit	Quantity	Unit Price	Total
ADD BOOSTER PUMP				
Booster Pump (262 gpm, VFD)	EA	1	$ 10,500.00	$ 10,500.00
Electrical	LS	1	$ 15,000.00	$ 15,000.00
Piping Modifications	LS	1	$ 45,000.00	$ 45,000.00
				$ 70,500.00
INSTALL GENERATOR AT WELL SITE				
Generator	LS	1	$ 40,000.00	$ 40,000.00
DISTRIBUTION IMPROVEMENTS				
(refer to Capital Improvement Plan for Option A1)				
			Subtotal =	$110,500.00
			10% Contingency =	$11,100.00
	Total Estimated Construction =			$121,600.00
Funding Assistance/Project Administration (approximately 1% legal, 1.5% administrative)	LS	1	$ 3,000.00	$ 3,000.00
Design Phase Engineering	LS	1	$ 17,000.00	$ 17,000.00
Bid Phase Engineering	LS	1	$ 4,500.00	$ 4,500.00
Construction Phase Engineering	LS	1	$ 12,000.00	$ 12,000.00
	Total Estimated Project =			**$158,100.00**

Notes:

1. Costs depicted include Davis Bacon wages.
2. Distribution improvement costs are based on waterline installation and asphalt restoration for half the road (2 inches AC on 6 inches base) where necessary. All efforts will be made to install waterline outside the roadway prism, depending on existing right of way.

CAPITAL IMPROVEMENT PLAN FOR OPTION A1

Improvement Number	Year End		2013	2014	2015	2016	2017	Future
			Estimated Project Expenditure					
	Option A1 Source and Booster Improvements							
1	**Booster Station Improvements (Add Pump & Install Generator)**		$106,650					
2	**Construct Second Well**		$7,000			$405,750		
	Replace Undersized Mains (Option A1 Distribution Improvements)							
3	**Meter Replacements**						$30,000	
4	**Replace Existing 4 Inch Line (Grand Tour from Glacier to 2350 Grand Tour) with 8 Inch Line**	4400 LF		$706,600				
5	**Replace Existing 2 Inch Line (Grand Tour from Glacier Dr. to Pinewood Way) with 8 Inch Line**	1400 LF			$224,500			
6	**Replace Existing 2 Inch Line (Glacier from Grand Tour to Beginning of 4 Inch) with 8 Inch Line**	2000 LF			$319,500			
	Replace Undersized Mains that Feed Fire Hydrants							
7	**Replace Existing 4 Inch Line (Grand Tour from 2350 Grand Tour to Maxwell Dr.) with 8 Inch Line**	300 LF						$44,800
8	**Replace Existing 4 Inch Line (Grand Tour from Maxwell Dr. to 1320 E. Grand Tour) with 8 Inch Line**	2600 LF						$414,600
9	**Replace Existing 4 Inch Line (Maxwell Drive) with 8 Inch Line**	700 LF						$111,000
10	**Replace Existing 4 Inch Line (Pinewood Way South of Glacier Dr.) with 8 Inch Line**	1500 LF						$ 240,500.00
11	**Replace Existing 4 Inch Line (Glacier Dr. from Pinewood Way to Beginning of 2 Inch) with 8 Inch Line**	400 LF						$66,500
12	**Replace Existing 6 Inch Line (from Boosters to Grand Tour) with 10 Inch Line**	500 LF						$ 65,500.00
	Replace Transmission Main							
13	**Replace Existing 6 Inch Line (Garwood from Well to Hudlow) with 10 Inch Line**	6000 LF						$1,034,500
14	**Replace Existing 6 Inch Line (Hudlow from Garwood to Grand Tour) with 10 Inch Line**	3800 LF						$658,000
15	**Replace Existing 6 Inch Line (Connecting Grand Tour North and South) with 10 Inch Line**	2100 LF						$263,500
	Replace 2 and 4 Inch Mains Not Feeding Fire Hydrants							
16	**Replace Existing 4 Inch Line (Connecting Grand Tour) with 8 Inch Line**	1300 LF						$ 146,500.00
17	**Replace Existing 4 Inch Line (Glacier North to 6 Inch Line) with 8 Inch Line**	350 LF						$ 42,500.00
18	**Replace Existing 4 Inch Line (Cross-Country East of Grand Tour) with 8 Inch Line**	1100 LF						$ 124,500.00
	Replace 2 and 4 Inch Dead End Lines							
19	**Replace Existing 2 Inch Line (Running South from Maxwell Dr.) with 6 Inch Line**	1100 LF						$ 112,600.00
20	**Replace Existing 2 Inch Line (Running between 16569 Pinewood and 2353 Glacier) with 6 Inch Line**	700 LF						$ 70,500.00
21	**Replace Existing 4 Inch Line (Running North of Glacier along Pinewood) with 6 Inch Line**	1000 LF						$ 99,500.00
22	**Replace Existing 4 Inch Line (Running on the East Side of 2692 Hudlow) with 6 Inch Line**	700 LF						$ 70,500.00
23	**Replace Existing 4 Inch Line (Running North on Grand Tour toward Hudlow) with 6 Inch Line**	600 LF						$ 90,500.00
	Replace 6 Inch Depreciated Mains							
24	**Replace Existing 6 Inch Main from Grand Tour to Reservoirs with 10 Inch Line**	2800 LF						$ 350,500.00
25	**Replace Existing 6 Inch Main (Running Between Grand Tour and Glacier) with 8 Inch Line**	1000 LF						$ 113,500.00
26	**Replace Existing 6 Inch Main (Ridgeway Lane) with 8 Inch Line**	2100 LF						$ 335,500.00
	Potential Future Waterlines							
27	**Install 8 Inch Main from Hudlow to Grand Tour (along power poles) and East Along Grand Tour**	2250 LF						$ 312,500.00
28	**Install 8 Inch Main along Hudlow from Pinewood Way West**	1400 LF						$ 224,500.00

Environmental Criteria	No Improvements	Improvement Option A/A1	Improvement Option B
Climate and Physical Aspects (Topography, Geology, and Soils)	No Impact	Excavation for New Well and Well House, Line Replacement and Distribution Improvements (Long-Term Impacts Minimal, Short-Term Impact, respectively)	Excavation for New Well and Well House, Significantly More Waterline Replacement than Option A (Long-Term Impacts Minimal, Short-Term Impact, respectively)
Population, Economic, and Social Profile	No Potential for Growth or Expansion	Increased User Rates; Allow for Growth, Improved Fire Flow and Service	Increased User Rates; Allow for Growth, Improved Fire Flow and Service
Land Use	No Impact	No Impact	No Impact
Floodplain Development	No Impact	Line Replacement in Floodplain (Minor Short-Term Impact)	Line Replacement in Floodplain (Minor Short-Term Impact)
Wetlands and Water Quality	No Impact	Line Replacement in Wetland, and General Disturbance for Line Replacement (Short-Term Impact)	Line Replacement in Wetland, and General Disturbance for Line Replacement (Short-Term Impact)
Wild and Scenic Rivers	No Impact	No Impact	No Impact
Cultural Resources	No Impact	Well Site (Potential Impact)	Well Site (Potential Impact)
Flora and Fauna	No Impact	Site Disturbance (Short-Term Impact)	Site Disturbance (Short-Term Impact)
Recreation and Open Space	No Impact	No Impact	No Impact
Agricultural Lands	No Impact	No Impact	No Impact
Air Quality	No Impact	Construction Emissions, Standby Generator (Short-Term Impact, Intermittent Long-Term Impact, respectively)	Construction Emissions, Standby Generator (Short-Term Impact, Intermittent Long-Term Impact, respectively)
Energy	No Impact	Improved Efficiency, More Pumping (Negligible Effect)	Improved Efficiency, More Pumping (Negligible Effect)
Public Health	Continue Deficiencies in Service, Reliability and Fire Flow	Improve Service, Reliability, and Improve Fire Flow	Improve Service, Reliability, and Fire Flow
Option Cost	$0	$1.093 million / $1.800 million	$2.345 million

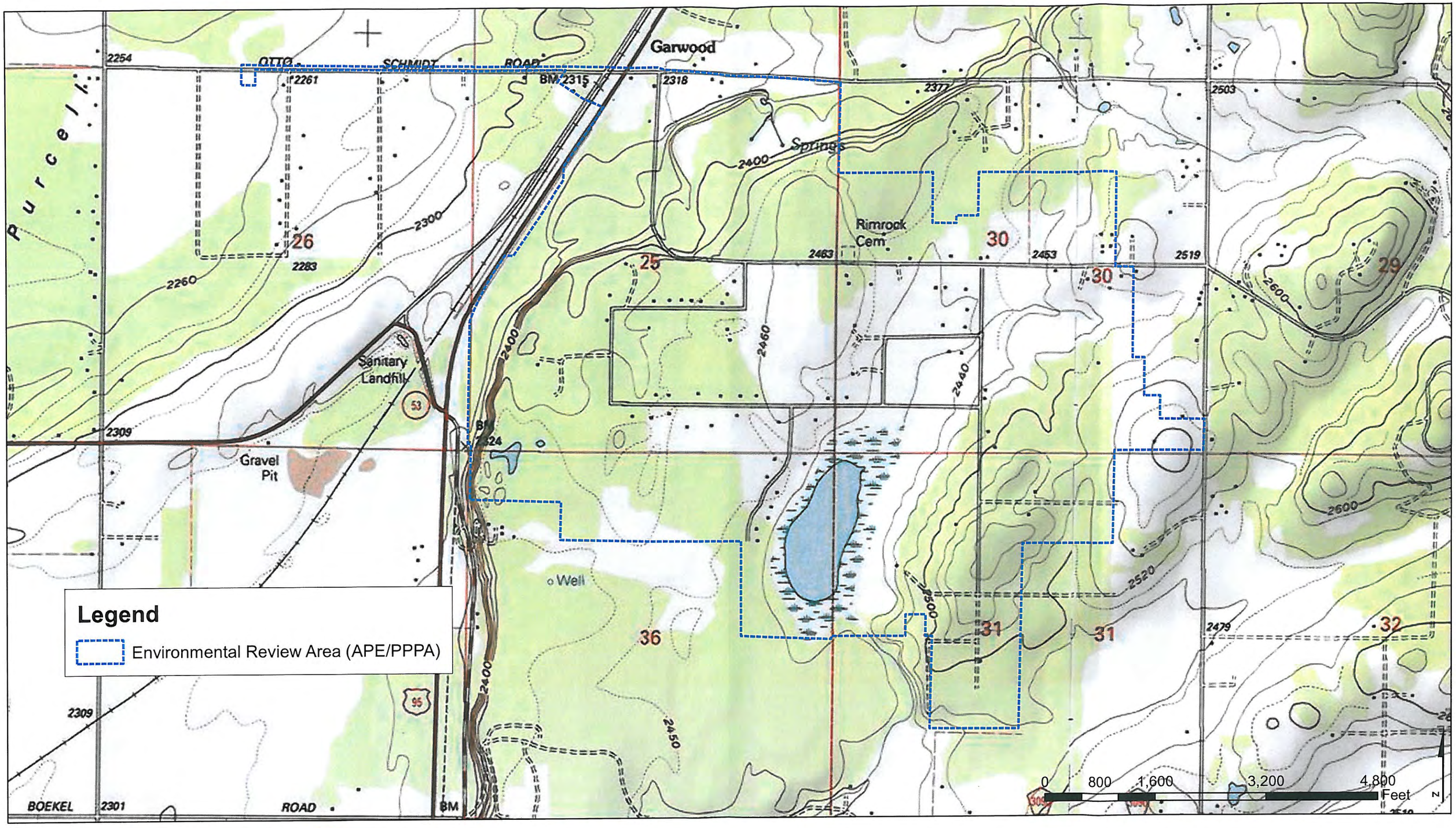
Environmental Criteria	No Improvements	Installation of Second Well	Increase Booster Capacity
Climate and Physical Aspects (Topography, Geology, and Soils)	No Impact	Excavation for New Well and Well House (Long-Term Impacts Minimal, Short-Term Impact)	No Impact
Population, Economic, and Social Profile	No Potential for Growth or Expansion	Increased User Rates; Allow for Growth, Improved and Service	Increased User Rates; Allow for Growth, Improved Service and Fire Flow
Land Use	No Impact	No Impact	No Impact
Floodplain Development	No Impact	No Impact	No Impact
Wetlands and Water Quality	No Impact	Site Disturbance (Short-Term Impact to Water Quality)	No Impact
Wild and Scenic Rivers	No Impact	No Impact	No Impact
Cultural Resources	No Impact	Well Site (Potential Impact)	No Impact
Flora and Fauna	No Impact	Site Disturbance (Short-Term Impact)	No Impact
Recreation and Open Space	No Impact	No Impact	No Impact
Agricultural Lands	No Impact	No Impact	No Impact
Air Quality	No Impact	Construction Emissions (Short-Term Impact)	Standby Generator (Intermittent Long-Term Impact, respectively)
Energy	No Impact	Improved Efficiency	Improved Efficiency, More Pumping (Negligible Effect)
Public Health	Continue Deficiencies in Service, Reliability and Fire Flow	Improve Service and Reliability	Improve Service and Reliability, and Improve Fire Flow
Option Cost	$0	$326,000	$80,900 to $96,800

Environmental Criteria	No Improvements	Distribution Improvements
Climate and Physical Aspects (Topography, Geology, and Soils)	No Impact	Excavation for Distribution Improvements (Long-Term Impacts Minimal, Short-Term Impact)
Population, Economic, and Social Profile	No Potential for Growth or Expansion	Increased User Rates; Allow for Growth, Improved Fire Flow and Service
Land Use	No Impact	No Impact
Floodplain Development	No Impact	Line Replacement in Floodplain (Minor Short-Term Impact)
Wetlands and Water Quality	No Impact	Line Replacement in Wetland, and General Disturbance for Line Replacement (Short-Term Impact)
Wild and Scenic Rivers	No Impact	No Impact
Cultural Resources	No Impact	Distribution Lines in New Areas (Potential Impact)
Flora and Fauna	No Impact	Site Disturbance (Short-Term Impact)
Recreation and Open Space	No Impact	No Impact
Agricultural Lands	No Impact	No Impact
Air Quality	No Impact	Construction Emissions (Short-Term Impact)
Energy	No Impact	Improved Efficiency due to Reduced Line Loss (Positive, Long-Term Impact)
Public Health	Continue Deficiencies in Service, Reliability and Fire Flow	Improve Service, Reliability, and Improve Fire Flow
Option Cost	$0	$6.273 million

APPENDIX D

Physical Information

- Topography Map
- Geologic Information
- Soils Information



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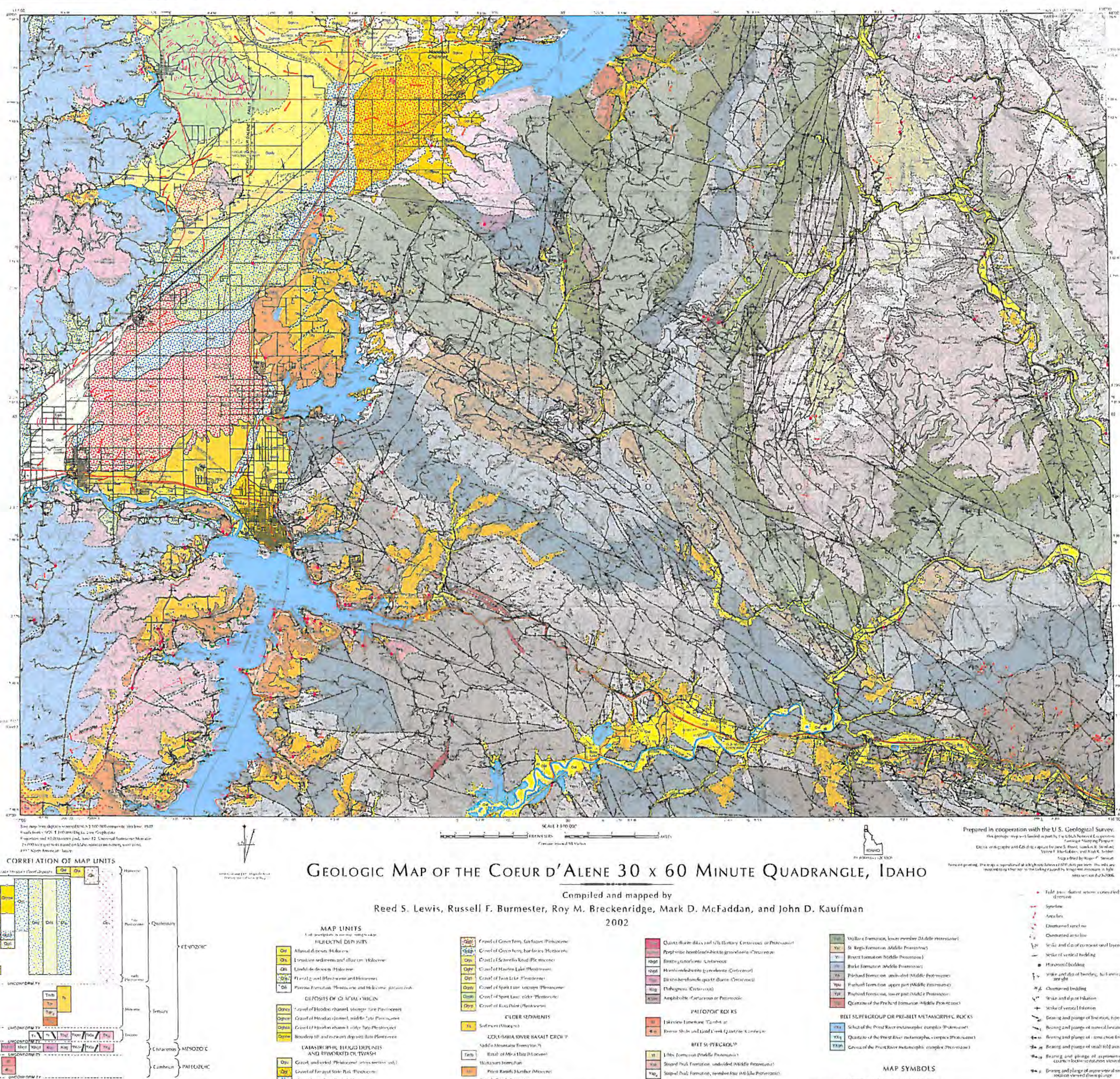
Alpine Meadows Water and Sewer District

Topography

Sources:
Kootenai County GIS Department

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Topography_11x17L
DATE.....5/8/12



Prepared in cooperation with the U.S. Geological Survey.

CORRELATION OF MAP UNITS

Geologic Map of the Coeur d'Alene 30 x 60 Minute Quadrangle, Idaho

Compiled and mapped by
Reed S. Lewis, Russell F. Burmester, Roy M. Breckenridge, Mark D. McFaddan, and John D. Kauffman

2002

MAP UNITS

DEPOSITS OF GLACIAL ORIGIN

CATASTROPHIC FLOOD DEPOSITS AND REWORKED OUTWASH

OLDER SEDIMENTS

COLUMBIA RIVER BASALT GROUP

INTRUSIVE ROCKS

PALEOZOIC ROCKS

BELT SUPERGROUP

BELT SUPERGROUP OR PRE-BELT METAMORPHIC ROCKS

MAP SYMBOLS

Horizontal bedding

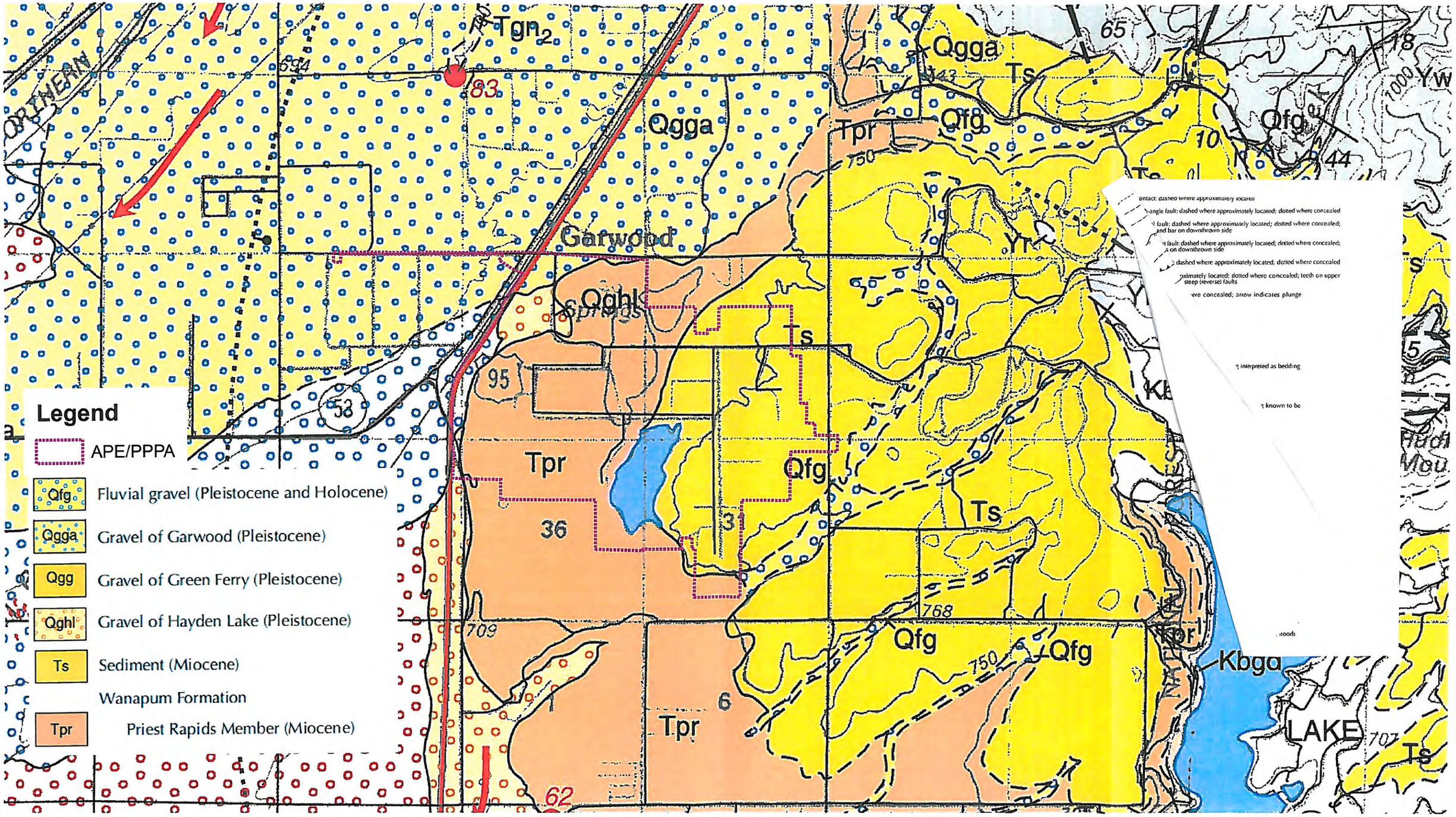
Overturned bedding

Strike of vertical foliation

Vein

Sample location

derived from Geologic Map of the Coeur d'Alene 30 x 60 Minute Quadrangle



Geologic Map of the Coeur d'Alene 30 X 60 Minute Quadrangle, Idaho

Compiled and Mapped by Reed S. Lewis, Russell F. Burmester, Roy M. Breckenridge, Mark D. McFaddan, and John D. Kauffman

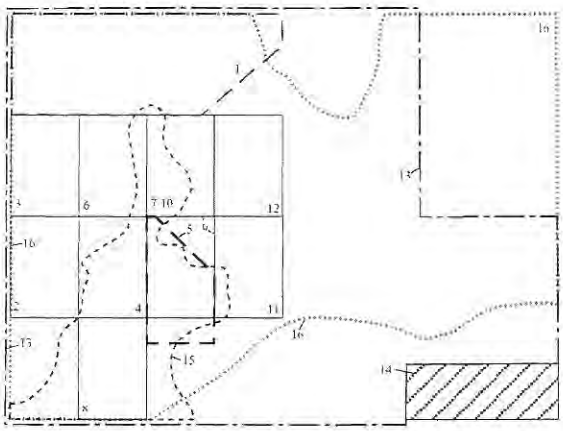
2002

INTRODUCTION

This compilation of the geology of the 1:100,000-scale Coeur d'Alene 30' x 60' quadrangle relied extensively on previous mapping. The principal sources were the seven unpublished 1:62,500-scale field maps used to prepare the 1:250,000-scale map of Griggs (1973). We supplemented Griggs' data with extensive field work in 1999, primarily in the northeast corner of the quadrangle. Basalt stratigraphy is based on the regional framework developed by Wright and others (1973) and Swanson and others (1979a, 1979b). Quaternary mapping in the Rathdrum Prairie area is based on our past unpublished and new work. The areal extent of the sources are shown on Figures 1 and 2. The geology of the Coeur d'Alene 1:100,000 quadrangle will also be published as a digital version in the Digital Data Series (see the Idaho Geological Survey's Web site: www.idahogeology.org).

The oldest and most abundant rocks in the Coeur d'Alene quadrangle are Precambrian (Figures 3 and 4). These include low-grade metasedimentary rocks of the Belt Supergroup and high-grade (amphibolite facies) metamorphic rocks whose protolith is either the Belt Supergroup or the basement rocks that predate the Belt metasedimentary rocks. The high-grade rocks are exposed in a metamorphic core complex in the western part of the map area (Priest River complex in Figure 4). Previously unmapped, deformed granitic rock (orthogneiss) of probable Cretaceous age is included in the core complex. Plutonic rocks of Cretaceous age are also present as intrusions within the low-grade Belt Supergroup. Relatively undeformed Eocene igneous rocks are exposed as plutons in the northwestern part of the map area and as a few rhyolite and dacite dikes in the central part. Flows of Miocene Columbia River basalt cover much of the western part of the quadrangle, although in places these flows are covered with Miocene sediments. Abundant Quaternary gravels in and near the Rathdrum Prairie were deposited by catastrophic floods derived from Glacial Lake Missoula.

This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program.



1. R.M. Breckenridge, unpublished geologic mapping, 1995-1999
2. R.M. Breckenridge and K.L. Othberg, 1998a
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14. S.W. Hobbs and others, 1965
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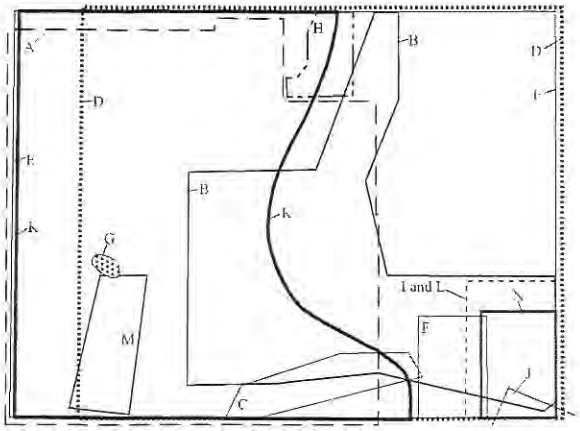
Figure 1. *Previous mapping used as primary sources of data.*



A. Anderson, 1940
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D. Griggs, 1968
E. Griggs, 1973
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H. Kun, 1970
I. Ransome and Calkins, 1908
J. Shenon and McConnel, 1939
K. Swanson and others, 1979a
L. Umpleby and Jones, 1923
M. Wavra and Reid,1990-1992
N. Willoughby, 1986

Figure 2. *Previous mapping used as secondary sources of data.*

DESCRIPTION OF ROCK UNITS

Intrusive rocks are classified according to IUGS nomenclature using normalized values of modal quartz (Q), alkali feldspar (A), and plagioclase (P) on a ternary diagram (Streckeisen, 1976). Mineral modifiers are listed in order of increasing abundance for both igneous and metamorphic rocks. Grain size classification of unconsolidated and consolidated sediment is based on the Wentworth scale.

HOLOCENE DEPOSITS

Qal—Alluvial deposits (Holocene)—Stream deposits in modern drainages. Most deposits are composed of stratified, poorly sorted, and laterally discontinuous beds of sandy gravel with sand and silt lenses. Thickness of 3 m or less.

Qla—Lacustrine sediments and alluvium (Holocene)—Moderately to well-sorted, silt and sand deposits in bays of Coeur d'Alene Lake and Hayden Lake. The deposits are mainly located within the lakes' high-water zones and are interbedded with and grade upstream into alluvium of tributary streams. Soils are deep and poorly drained and include muck of the Pywell series and silt loam of the Cald, Cougar Bay, Pywell, and Ramsdell series (Weisel, 1981). Thickness as much as 5 m.

Qls—Landslide deposits (Holocene)—Nonsorted and poorly sorted, stratified angular basalt clasts mixed with silt and clay. Mass-movement slope deposits are mainly associated with steep basalt rimrock and the interbedded fine-grained sediments and weathering surfaces. Locally may include columns of basalt carried either by mass movement processes or by Glacial Lake Missoula floods. Gradations from talus to smaller landslide deposits are present and difficult to distinguish. Thickness as much as 12 m.

Qfg—Fluvial gravel (Pleistocene and Holocene)—Moderately to poorly sorted sandy gravel and sandy silt in abandoned drainageways of the latest Glacial Lake Missoula floods. The Coeur d'Alene and Hayden Lake basins were inundated by the largest releases from Glacial Lake Missoula. Unit is mostly reworked Miocene sediment and colluvium that were previously carried and deposited by lower energy Missoula floods in slack-water areas. Includes various thicknesses of Holocene alluvium and wetland bog deposits. Thickness as much as 3 m.

Qp—Palouse Formation (Pleistocene and Holocene)—Loess composed of massive silt and clayey silt of the Palouse hills in the eastern Columbia Plateau. Consists of many layers that represent periods of rapid loess deposition followed by long surface exposure and soil development. Depositional and soil units within the Palouse Formation form complex surface and subsurface patterns that are discontinuous and difficult to map. Thick, welded, clayey B horizons of paleosols are locally exposed through erosion, especially on steep amphitheater-shaped slopes with northerly aspects, and form low knobs below the high ridge crests of the Palouse hills. Where the loess is thin, it is mostly composed of late Pleistocene and Holocene deposits. The Palouse Formation has previously been restricted to only Pleistocene loess deposits, but some workers have included Holocene loess in it. The Palouse Formation overlies a Miocene-Pliocene surface primarily developed on the basalt of the Priest Rapids Member (Wanapum Basalt) and Tertiary alluvial deposits. Soils include the Santa and the Tancy series (Weisel, 1981). Shown only by an overlay pattern without well-defined boundaries. Thickness less than 3 m. Thin to absent on surfaces scoured by Glacial Lake Missoula floods.

DEPOSITS OF GLACIAL ORIGIN

Qghcy—Gravel of Hoodoo channel, younger (late Pleistocene)—Poorly sorted, coarse boulder outwash gravel that forms the lowest terrace of Hoodoo channel and records the meltwater flow through Granite Lake to the Pend Oreille

River. Graded to the outlet of Pend Oreille Lake at Bayview at an elevation of 670 m (2,200 feet). Contains kettles from melted blocks of ice. Probably records overflow of the lake during the last phase of alpine glaciation in the region. Moraines of alpine valley glaciers in the Selkirk and Cabinet Mountains are still intact and postdate the retreat of Cordilleran ice from the southern end of the Purcell Trench. Postdates the last Cordilleran ice dam at Clark Fork about 12,000 years ago. Thickness as much as 18 m.

Qghcm—Gravel of Hoodoo channel, middle (late Pleistocene)—Poorly sorted very coarse boulder gravel with a granule and sand matrix; the gravel forms the middle terrace of Hoodoo channel and records the lowest elevation of flow through the Spirit Lake part of the Hoodoo channel. Graded to an elevation of 700 m (2,300 feet). Probably resulted from overflow of the Pend Oreille Lake basin during Cordilleran deglaciation of the Purcell Trench, or from a late ice-marginal and noncatastrophic drainage of Glacial Lake Missoula. Thickness as much as 30 m.

Qghco—Gravel of Hoodoo channel, older (late Pleistocene)—Poorly sorted, very coarse boulder gravel that forms the highest terrace of Hoodoo channel; graded to approximately 730 m (2,400 feet). Probably represents the last emptying cycle of a much diminished and shallow Glacial Lake Missoula. Thickness as much as 30 m.

Qgtow—Bouldery till and outwash deposits (late Pleistocene)—Nonsorted, bouldery clay till and boulder outwash deposits that form a modified end moraine at the south end of Lake Pend Oreille. Clay till recorded in well logs and exposed by excavations in Farragut State Park. Probably equivalent in age to the gravel of Farragut State Park and the distal facies of the oldest gravel of Hoodoo channel (*Qghco*). Thickness as much as 25 m.

CATASTROPHIC FLOOD DEPOSITS AND REWORKED OUTWASH

Qgu—Gravel, undivided (Pleistocene)—Shown only in cross section. Bouldery flood gravels of Rathdrum Prairie undivided for the purpose of the cross section. Fills a deep paleovalley between Round Mountain and Twin Lakes (Adema, 1999). Thickness as much as 180 m.

Qgf—Gravel of Farragut State Park (Pleistocene)—Poorly sorted, sandy boulder gravel at the Glacial Lake Missoula flood breakout from the south end of Lake Pend Oreille. Probably represents the last drainage from Glacial Lake Missoula and outwash from late Wisconsin glacial retreat. Includes reworked outwash facies from the bouldery till moraine (*Qgtow*) at the southern end of Lake Pend Oreille. Thickness from 10 to 30 m.

Qgc—Channel gravel, undivided (Pleistocene)—Latest Wisconsin catastrophic flood and outwash gravel and sand deposited in channelways cut into high energy fans and bars of Glacial Lake Missoula flood origin. Deposited during declining stages of last catastrophic flood event. The last overland flood event was post-"S" ash (13,000 years ago) and pre-Glacier Peak ash (11,200 years ago), perhaps 12,800 years ago (Stradling and Kiver, 1986). Moderately sorted and stratified in the lower flow regimes. The channels are commonly developed at the margin of the Rathdrum Prairie because the larger boulders armor the center of the flood path. Locally includes angular basalt columns derived from the basalt rimrock. Soil is gravelly loam of the Kootenai series (Weisel, 1981). Thickness from 3 to 12 m.

Qdg—Distal gravel deposits (Pleistocene)—Moderately sorted, sandy flood gravels. These deposits form eddy bars at the mouths of the tributary valleys to the Rathdrum Prairie. Lower energy eddy flows deposit finer facies behind the main bar form. May be mantled by post-Glacial Lake Missoula flood lacustrine silt and alluvial deposits. Thickness as much as 60 m.

Qds—Distal sand and silt deposits (Pleistocene)—Moderately sorted sand and silt with some gravel deposited in a lower energy, Glacial Lake Missoula flood regime; represents slack-water sediments in waning floodwaters or finer facies of pendant bar deposits. Includes planar medium-bedded sand of low flow regime. Overlain by postflood lacustrine silt and peat deposits in local basins. Thickness from 3 to 10 m.

Qgb—Gravel of Beck Road (Pleistocene)—Poorly sorted flood gravel graded to the lowest valley-filling episode of flooding continuous with the Spokane Valley, about 640 m (2,100 feet) at the Idaho-Washington state line. The gravel is associated with the most developed incision representing a large abandoned river channel meandering westward into Washington (Gerstel and Palmer, 1994). Two separate sets of thick-bedded foresets are exposed in deep gravel pits. Soil is very stony and includes the gravelly silt loam of the Garrison series (Weisel, 1981). Thickness in excess of 25 m.

Qgcd—Gravel of Coeur d'Alene (Pleistocene)—Mixed deposits of poorly to moderately sorted, stratified cobbly sand and sandy gravel carried by outburst floods and currents of reverse outflow from inundation of the Coeur d'Alene basin. Composes the deposits damming Coeur d'Alene Lake and forming giant current ripples on the lake bottom shown

in seismic profiles (Breckenridge and Othberg, 1999a). Soil is gravelly silt loam of the McGuire series (Weisel, 1981). Thickness from 6 to 25 m.

Qgdg—Gravel of Dalton Gardens fan (Pleistocene)—Poorly sorted sandy gravel deposited in a large fan formed downstream from Hayden Lake outlet. Lobate in form at the downstream margin. Soil is fine gravelly silt loam of the Avonville series (Weisel, 1981). Thickness from 3 to 15 m.

Qgga—Gravel of Garwood (Pleistocene)—Poorly to moderately sorted sandy gravel deposited in a large fan formed downstream from the flood outlet of Lake Pend Oreille. Probably represents waning stages of the last recognizable flood event or a very small late flood. Includes local fans composed of gravel contributed from side drainages and rimrock basalt. Soils are gravelly silt loam of the Kootenai series and silt loam of the Bonner series (Weisel, 1981). Thickness from 3 to 15 m.

Qgm—Gravel of McGuire (Pleistocene)—Poorly sorted sandy flood gravel graded to an intermediate level of 650 m (2,140 feet) near Post Falls. Though extensive, the gravel unit appears to be characterized by incision and scour unconformities of a waning flood; the surface is marked by channel erosion and lag deposits. Soil is gravelly silt loam of the Garrison series (Weisel, 1981). Thickness from 20 to 30 m.

Qgmb—Gravel of McGuire, bar facies (Pleistocene)—Coarse, poorly sorted, imbricate flood gravel with parallel bedding. Forms a large longitudinal bar extending several miles west to the Idaho-Washington state line. Graded to the gravel of McGuire. Soil is very stony silt loam of the Garrison series. Thickness from 6 to 12 m.

Qgg—Gravel of Green Ferry (Pleistocene)—Coarse flood gravel. Consists of an extensive sheet of flood deposits in the quadrangle. Has poor sorting and variation in bedding; graded to about 670 m (2,200 feet) at Post Falls. Probably represents the last episode of major flood events about 12,800 years ago. Soil is gravelly silt loam of the McGuire-Marble association (Weisel, 1981). Thickness in excess of 30 m.

Qggf—Gravel of Green Ferry, fan facies (Pleistocene)—Poorly sorted, sandy flood gravel with channel cut and fill structures. The deposits form a large coalescing fan complex characterized by scour and fill features and concentrations of lag boulders, dissected by waning phases of flooding and smaller, later flood events. The depositional morphology of the fan tends to form lobes. Soils are fine gravelly silt loam of the Avonville series and gravelly silt loam of the Garrison series (Weisel, 1981). Thickness from 3 to 25 m.

Qggb—Gravel of Green Ferry, bar facies (Pleistocene)—Bouldery flood gravel. Coarse, poorly sorted imbricate flood gravel with large-scale foreset bedding. Forms a large channel bar with well-developed current ripples at the surface. Soil is gravelly silt loam of the Avonville series (Weisel, 1981). Thickness as much as 12 m.

Qgs—Gravel of Scarcello Road (Pleistocene)—Mixed deposits of poorly to moderately sorted, stratified cobbly sand and sandy gravel carried by outburst floods. Forms a well-developed terrace at about 720 m (2,360 feet) in elevation. Soil is gravelly silt loam of the Kootenai series (Weisel, 1981). Thickness from 6 to 25 m.

Qghl—Gravel of Hayden Lake (Pleistocene)—Coarse, poorly sorted gravel forms a terrace at about 700 m (2,300 feet) along the eastern margin of Rathdrum Prairie. Characteristically contains columns of basalt eroded from the nearby rimrock and large rip-up clasts of clay from the Latah Formation. Soils are fine gravelly silt loam of the Avonville series and gravelly silty loam of the Kootenai series (Weisel, 1981). Thickness from 12 to 15 m.

Qgtl—Gravel of Twin Lake (Pleistocene)—Poorly sorted, bouldery flood gravel deposited as a major pendant bar in the lee of Round Mountain, a scoured bedrock knob. Soils are gravelly silt loam of the Kootenai series and the Kootenai-Rathdrum association (Weisel, 1981). Thickness as much as 25 m.

Qgsly—Gravel of Spirit Lake, younger (Pleistocene)—Poorly sorted, bouldery flood gravel deposited as a large fan directly from the earlier and larger flood breakouts from Lake Pend Oreille. Forms the second (youngest and lower) of two high fan surfaces isolated by later flood erosion. Soil is cobbly silt loam of the Kootenai series (Weisel, 1981). Thickness as much as 30 m.

Qgslo—Gravel of Spirit Lake, older (Pleistocene)—Poorly sorted, bouldery flood gravel deposited as a large fan directly from the earlier and larger flood breakouts from Lake Pend Oreille. Forms the first (oldest and highest) of two high fan surfaces isolated by later flood erosion. Locally contains some very large boulders greater than 5 m that were probably carried in icebergs. Surface marked by giant current ripples up to 150 m (500 feet) between crests and 12 m (40 feet) in height. Pattern of current ripples shows divergent flow directions both north toward the Pend Oreille River drainage and south down Rathdrum Prairie as the floodwaters were deflected by the Mount Spokane uplands. Soils are gravelly

silt loam and silt loam of the Kootenai-Rathdrum association mantled by loess and Mazama volcanic ash (Weisel, 1981). Thickness in excess of 30 m.

Qgrp—Gravel of Ross Point (Pleistocene)—Poorly to moderately sorted, coarse, stratified sandy gravel forms the highest preserved remnant flood terrace south of Spirit Lake at about 713 m (2,340 feet) in elevation. Represents the earliest of the flood deposits recognized in the area; may be equivalent to the gravel of Spirit Lake. Has the most soil development of all the Rathdrum Prairie gravel units: the gravelly and sandy silt loam of the Avonville series and the McGuire-Marble association (Weisel, 1981). Thickness in excess of 50 m.

OLDER SEDIMENTS

Ts—Sediment (Miocene)—Mostly deeply weathered yellow to orange silt and clay, but also quartzite pebbles and cobbles, and sand. Clasts derived primarily from the Belt Supergroup. Typical thickness is 5-15 m. Cobble and pebble gravels consist of mature, rounded quartzite and other rock types derived from the Precambrian Belt Supergroup and the Mesozoic-Tertiary intrusions. In the western part of the area, the unit forms a flat to gently sloping upland surface 730-790 m (2,400-2,600 feet) in elevation that is underlain by basalt of the Priest Rapids Member (Wanapum Basalt). The unit grades laterally into thick colluvium or residuum of pre-Tertiary rocks. These deposits are probably graded to high base levels formed when the Miocene plateau basalt flows blocked and diverted stream drainages (McDaniel and others, 1998). These basalt-related sediments are considered part of the Latah Formation. The age of the deposits in the eastern part of the area is unknown, and these deposits are not included in the Latah Formation. Unit includes clay-rich interbeds of sediment between flows of Columbia River Basalt Group exposed 2 km west of Coeur d'Alene. Most interbeds are too poorly exposed or too thin to show at map scale, so they are included in the basalt map units.

COLUMBIA RIVER BASALT GROUP

Saddle Mountains Formation(?)

Tmfb—Basalt of Mica Flats (Miocene)—Medium gray to dark gray, fine-grained basalt. Microphyric with abundant plagioclase laths and needles, typically < 1 mm in length; a few scattered plagioclase phenocrysts as laths as much as 4 mm in length, or as clear to waxy clots and clusters as much as 4 mm across. Diktytaxitic cavities common but irregularly distributed. Freshly broken surfaces commonly have a rough, irregular texture. Known only from outcrops along U.S. Highway 95 and in a small rock quarry west of the highway, just south of Mica, and in the Idaho Highway Department's quarry east of Mica. Stratigraphically above Priest Rapids Member (Rosalia chemical type) where exposed along the highway. Probably underlain there by an interbed containing quartzite pebbles and cobbles. Unit consists of one known flow having reverse magnetic polarity. The mean paleomagnetic direction for the basalt of Mica Flats is distinct from the mean direction for Priest Rapids' Rosalia flows from nearby locations. Chemically the unit is also distinct from Priest Rapids, as well as from other known Wanapum and Saddle Mountains Basalt chemical types. Because of its position above Priest Rapids (Rosalia chemical type), it is tentatively correlated with Saddle Mountains Basalt. Additionally, it does not appear to be time-correlative with younger Priest Rapids (Lolo chemical type), the uppermost Wanapum unit found farther to the south, because the paleomagnetic direction differs significantly from that of the Lolo unit. At least 12 m is exposed in the quarry east of Mica, although the base of the unit has not been uncovered.

Wanapum Formation

Tpr—Priest Rapids Member (Miocene)—Medium gray to dark gray basalt. Typically has a grainy, felty texture caused by abundant small plagioclase and olivine phenocrysts and by microvesicles and diktytaxitic cavities. The denser parts of the flows are dark gray to black and fine grained; they lack the grainy texture, although small plagioclase phenocrysts are apparent. Outcrops weather gray-brown to reddish brown. In thick flows, large, poorly defined basal columnar zones 3-6 m thick change upward to slabby, platy zones that are typically medium bluish gray on fresh surfaces. Above the platy zones, flows commonly have a thick blocky to hackly entablature, 15 m or more thick, and in places well-developed thin, vertical to radiating columns. The top of the entablature grades upward into an increasingly vesicular, rubbly in places, flow top. Thin flows are more vesicular throughout and generally have only weakly developed basal columns and a vesicular flow top. Pillow-palagonite complexes are locally common at the base of flows or flow units (series of chemically similar thin flows that grade laterally into a single flow). The Priest Rapids Member consists of one or more flows of Rosalia chemical type and has reverse magnetic polarity. Thicknesses of individual flow units range from 8 to 25 m for thin units and as much as 180 m for thick units.

Grande Ronde Formation

Tgn_2—Grande Ronde N_2 magnetostratigraphic unit

the western part of the area are part of the Priest River metamorphic complex. Meta-igneous rocks to the north and northwest within this complex have U-Pb ages that range from 1,576 to 2,651 Ma, indicating a pre-Belt age (Clark, 1973; Evans and Fischer, 1986; Armstrong and others, 1987; Doughty and others, 1998). However, some may be basement upon which the sedimentary rocks were deposited rather than intrusive into the sedimentary package (Doughty and others, 1998). Thus, all or part of the complex may be younger than the intrusions and correlate with the lower part of the Belt Supergroup.

YXs—Schist of the Priest River metamorphic complex (Proterozoic)—Fine-grained garnetiferous muscovite schist. Mapped as Prichard Formation by Griggs (1973).

YXq—Quartzite of the Priest River metamorphic complex (Proterozoic)—Strongly lineated and foliated light gray to white quartzite. Contains 5 percent or less muscovite and 15 percent feldspar. Coarsely recrystallized, and resembles vein quartz. Areas of *YXq* within *Kog* are either remnants of unmelted country rock or extremely large quartz veins.

YXgn—Gneiss of the Priest River metamorphic complex (Proterozoic)—Purplish brown sillimanite-biotite gneiss. Locally schistose and includes minor amounts of quartzite and amphibolite. Layering probably inherited from sedimentary protolith. Predominant mineral assemblage is quartz, plagioclase, potassium feldspar, biotite, and sillimanite. Includes rocks mapped as the Hauser Lake gneiss of Weisenborn and Weis (1976), gneiss of Cable Peak (Weis, 1968) and metamorphic rocks, undivided (Weis, 1968). See Rhodes (1986) and Doughty and others (1998) for a more detailed description of the Hauser Lake gneiss.

BELT SUPERGROUP NOMENCLATURE

Nomenclature for Belt Supergroup units is complicated by the many formation names in northern Idaho that differ from those developed in western Montana (Figure 3). We have adopted "Idaho terminology" similar to that of Hobbs and others (1965) and Griggs (1973), with the exception of that for the lower Wallace Formation. Here, we follow the usage of Harrison and others (1986) and subdivide the lower Wallace of Hobbs and others (1965) and Griggs (1973) into informal middle and lower members. A regional stratigraphic nomenclature is currently being pursued by Don Winston and the authors. A likely outcome involves assigning formation rank to the present members of the upper Wallace Formation and carrying the easily recognized Shepard Formation west into Idaho.

GEOLOGIC HISTORY

Most of the Coeur d'Alene quadrangle is underlain by a thick sequence of fine-grained siliciclastic and carbonate-bearing clastic rocks of the Belt Supergroup (Figures 3 and 4). These rocks were deposited between about 1,470 and 1,400 Ma during the Middle Proterozoic (Anderson and Davis, 1995; Evans and others, 2000). Continental reconstructions suggest that the Belt basin was intracratonic (e.g., Moores, 1991; Dalziel, 1991; Doughty and others, 1998; Burrett and Berry, 2000); a rifting event may have triggered initial subsidence. The lower part of the Belt (Prichard Formation) was deposited in relatively deep water under anoxic conditions. Intrusion of tholeiitic magmas formed extensive sills north and east of the area (Bishop, 1973). Units above the Prichard were deposited in relatively shallow water (near or above wave base) and under more oxidizing conditions. Algal mats and sedimentary structures such as mudcracks and salt casts are well preserved in the younger Belt rocks (Winston, 1986). Protoliths for high-grade (amphibolite facies) metasedimentary rocks in the western part of the quadrangle (units *YXgn*, *YXq*, and *YXs*) may have been deposited at the same time as the Belt Supergroup. Alternatively, some or all of these units may be the basement of the Belt (see discussions by Armstrong and others, 1987; Doughty and others, 1998; and Rhodes and Hyndman, 1988).

Deformation and magmatism during the East Kootenai orogeny at about 1,300-1,350 Ma affected rocks to the north in Canada (McMechan and Price, 1982) and may have affected rocks in the study area as well. Rifting of the former continent in the Late Proterozoic led to the accumulation of sedimentary and volcanic rocks of the Windermere Group in northeastern Washington (Miller, 1994). Rocks of this age are not found in the Coeur d'Alene quadrangle, although they may have once existed. Later rifting that formed the continental margin to the west lead to the deposition of Cambrian sedimentary rocks on a regional angular unconformity (Campbell, 1959), indicating that the Belt rocks were folded or faulted during one or both of the events above. No record exists of additional sedimentation or deformation in the Paleozoic or early Mesozoic.

The region was subjected to compressional deformation during the Cretaceous Sevier Orogeny, when the Belt Supergroup was strongly folded and faulted (Fillipone and Yin, 1994; Rhodes and Hyndman, 1988). Contractional faults and a strong cleavage formed in the southeastern part of the area (Clark, 1970). At the present level of exposure, all of these faults are relatively steep (reverse). We believe these structures are related to regional thrusting in the

Cretaceous and refer to them as thrust faults regardless of present dip. An example is the Alhambra fault south of Kellogg. During this time, rocks in the western part of the area were deformed at deeper levels and acquired a foliation (S_2 of Rehrig and others, 1987) as well as a lineation defined by sillimanite.

Magmatism in the Cretaceous affected the western half of the quadrangle (Figure 4). The Hayden Lake stock and similar rocks to the north were intruded into the Belt Supergroup. These plutonic rocks lack significant fabric and presumably were emplaced at relatively shallow crustal levels or after much of the deformation in the area. Biotite K-Ar dates of 75 Ma and 83 Ma provide minimum emplacement ages. Even less certain are the ages of some of the other intrusive rock units (*TKdd*, *TKla*, *TKg*, *TYqd*). The greatest uncertainty is for quartz diorite dikes (*TYqd*) that were previously assigned to the Proterozoic and thought to represent sills in the Prichard Formation (Griggs, 1973). Some may indeed be Proterozoic, but because many tend to be discordant to bedding and are concentrated in areas of faulting, a Cretaceous or Eocene age seems more likely.

Orthogneiss southwest of Coeur d'Alene (*Kog*) formed from plutons that resided at deeper crustal levels than the Hayden Lake stock and related rocks. The Cretaceous age is suggested because chemically and mineralogically the orthogneiss more closely resembles the Na- and Ca-rich Idaho batholith than the K-rich Proterozoic orthogneiss in the region. Widespread K-Ar cooling ages of 46-52 Ma (Miller and Engels, 1975; Harms and Price, 1992; Doughty and Price, 1999) indicate that this orthogneiss and the surrounding amphibolite facies metasedimentary rocks of the Priest River metamorphic complex were brought to near-surface levels during the Eocene. The timing details and the role that the Purcell-Coeur d'Alene detachment fault played in this unroofing event are still being debated.

Most of the mylonites in the footwall of the Purcell-Coeur d'Alene fault may have formed during late Cretaceous compressional strain before the intrusion of the fine-grained biotite granite of Rathdrum Mountain (*Tbgf*) at about 52 Ma (Rhodes and Hyndman, 1984, 1988; Rhodes and others, 1989; Doughty and Price, 1999). Of the three foliations in the area, only the latest may have formed or been superimposed upon earlier fabrics during down-to-the-east faulting along the Purcell-Coeur d'Alene fault in the Eocene (Rehrig and others, 1987). The mylonitic fabric in the footwall of the fault has kinematic indicators that show top-to-the-east motion. This mylonitic fabric was later folded into the Spokane dome (Rhodes and Hyndman, 1984) contemporaneously with uplift.

Doughty and Price (1999) have suggested that there is a relatively steep normal fault within the Purcell Trench to the north that cuts the Spokane dome mylonite zone. One is likely to be present in the Coeur d'Alene area as well. We speculate that a relatively steep normal fault extends from north of Athol south through Coeur d'Alene Lake. It appears to intersect (and cut) the Purcell-Coeur d'Alene fault southeast of Round Mountain but is entirely covered by surficial deposits. Alternatively, the Purcell-Coeur d'Alene fault may extend the entire length of the map area and not be offset by a younger fault. The trace of the northern extension of the Purcell-Coeur d'Alene fault from Athol north to Sandpoint is uncertain, partly because of cover by glacial deposits and partly because the exposed bedrock is largely granitic rocks that have little or no fabric. We show the Purcell-Coeur d'Alene fault (mylonite zone) continuing due north from Round Mountain more or less where McCarthy and others (1993) suggested it might be located. Alternatively, it may continue as a steeper structure north of Athol.

Extension in the central and eastern part of the quadrangle was probably localized along north-northeast-striking faults such as the Cascade fault. Both the steep bedding and some faults in the Magee fault zone probably originated during contractional deformation, but the present configuration appears strongly dependent on down-to-the-west normal faulting. West-northwest faults such as the Osburn fault are thought to have had right-lateral strike-slip motion at this time and served to transfer the extension from the area of the Priest River metamorphic complex eastward into Montana (Sheriff and others, 1984; Rehrig and others, 1987). Movement on the Purcell-Coeur d'Alene fault had ended by Miocene time (about 16 Ma) when drainages in the area were invaded by Columbia River basalt. No offset of basalt is apparent across the fault. The Columbia River basalt disrupted drainages in the area and established a new base level. Drainage systems that previously had transported sediment out of the area now deposited their sediment at the margins of the basalt flows, or upstream from them. These sediments (*Ts*) are widespread in the region south of the map area.

During the Pleistocene, a lobe of the Cordilleran ice sheet moved south down the Purcell Trench from Canada into northern Idaho. Glacial Lake Missoula was formed when this lobe blocked the Clark Fork drainage near its mouth into Lake Pend Oreille. At its maximum, the lake was over 610 m (2,000 feet) deep against the ice dam. Repeated failures and re-formations of the Clark Fork ice dams resulted in catastrophic outbursts of as much as 2,000 cubic km (500 cubic miles) of water flowing across northern Idaho and into the Channeled Scabland of Washington (Waitt,

1985). The main path of the floods was from the southern end of Lake Pend Oreille across Rathdrum Prairie and through the Spokane Valley. The enormous energy of the flood water transported coarse boulder gravel downstream. This gravel forms the Rathdrum-Spokane aquifer, which is the sole source of ground water for the area's urban and rural population. The largest of the floods would have removed evidence of earlier flood events, so only the physical record for the late Wisconsin floods and ice advances remains. Similar floods, however, likely recurred in earlier Pleistocene glaciations. Remnants of the oldest recognized gravel form high expansion flood bars at Spirit Lake (*Qgslo*, *Qgslv*) and at Ross Point (*Qgrp*). Pendant bars formed behind bedrock obstructions at Round Mountain (*Qgtl*), and eddy bars dammed the side valleys (*Qdg*). Lakes bordering the Purcell Trench (Spirit, Twin, Hayden, Coeur d'Alene, Fernan, Hauser, and Newman) formed behind bars of flood gravel deposited at the mouths of valleys (Breckenridge, 1989). Younger gravel units mapped in the Rathdrum Prairie formed gravel sheets and fans and resulted from younger and smaller floods after the late Wisconsin maximum, about 18,000 years ago. The Mount St. Helens set S tephra of approximately 13,000 years ago is associated with late flood deposits, and the last flood is immediately postdated by the Glacier Peak ashes B and G (about 11,200 years ago; Kiver and others, 1991). Small alpine glaciers postdate the Cordilleran ice retreat in the high elevations of the Selkirk and Cabinet Mountains north of the map area. Eolian deposits of silt, the loess of the Palouse Formation (*Qp*), accumulated on the Columbia Plateau throughout the Quaternary to the present and were mainly a result of ice age erosion and winds (Busacca, 1991).

GEOCHEMISTRY

Over ninety samples from the Coeur d'Alene quadrangle were analyzed by X-ray fluorescence (XRF) methods for major and trace element concentrations at Washington State University as part of this study and other related STATEMAP projects. Results for igneous intrusive rocks are presented in Table 1; those for metasedimentary rocks are in Table 2, and those for basalts are in Table 3. Sample locations are shown on the map, and their latitude and longitude are listed in the tables. Also reported here are two samples outside the map area: one, a garnet-muscovite schist from an exposure just south of the quadrangle along the west side of Coeur d'Alene Lake (99RL244); and the other, an augen gneiss of Laclede (99RL262), a Proterozoic igneous rock within the Priest River complex, but from north of the area.

The two analyzed samples from the fine-grained biotite granite unit (*Thgf*) have significantly different chemical compositions (Table 1). Sample 99RL202 from a pluton on the northwest side of Spirit Lake has a lower SiO_2 content (68 versus 74 percent) and a lower K_2O content (3.7 versus 5.2 percent) than sample 99RL256 collected from a larger pluton extending west from Rathdrum Mountain. The pluton at Rathdrum Mountain has K_2O well in excess of Na_2O and Rb in excess of Sr, characteristics common to epizonal Eocene granite plutons in central Idaho (Lewis and Kiilsgaard, 1991). Although the pluton at Rathdrum Mountain lacks miarolitic cavities that characterize the epizonal granite, it may be similar in age and origin but was emplaced at deeper levels than those in central Idaho. A sample collected from the Beauty Creek stock (unit *TKg*, sample 99RL281) is similar in composition to the pluton of *Thgf* on the northwest side of Spirit Lake. Both have K_2O/Na_2O ratios of 1.1 to 1.3, and SiO_2 contents in the 68-69 percent range.

Samples of biotite granodiorite from the Hayden Lake stock and the hornblende-biotite granodiorite north of Hayden Lake (units *Khgd* and *Khgd*) have similar major element concentrations (compare 99RL208, 99RL257, and 99RL258). Most trace element concentrations are also similar. However, the sample from the Hayden Lake stock contains considerably more Sr than samples from the hornblende-bearing unit (708 ppm versus 297 and 348 ppm). Biotite K-Ar ages on the two rock units of 83.8 and 74.6 Ma (recalculated from Miller and Engels, 1975) suggest two episodes of magmatism. All three samples have K_2O in excess of Na_2O. In this regard, they are unlike the bulk of the Idaho batholith, which is relatively sodic. The higher K_2O contents and the presence of euhedral biotite books are similar to some of the satellite plutons southeast of the southern lobe of the Idaho batholith (Lewis and others, 1987; Lewis, 1989, 1990) as well as the potassic series of the Boulder batholith of Montana (Tilling, 1973).

Craig Wavra and Rolland Reid analyzed thirteen samples of "deep igneous rocks" (our orthogneiss unit, *Kog*) from southwest of Coeur d'Alene that they described as granite gneiss, granodiorite gneiss, and tonalite gneiss (Rolland Reid, written commun., 1998). These rocks have a moderate SiO_2 range from 69 to 76 percent and a wider K_2O range from 2.8 to 5.9 percent. One anomalous analysis with 83 percent SiO_2 and only 1.2 percent K_2O we attribute to contamination by quartzite. Two samples of diorite gneiss from the same area have SiO_2 contents of 55-57 percent. K_2O exceeds Na_2O in ten of the samples, and Rb exceeds Sr in three samples. The four orthogneiss samples we analyzed (Table 1) have compositions that are within the range found by Wavra and Reid.

Chemical compositions of argillite-siltite from different formations of the Belt Supergroup (Table 2) largely overlap,

a result consistent with those of previous workers (e.g., Harrison and Grimes, 1970; Harrison and Hamilton, 1971). Concentrations of Sr are higher in the siltite-argillite and siltite samples of the Prichard Formation (111 and 76 ppm) relative to other noncarbonate-bearing siltite or argillite samples in the Belt (58 ppm or less). This distinction was originally noted by Jack Harrison (written commun., 1991). Copper concentrations are 44 ppm or less in all samples, with the exception of 99RL251, an argillite-siltite from the lower part of the Libby Formation that contains 148 ppm Cu. Zinc concentrations exceed 100 ppm in only two samples (99RL279 and 98RL052), both from the Prichard Formation. Concentrations of K_2O are highest (greater than 4 percent) in the argillite-siltite samples from the Prichard, St. Regis, lower Wallace, and Striped Peak Formations. K_2O content of siltite-argillite in the middle and upper members of the Wallace and in the Libby Formation ranges more widely (2.6 to 5.4 percent K_2O). Carbonate-bearing samples have low total oxides because CO_2 was not analyzed. These carbonate-bearing rocks also have low K_2O concentrations (0.8-3.8 percent) relative to the noncarbonate rocks and, as expected, high CaO concentrations. Quartzite samples have lower K_2O concentrations (1.4 to 3.8 percent) as a result of the high quartz sand content in these rocks. Sample 98RL176 is from the "lower green marker" in the Sunshine Mine and has an unusually high silica content (80.35%).

Seven samples of metasedimentary gneiss and schist from the Priest River metamorphic complex (units *YXgn* and *YXs*) have an expected moderate range in chemical composition. The most schistose sample (99RL244) also has the lowest SiO_2 content (62 percent) and the highest Al_2O_3 content (23 percent). This sample is from just south of the map area. Metasedimentary rocks from the Priest River metamorphic complex are compositionally similar in many respects to the Belt Supergroup. However, they typically have higher Sr concentrations (all but one sample exceed 143 ppm). This may be a metamorphic effect, as Sr is known to increase with increasing metamorphic grade in this region (Harrison and Hamilton, 1971). Alternatively, all or some of the metasedimentary rocks of the Priest River complex may predate the Belt Supergroup, as discussed in the previous section. All of the analyses of Columbia River basalt (Table 3) match well with previously published results (Griggs, 1978; Swanson and others, 1979b; Wright and others, 1973, 1979, 1980). Significant differences exist in both major and trace element contents of the different units, but variations within the units are small. One important result was from an analysis of samples collected on Mica Flat southwest of Coeur d'Alene. These samples are from a previously unknown flow with a chemical composition unlike that of the underlying Priest Rapids member.

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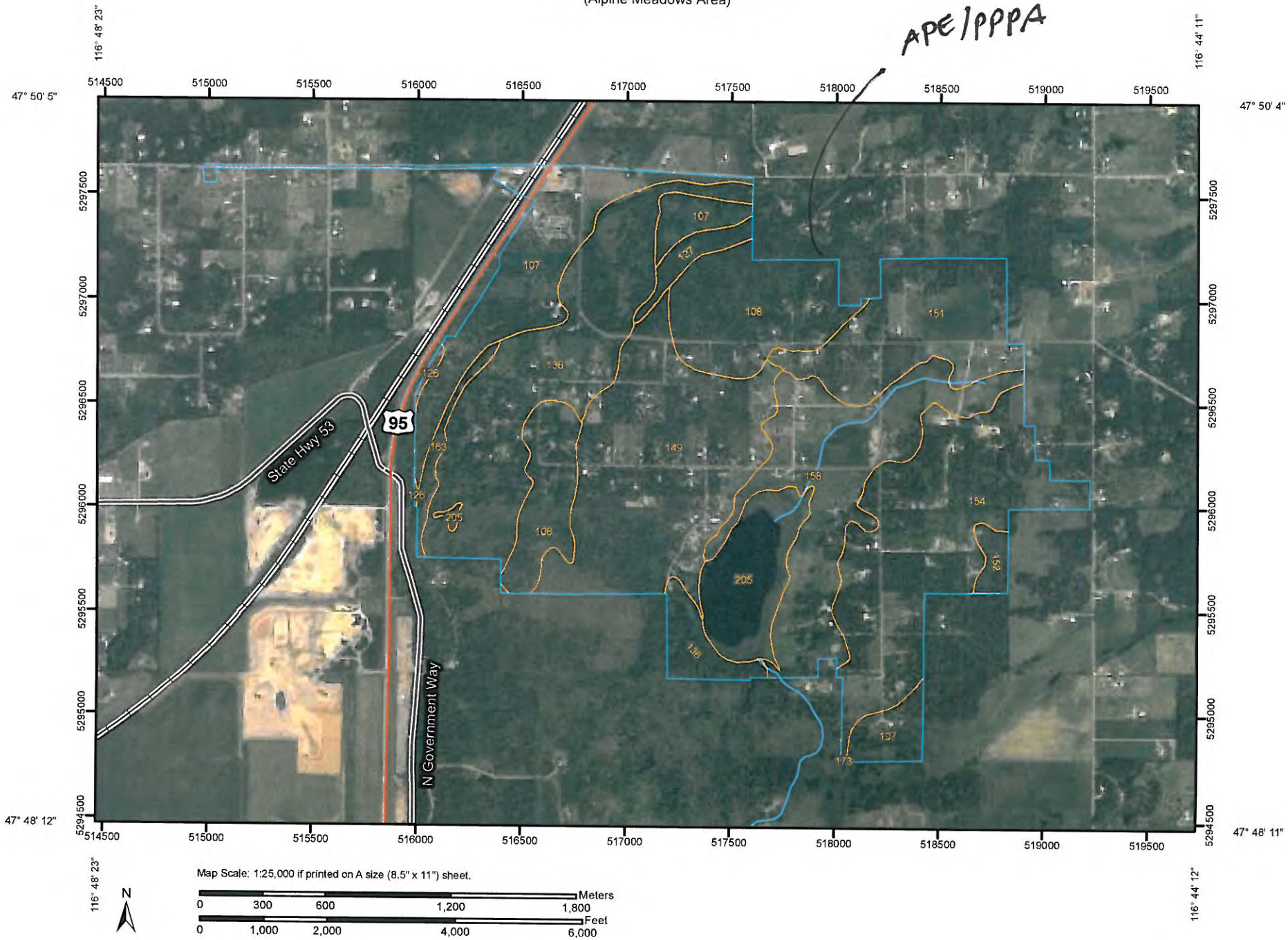
Soil Map—Kootenai County Area, Idaho
(Alpine Meadows Area)

APE/PPPA



Map Scale: 1:25,000 if printed on A size (8.5" x 11") sheet.

N

Meters: 0 300 600 1,200 1,800

Feet: 0 1,000 2,000 4,000 6,000

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/28/2012
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Gully

Short Steep Slope

Other

Political Features

Cities

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:25,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Date(s) aerial images were photographed: 6/23/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Refer to map page 3 for soil map units descriptions.

Map Unit Legend

Kootenai County Area, Idaho (ID606)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
107	Bonner silt loam, 0 to 8 percent slopes	160.9	11.6%
108	Bonner gravelly silt loam, 0 to 8 percent slopes	152.3	11.0%
126	Kootenai gravelly silt loam, 0 to 7 percent slopes	2.5	0.2%
127	Kootenai gravelly silt loam, 20 to 45 percent slopes	16.3	1.2%
136	Lacy-Bobbitt association, 5 to 35 percent slopes, very stony	225.7	16.3%
149	McGuire-Marble association, 0 to 7 percent slopes	230.0	16.6%
151	Mokins silt loam, 5 to 20 percent slopes	120.0	8.6%
152	Mokins silt loam, 20 to 35 percent slopes	11.0	0.8%
154	Mokins-Chatcolet complex, 5 to 20 percent slopes	214.5	15.5%
158	Potlatch silt loam	169.6	12.2%
163	Rock outcrop	13.3	1.0%
173	Seelovers-Potlatch complex	0.1	0.0%
205	Water	70.8	5.1%
Totals for Area of Interest		**1,387.0**	**100.0%**

Kootenai County Area, Idaho

107—Bonner silt loam, 0 to 8 percent slopes

Map Unit Setting

Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days

Map Unit Composition

Bonner and similar soils: 85 percent

Description of Bonner

Setting

Landform: Outwash terraces
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or schist and/or gneiss

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Other vegetative classification: grand fir/ninebark (CN506)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 2 inches: Moderately decomposed plant material
2 to 10 inches: Ashy silt loam
10 to 20 inches: Gravelly silt loam
20 to 28 inches: Gravelly sandy loam
28 to 62 inches: Very gravelly loamy sand

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

108—Bonner gravelly silt loam, 0 to 8 percent slopes

Map Unit Setting

Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days

Map Unit Composition

Bonner and similar soils: 90 percent

Description of Bonner

Setting

Landform: Outwash terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or schist and/or gneiss

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Other vegetative classification: grand fir/ninebark (CN506)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 2 inches: Moderately decomposed plant material
2 to 10 inches: Gravelly ashy silt loam
10 to 20 inches: Gravelly silt loam
20 to 28 inches: Gravelly sandy loam
28 to 62 inches: Very gravelly loamy sand

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

126—Kootenai gravelly silt loam, 0 to 7 percent slopes

Map Unit Setting

Elevation: 2,100 to 2,700 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days

Map Unit Composition

Kootenai and similar soils: 75 percent

Description of Kootenai

Setting

Landform: Outwash terraces, moraines
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or gneiss and/or schist

Properties and qualities

Slope: 0 to 7 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability (nonirrigated): 4s
Other vegetative classification: Douglas-fir/common snowberry (CN310)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 2 inches: Moderately decomposed plant material
2 to 8 inches: Gravelly silt loam
8 to 24 inches: Gravelly silt loam
24 to 28 inches: Very gravelly loam
28 to 62 inches: Extremely gravelly coarse sand

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

127—Kootenai gravelly silt loam, 20 to 45 percent slopes

Map Unit Setting

Elevation: 2,100 to 2,700 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days

Map Unit Composition

Kootenai and similar soils: 90 percent

Description of Kootenai

Setting

Landform: Outwash terraces, escarpments
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or gneiss and/or schist

Properties and qualities

Slope: 20 to 45 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Other vegetative classification: Douglas-fir/common snowberry (CN310)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 2 inches: Moderately decomposed plant material
2 to 8 inches: Gravelly silt loam
8 to 24 inches: Gravelly silt loam
24 to 28 inches: Very gravelly loam
28 to 62 inches: Extremely gravelly coarse sand

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

136—Lacy-Bobbitt association, 5 to 35 percent slopes, very stony

Map Unit Setting

Elevation: 1,500 to 3,200 feet
Mean annual precipitation: 22 to 28 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 140 days

Map Unit Composition

Lacy, very stony surface, and similar soils: 55 percent
Bobbitt, very stony surface, and similar soils: 35 percent

Description of Lacy, Very Stony Surface

Setting

Landform: Canyons, escarpments
Landform position (two-dimensional): Summit, shoulder
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess and/or colluvium over bedrock derived from basalt

Properties and qualities

Slope: 5 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Other vegetative classification: ponderosa pine/Idaho fescue (CN140)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 8 inches: Gravelly loam
8 to 15 inches: Stony clay loam
15 to 20 inches: Extremely stony clay loam
20 to 30 inches: Bedrock

Description of Bobbitt, Very Stony Surface

Setting

Landform: Mountain slopes, escarpments
Down-slope shape: Concave

Across-slope shape: Linear
Parent material: Volcanic ash and/or loess over colluvium over bedrock derived from basalt

Properties and qualities

Slope: 5 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Other vegetative classification: Douglas-fir/common snowberry (CN310)

Typical profile

0 to 1 inches: Moderately decomposed plant material
1 to 11 inches: Stony loam
11 to 36 inches: Very stony clay loam
36 to 46 inches: Bedrock

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

149—McGuire-Marble association, 0 to 7 percent slopes

Map Unit Setting

Elevation: 1,500 to 2,500 feet
Mean annual precipitation: 15 to 26 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 110 to 150 days

Map Unit Composition

Mcguire and similar soils: 60 percent
Marble and similar soils: 30 percent

Description of Mcguire

Setting

Landform: Outwash terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash

Properties and qualities

Slope: 0 to 7 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Other vegetative classification: ponderosa pine/common snowberry (CN170)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 9 inches: Gravelly sandy loam
9 to 23 inches: Very gravelly sandy loam
23 to 27 inches: Extremely gravelly coarse sandy loam
27 to 61 inches: Extremely gravelly coarse sand

Description of Marble

Setting

Landform: Outwash terraces
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Reworked sandy outwash

Properties and qualities

Slope: 0 to 7 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Other.vegetative classification: ponderosa pine/Idaho fescue (CN140)

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 3 inches: Moderately decomposed plant material
3 to 9 inches: Sandy loam
9 to 63 inches: Loamy sand

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

151—Mokins silt loam, 5 to 20 percent slopes

Map Unit Setting

Elevation: 2,200 to 2,800 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 80 to 100 days

Map Unit Composition

Mokins and similar soils: 80 percent

Description of Mokins

Setting

Landform: Lake terraces
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Volcanic ash and loess over lacustrine deposits

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: 20 to 40 inches to abrupt textural change
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Other vegetative classification: grand fir/twinflower (CN590)

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 8 inches: Silt loam
8 to 16 inches: Gravelly silt loam
16 to 22 inches: Silt loam
22 to 62 inches: Silty clay

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

152—Mokins silt loam, 20 to 35 percent slopes

Map Unit Setting

Elevation: 2,200 to 2,800 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 80 to 100 days

Map Unit Composition

Mokins and similar soils: 85 percent

Description of Mokins

Setting

Landform: Lake terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Volcanic ash and loess over lacustrine deposits

Properties and qualities

Slope: 20 to 35 percent
Depth to restrictive feature: 20 to 40 inches to abrupt textural change
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Other vegetative classification: grand fir/twinflower (CN590)

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 8 inches: Silt loam
8 to 16 inches: Gravelly silt loam
16 to 22 inches: Silt loam
22 to 62 inches: Silty clay

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

154—Mokins-Chatcolet complex, 5 to 20 percent slopes

Map Unit Setting

Elevation: 2,200 to 2,800 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 70 to 100 days

Map Unit Composition

Mokins and similar soils: 55 percent
Chatcolet and similar soils: 35 percent

Description of Mokins

Setting

Landform: Lake terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Volcanic ash and loess over lacustrine deposits

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: 20 to 40 inches to abrupt textural change
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Other vegetative classification: grand fir/twinflower (CN590)

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 8 inches: Silt loam
8 to 16 inches: Gravelly silt loam
16 to 22 inches: Silt loam
22 to 62 inches: Silty clay

Description of Chatcolet

Setting

Landform: Lake terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Volcanic ash and/or loess over glaciolacustrine deposits and/or lacustrine deposits

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.7 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Other vegetative classification: western redcedar/ladyfern (CN540)

Typical profile

0 to 8 inches: Cobbly loam
8 to 17 inches: Cobbly loam
17 to 60 inches: Silty clay loam

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

158—Potlatch silt loam

Map Unit Setting

Elevation: 2,100 to 3,000 feet
Mean annual precipitation: 24 to 35 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 60 to 110 days

Map Unit Composition

Potlatch and similar soils: 80 percent
Minor components: 10 percent

Description of Potlatch

Setting

Landform: Stream terraces, drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Mixed alluvium and/or loess

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to abrupt textural change
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability (nonirrigated): 5w

Typical profile

0 to 4 inches: Silt loam
4 to 12 inches: Silt loam
12 to 22 inches: Silt loam
22 to 44 inches: Silty clay
44 to 60 inches: Silty clay loam

Minor Components

Porrett

Percent of map unit: 5 percent
Landform: Flood plains

Seelovers

Percent of map unit: 5 percent
Landform: Flood plains

Other vegetative classification: western redcedar/devil's club (CN550)

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

163—Rock outcrop

Map Unit Composition

Rock outcrop: 100 percent

Description of Rock Outcrop

Properties and qualities

Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability (nonirrigated): 8

Typical profile

0 to 60 inches: Bedrock

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

173—Seelovers-Potlatch complex

Map Unit Setting

Elevation: 2,100 to 3,000 feet
Mean annual precipitation: 24 to 35 inches
Mean annual air temperature: 41 to 46 degrees F
Frost-free period: 60 to 130 days

Map Unit Composition

Seelovers and similar soils: 55 percent
Potlatch and similar soils: 35 percent
Minor components: 7 percent

Description of Seelovers

Setting

Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed fine-silty alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: High (about 11.6 inches)

Interpretive groups

Land capability (nonirrigated): 4w
Other vegetative classification: western redcedar/devil's club (CN550)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 2 inches: Moderately decomposed plant material
2 to 11 inches: Silt loam
11 to 28 inches: Silt loam
28 to 30 inches: Sandy loam
30 to 40 inches: Silty clay loam
40 to 42 inches: Sandy loam
42 to 62 inches: Silty clay loam

Description of Potlatch

Setting

Landform: Drainageways
Down-slope shape: Concave

Across-slope shape: Linear
Parent material: Mixed alluvium and/or loess

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to abrupt textural change
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability (nonirrigated): 5w

Typical profile

0 to 4 inches: Silt loam
4 to 12 inches: Silt loam
12 to 22 inches: Silt loam
22 to 44 inches: Silty clay
44 to 60 inches: Silty clay loam

Minor Components

Porrett

Percent of map unit: 3 percent
Landform: Flood plains

Ramsdell

Percent of map unit: 2 percent
Landform: Flood plains
Other vegetative classification: western redcedar/devil's club (CN550)

Pywell

Percent of map unit: 2 percent
Landform: Marshes

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Kootenai County Area, Idaho

205—Water

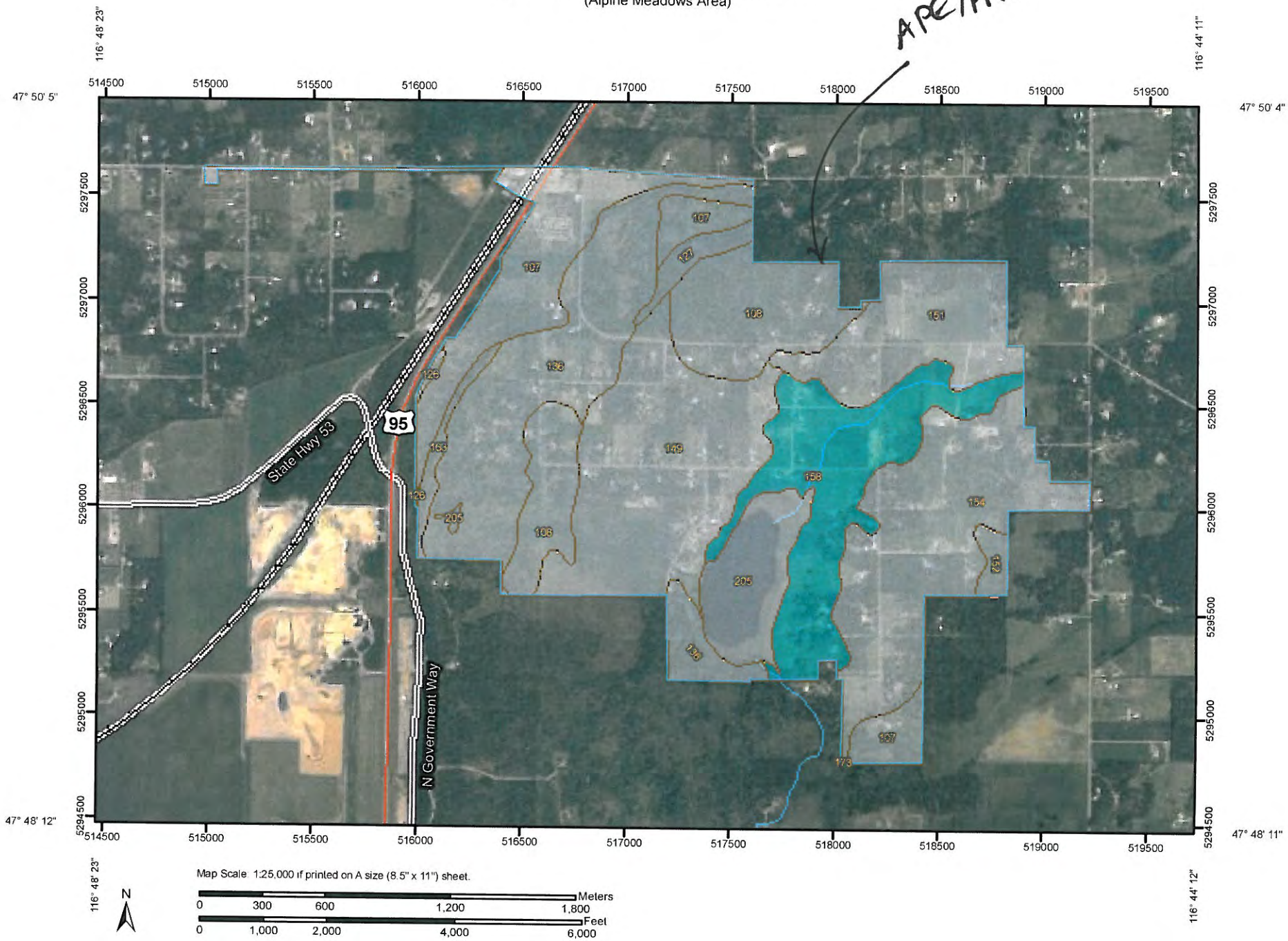
Map Unit Composition
Water: 100 percent

Data Source Information

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

K Factor, Whole Soil—Kootenai County Area, Idaho
(Alpine Meadows Area)

APE/IPPPA



Map Scale: 1:25,000 if printed on A size (8.5" x 11") sheet.

N

Meters: 0 300 600 1,200 1,800

Feet: 0 1,000 2,000 4,000 6,000

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

.02

.05

.10

.15

.17

.20

.24

.28

.32

.37

.43

.49

.55

.64

Not rated or not available

Political Features

Cities

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:25,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Date(s) aerial images were photographed: 6/23/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

K Factor, Whole Soil— Summary by Map Unit — Kootenai County Area, Idaho (ID606)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
107	Bonner silt loam, 0 to 8 percent slopes		160.9	11.6%
108	Bonner gravelly silt loam, 0 to 8 percent slopes		152.3	11.0%
126	Kootenai gravelly silt loam, 0 to 7 percent slopes		2.5	0.2%
127	Kootenai gravelly silt loam, 20 to 45 percent slopes		16.3	1.2%
136	Lacy-Bobbitt association, 5 to 35 percent slopes, very stony		225.7	16.3%
149	McGuire-Marble association, 0 to 7 percent slopes		230.0	16.6%
151	Mokins silt loam, 5 to 20 percent slopes		120.0	8.6%
152	Mokins silt loam, 20 to 35 percent slopes		11.0	0.8%
154	Mokins-Chatcolet complex, 5 to 20 percent slopes		214.5	15.5%
158	Potlatch silt loam	.32	169.6	12.2%
163	Rock outcrop		13.3	1.0%
173	Seelovers-Potlatch complex		0.1	0.0%
205	Water		70.8	5.1%
Totals for Area of Interest			**1,387.0**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options: Surface Layer

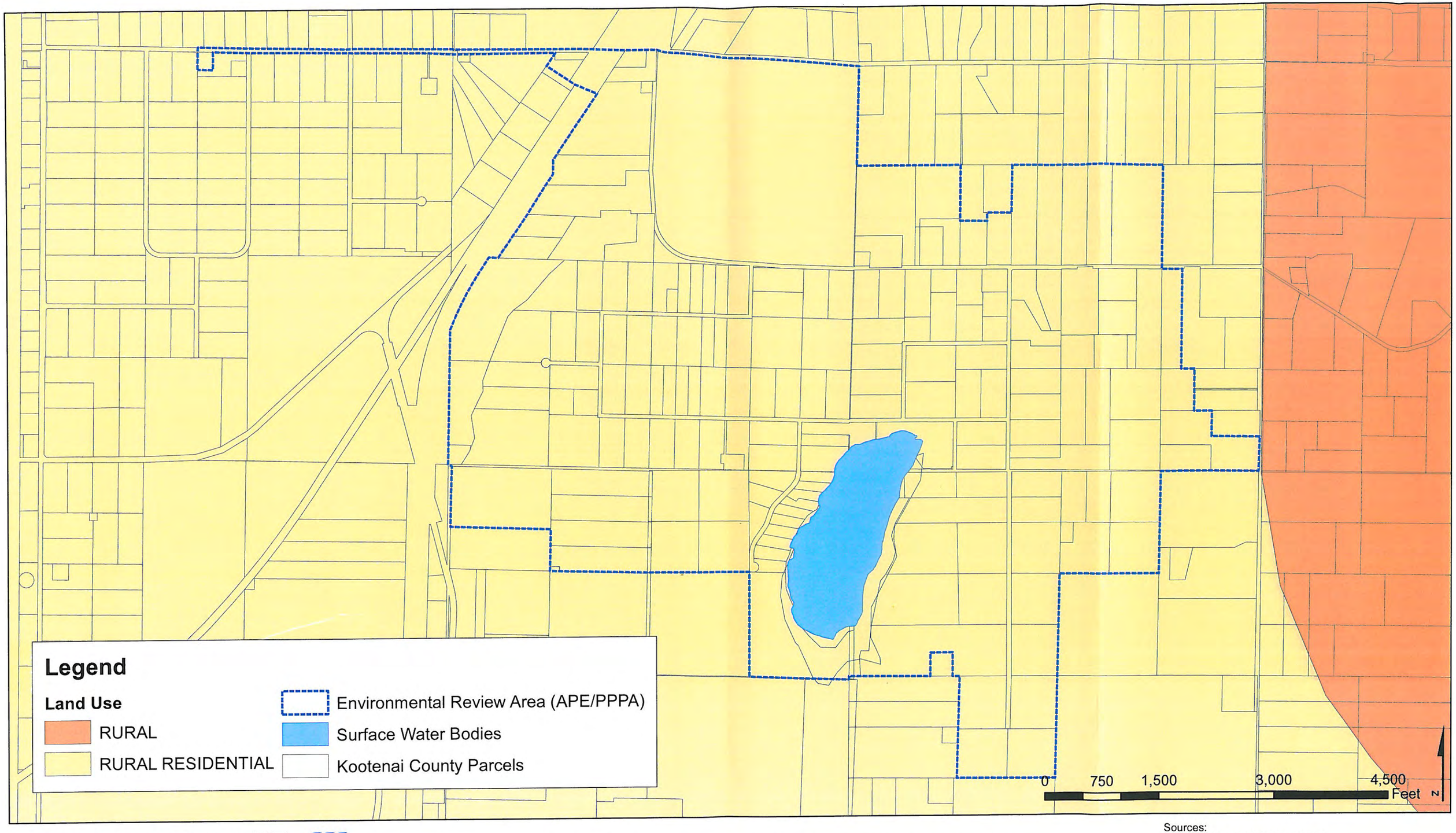
APPENDIX E

Zoning and Land Use Maps

Kootenai County Comprehensive Plan
Land Use

Kootenai County Planning & Zoning Office

Date:
Scale:
Projection:
Datum:
Prepared by:
Prepared for:
Project Name:
Project No.:



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Alpine Meadows Water and Sewer District

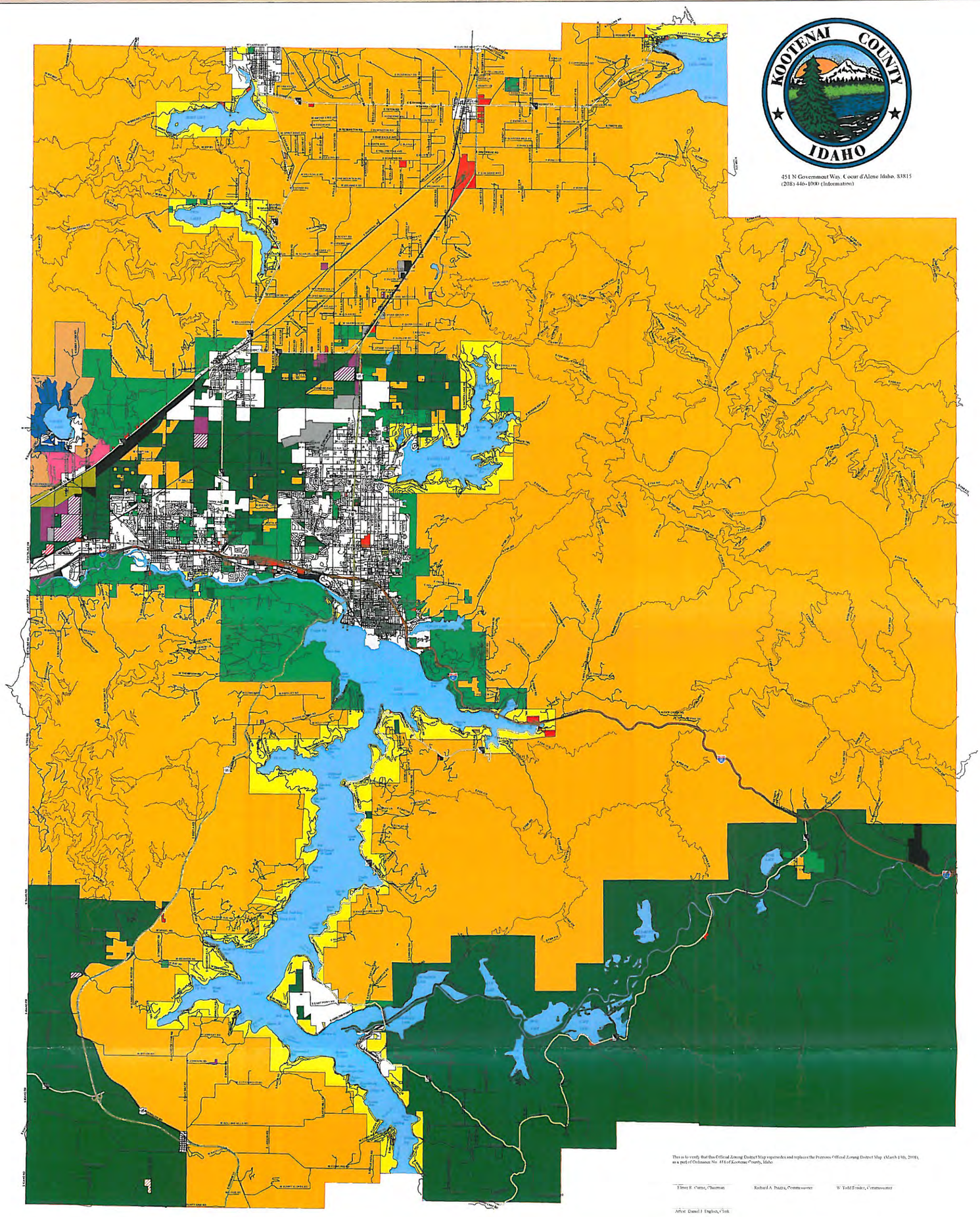
Land Use

Sources:
Kootenai County GIS Department

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....LandUse_11x17L
DATE.....5/9/12

Kootenai County Zoning District Map

June 24th, 2010



KOOTENAI COUNTY IDAHO

451 N Government Way, Coeur d'Alene Idaho, 83815
(208) 446-1000 (Information)

This is to verify that this Official Zoning District Map supersedes and replaces the Previous Official Zoning District Map (March 14th, 2008), as a part of Ordinance No. 414 of Kootenai County, Idaho.

Elmer R. Currie, Chairman Richard A. Piazza, Commissioner W. Todd Fender, Commissioner

Attest: Daniel J. English, Clerk

Kootenai County Planning & Zoning Office

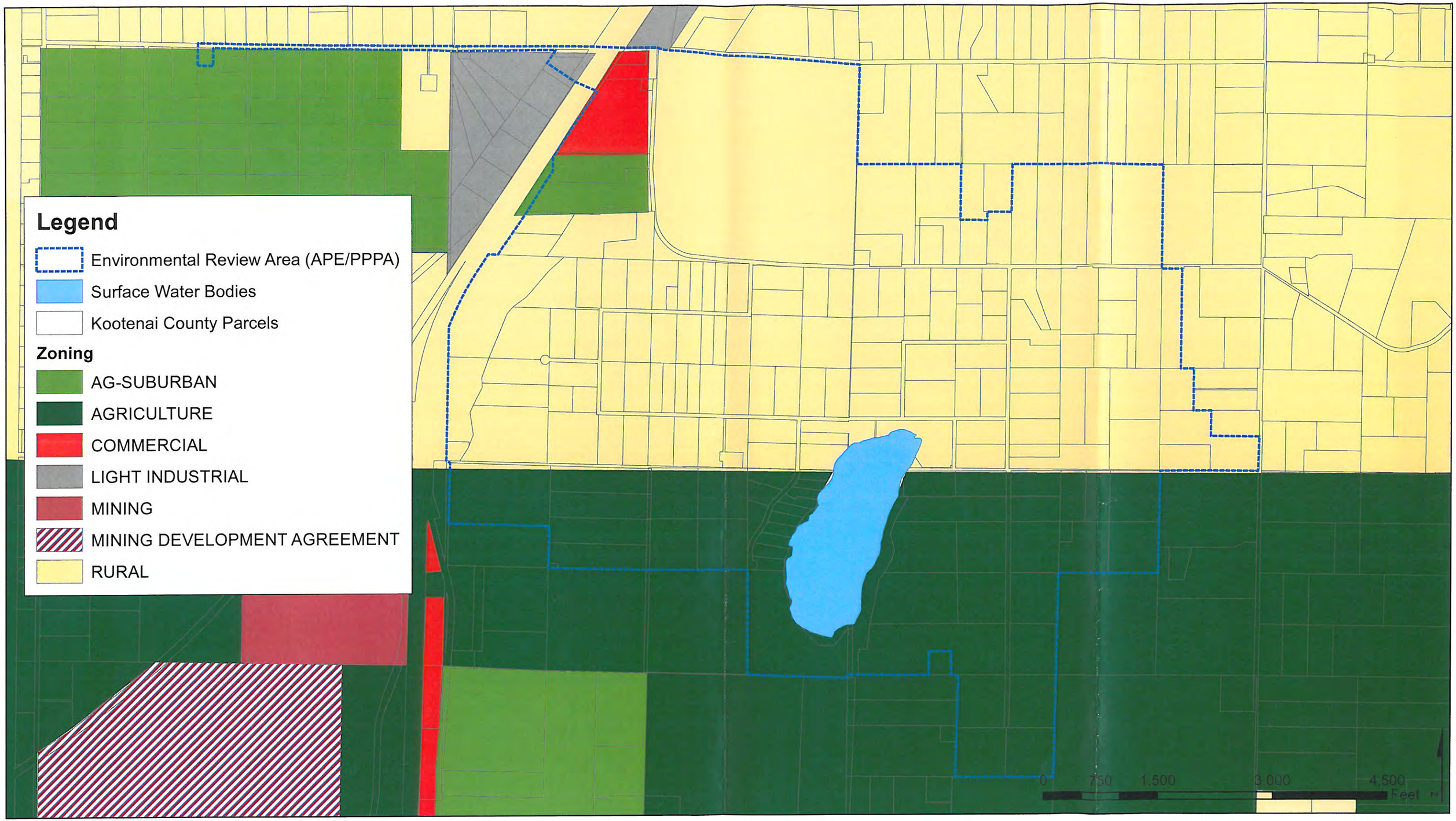
PO Box 9000
451 N Government Way
Coeur d'Alene, ID 83814-9000
email: kcmap@co.kootenai.id.us
www.co.kootenai.id.us

Prepared for: Community Development
Map Date: 06/24/2010
Saved Date: 06/24/2010
Project Filename: Zoning.mxd
Plot File: Zoning.pdf

0 1.25 2.5 5 7.5 10 Miles

This map is to be used for reference purposes only.
Kootenai County is not responsible for an inaccurate or outdated basis.

RURAL RESIDENTIAL	COMMERCIAL DEVELOPMENT	RURAL WORKING PRODUCTIVE
AGRICULTURE	RESIDENTIAL	RURAL WORKING PRODUCTIVE (FOR FOREST)
COMMERCIAL	MINE VALLEY	RURAL
COMMERCIAL DEVELOPMENT (SUBURBAN)	COUNTRY ESTATE (RURAL)	RURAL (RURAL DEVELOPMENT ALLOWED)
CONTROL VALLEY	SUBDIVISION (RURAL DEVELOPMENT ALLOWED)	LATERAL SUBDIVISION
DRAW DISTRICT DESIGN BOX	MINING	
DRAW DISTRICT DESIGN BOX (DEVELOPMENT)	MINING (DEVELOPMENT SUBDIVISION)	



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Alpine Meadows Water and Sewer District

Zoning

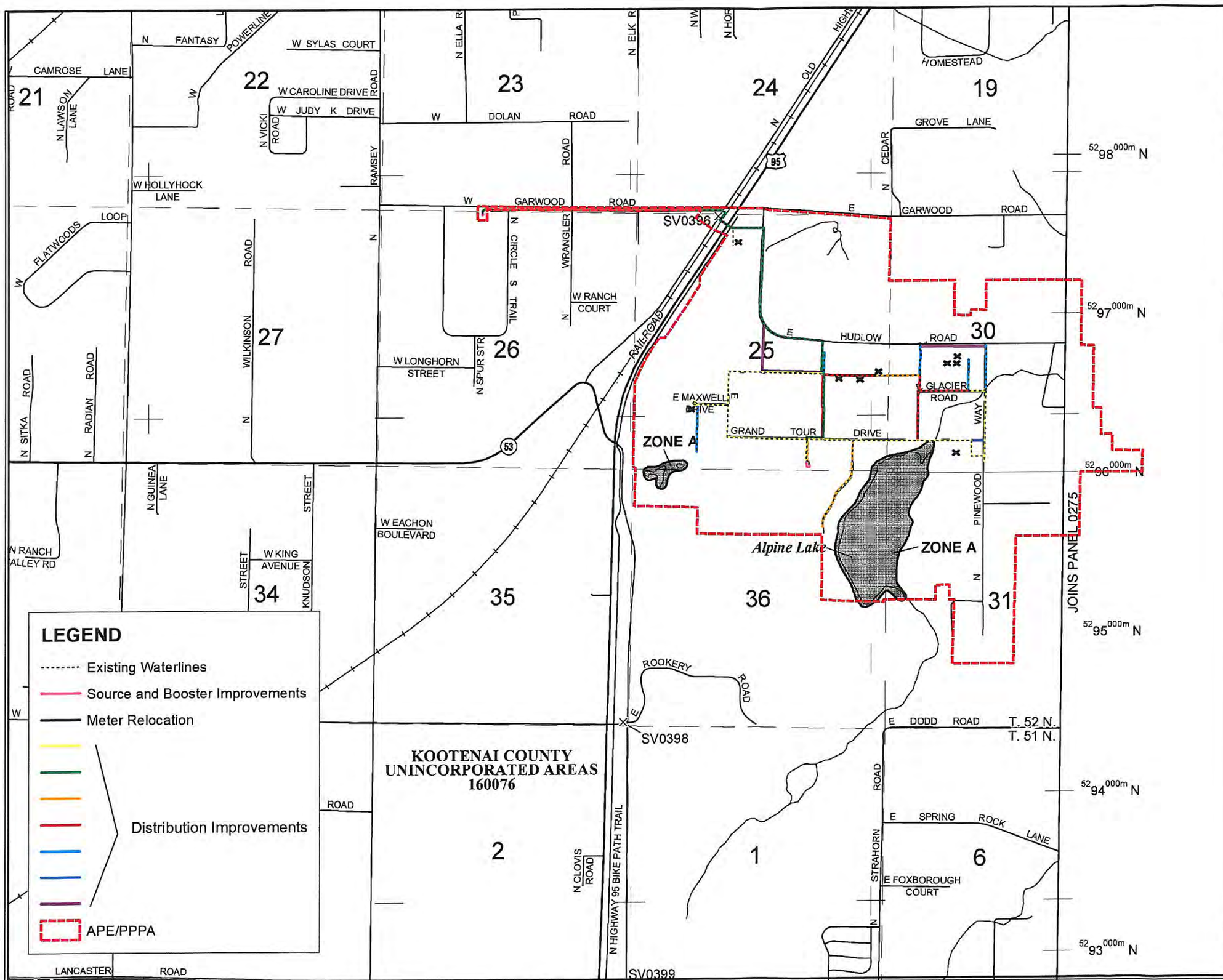
Sources:
Kootenai County GIS Department

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Zoning_11x17L
DATE.....5/9/12

APPENDIX F

Floodplains and Wetlands Maps

- FEMA Floodplain Map
- Wetlands Map



MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0250E

FIRM

FLOOD INSURANCE RATE MAP

KOOTENAI COUNTY, IDAHO

AND INCORPORATED AREAS

PANEL 250 OF 975

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
KOOTENAI COUNTY	160076	0250	E
HAYDEN LAKE, CITY OF	160082	0250	E
HAYDEN, CITY OF	160170	0250	E
RATHDRUM, CITY OF	160187	0250	E

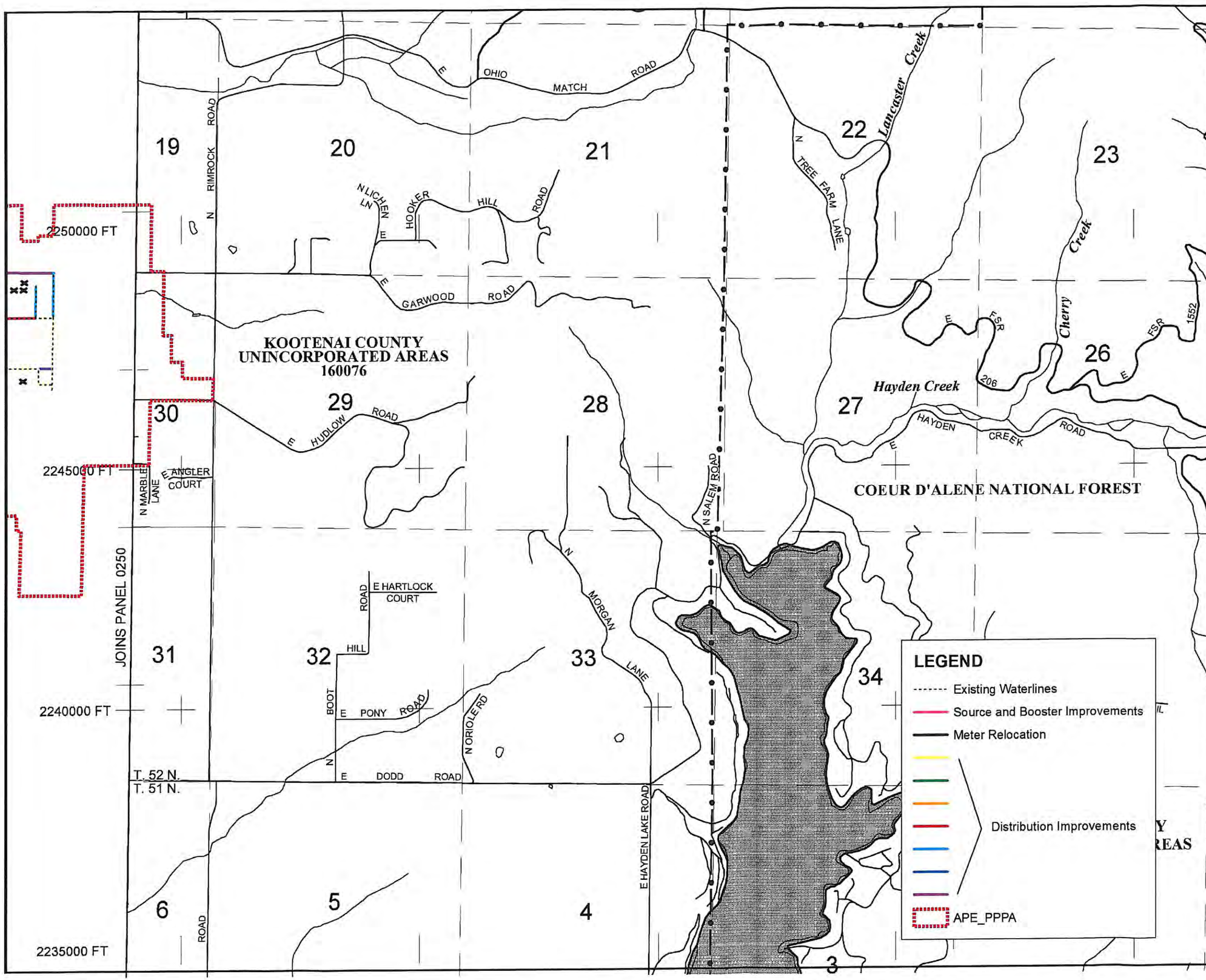
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
16055C0250E

EFFECTIVE DATE
MAY 3, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0275E

FIRM

FLOOD INSURANCE RATE MAP

KOOTENAI COUNTY, IDAHO

AND INCORPORATED AREAS

PANEL 275 OF 975

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
KOOTENAI COUNTY	160076	0275	E
HAYDEN LAKE, CITY OF	160082	0275	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
16055C0275E

EFFECTIVE DATE
MAY 3, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.g

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	Floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

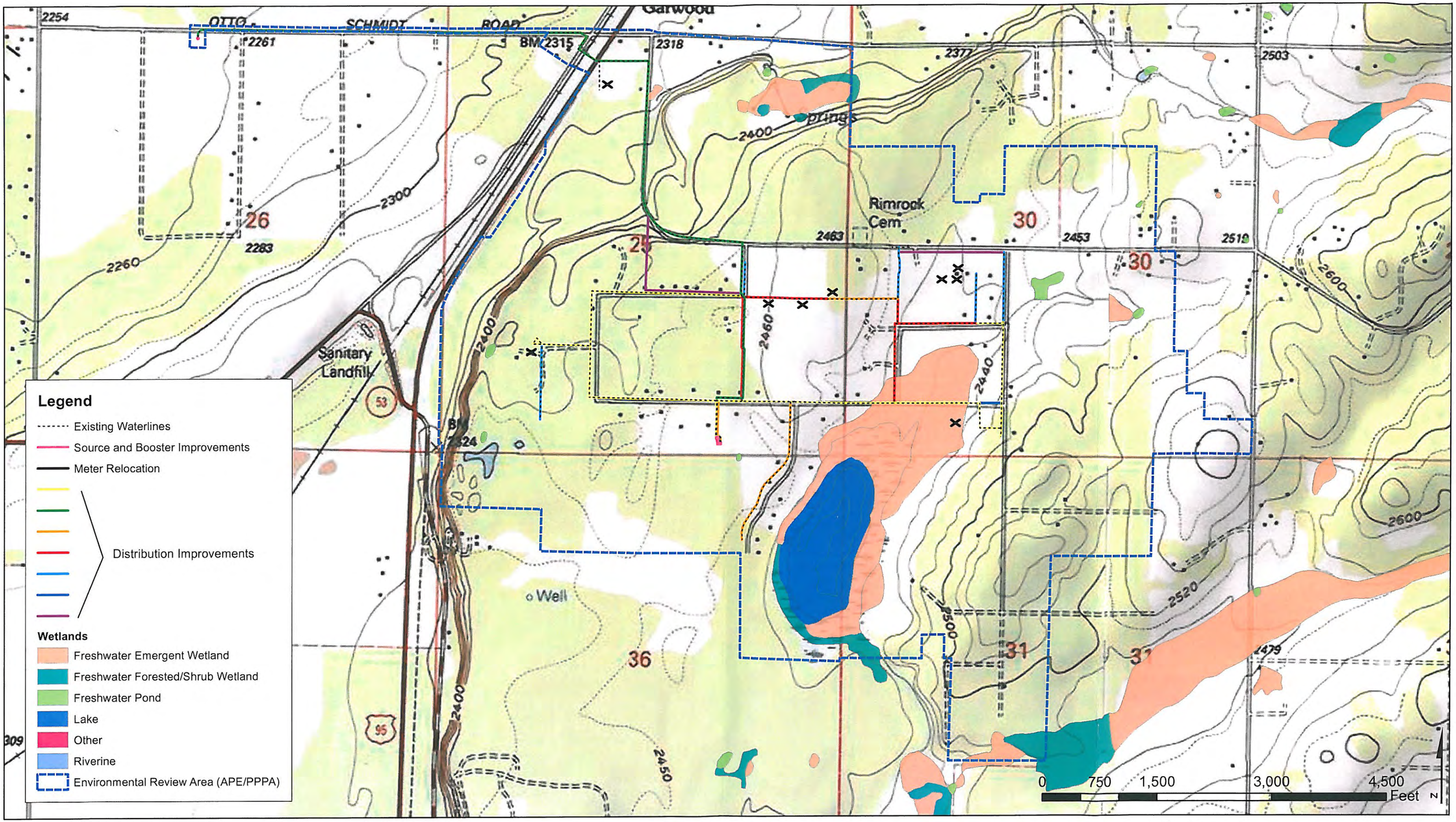
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A	Cross section line
23 - - - - - - - 23	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
$^{42}75^{000m}$N	1000-meter Universal Transverse Mercator grid ticks, zone 11
6000000 FT	5000-foot grid ticks: Idaho State Plane coordinate system, west zone (FIPSZONE 1103), Transverse Mercator
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
May 3, 2010
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



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Alpine Meadows Water and Sewer District

Wetlands

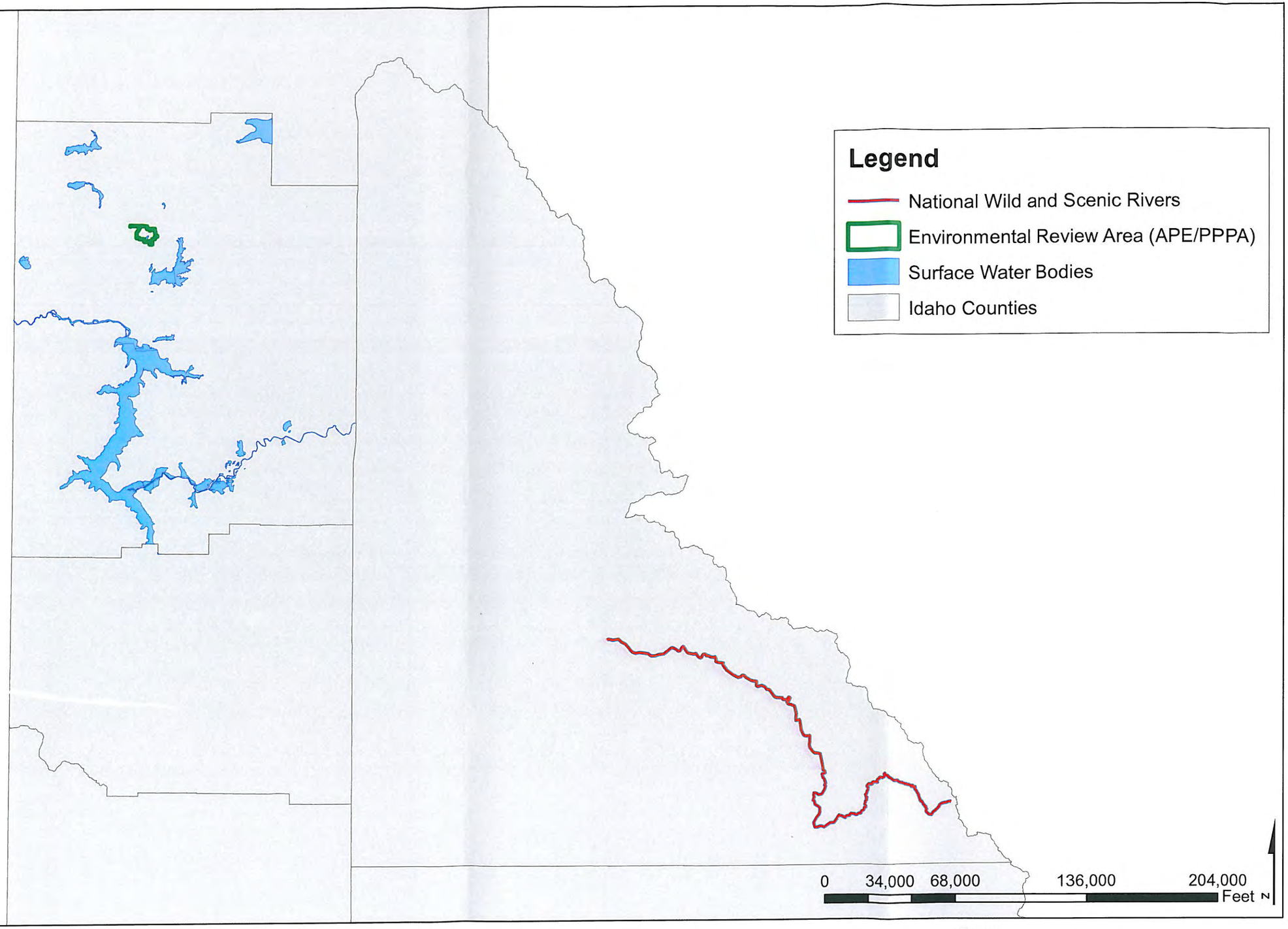
Sources:
Kootenai County GIS Department
US Fish and Wildlife National Wetland Inventory
USA Topo Maps

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Wetland_11x17L
DATE.....8/30/12

APPENDIX G

Wild and Scenic River Information

NATIONAL WILD AND SCENIC RIVERS SYSTEM
SEPTEMBER 2009
CONTINENTAL UNITED STATES
SCALE 1:1,000,000
Albers Equal Area Projection
PUERTO RICO
THE NATIONAL WILD AND SCENIC RIVERS SYSTEM
www.rivers.gov



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Alpine Meadows Water and Sewer District

Wild and Scenic Rivers

Sources:
Kootenai County GIS Department
National Wild and Scenic Rivers

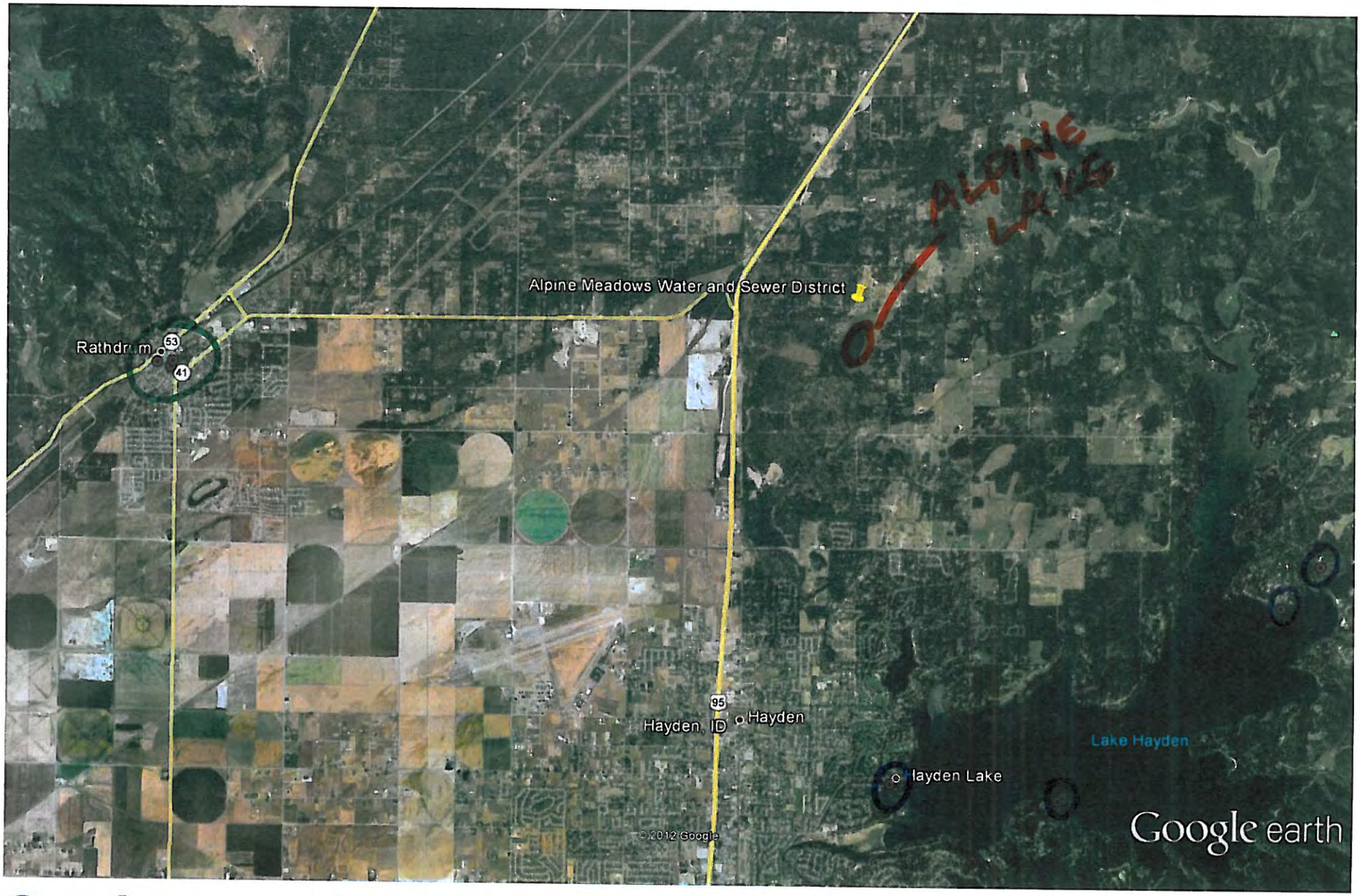
PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....WildnScenic_11x17L
DATE.....5/9/12

APPENDIX H

Historic Locations Map

National Register of Historic Places: Listed Properties as of October 1, 2011

85002090	IDAHO	Kootenai	Bayview	Bayview School II	Careywood Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
85002091	IDAHO	Kootenai	Rockford Bay	Bellgrove School II	Hamaker Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
66000312	IDAHO	Kootenai	Cataldo	Cataldo Mission	Off U.S. 10	19661015	BUILDING	
85002092	IDAHO	Kootenai	Medimont	Cave Lake School	ID 3	19850912	BUILDING	Kootenai County Rural Schools TR
85002093	IDAHO	Kootenai	Athol	Cedar Mountain School	Parks and Lewellyn Creek Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
78001070	IDAHO	Kootenai	Clarksville	Clark House	On Hayden Lake	19781212	BUILDING	
79000792	IDAHO	Kootenai	Coeur d'Alene	Coeur d'Alene City Hall	5th and Sherman Sts.	19790803	BUILDING	
77000461	IDAHO	Kootenai	Coeur d'Alene	Coeur d'Alene Federal Building	4th and Lakeside	19771216	BUILDING	
78001071	IDAHO	Kootenai	Coeur d'Alene	Coeur d'Alene Masonic Temple	525 Sherman Ave.	19780522	BUILDING	
85002094	IDAHO	Kootenai	Post Falls	Cougar Gulch School III	Cougar Gulch Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
99001476	IDAHO	Kootenai	Harrison	Crane, Silas W., and Elizabeth, House	201 S. Coeur d'Alene Ave.	19991209	BUILDING	
85001126	IDAHO	Kootenai	Coeur d'Alene	Davey, Harvey M., House	315 Wallace Ave.	19850523	BUILDING	
85002095	IDAHO	Kootenai	Camp Mivoden	East Hayden Lake School II	Hayden Lake Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
87001562	IDAHO	Kootenai	Hayden Lake	Finch, John A., Caretaker's House	2160 Finch Rd.	19870914	BUILDING	
79000793	IDAHO	Kootenai	Coeur d'Alene	First United Methodist Church	618 Wallace Ave.	19790618	BUILDING	
79000794	IDAHO	Kootenai	Coeur d'Alene	Fort Sherman Buildings	North Idaho Junior College campus	19791025	DISTRICT	
88000272	IDAHO	Kootenai	Coeur d'Alene	Gray, John P. and Stella, House	521 S. Thirteenth St.	19880331	BUILDING	
96001505	IDAHO	Kootenai	Harrison	Harrison Commercial Historic District	Roughly bounded by N. Lake Ave., W. Harrison St., N. Coeur d'Alene., and Pi	19961220	DISTRICT	
85002096	IDAHO	Kootenai	Medimont	Indian Springs School II	ID 3	19850912	BUILDING	Kootenai County Rural Schools TR
75000633	IDAHO	Kootenai	Coeur d'Alene	Inland Empire Electric Railway Substation	Mullan Rd. and Northwest Blvd.	19750627	BUILDING	
77000462	IDAHO	Kootenai	Coeur d'Alene	Kootenai County Courthouse	501 Government Way	19771223	BUILDING	
01000834	IDAHO	Kootenai	Rathdrum	Kootenai County Jail	802 Second St.	20010810	BUILDING	
85002097	IDAHO	Kootenai	Lane	Lane School II	Lanz Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
85002098	IDAHO	Kootenai	McGuire	McGuires School	Corbin Rd. and Old Hwy. 10	19850912	BUILDING	Kootenai County Rural Schools TR
09001163	IDAHO	Kootenai	Coeur d'Alene	Mooney-Dahlberg Farmstead	5803 Riverview Dr.	20091230	BUILDING	
90000548	IDAHO	Kootenai	Coeur d'Alene	Mullan Road	3 segments:1)between Aldar Creek and Cedar Creek;2)Fourth of July Pass be	19900405	SITE	
85002099	IDAHO	Kootenai	Pleasant View	Pleasant View School II	Pleasant View Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
84003851	IDAHO	Kootenai	Post Falls	Post Falls Community United Presbyterian Church	4th and William Sts.	19840907	BUILDING	
85002100	IDAHO	Kootenai	Coeur d'Alene	Prairie School II	Prairie Ave.	19850912	BUILDING	Kootenai County Rural Schools TR
74000742	IDAHO	Kootenai	Rathdrum	Rathdrum State Bank	1st and Mills Sts.	19741108	BUILDING	
76000676	IDAHO	Kootenai	Coeur d'Alene	Roosevelt School	1st and Wallace Sts.	19760730	BUILDING	
85002101	IDAHO	Kootenai	Rose Lake	Rose Lake School II	Queen St. and ID 3	19850912	BUILDING	Kootenai County Rural Schools TR
92000418	IDAHO	Kootenai	Coeur d'Alene	Sherman Park Addition	Bounded by Garden Ave., Hubbard St., Lakeshore Dr. and Park Dr.	19920427	DISTRICT	
79000795	IDAHO	Kootenai	Spirit Lake	Spirit Lake Historic District	Maine St.	19790208	DISTRICT	
03000124	IDAHO	Kootenai	Post Falls	Spokane Valley Land and Water Company Canal	Diverts in Falls Park, Fourth St.	20030320	STRUCTURE	
77000464	IDAHO	Kootenai	Rathdrum	St. Stanislaus Kostka Mission	McCartney and 3rd Sts.	19771117	BUILDING	
77000463	IDAHO	Kootenai	Coeur d'Alene	St. Thomas Catholic Church	919 Indiana Ave.	19771005	BUILDING	
85002156	IDAHO	Kootenai	Hayden Lake	Thunborg, Jacob and Cristina, House	Chicken Point	19850912	BUILDING	
92000420	IDAHO	Kootenai	Post Falls	Treaty Rock	N of I-90, NE of Spokane R. falls	19920430	SITE	
85002102	IDAHO	Kootenai	Silver Sands Beach	Upper Twin Lakes School	Twin Lakes Rd.	19850912	BUILDING	Kootenai County Rural Schools TR
96001507	IDAHO	Kootenai	Post Falls	Washington Water Power Bridges	.5 mi. W of jct. of Spokane and 4th Sts.	19961220	STRUCTURE	
97000765	IDAHO	Kootenai	Post Falls	Young, Samuel and Ann, House	120 4th Ave.	19970709	BUILDING	



Google earth

miles 7

km 10

O = RATHDRUM AREA SITES

O = HAYDEN LAKE AREA SITES

APPENDIX I

Endangered Species and Critical Habitat Information

- Endangered Species Information
- Critical Habitat Map

United States Department of the Interior
Fish and Wildlife Service
Idaho Fish And Wildlife Office
1387 S. Vinnell Way, Room 368
Boise, Idaho 83709
Telephone (208) 378-5243
http://www.fws.gov/idaho

U.S. Fish and Wildlife Service - Idaho Fish and Wildlife Office
Endangered, Threatened, Proposed, and Candidate Species
With Associated Proposed and Critical Habitats in Idaho

September 28, 2012

This Letter and Species List
The U.S. Fish and Wildlife Service (Service) is providing this letter in response to your inquiry regarding federally listed, proposed, and candidate species, and proposed and designated critical habitats that may occur in Idaho. Use the attached Species List to ensure compliance with Sections 7 and 9 of the Endangered Species Act (Act). As a federal agent or designated non-federal representative, use this list in conjunction with best available information to assess whether a proposed action may affect these species or their habitats. If you determine a proposed action may affect a species or their habitats, contact the Service to initiate informal or formal consultation. This list is only valid for a period of 90 days. An updated list can be obtained by downloading the PDF file: www.fws.gov/idaho/species/IdahoSpeciesList.pdf.

Candidate Species Conservation
Though Candidate species have no protection under the Act, they are included in the Species List for early planning consideration. Candidate species could be proposed or listed during the project planning period. The Service advises project proponents to evaluate potential effects to Candidate species that may occur in the project area. Should the species be listed, this may expedite Section 7 consultation under the Act.

Effects Beyond Idaho
If the anticipated effects of an action extend beyond the range of Idaho, please contact the appropriate Service Contact for lists of species and habitats occurring in those adjacent states.

U.S. Fish and Wildlife Service Contacts
Idaho - Idaho Fish and Wildlife Office, Bob Kibler, bob_kibler@fws.gov, (208) 378-5255
Montana - Montana Ecological Services Field Office, (406) 449-5225
Nevada - Nevada Fish and Wildlife Office, (775) 861-6300
Oregon - LaGrande Field Office, (541) 962-8584
Utah - Utah Ecological Service Field Office, (801) 975-3330
Washington - Eastern Washington Field Office, (509) 891-6839
Wyoming - Wyoming Ecological Services Field Office, (307) 772-2374

NOAA Fisheries Species
Listed or proposed species that are under National Marine Fisheries Service's (NOAA Fisheries) jurisdiction do NOT appear on the Service's Species Lists. In Idaho, please contact NOAA Fisheries at (208) 378-5696 or visit NOAA Fisheries' webpage at http://www.nwr.noaa.gov/Species-Lists.cfm for consultation information.

Additional Information
To obtain additional information about the Act, please visit one of the Service's internet sites at http://www.fws.gov/endangered/laws-policies/index.html; http://www.fws.gov/idaho/agencies.htm; or speak with a Service Contact.

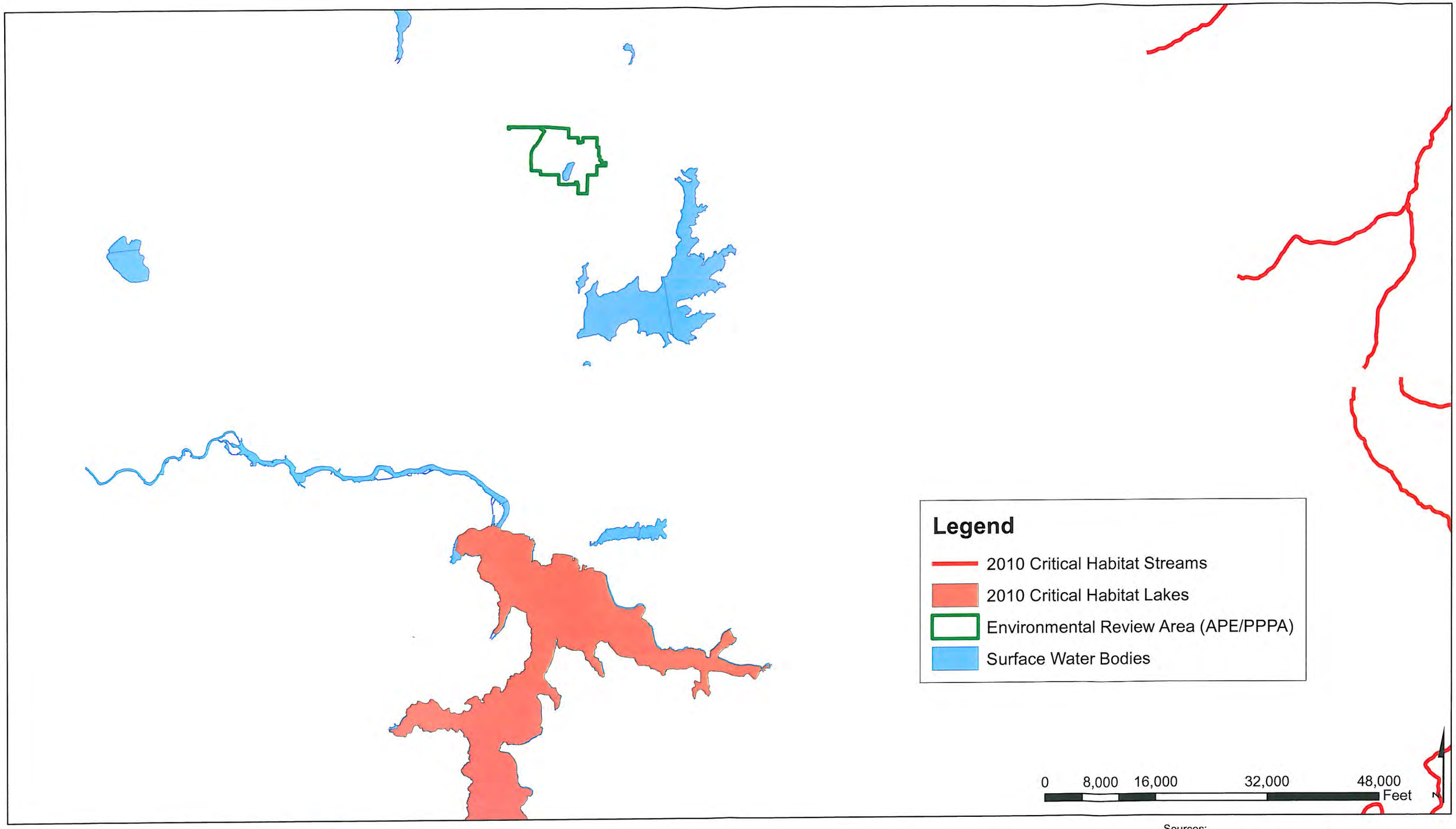
This species list was revised by the USFWS on 09/17/2012, and is valid for 90 days after .

U.S. Fish and Wildlife Service • Idaho Fish and Wildlife Office

CANDIDATE, PROPOSED AND LISTED SPECIES & PROPOSED AND DESIGNATED CRITICAL HABITAT IN IDAHO

	Herps	Birds		Mammals						Fish		Mollusks				Plants							
Common Name	Columbia Spotted Frog (Great Basin Population)	Greater Sage-Grouse	Yellow-Billed Cuckoo	Canada Lynx	Grizzly Bear	Northern Idaho Ground Squirrel	Selkirk Mountains Woodland Caribou	Southern Idaho Ground Squirrel	North American Wolverine	Bull Trout	Kootenai River White Sturgeon	Banbury Springs Lanx	Bliss Rapids Snail	Bruneau Hot Springsnail	Snake River Physa	Christ's Paintbrush	Goose Creek Milkvetch	MacFarlane's Four-O'Clock	Packard's Milkvetch	Spalding's Catchfly	Ute Ladies'-Tresses	Water Howellia	Whitebark Pine
Scientific Name	*Rana luteiventris*	*Centrocercus urophasianus*	*Coccyzus americanus*	*Lynx canadensis*	*Ursus arctos horribilis*	*Spermophilus brunneus brunneus*	*Rangifer tarandus caribou*	*Spermophilus brunneus endemicus*	*Gulo gulo luscus*	*Salvelinus confluentus*	*Acipenser transmontanus*	*Lanx* sp.	*Taylorconcha serpenticola*	*Pyrgulopsis bruneauensis*	*Haitia (Physa) natricina*	*Castilleja christii*	*Astragalus anserinus*	*Mirabilis macfarlanei*	*Astragalus cusickii var. parkardiae*	*Silene spaldingii*	*Spiranthes diluvialis*	*Howellia aquatilis*	*Pinus albicaulis*
Gooding		C							C			E	T		E								
Idaho			C	T					C	T-DCH								T		T			C
Jefferson		C	C	T					C												T		
Jerome		C											T		E								
Kootenai			C	T					C	T-DCH										T		T	
Latah			C	T					C											T		T	
Lemhi		C	C	T					C	T-DCH													
Lewis			C						C	T-DCH										T			
Lincoln		C							C														
Madison		C	C	T					C												T		
Minidoka		C	C												E								
Nez Perce				T					C	T-DCH										T			
Oneida		C																					
Owyhee	C	C	C							T-DCH				E	E								
Payette		C						C		T					E				C				
Power		C																					
Shoshone				T					C	T-DCH										T		T	C
Teton				T	T				C														C
Twin Falls	C	C	C						C				T		E								
Valley				T		T			C	T-DCH													C
Washington		C				T		C	C	T-DCH					E								C

Table Key: C = Candidate Species P= Proposed Species T=Threatened Species E=Endangered Species PCH= Proposed Critical Habitat DCH=Designated Critical Habitat



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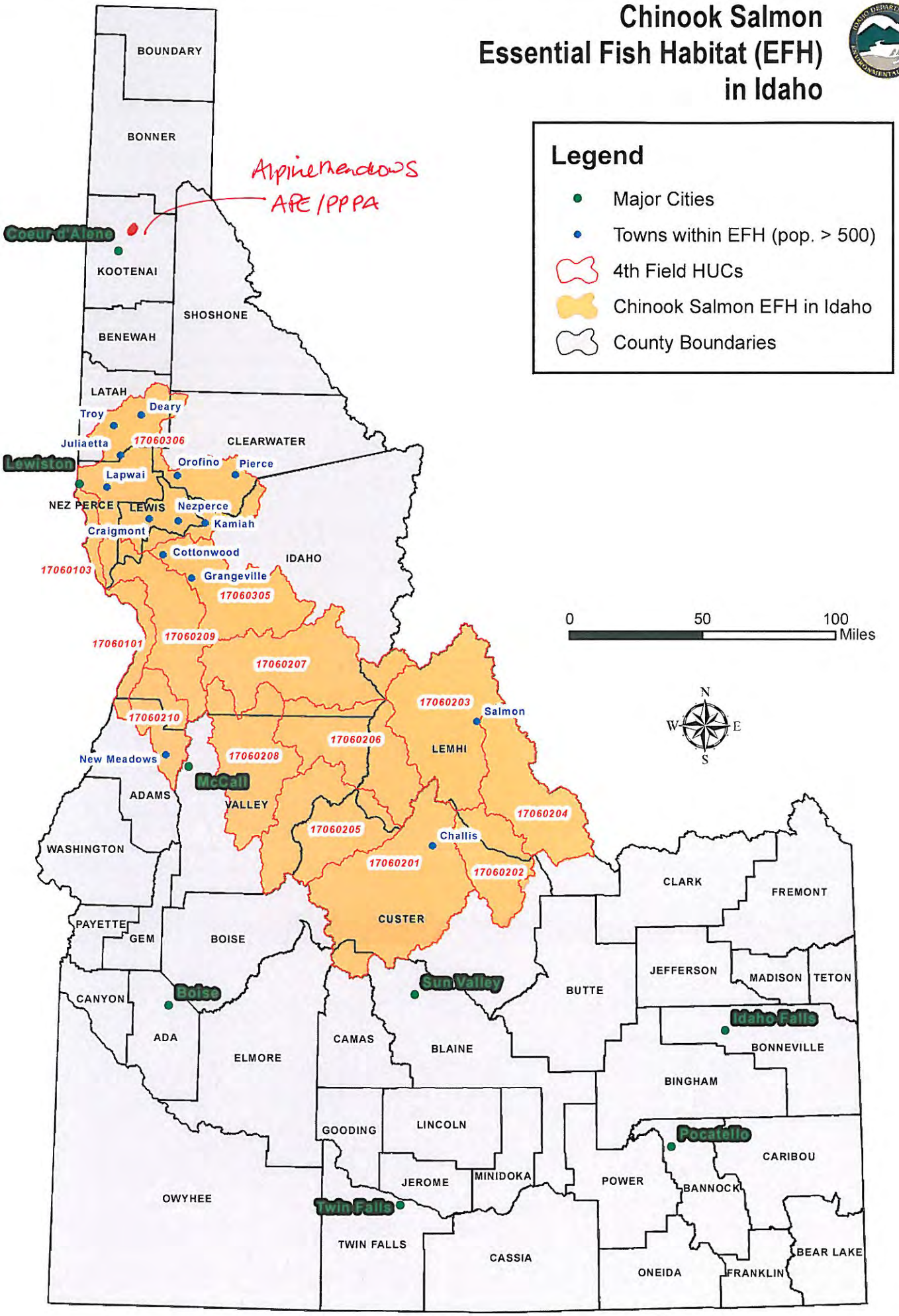
Alpine Meadows Water and Sewer District

Critical Habitat for Bull Trout

Sources:
Kootenai County GIS Department
US Fish and Wildlife Critical Habitat Portal

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....CritHab_11x17L
DATE.....5/9/12

Chinook Salmon Essential Fish Habitat (EFH) in Idaho

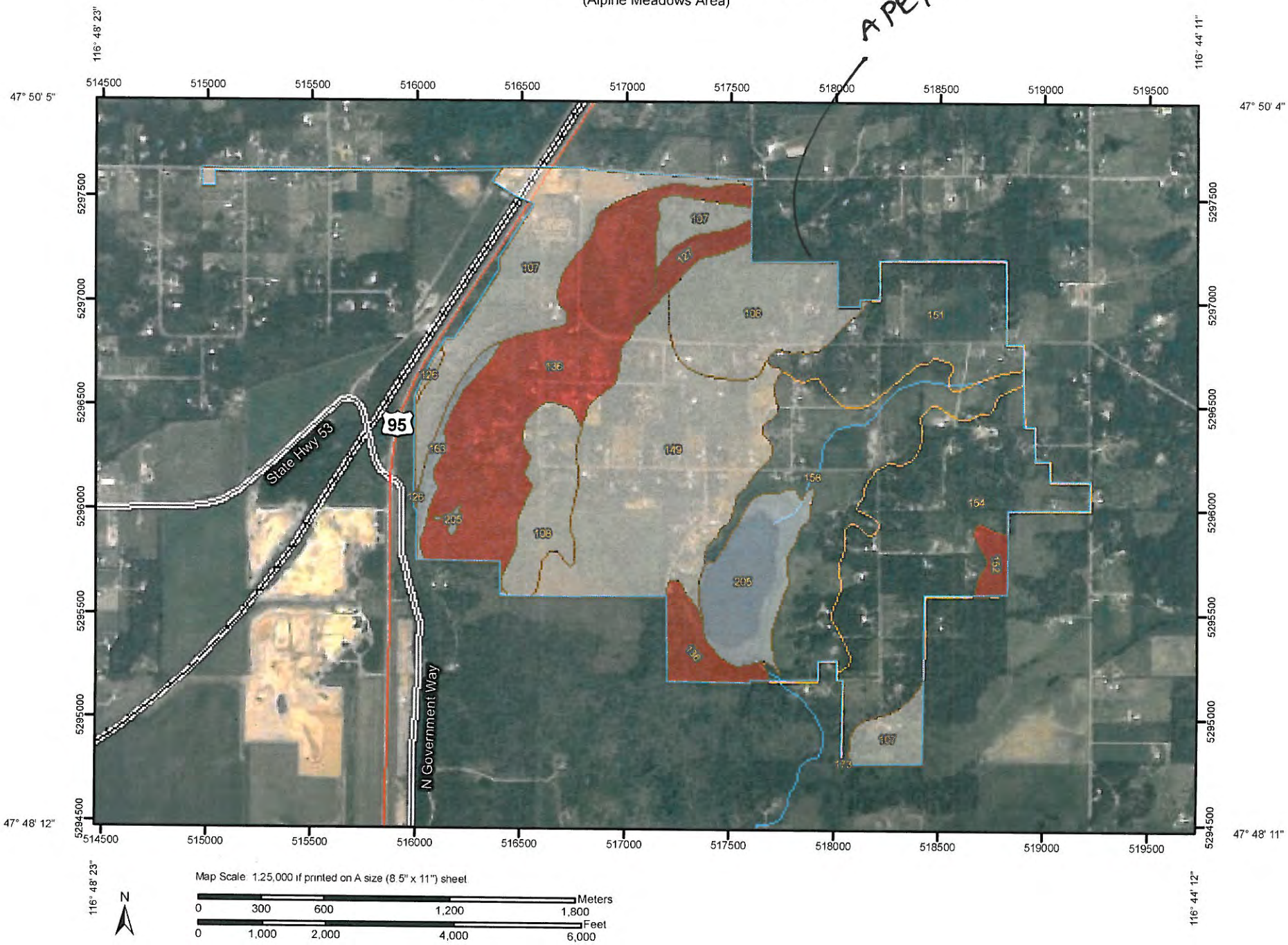


APPENDIX J

Farmland Classification Map

Farmland Classification—Kootenai County Area, Idaho
(Alpine Meadows Area)

APE/PPPA



USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:25,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kootenai County Area, Idaho
Survey Area Data: Version 7, Aug 7, 2012

Date(s) aerial images were photographed: 6/23/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Farmland Classification— Summary by Map Unit — Kootenai County Area, Idaho (ID606)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
107	Bonner silt loam, 0 to 8 percent slopes	Prime farmland if irrigated	160.9	11.6%
108	Bonner gravelly silt loam, 0 to 8 percent slopes	Prime farmland if irrigated	152.3	11.0%
126	Kootenai gravelly silt loam, 0 to 7 percent slopes	Prime farmland if irrigated	2.5	0.2%
127	Kootenai gravelly silt loam, 20 to 45 percent slopes	Not prime farmland	16.3	1.2%
136	Lacy-Bobbitt association, 5 to 35 percent slopes, very stony	Not prime farmland	225.7	16.3%
149	McGuire-Marble association, 0 to 7 percent slopes	Prime farmland if irrigated	230.0	16.6%
151	Mokins silt loam, 5 to 20 percent slopes	Farmland of statewide importance, if drained	120.0	8.6%
152	Mokins silt loam, 20 to 35 percent slopes	Not prime farmland	11.0	0.8%
154	Mokins-Chatcolet complex, 5 to 20 percent slopes	Farmland of statewide importance, if drained	214.5	15.5%
158	Potlatch silt loam	Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season	169.6	12.2%
163	Rock outcrop		13.3	1.0%
173	Seelovers-Potlatch complex	Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season	0.1	0.0%
205	Water		70.8	5.1%
Totals for Area of Interest			**1,387.0**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

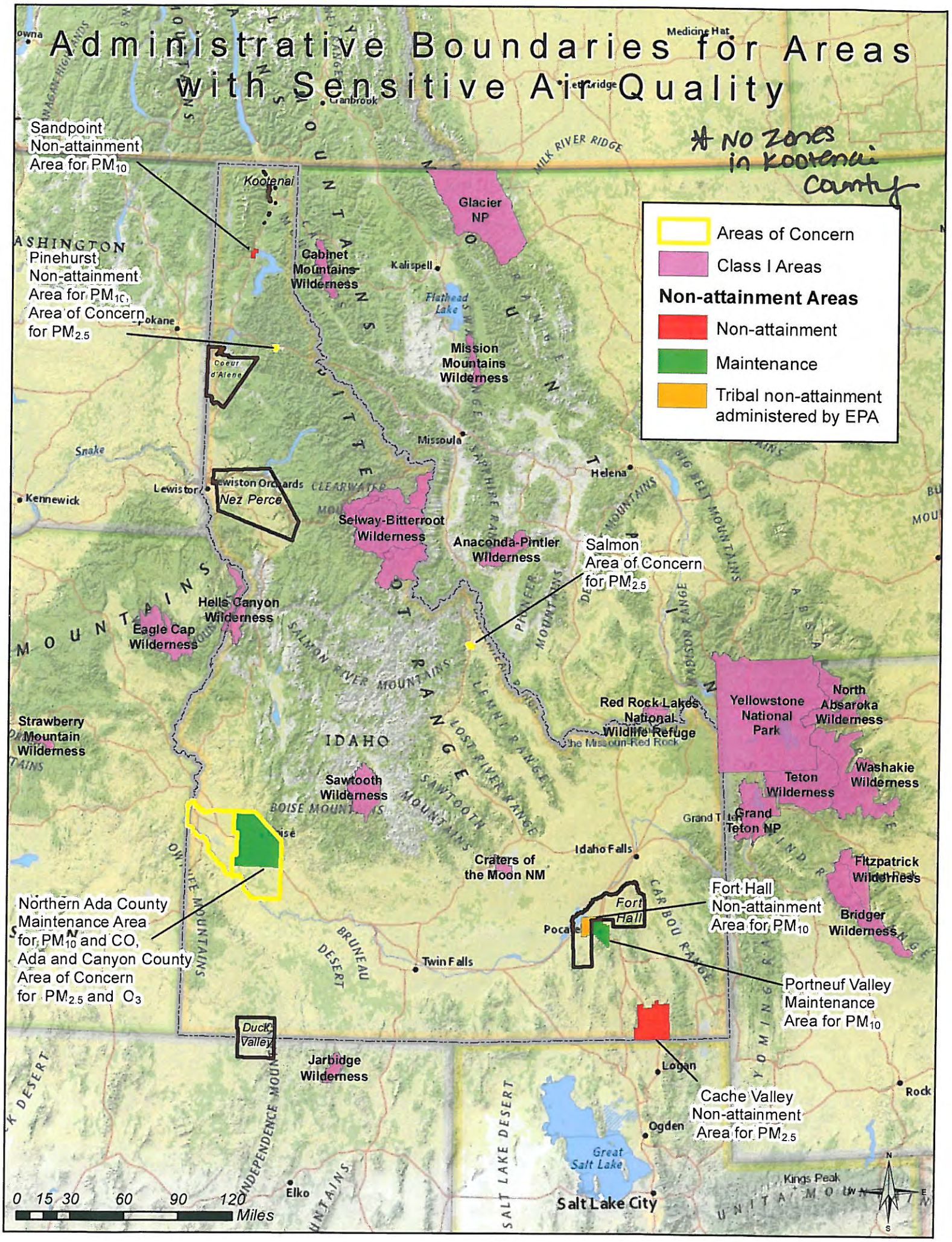
Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

APPENDIX K

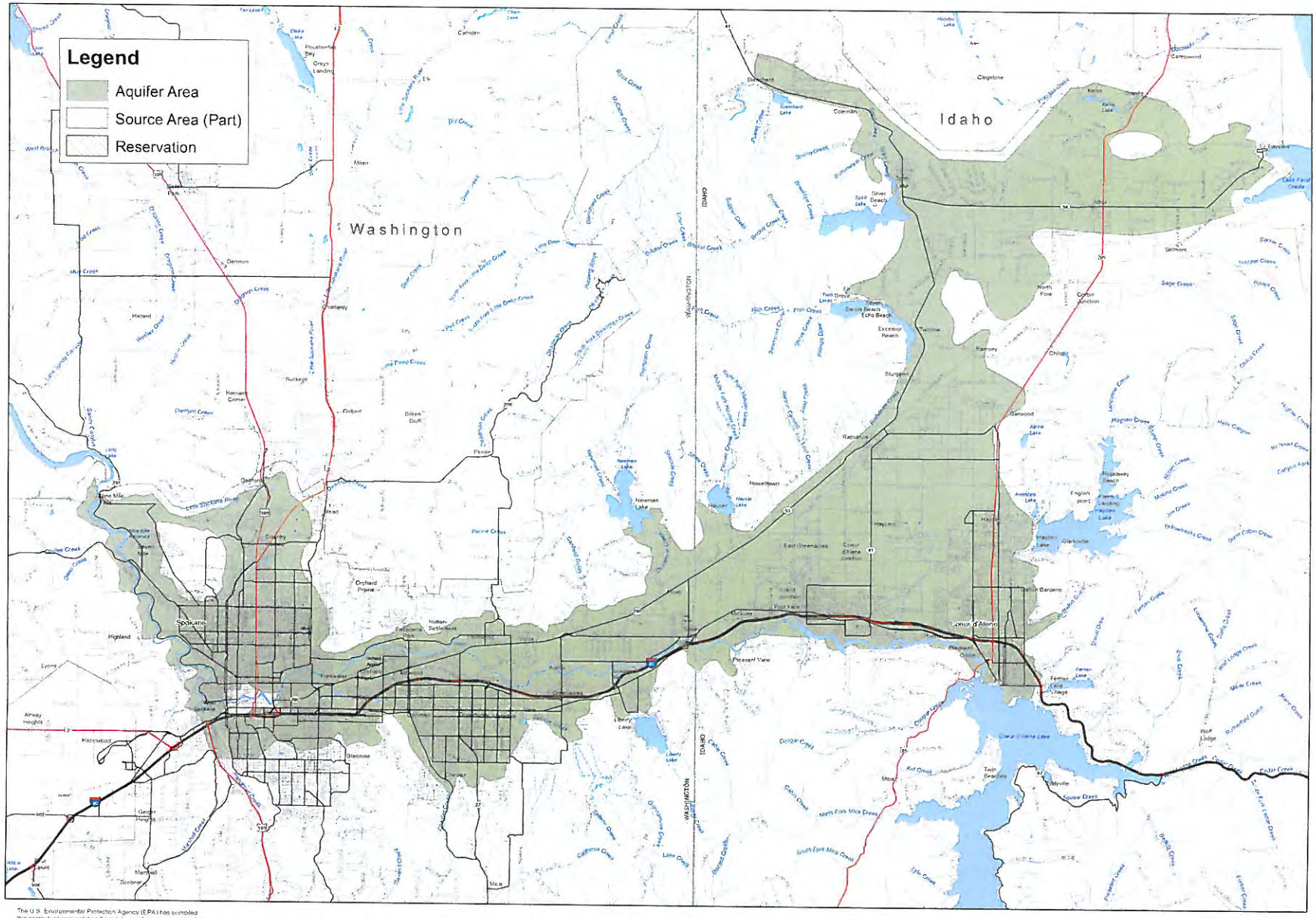
Air Quality Map

Administrative Boundaries for Areas with Sensitive Air Quality



APPENDIX L

Sole Source Aquifer Map



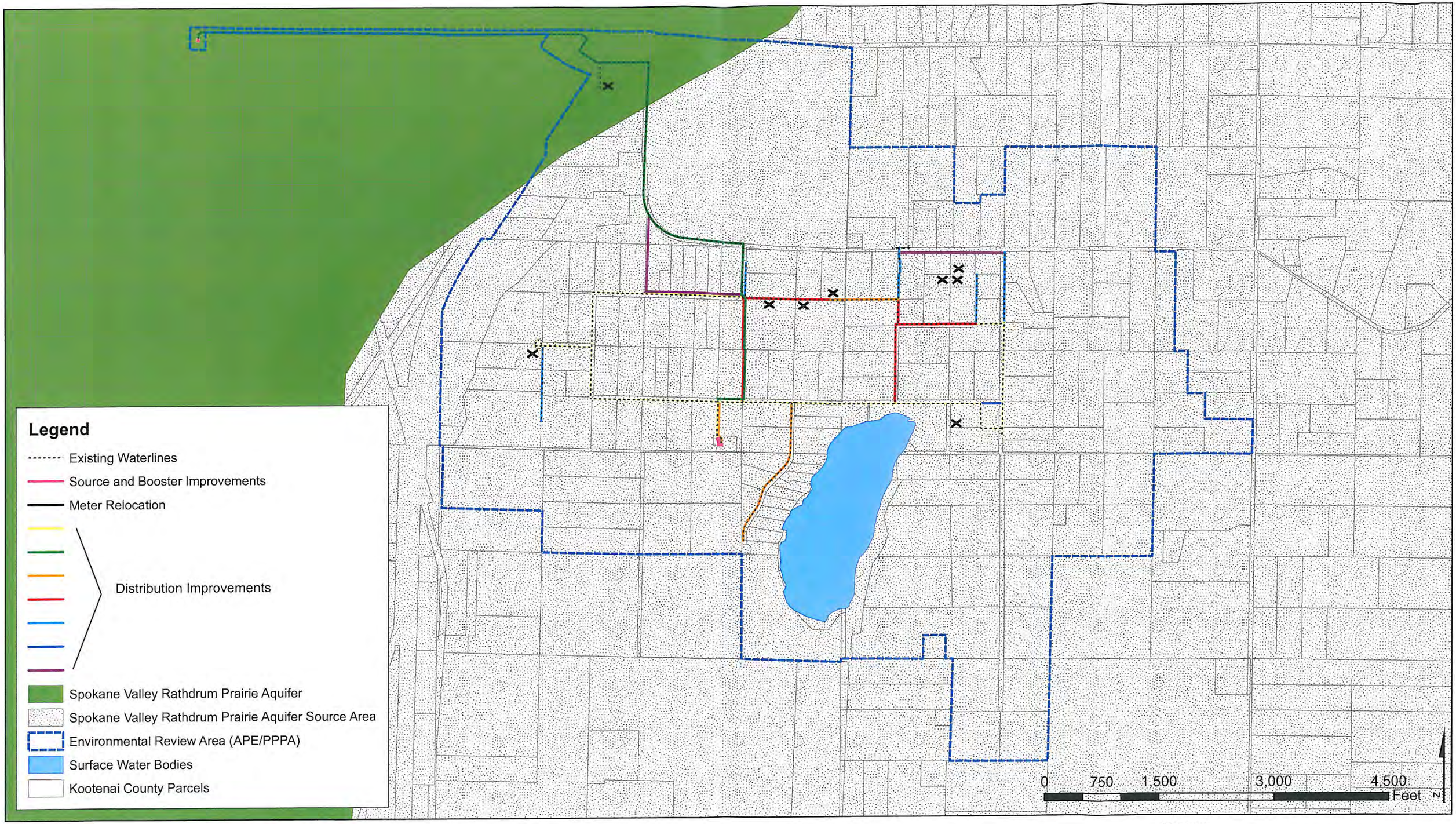
The U.S. Environmental Protection Agency (EPA) has compiled this computer representation from data or information sources that may not have been verified by the EPA. This data is offered here as a general representation only and is not to be re-used without verification by an independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy completeness, or timeliness of the information shown and shall not be liable for any loss or injury resulting from reliance upon the information shown.

Spokane-Rathdrum Sole Source Aquifer

Aquifer Area and Part of Source Area

0 5 10 20 Kilometers

Map Created 11/04/2008 EPA Region 10



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(fax) 208-664-5946

Alpine Meadows Water and Sewer District

Sole Source Aquifer

Sources:
Kootenai County GIS Department
EPA Region 10 Sole Source Aquifer Program
Idaho Department of Water Resources

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Aquifer_11x17L
DATE.....8/30/12

APPENDIX M

Water Quality Information

Alpine Meadows Drinking Water Quality Report 2010

Last year, we conducted more than 14 tests for drinking water contaminants. We did not detect any regulated chemical compounds above regulated levels.

This report is a snapshot of the quality of the water that we provide each year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. For more information about your water, call 772-5313.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Your water comes from one well located on Garwood Road, about 3/4 of a miles west of Highway 95 at 1700 W Garwood Road, which is sunk into an underground source of water called the Rathdrum Prairie Aquifer. We own the land around the well and restrict activity that could contaminate it. After the water comes out of the well, it is chlorinated, and we pump it to our storage reservoirs where it is then pumped into the distribution system.

The state is performed a source water assessment in May of 2001. A copy is available at the Idaho Department of Environmental Quality in Coeur d'Alene at 2110 Ironwood Parkway.

Our Water Board meets on the second Tuesday of each month at the pump house at 2942 E. Grand Tour starting at 7 PM. Please feel free to participate in these meeting.

General Drinking Water Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of all drinking water, not just ours, (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:
Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.
Radioactive contaminants, which are naturally occurring.
Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Water Quality Data

Terms and abbreviations used below:

- **Maximum Contaminant Level Goal** (MCLG): the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety
- **Maximum Contaminant Level** (MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology
- **Action Level** (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow
- **n/a** not applicable, **nd**: not detectable at testing limit, **PPM** parts per million or milligrams per liter, **PPB** parts per billion or micrograms per liter, **pC/l** picocuries per liter (a measure of radiation)

Inorganic Contaminants	MCL	MCLG	Our Water	Range of Detection	Sample Date	Violation?	Typical Source of Contaminant
Nitrate	10 PPM	10 PPM	.9 PPM		05/04/10	No	Agricultural runoff, fertilizers, Septic tank effluent

Organic Chemical Contaminants	MCL	MCLG	Our Water	Range of Detection	Sample Date	Violation?	Typical Source of Contaminant
Synthetic Organic Compounds			nd		05/04/10	No	

Radionuclides	MCL	MCLG	Our Water	Range of Detection	Sample Date	Violation?	Typical Source of Contaminant
Alpha Activity	15 pC/l	0	.6 pC/l		08/06/03	No	Erosion of natural deposits
Beta Activity	50 pC/l	0	2.1 pC/l		08/06/03	No	Erosion of natural deposits

Bacteria	MCL	MCLG	Our Water	Range of Detection	Sample Date	Violation?	Typical Source of Contaminant
Total Coliform	Non	Non	Non		Monthly	No	Naturally present in the environment See Notes

Lead/Copper	Action Limit	MCLG	Our Water	Range of Detection	Sample Date	Violation ?	Typical Source of Contaminant
Copper	1.3 PPM	1.3 PPM	.12 PPM	.07 - .12 PPM	12/31/2010	No	Corrosion of pipes within the water system, erosion of natural mineral deposits
Lead	15 PPB		.000		12/31/2010	No	Corrosion of pipes within the water system, erosion of natural mineral deposits

Notes:

Monitoring Waiver Information
Our well is within the **Rathdrum Prairie Aquifer Wellhead Protection Area**. This is a geographical and geological area where strict regulations to protect ground water (drinking water) are applied. The federal Environmental Protection Agency (EPA) has granted the State of Idaho authority to issue monitoring in this area. We have received partial waivers from IOC monitoring, full waivers from VOC, SOC, Asbestos, Cyanide, and Dioxin monitoring. The waivers and the criteria used to evaluate Alpine Meadows is at the Department of Environmental Quality office in Coeur d'Alene at 2110 Ironwood Parkway.

Improvements
The well pump was replaced in December of 2006. A major line relocation under Hiway 95 was completed in the summer of 2008.

Failure to Monitor
None

Our water system operator
If you have a problem or questions about your water or water system you should contact the Water Master Jeff Mueller at 772-5313.

Billing Questions?
Please contact Jim Lindsay at 772-2989 in the early evenings.

Alpine Meadows Water & Sewer District
PO Box 526
Hayden Lake, ID 83835-0526
772-5513
772-2989

Friday, September 30, 2011

Ms. Jean Felker
Department of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83835

Dear Ms. Felker:

This letter is in response to your letter of May 3, 2011 regarding the Sanitary Survey of PWS #ID1280002, the Alpine Meadows Water & Sewer District.

All items discussed as needing to be corrected have been completed as of this date with the exception of:

- The installing of vents in both reservoirs which will be done at the next major modification as per your letter.
- The reservoir hatches have no inner gasket seals by design and the hatches will need to be re-engineered at the time of the major modifications.

Thank you for your well done survey of our water district.

Sincerely

Jim Lindsay
Sect/Treasurer

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway, Coeur d'Alene, ID 83814 (208) 769-1422

C. L. "Butch" Otter, Governor
Toni Hardesty, Director

May 3, 2011

Mr. Jim Lindsay
Alpine Meadows Water District Board President
PO Box 526
Hayden Lake, ID 83835

Subject: **Sanitary Survey of PWS #ID1280002, Alpine Meadows Water District**

Dear Mr. Lindsay:

Thank you for your assistance in conducting the inspection of the Alpine Meadows Water District on April 13, 2011. We found that the water system was well built, properly maintained, and in substantial compliance with the Idaho Rules for Public Drinking Water Systems. It will continue with its **approved** designation.

One significant deficiency was identified at the time of the survey; however, the following additional requirements must also be met.

Significant Deficiency

1. A flow cut off switch is required on the LMI sodium hypochlorite pump in the event the well pump is energized but is not able to produce water to prevent the pump from producing excessive chlorination into the water supply. This represents a significant deficiency.

Requirements to be Corrected

1. Remove the cleaning solutions and other non-necessary chemicals from the well house and reservoir pump house.
2. The hypochlorite solution tank is vented to the outside; however, the vent line must be sealed.
3. The reservoir overflows need to be increased to between 12 and 24 inches from the ground surface. It is recommended that the area under the overflows have a concrete or gravel splash pad area installed.
4. The reservoir does not have vents installed and is likely venting through the overflows. At the time of the next major modification, you will need to install vents in both reservoirs per IDAPA 58.01.08.544.08
5. The reservoir roof sealant is peeling and is in need of being stripped and re-sealed with an NSF approved sealant.
6. The reservoir hatches need to have the inner gasket seals replaced during this summer season.

If you have any questions regarding this survey, please do not hesitate to contact me at DEQ in Coeur d'Alene, located at 2110 Ironwood Parkway; phone 208 666-4630.

Sincerely,

Jean Felker

Jean Felker
Drinking Water Analyst
Jean.felker@deq.idaho.gov

c: Mr. Jeff Mueller, Operator, Alpine Meadows Water District, 3027 Grand Tour Drive, Hayden, ID 83835
File in TRIM: ID1280002 Alpine Meadows W&SD

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER SUPPLY REPORT
2011

PWS NUMBER: **ID1280002**
SYSTEM: **ALPINE MEADOWS WATER DISTRICT**
OWNERSHIP: Alpine Meadows Water District
INFORMATION OBTAINED FROM: Jeff Mueller
COUNTY: Kootenai County
INSPECTOR: Jean Felker DATE: 04/13/2011
NUMBER OF CONNECTIONS: 103 POPULATION SERVED: 258

FIELD SURVEY DATA

The Alpine Meadows Water District is a non-profit District owned water system located near Garwood Road and Hwy 95 in Kootenai County, Idaho. The well and pump house are located at 1400 West Garwood Road and east of Hwy 95. The reservoirs and pump house are located off Grand Tour Drive on the east side of Hwy 95.

The water system consists of a drilled well and well house which pump up to two side by side reservoirs located approximately 88 feet in elevation on the reservoir and pump house lot. The water system voluntarily disinfects using sodium hypochlorite injected at the well house and then pumped to the reservoirs and out to distribution. The well draws its water from the Rathdrum Prairie Aquifer utilizing a 25-horsepower submersible pump.

The system serves 103 connections and approximately 258 people. The designated operator in charge, Jeff Mueller, along with three of the Alpine Meadows Water District Board members Jim Lindsay, John Jones, and Mike Waldo, were onsite at the time of the survey. Department Engineer Mike Camin was also on site for the survey.

Source

Well 1 is located at 1400 West Garwood Road approximately ¾ mile west of Hwy 95 and was drilled in December 1977 to a depth of 348 feet. Per the well log, it produces approximately 160 gpm with a static water depth of 262 feet. The casing size is 12 inches and casing depth is 331 feet; grout depth is 40 feet. It meets current setbacks and minimum distances as required by the Rules. The well log is on file for this well. The well casing extends a minimum of 18 inches above the ground surface with a properly screened vent and sealed well cap.

A smooth nose raw water sample tap for this well is located inside of the well house prior to the chlorination injection point. The pressure gauge and instantaneous and totalizing flow meter

were working properly at the time of the survey. The well does not have flow to waste capability. The well house was properly heated, ventilated, lighted, and had adequate floor drainage. It was clean and well organized. The well lot and well house were securely fenced and locked to prevent unauthorized entry. Two buckets containing cleaning solution were noted in the well house and must be removed, as discussed during the survey.

The well house is equipped with a diaphragm meter pump and sodium hypochlorite solution tank to provide voluntary disinfection to the reservoirs and to distribution. The electrical power for the metering pump is connected to the electrical power to the well pump. Therefore, the metering pump energizes with the well pump. A flow cut off switch is required in the event the well pump is energized, but not producing water. That situation could produce excessive concentrations of chlorine entering distribution and represents a significant deficiency.

The hypochlorite solution tank is vented to the outside; however, the vent is not adequately sealed. The vent must be revised to include adequate seals for both the day tank and the exterior wall. Sealants could be provided with a flexible gasket, and/or silicone or appropriate caulk.

No existing ground water problems have been identified by the Source Water Assessment report completed May 21, 2001. The GWUDI (Ground Water Under Direct Influence of Surface Water) assessment was completed on May 1, 1995 and determined that no surface water is influencing the ground water source. The operator verified there is no seasonal water or streams in the service area.

The previous deficiencies related to the well and well house noted on the February 2005 sanitary survey have been corrected.

Storage

The water system contains two partially buried concrete reservoirs: the 20,000 gallon reservoir was installed in 1977 and the 80,000 gallon reservoir was installed in 1990. The reservoirs are side by side, interconnected, and utilize floats to control the well pump. The set points change seasonally to maximize efficiency and keep the reservoir water stored turning over. The increase in altitude to the reservoir from the well is approximately 88 feet.

The adjacent booster station contains two 5 hp and one 10 hp booster pumps which operate in a lead/lag alternating sequence to supply pressure to distribution. The booster pumps have an automatic cut off switch to prevent pump damage in the event the reservoir gets too low. The pump house contains a smooth nosed sample tap for the reservoirs, pressure gauge, and flow meter.

The reservoir overflows are screened with a 24-mesh which is in good condition. The distance between the overflow and the ground surface needs to be increased to between 12 and 24 inches to preclude the possibility of backflow into the reservoir. It is recommended that the area under the overflows have a concrete or gravel splash pad area installed. The area provides adequate drainage away from the reservoirs.

The reservoir does not have vents installed and is likely venting through the overflows. At the time of the next major modification you will need to install vents in both reservoirs per IDAPA 58.01.08.544.08 which requires that water storage reservoirs be vented and shall:

a. Prevent the entrance of surface water and rainwater and extend twelve (12) inches above the roof.
b. Exclude birds and animals.
c. Exclude insects and dust, as much as this function can be made compatible with effective venting.
d. On ground level, partially buried, or below ground structures, open downward with the openings at least 24 inches above the roof or the ground level and covered with 24 mesh non-corrodible screen.

The reservoir roof sealant is peeling and is in need of being stripped and re-sealed with an NSF approved sealant. The operator, Jeff Mueller, and Board members present agreed that this could be accomplished during the 2011 summer season. There were no signs of leaking from the sides of the reservoir and the cracks visible on the roof area were minor. The reservoir hatches need to have the inner gasket seals replaced during this summer season. The reservoir was last inspected and cleaned in 2009. The reservoir interior appeared to be clean by inspection from the reservoir hatch. The Department recommends the reservoirs be inspected and cleaned every 5 years.

Several bags of Tamoseal and bonding liquid must be removed from the pump house booster station room. The reservoir grounds and the pump house are adequately secure and protected from unauthorized access and vandalism by the use of fencing and locks.

Both reservoirs can be isolated from the system in order to perform routine maintenance and cleaning by using the valves to bypass the reservoir.

Distribution

The water system currently serves 103 connections; all of which are metered. The distribution lines consist of 2-inch through 6-inch PVC pipe with 10 fire hydrants. The Department recommends that all valves be exercised and main lines be flushed annually. It is required that any dead end lines be flushed once every six months. The operator, Jeff Mueller, stated that all valves are exercised twice a year, and that main lines are flushed annually. There are two (2) air relief assemblies at the high points in the system. The vaults drain to daylight and the air relief assemblies are properly vented.

There have been no interruptions of service including pressure loss in the past year. If at any time there is a depressurization event, the water system operator must provide public notification to its users and also notify the DEQ.

The water system must continue to ensure that cross connections do not exist or are isolated from the potable water system by an approved backflow prevention assembly. Backflow prevention assemblies shall be inspected and tested annually for functionality by an Idaho licensed tester, as specified in Subsection 552.06.c. Annual backflow testing of all backflow assemblies installed

on underground sprinkler systems within distribution is required. The cross connection control program was discussed in detail at the time of the survey with the system operator and Board members present.

The Department recommends that all frost free hydrants on the water system have an atmospheric vacuum breaker installed to prevent cross connection contamination; and that at no time are frost free hydrants left in the open position when connected to garden hoses where attachments on the hose regulate flow.

Financial & Managerial Capacity

The Alpine Meadows Water District is current on their drinking water fees with the State.

Monitoring Schedule

The Alpine Meadows Water District has the following monitoring requirements:

Distribution: Total coliform – 1 routine per month from distribution
Lead and Copper – 5 routine samples per 3 years from distribution
DBP-TTHM and HAA5 – 1 routine per 3 years from distribution

Well: Arsenic – 1 sample per 9 years
Fluoride – 1 sample every 9 years
Sodium – 1 sample every 3 years
Nitrate – 1 sample per year
Nitrite – 1 sample per 9 years
Rads – Gross Alpha, 226, & 228 – 1 sample every 9 years
Rads – Uranium – 1 sample every 9 years
VOC group – 1 sample per 6 years
IOC group – 1 sample per 9 years

The last positive coliform sample was May 2009.

Conclusions and Recommendations

At the time of the survey it was evident that the operator, Jeff Mueller, and the attending Board members take their responsibility of providing adequately treated water to the users at Alpine Meadows Water District seriously. Their efforts are appreciated by the Department. The Alpine Meadows Water District was found to be in substantial compliance with the Idaho Rules for Public Drinking Water Systems. One significant deficiency was noted.

The previous deficiencies noted on the February 2005 sanitary survey have been corrected.

The deficiencies and additional requirements listed below need to be addressed in a written plan of correction (POC), submitted within 30 days of the receipt of this letter. The POC is a simple

narrative document that lists the deficiencies and additional requirements, how they will be corrected, and the date by which correction will be completed. Please afford yourself adequate time to address the problems so that time extensions will not be necessary.

Significant Deficiency

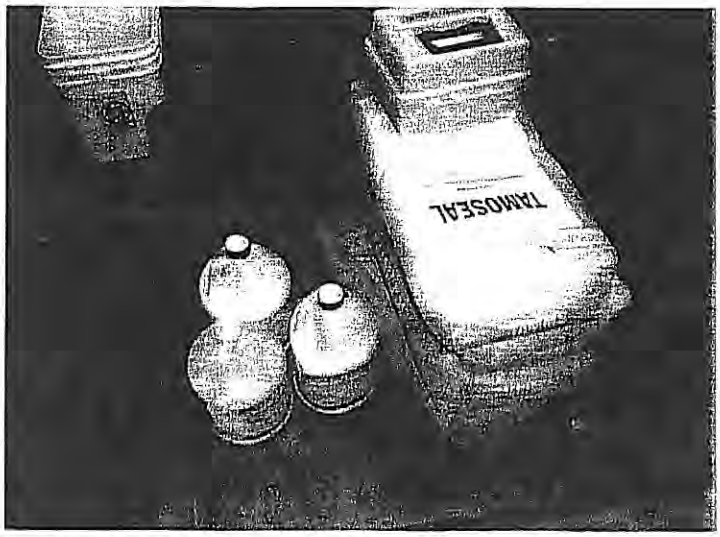
1. A flow cut off switch is required on the LMI sodium hypochlorite pump in the event the well pump is energized but is not able to produce water to prevent the pump from producing excessive chlorination into the water supply. This represents a significant deficiency.

Requirements to be Corrected

1. Remove the cleaning solutions and other non-necessary chemicals from the well house and reservoir pump house.
2. The hypochlorite solution tank is vented to the outside; however, the vent line must be sealed.
3. The reservoir overflows need to be increased to between 12 and 24 inches from the ground surface. It is recommended that the area under the overflows have a concrete or gravel splash pad area installed.
4. The reservoir does not have vents installed and is likely venting through the overflows. At the time of the next major modification you will need to install vents in both reservoirs per IDAPA 58.01.08.544.08
5. The reservoir roof sealant is peeling and is in need of being stripped and re-sealed with an NSF approved sealant.
6. The reservoir hatches need to have the inner gasket seals replaced during this summer season.

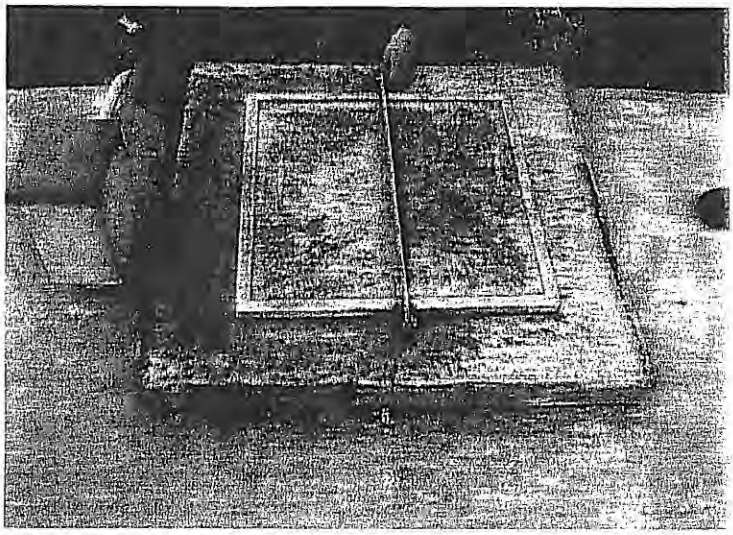
Jean Felker — 5/03/2011

Jean Felker, Drinking Water Analyst — Date

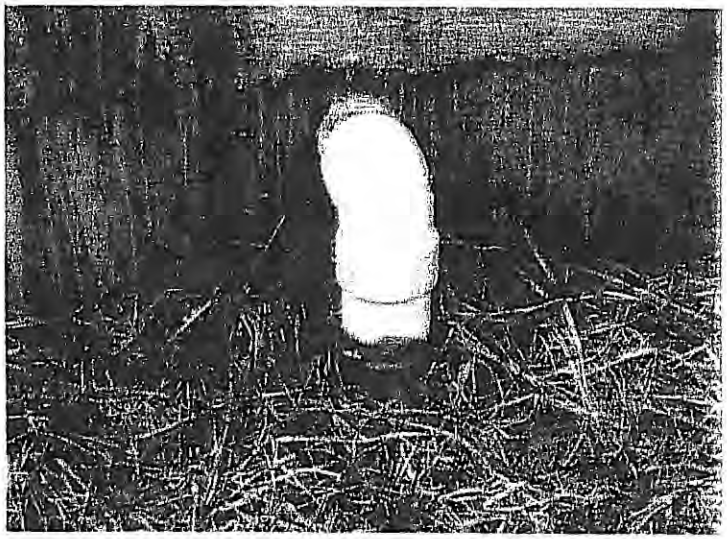


reservoir sealants to be removed from pump house area

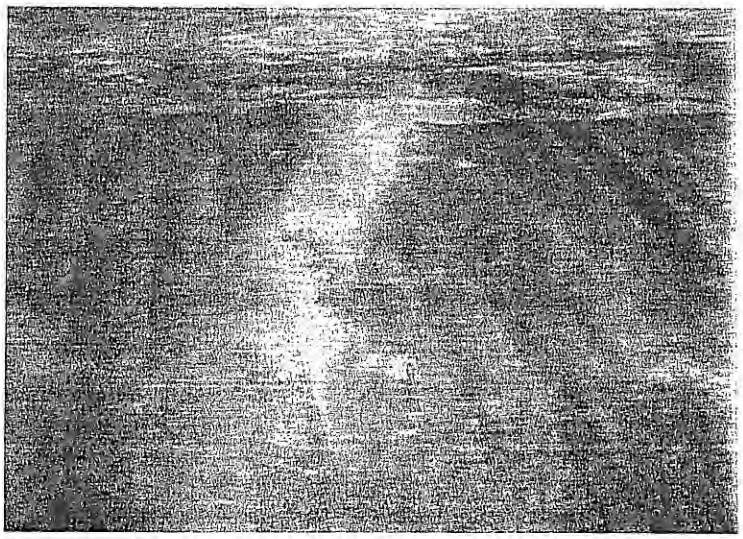
to be removed from pump house room



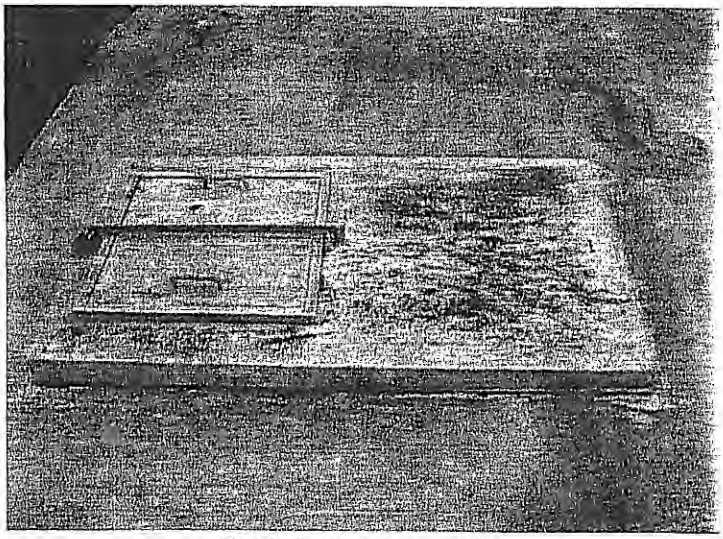
STO1 (small reservoir) reservoir hatch



STO1 over flow



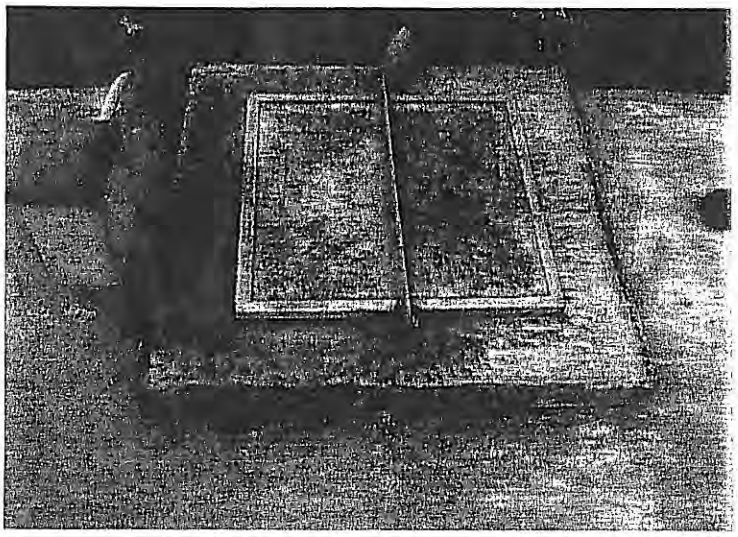
Reservoir roof



STO2 (large reservoir) hatch

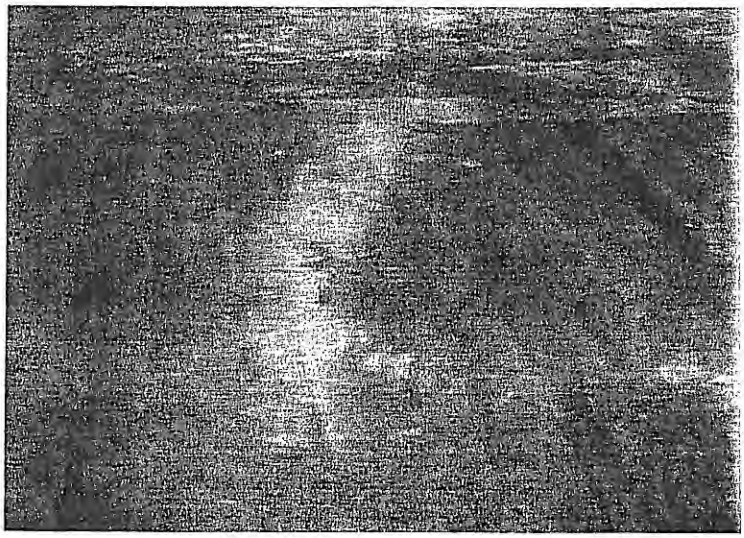
reservoir sealants to be removed from pump house area

to be removed from pump house room

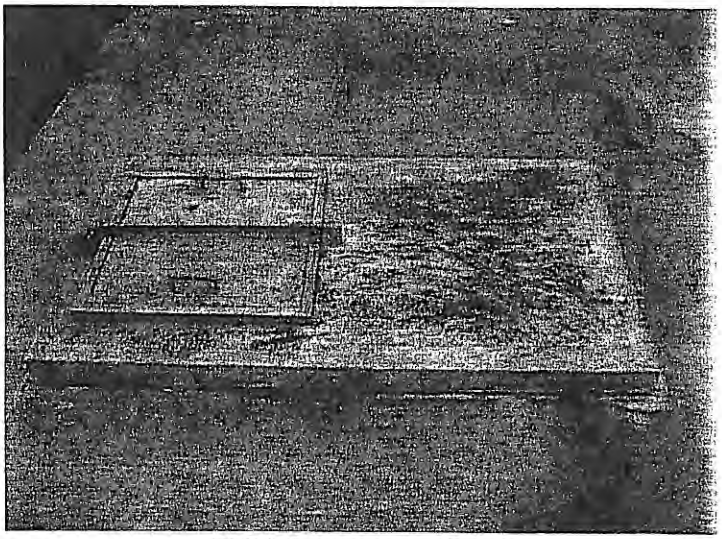


STO1 (small reservoir) reservoir hatch

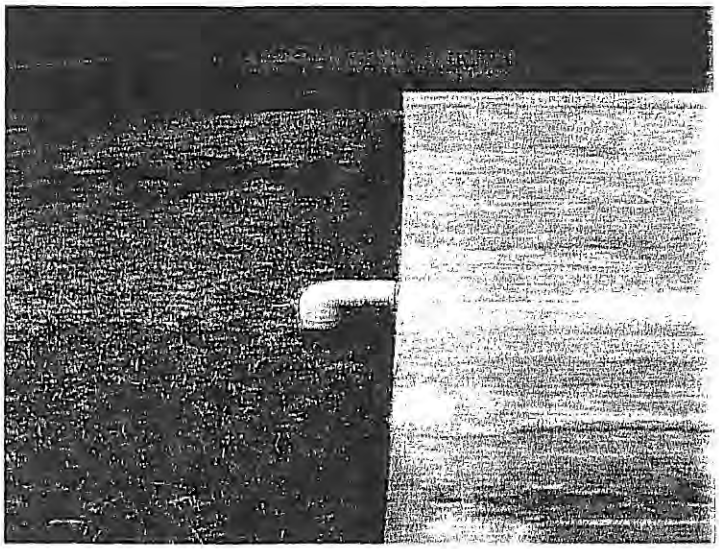
STO1 over flow



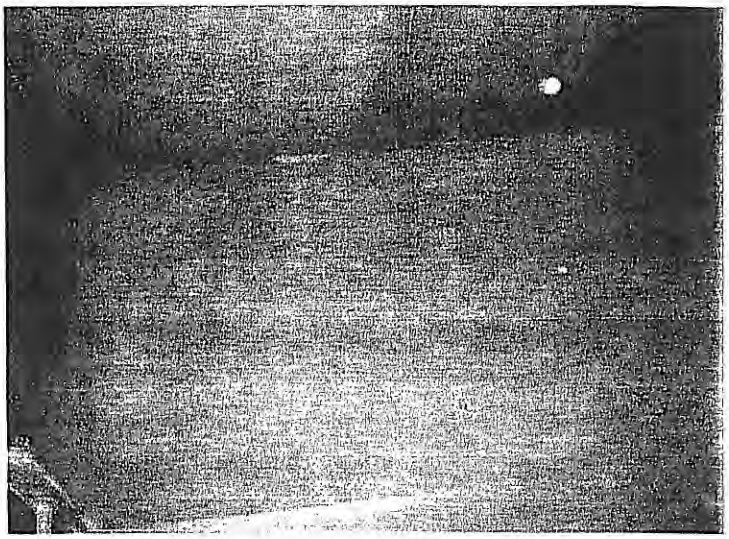
Reservoir roof



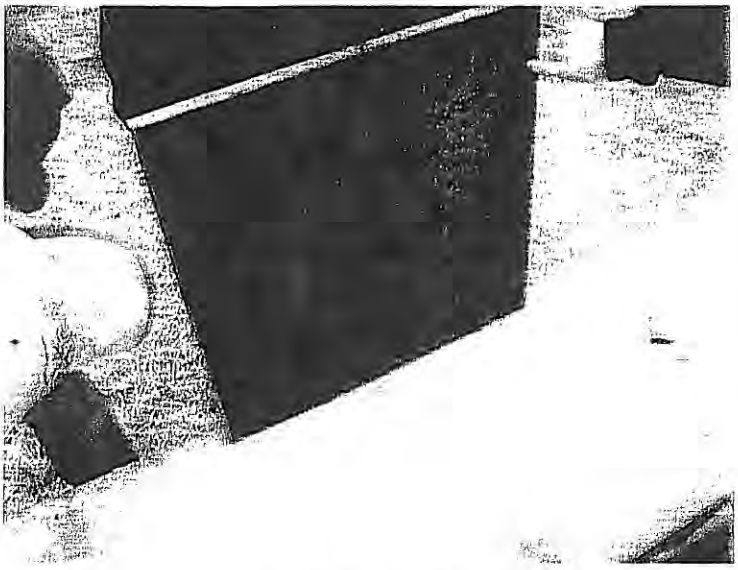
STO2 (large reservoir) hatch



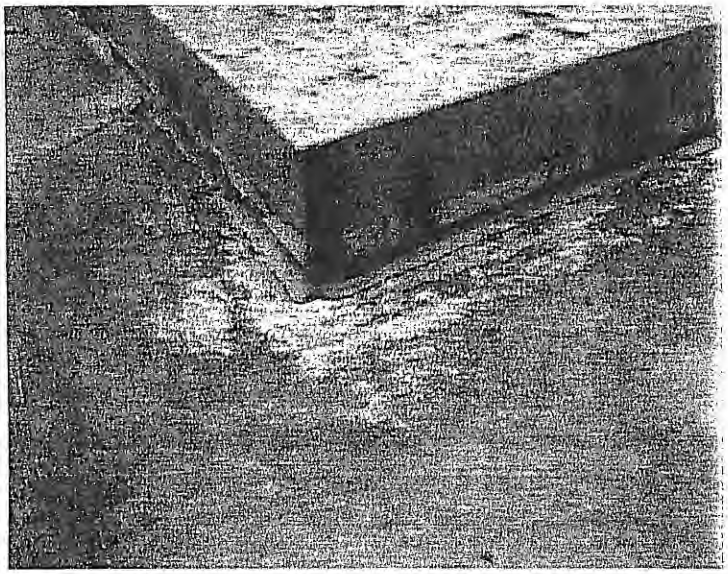
STO2 overflow



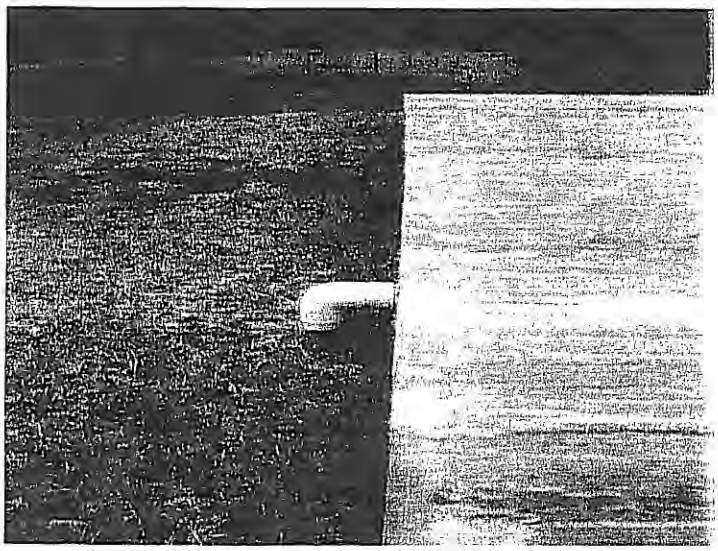
STO2 interior reservoir



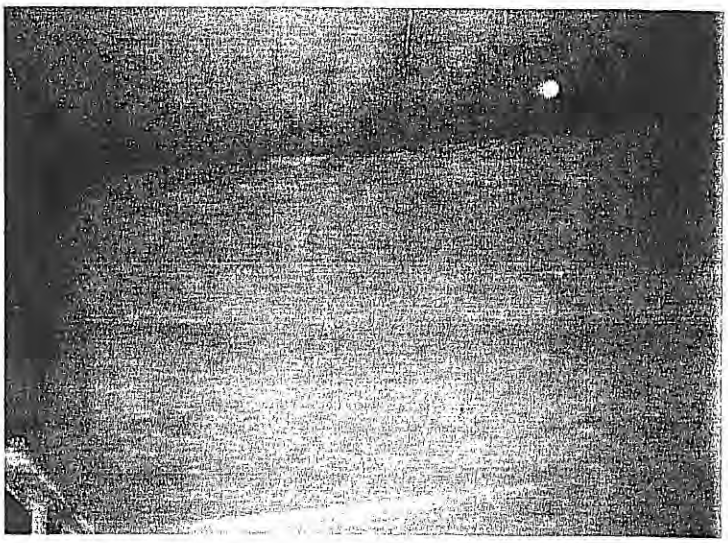
inside STO2 hatch



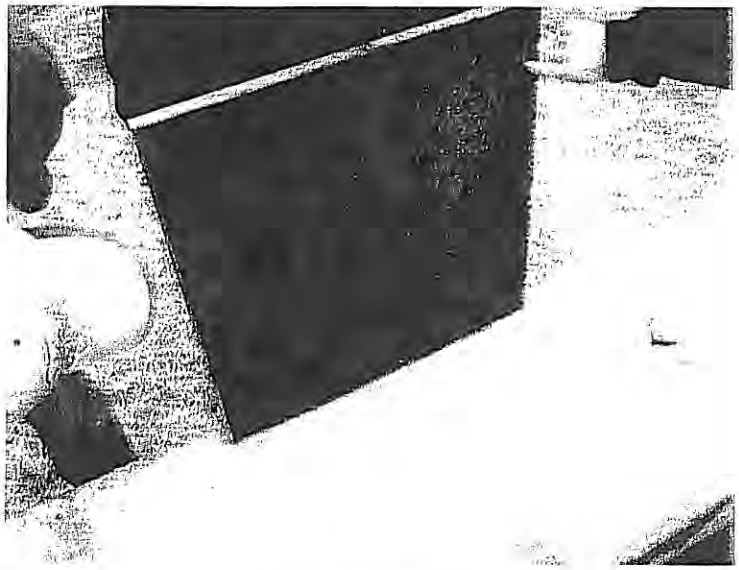
STO2 hatch & reservoir roof



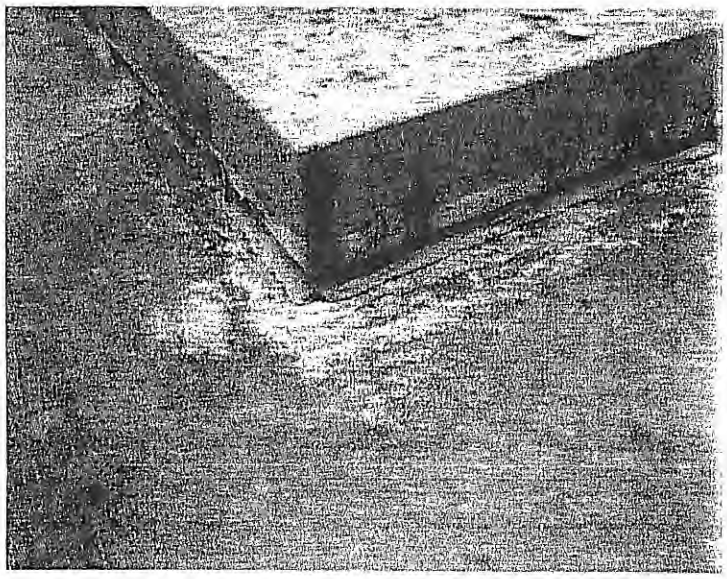
STO2 overflow



STO2 interior reservoir



Inside STO2 hatch



STO2 hatch & reservoir roof

APPENDIX N

Public Participation Information

- May Newsletter and Mailing List; Publication Notice
- June Meeting Presentation and Sign-Ins
- Public Comments Received and Summary of Comments
- September Bill Insert
- September Meeting Minutes and Sign-Ins
- September Newsletter
- October Meeting Presentation and Sign-Ins

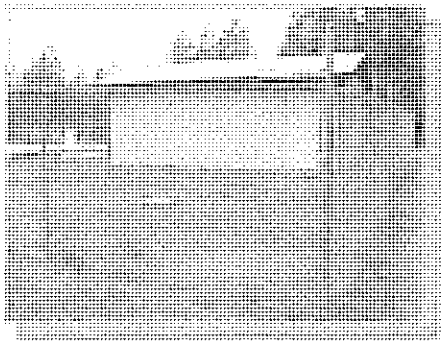
Volume 1, Issue 2

May, 2012

ALPINE MEADOWS WATER & SEWER DISTRICT NEWSLETTER

PUBLIC MEETING

Plan to attend the public meeting on June 19, 2012 at 6:00 pm at the Fire Station at 1114 E. Hudlow Road.



Alpine Meadows Water & Sewer District
P.O. Box 526
Hayden, ID 83835
Phone: 208/772-5313

Board
Mike Waldo, Chairperson
John Jones, Vice Chair
Bill Lambert, Ed Kelly, Kim Ann Erk
Secretary/Treasurer
Jim Lindsay
Water Master
Jeff Mueller

What is Facility Planning?

In 2011, the Alpine Meadows Water and Sewer District ("District") applied for and received a grant from the Idaho Department of Environmental Quality ("IDEQ") to complete a Water System Facility Plan ("Facility Plan"). A Facility Plan is a document that:

1. Analyzes the ability of the existing water system to serve both current and anticipated future demands while complying with the Idaho Drinking Water Rules for Public Water Systems

2. Provides recommended and prioritized improvements necessary to resolve system deficiencies identified relative to the Idaho Drinking Water Rules and current and anticipated future demands.

IDEQ requires all water systems proposing system modifications to complete a facility planning document.

The following are two important evaluation criteria evaluated during the Facility Planning process:

1. **System Reliability and Protection of Public Health and Safety:** the Idaho Drinking Water Rules require public water systems to be able to serve maximum ("peak") demands in the event of a power outage or pump failure ("emergency operating conditions") while maintaining acceptable pressures throughout the system.

2. **Reliable Fire Flow:** the Idaho Drinking Water Rules require public water systems that intend to provide fire flow to be able to provide the fire flow required by the local fire authority in addition to peak demands under emergency operating conditions while maintaining acceptable pressures throughout the system.

Preliminary Facility Plan Findings

The District retained Welch Comer and Associates, Inc. to prepare the District's Facility Plan. A **DRAFT** of the District's Facility Plan is underway. Through development of the Facility Plan, several deficiencies with the Alpine Meadows water system were identified with the system's existing source, storage, booster pump and distribution facilities.

The following is a brief summary of the system's deficiencies based on current Idaho Drinking Water rules:

- The existing production well and booster station **cannot provide the current maximum day or peak hour demands** under "emergency operating conditions".

- The existing system **cannot currently provide the fire flows required by the local fire authority** to parts of the system while complying with Idaho Drinking Water Rules due to limited pumping capacity and undersized waterlines.

Funding Opportunities

In order to meet a time sensitive application date, the District submitted a Letter of Interest to IDEQ in January for construction loan money for water system improvements. The District has been listed as eligible to receive up to $1,800,000 at 1.25% interest over a 30 year term with $543,691 in principal forgiveness (this principal forgiveness amount is essentially equivalent to a 30% grant). **The District will discuss this funding option, as well as others, at the public meeting.**

Board Actions

The Board will hold a public meeting on June 19, 2012 at 6:00 pm at the Fire Station at 1114 E. Hudlow Road. The purpose of the meeting is to present the deficiencies identified, proposed improvement options, the environmental impacts associated with each option, funding options, and associated financial impacts to the District's customers.

PUBLIC COMMENT

The Board would like to hear from you!

Following the public meeting:

⇒ The presentation and draft Facility Plan will be available online at www.welchcomer.com/projectinformation.html

⇒ Hard copies can be viewed at Welch Comer's office during normal business hours at 350 E. Kathleen Ave in Coeur d'Alene or during regularly scheduled Board meetings (the 2nd Tuesday of every month at 7:00 pm) at the pump house at 2942 E. Grand Tour.

The Board will consider all written comments received between June 20 and July 20, 2012 . Please mail your comments to the following address:

Alpine Meadows Water & Sewer District
P.O. Box 526
Hayden, ID 83835

Alpine Meadows Water and Sewer District
Customer Contact List
November 2, 2012

Customer	Contact	Bill to
Adams, Steve & Barbara	Steve & Barbara Adams	Steve & Barbara Adams 2340 E Hudlow Road Hayden Lake, ID 83835-7358
Alpine Country Store	Tom	Alpine Country Store 17568 N Highway 95 Hayden Lake, ID 83835-9462
Alpine Greenhouse	Dean & Mary Marcus	Alpine Greenhouse 3461 E Grand Tour Drive Hayden Lake, ID 83835-7777
Archambault, Joseph & Denise	Joseph & Denise Archambault	Joseph & Denise Archambault 688 E Maxwell Drive Hayden Lake, ID 83835-7786
Bard, Erik B.	Bob Hendericks	Erik B Bard 16048 N Ridgeway Dr Hayden Leke, ID 83835-7787
Bauer, Gerard & Marilyn	Gerard & Marilyn Bauer	Gerard & Marilyn Bauer 15852 N Ridgeway Dr Hayden Lake, ID 83835-7351
Benson, David & Wanda	David & Wanda Benson	David & Wanda Benson PO Box 1414 Hayden Lake, ID 83835-1414
Berg, Duane & Donna	Gary Berg	Gary Berg 1211 E 36th Ave Spokane, WA 99203-3060
Booth, Ronald & Stephanie	Ronald & Stephanie Booth	Ronald & Stephenie Booth 2087 E Glacier Road Hayden Lake, ID 83835-7789
Boris, Brian & Melissa	Brandon LaBreck	Brandon LaBreck 3556 E Grand Tour Dr Hayden Lake, ID 83835-7889
Bradway, Don & Jonna	Don Bradway	Don & Jonna Bradway 2994 E Hudlow Road Hayden Lake, id 83835-7733
Brooks, Michael & Gail	Michael & Gail Brooks	Michael & Gail Brooks 16015 N Pinewood Way Hayden Lake, ID 83835-7349
Buechner, Kelly & Kimberlee	Kelly & Kimberlee Buechner	Kelly & Kimberlee Buechner 2117 E Glacier Road Hayden Lake, ID 83835-7792
Carkuff, Darren & Rory	Darren & Rory Carkuff	Darren & Rory Carkuff 2785 E Grand Tour Drive Hayden Lake, ID 83835-7784
Colombini, Don & Wanda	Don & Wanda Colombini	Don & Wanda Colombini 2050 E Glacier Road Hayden Lake, ID 83835-7789
Coney, Carol	Carol Coney	Carol Coney 1427 E Grand Tour Drive Hayden Lake, ID 83835-7768
Creative Concrete Northwest	John or Robert Olson	Creative Concrete Northwest 50669 Old Hiway 95 Road Rathdrum, ID 83858-7176
Daniels, Mike	Phil Rohr	Phil Rohr 1890 E Grand Tour Drive Hayden Lake, ID 83835-7772
Danielson, Leslie	Leslie A Danielson	Leslie Danielson 16023 N Pinewood Way Hayden Lake, ID 83835-7349
Dawson, John & Dianne	John & Dianne Dawson	John & Dianne Dawson 2867 E Hudlow Road Hayden Lake, ID 83835-9368
DeMotte, Melissa	Melissa DeMotte	Melissa DeMotte 16109 N. Ridgeway Drive Hayden Lake, ID 83835-7350
Derting, Jack & Audrey	Jack & Audrey Derting	Jack & Audrey Derting 2915 E Grand Tour Drive Hayden Lake, ID 83835-7782
Desmarais, Dennis & Deborah	Dennis & Deborah Desmarais	Dennis & Deborah Desmarais 15811 N Ridgeway Drive Hayden Lake, ID 83835-7351
Donnelly, Brent & Heidi	Brent & Heidi Donnelly	Brent & Heidi Donnelly 2540 E Grend Tour Dr Hayden Lake, ID 83835-7778
Edelmann, Terry & Angela	Terry or Angela Edelmann	Terry & Angela Edelmann 2482 E Glacier Road Hayden Lake, ID 83835-7793
Edmondson, A E	A. E. Edmondson	A E Edmondson 3705 E Grand Tour Drive Hayden Lake, ID 83835-7766
Edmondson, Andy & Kim	Andy & Kim Edmondson	Andy & Kim Edmondson 16281 N Pinewood Way Hayden Lake, ID 83835-9392
Engelbrecht, Jerry & Eleanor	Jerry & Eleanor Engelbrecht	Jerry & Eleanor Engelbrecht 15778 N Ridgeway Drive Hayden Lake, ID 83835-9337
Erk, Kim Ann	Kim A Erk	Kim Ann Erk 16087 N Ridgeway Dr. Hayden Lake, ID 83835-7787
Fabianski, Frank & Cindy	Frank & Cindy Fabianski	Frank & Cindy Fabianski 697 E Maxwell Drive Hayden Lake, ID 83835-7786
Fisher, Mark & Tris	Mark & Tris Fisher	Mark & Tris Fisher PO Box 826 Hayden Lake, ID 83835-0826
Ford, Sherree	Ford	Sherree Ford 1688 E Hudlow Road Hayden Lake, ID 83835-7730
Freeman, Mark & Lynette	Mark & Lynette Freeman	Mark & Lynette Freeman 15843 N Pinewood Way Hayden Lake, ID 83835-8321
George, Bernice	Bernice George	Bernice George 2353 E Glacier Road Hayden Lake, ID 83835-7657
Giles, Barbara	Barbera Giles	Barbara Giles 2582 E Hudlow Road Heyden Lake, ID 83835-7359
Gove, Carleton & Joanne	Carleton & Joanne Gove	Carleton & Joanne Gove 16036 N Pinewood Way Hayden Lake, ID 83835-7349
Guerrero, Marcus & Debbie	Marcus & Debbie Guerrero	Marcus & Debbie Guerrero 1341 E Grand Tour Drive Hayden Lake, ID 83835-7767
Hambek, James & Sandra	James & Sandra Hambek	James & Sandra Hambeck 1464 Bedford Drive Camarillo, CA 93010-3123
High, Rose Marie	Rose Marie High	Rose Marie High 1569 E Grand Tour Drive Hayden Lake, ID 83835-7769
Hite, Suzanne	Suzanne Hite	Suzanne Hite 16191 N Ridgeway Drive Hayden Lake, ID 83835-7350
Hodges, Richard & Wendy	Richard or Wendy Hodges	Richard & Wendy Hodges 16633 N Pinewood Way Hayden Lake, ID 83835-7798
Hopkins, Richard & Mary	Richard & Mary Hopkins	Richard & Mary Hopkins 693 E Maxwell Drive Hayden Lake, ID 83835-7786
Howell, Terry & Alwyn	Terry & Alwyn Howell	Terry & Alwyn Howell 3077 E Grand Tour Drive Hayden Lake, ID 83835-7781
Hughes, Edwerd	Edward Hughes	Edward Hughes 692 E Maxwell Drive Hayden Lake, ID 83835-7786
J & D Automotive	John & Denise Daum	J & D Automotive 50575 N Old Highway 95 Rathdrum, ID 83858-7130
James, Daniel & Suzan	Daniel & Suzan James	Daniel & Suzan James 2620 E Grand Tour Hayden Lake, ID 83835-7785
Jones, John L. & Carol	John L. Jones	John L. & Carol Jones 3348 E Grand Tour Hayden Lake, ID 83835-7779
Jones, Michael & Suzanne	Michael & Suzanne Jones	Michael & Suzanne Jones 2301 E Grand Tour Drive Hayden Lake, ID 83835-7775
Jones, Terry	Terry Jones	Terry Jones PO Box 2405 Hayden Lake, ID 83835 - 2405
Kasper, Fredrick & Lesley	Fredrick & Lesley Kasper	Fredrick & Lesley Kasper 2448 E Grand Tour Drive Hayden Lake, ID 83835-7776
Kelly, Ed	Ed Kelly	Ed Kelly 1887 E Grand Tour Drive Hayden Lake, ID 83835-7772
Kelsey, Shari	Shari Kelsey	Shari Kelsey 16038 N Ridgeway Drive Hayden Lake, ID 83835-7787
Kepler, Terrie	Terrie Kepler	Terrie Kepler 1684 E Grand Tour Drive Hayden Lake, ID 83835-7770
Kerber, Steven & Gwen	Steven & Gwen Kerber	Steven & Gwen Kerber 16000 N Ridgeway Lane Hayden Lake, ID 83835-7787
Kramer, Jean	Jean Kramer	Jean Kramer 16761 N Pinewood Way Hayden Lake, ID 83835-9393
Kramer, Shawn	Shawn Kramer	Shawn Kramer 3211 E Hudlow Road Hayden Lake, ID 83835-7734
Krause, Philip & Loretta	Philip or Loretta Krause	Philip & Lorette Krause 15967 N Ridgeway Drive Hayden Lake, ID 83835-9394
LaBreck, Brandon	Brandon La Breck	Brandon La Breck 3556 E Grand Tour Dr Hayden Lake, ID 83835-7889
Laird, Gilbert & Edlene	Gilbert & Edlene Laird	Gilbert & Edlene Laird 2151 E Grand Tour Drive Hayden Lake, ID 83835-7774
Lambert, Bill & Michele	Bill & Michele Lambert	Bill & Michele Lambert 15951 N Pinewood Way Hayden Lake, ID 83835-7794
Lindsay, Jim & Mary Ann	Jim & Mary Ann Lindsay	Jim & Mary Ann Lindsay 2091 E Glacier Road Hayden Lake, ID 83835-7789
Marshall, Wayne	Shawn	Shawn J Marshall 855 Auburn Ave Idaho Falls, ID 83401
Marston, Jo	Chris Marston	Jo Marston 2802 Grand Tour Drive Hayden Lake, ID 83835-7783
McCullough, Calvin & Leah	Calvin & Leah McCullough	Calvin & Leah McCullough 1320 E Grand Tour Drive Hayden Lake, ID 83835-7767
McFarland, Barbara	Barbara McFarland	Barbara McFarland 2908 E Grand Tour Dr. Hayden Lake, ID 83835
McNeill, Mary	John & Misty McNeill	Mary McNeill 16569 N Pinewood Way Hayden Lake, ID 83835-7797
Menica, Ignacio & Martha	Ignacio & Martha Menica	Ignacio & Martha Menica 2661 E Hudlow Road Hayden Lake, ID 83835-7360
Moore, Jim & Judy	Jim & Judy Moore	Jim & Judy Moore 1588 E Grand Tour Drive Hayden Lake, ID 83835-7769
Moyer, Floyd & Linda	Floyd & Linda Moyer	Floyd & Linda Moyer 1957 E Glacier Road Hayden Lake, ID 83835-7791
Mueller, Jeff & Jessica	Jeff & Jessica Mueller	Jeff & Jessica Mueller 3027 E Grand Tour Drive Hayden Lake, ID 83835-7781
Mueller, Stanley/Czech, Carol	Stanley Mueller	Stanley Mueller & Carol Czech 3213 E Grand Tour Drive Hayden Lake, ID 83835-7780
Nelson, Norman & Charlene	Norman & Charlene Nelson	Norman & Charlene Nelson 15946 N Ridgeway Drive Hayden Lake, ID 83835-9394
Oden, Jerry	Jerry	Jerry Oden 2804 E Hudlow Road Hayden Lake, ID 83835-9368
Paris, Kathy	Kathy Paris	Kathy Paris 1205 Cypress St. SPC 188 San Dimas, CA 91773-3524
Pereira, Daniel & Tonya	Daniel & Tonya Pereira	Daniel & Tonya Pereira 1767 E Grand Tour Drive Hayden Lake, ID 83835-7771
Peterson, Todd & Cora	Todd & Cora Peterson	Todd & Cora Peterson 15628 N Ridgeway Drive Hayden Lake, ID 83835-9337
Phelps, Patty	Patty Phelps	Patty Phelps % Relieble Electric 10118 N Taryne Hayden Lake, ID 83835
Rekstad, Bob & Kelly	Bob & Kelly Rekstad	Bob & Kelly Rekstad 1760 E Grand Tour Drive Hayden Lake, ID 83835-7771
Rekstad, Rental	Al Stebbins	Rekstad, Rental 1732 E Grand Tour Drive Hayden Lake, ID 83835-7771
Rigler, Janos & Maria	Janos & Maria Rigler	Janos & Maria Rigler 2871 E Hudlow Road Hayden Lake, ID 83835-8376
Schrom, Frederick & Hye Kyong	Frederick & Hye Kyong Schrom	Frederick & Hye Kyong Schrom 3387 E Grand Tour Drive Hayden Lake, ID 83835-7779
Smith, Jeff & Rae Ann	Jeff & Rae Ann Smith	Jeff & Rae Ann Smith 2661 E Grand Tour Drive Hayden Lake, ID 83835-7785
Smith, Richard & Laurie	Richard & Laurie Smith	Richard & Laurie Smith 1761 E Grand Tour Drive Hayden Lake, ID 83835-7771
Stafford, Jeffery & Ceroline		16204 N Pinewood Way Hayden Lake, ID 83835-7348
Stallcup, Linda	Linda Stallcup	Linda Stallcup PO Box 2274 Hayden Lake, ID 83835-2274
Stegman, Kevin and Sheila	Kevin & Sheila Stegman	Kevin & Sheila Stegman 16338 N Pinewood Way Hayden Lake, ID 83835-7348
Sturges, Jami	Jami Sturges	Jami Sturges PO Box 1356 Coeur d'Alene, ID 83816-1356
Sumerlin, Toni S	Toni Sumerlin	Toni Sumerlin 2680 E Grand Tour Drive Hayden Lake, ID 83835-7785
Taylor, Steven	Steven Taylor	Jesse Moore 2874 E Hudlow Road Hayden Lake, ID 83835-9368
Thackston, Robert & Trudi	Robert & Trudi Thackston	Robert & Trudi Thackston 16086 N Pinewood Way Hayden Lake, ID 83835-7349
Thompson, Floyd & Hazel		Floyd & Hazel Thompson 1517 E Grand Tour Drive Hayden Lake, ID 83835-7769
Thurman, Eric & Lacey	Eric B Thurman	Eric & Lacey Thurman 15983 N Ridgeway Drive Hayden Leke, ID 83835-9394

Alpine Meadows Water and Sewer District
Customer Contact List
November 2, 2012

Customer	Contact	Bill to
Waldo, Michael & Theresa		Michael & Theresa Waldo 2833 E Grand Tour Drive Hayden Lake, ID 83835-7783
Walkowiak, Tim & Sandra	Tim & Sandra Walkowiak	Tim & Sandra Walkowiak 2607 E Grand Tour Drive Hayden Lake, ID 83835-7785
Walter, Dale A	Dale Walter	Dale Walter 2468 E Hudlow Road Hayden Lake, ID 83835-7749
Wilcott, James	Chris Wilcott	Chris Wilcott 809 So. Calvin Road Veradale, WA 99037
Wilcox, Don & Pat	Don & Pat Wilcox	Don & Pat Wilcox 1684 E Hudlow Road Hayden Lake, ID 83835-7730
Wilcox, Janet	Janet Wilcox	Janet Wilcox 1806 E Grand Tour Drive Hayden Lake, ID 83835-7772
Wiley, Nolan & Gloria	Nolan or Gloria Wiley	Nolan & Gloria Wiley 684 E Maxwell Drive Hayden Lake, ID 83835-7786
Winters, Tookie	Tookie Winters	Tookie Winters 2350 E Grand Tour Drive Hayden Lake, ID 83835-7775
Womble, Kan & Eiko	Ken & Eiko Womble	Ken & Eiko Womble 2054 E Grand Tour Drive Hayden Lake, ID 83835-7773
Wyble, Bruce & Jennifer	Bruce & Jennifer Wyble	Bruce & Jennifer Wyble 15926 N Ridgeway Drive Hayden Lake, ID 83835-9394
Yeend, Rick & Michelle	Rick & Michelle Yeend	Rick & Michelle Yeend 3325 E Grand Tour Drive Hayden Lake, ID 83835-7779
Zak, William & Diane	William & Diana Zak	William & Diana Zak PO Box 535 Lakehead, CA 96051-0555

Alpine Meadows Water and Sewer District

Customer Contact List

August 1, 2012

RDM	#	A/B	✓	Physical Address	Customer
1	82	A		2680 E Grand Tour Drive Hayden Lake, ID 83835-7785	RESIDENT
2	68	A		1767 E Grand Tour Drive Hayden Lake, ID 83835-7771	RESIDENT
3	88	A		2607 E Grand Tour Drive Hayden Lake, ID 83835-7785	RESIDENT
4	21	A		2482 E Glacier Road Hayden Lake, ID 83835-7793	RESIDENT
5	48	A		16000 N Ridgeway Lane Hayden Lake, ID 83835-7787	RESIDENT
6	56	A		2802 Grand Tour Drive Hayden Lake, ID 83835-7783	RESIDENT
7	74	A		2871 E Hudlow Road Hayden Lake, ID 83835-8376	RESIDENT
8	42	A		2301 E Grand Tour Drive Hayden Lake, ID 83835-7775	RESIDENT
9	18	A		16109 N. Ridgeway Drive Hayden Lake, ID 83835-7350	RESIDENT
10	41	A		3348 E Grand Tour Hayden Lake, ID 83835-7779	RESIDENT
11	57	A		2540 E Grand Tour Drive, Hayden Lake, ID 83535-7778	RESIDENT
12	10	A		16015 N Pinewood Way Hayden Lake, ID 83835-7349	RESIDENT
13	72	A		1760 E Grand Tour Drive Hayden Lake, ID 83835-7771	RESIDENT
14	63	A		1957 E Glacier Road Hayden Lake, ID 83835-7791	RESIDENT
15	69	A		15628 N Ridgeway Drive Hayden Lake, ID 83835-9337	RESIDENT
16	25	A		16087 N Ridgeway Dr. Hayden Lake, ID 83835-7787	RESIDENT
17	92	A		1806 E Grand Tour Drive Hayden Lake, ID 83835-7772	RESIDENT
18	22	A		3705 E Grand Tour Drive Hayden Lake, ID 83835-7766	RESIDENT
19	54	A		2091 E Glacier Road Hayden Lake, ID 83835-7789	RESIDENT
20	81	A		706 E Maxwell, Hayden Lake, ID 83835	RESIDENT
21	90	A		2692 E Hudlow Road, Hayden Lake, ID 83835	RESIDENT
22	80	A		16338 N Pinewood Way Hayden Lake, ID 83835-7348	RESIDENT
23	2	A		688 E Maxwell Drive Hayden Lake, ID 83835-7786	RESIDENT
24	44	A		2448 E Grand Tour Drive Hayden Lake, ID 83835-7776	RESIDENT
25	23	A		16281 N Pinewood Way Hayden Lake, ID 83835-9392	RESIDENT
26	46	A		16038 N Ridgeway Drive Hayden Lake, ID 83835-7787	RESIDENT
27	61	A		2661 E Hudlow Road Hayden Lake, ID 83835-7360	RESIDENT
28	79	A		16300 N Pinewood Way, Hayden Lake, ID 83835-7348	RESIDENT
29	86	A		15983 N Ridgeway Drive Hayden Lake, ID 83835-9394	RESIDENT
30	89	A		2468 E Hudlow Road Hayden Lake, ID 83835-7749	RESIDENT
31	20	A		15811 N Ridgeway Drive Hayden Lake, ID 83835-7351	RESIDENT
32	40	A		692 E Maxwell Drive Hayden Lake, ID 83835-7786	RESIDENT
33	35	A		1569 E Grand Tour Drive Hayden Lake, ID 83835-7769	RESIDENT
34	16	A		16023 N Pinewood Way Hayden Lake, ID 83835-7349	RESIDENT
35	19	A		2915 E Grand Tour Drive Hayden Lake, ID 83835-7782	RESIDENT
36	1	A		2340 E Hudlow Road Hayden Lake, ID 83835-7358	RESIDENT
37	47	A		1684 E Grand Tour Drive Hayden Lake, ID 83835-7770	RESIDENT
38	32	A		2582 E Hudlow Road Hayden Lake, ID 83835-7359	RESIDENT
39	50	A		3211 E Hudlow Road Hayden Lake, ID 83835-7734	RESIDENT
40	34	A		1341 E Grand Tour Drive Hayden Lake, ID 83835-7767	RESIDENT
41	75	A		3387 E Grand Tour Drive Hayden Lake, ID 83835-7779	RESIDENT
42	76	A		2661 E Grand Tour Drive Hayden Lake, ID 83835-7785	RESIDENT

Alpine Meadows Water and Sewer District

Customer Contact List

August 1, 2012

RDM	#	A/B	✓	Physical Address	Customer
43	49	A		16761 N Pinewood Way Hayden Lake, ID 83835-9393	RESIDENT
44	6	A		3026 E Grand Tour Drive, Hayden Lake, ID 83835	RESIDENT
45	38	A		693 E Maxwell Drive Hayden Lake, ID 83835-7786	RESIDENT
46	53	A		15951 N Pinewood Way Hayden Lake, ID 83835-7794	RESIDENT
47	71	A		2620 E Grand Tour Drive Hayden Lake, ID 83835-7785	RESIDENT
48	93	A		684 E Maxwell Drive Hayden Lake, ID 83835-7786	RESIDENT
49	62	A		1588 E Grand Tour Drive Hayden Lake, ID 83835-7769	RESIDENT
50	51	A		15967 N Ridgeway Drive Hayden Lake, ID 83835-9394	RESIDENT
51	73	A		1732 E Grand Tour Drive Hayden Lake, ID 83835-7771	RESIDENT
52	14	A		1427 E Grand Tour Drive Hayden Lake, ID 83835-7768	RESIDENT
53	43	A		2705 E Grand Tour Drive Hayden Lake, ID 83835-7784	RESIDENT
54	28	A		2052 E Grand Tour Drrive, Hayden Lake, ID 83835	RESIDENT
55	5	A		15720 N Ridgeway Dr, Hayden Lake, ID 83835	RESIDENT
56	96	A		15926 N Ridgeway Drive Hayden Lake, ID 83835-9394	RESIDENT
57	15	A		1890 E Grand Tour Drive Hayden Lake, ID 83835-7772	RESIDENT
58	39	A		3077 E Grand Tour Drive Hayden Lake, ID 83835-7781	RESIDENT
59	59	A		2908 E Grand Tour Dr. Hayden Lake, ID 83835	RESIDENT
60	7	A		2087 E Glacier Road Hayden Lake, ID 83835-7789	RESIDENT
61	9	A		2994 E Hudlow Road Hayden Lake, id 83835-7733	RESIDENT
62	60	A		16569 N Pinewood Way Hayden Lake, ID 83835-7797	RESIDENT
63	31	A		2353 E Glacier Road Hayden Lake, ID 83835-7657	RESIDENT
64	33	A		16036 N Pinewood Way Hayden Lake, ID 83835-7349	RESIDENT
65	12	A		2785 E Grand Tour Drive Hayden Lake, ID 83835-7784	RESIDENT
66	17	A		2867 E Hudlow Road Hayden Lake, ID 83835-9368	RESIDENT
67	13	A		2050 E Glacier Road Hayden Lake, ID 83835-7789	RESIDENT
68	66	A		2804 E Hudlow Road Hayden Lake, ID 83835-9368	RESIDENT
69	36	A		16191 N Ridgeway Drive Hayden Lake, ID 83835-7350	RESIDENT
70	95	A		2054 E Grand Tour Drive Hayden Lake, ID 83835-7773	RESIDENT
71	24	A		15778 N Ridgeway Drive Hayden Lake, ID 83835-9337	RESIDENT
72	52	A		2151 E Grand Tour Drive Hayden Lake, ID 83835-7774	RESIDENT
73	67	A		2096 E Grand Tour Drive, Hayden Lake, ID 83835	RESIDENT
74	97	A		3325 E Grand Tour Drive Hayden Lake, ID 83835-7779	RESIDENT
75	94	A		2350 E Grand Tour Drive Hayden Lake, ID 83835-7775	RESIDENT
76	45	A		1887 E Grand Tour Drive Hayden Lake, ID 83835-7772	RESIDENT
77	84	A		16086 N Pinewood Way Hayden Lake, ID 83835-7349	RESIDENT
78	87	A		2833 E Grand Tour Drive Hayden Lake, ID 83835-7783	RESIDENT
79	64			3027 E Grand Tour Drive Hayden Lake, ID 83835-7781	RESIDENT
80	91			1684 E Hudlow Road Hayden Lake, ID 83835-7730	RESIDENT
81	37			16633 N Pinewood Way Hayden Lake, ID 83835-7798	RESIDENT
82	11			2117 E Glacier Road Hayden Lake, ID 83835-7792	RESIDENT
83	83			2874 E Hudlow Road Hayden Lake, ID 83835-9368	RESIDENT
84	27			3213 E Grand Tour Drive Hayden Lake, ID 83835-7780	RESIDENT

Alpine Meadows Water and Sewer District

Customer Contact List

August 1, 2012

RDM	#	A/B	✓	Physical Address	Customer
85	70			2008 E Grand Tour Dr., Hayden Lake, ID 83835	RESIDENT
86	77			1761 E Grand Tour Drive Hayden Lake, ID 83835-7771	RESIDENT
87	4			15852 N Ridgeway Dr, Hayden Lake, ID 83835-7351	RESIDENT
88	30			15843 N Pinewood Way Hayden Lake, ID 83835-8321	RESIDENT
89	29			1688 E Hudlow Road Hayden Lake, ID 83835-7730	RESIDENT
90	26			697 E Maxwell Drive Hayden Lake, ID 83835-7786	RESIDENT
91	85			1517 E Grand Tour Drive Hayden Lake, ID 83835-7769	RESIDENT
92	8			3556 E Grand Tour Dr Hayden Lake, ID 83835-7889	RESIDENT
93	58			1320 E Grand Tour Drive Hayden Lake, ID 83835-7767	RESIDENT
94	3			16048 N Ridgeway Dr, Hayden Lake, ID 83835-7787	RESIDENT
95	78			16204 N Pinewood Way Hayden Lake, ID 83835-7348	RESIDENT
96	55			15826 N Ridgeway Drive Hayden Lake, ID 83835-7351	RESIDENT
97	65			15946 N Ridgeway Drive Hayden Lake, ID 83835-9394	RESIDENT

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,
County of Kootenai, } ss.

Madison Mizeur being first duly sworn upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Legal Notice

of which the annexed is a printed copy, was published in the regular Saturday issue of said newspaper for 2 consecutive Days commencing on the 2 day of June 2012 and ending on the 6 day of June 2012, and such publication was made as often during said period as said Daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice Madison Mizeur

On this 6 day of June in the year of 2012, before me, a Notary Public, personally appeared Madison Mizeur, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Katrina George
Notary Public for the State of Idaho
residing at Coeur d'Alene, Idaho.

KATRINA GEORGE NOTARY PUBLIC STATE OF IDAHO

MY COMMISSION EXPIRES 8/29/17

PUBLIC MEETING

The Alpine Meadows Water & Sewer District will hold a public meeting on June 19, 2012 at the Fire Station at 114 E. Hudlow Road in Hayden at 6:00p.m. The purpose of the public meeting is to present the Alpine Meadows Water Facility Plan. The main purpose of the meeting are to: Present the deficiencies identified, proposed improvement options, discuss the enviornmental impacts associated with each option, funding options, and potential financial impact to the District's customers, as well as to solicit verbal and written comments regarding the plan. Written comments will be accepted by the Board from June 20,2012 to July 20, 2012. Following the meeting, a copy of the plan will be available online at www.welchcomer.com/projectinformation.html. Hard copies can he viewed at Welch Comer's office during normal business hours at 350 E. Kathleen Ave in Coeur d'Alene or during regularly scheduled Board meetings (the 2nd Tuesday of every month at 7:00 pm) at the pump house at 2942 E. Grand Tour in Hayden. After considering and addressing comments the Board will determine which improvement option to implement and document the section. A detailed enviornmental evaluation will be performed based on this section.
Legal 5500
June 2, 6, 2012

Wed, May 30, 2012
11:40:01
1 of 1

Coeur d'Alene Press
P.O. Box 7000
Coeur d'Alene, ID 83816
Phone (208) 664-8176
Fax (208) 664-0212

Ad Name: 2401311A **Ad ID** 2401311 **Col:** 1 **Depth:** 5.14 **Colors:**
Acct: CD33117944 **Phone:** (208)772-5313 **Fax:**
Caller: **E-Mail:** **Ad Name:** 2401311A
Copyline: LEGAL 5500 - SKMBT **Ad Status:** -
Split Billed: N
ALPINE MEADOWS WAT **Reply Request:**
PO BOX 526 **Category:** -
Date Entered: May 30, 2012
HAYDEN ID 83835 **Standby Type:**
Rate: IDLEGL
Class: 3010 **Lines:** 46 **Paytype:** BL
Rep: CD HOUSE BLOC **Tear Sheets:** **Client:**

Start: June 2, 2012 **Stop:** June 6, 2012 **Issues:** 2
Editions: CD01/

DATE	DAY	EDITION	NET PRICE
06/02/12	SAT	COEUR D'ALENE PRESS	43.42
06/06/12	WED	COEUR D'ALENE PRESS	30.91

6/11/12
#4721

Price:	66.33
Other Charges:	8.00
Total:	74.33

Instructions:

PUBLIC MEETING

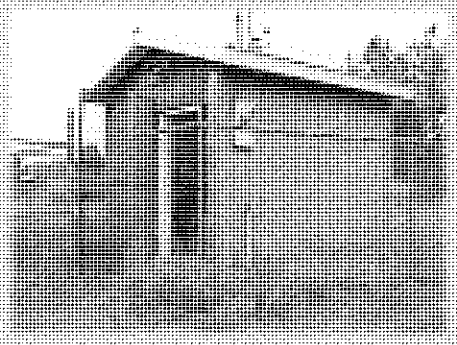
The Alpine Meadows Water & Sewer District will hold a public meeting on June 18, 2012 at the Fire Station at 114 E. Hallow Road in Hayden at 6:00pm. The purpose of the public meeting is to present the Alpine Meadows Water Facility Plan. The main purpose of the meeting are to: Present the deficiencies identified, proposed improvement options, discuss the environmental impacts associated with each option, funding options, and potential financial impact to the District's customers, as well as to solicit verbal and written comments regarding the plan. Written comments will be accepted by the Board from June 20,2012 to July 20, 2012. Following the meeting, a copy of the plan will be available online at www.welcheotner.com/projectinformationhtml. Hard copies can be viewed at Welch Comer's office during normal business hours at 250 E. Kathleen Ave in Coeur d'Alene or during regularly scheduled Board meetings (the 2nd Tuesday of every month at 7:00 pm) at the pump house at 2942 E. Grand Tour in Hayden. After considering and addressing comments the Board will determine which improvement option to implement and document the section. A detailed environmental evaluation will be performed based on this section.
Legal 5500
June 2, 6, 2012

Ad shown is not actual print size

This is proof of production. This is not a receipt

ALPINE MEADOWS WATER AND SEWER DISTRICT

2012 FACILITY PLAN PRESENTATION AND PUBLIC MEETING



Introductions

1. Alpine Meadows Water and Sewer District:
   - Mike Waldo, Chairperson
   - John Jones, Vice Chair
   - Kim Ann Erk, Member
   - Ed Kelly, Member
   - Toni Sumerlin, Member
   - Jim Lindsay, Secretary/Treasurer
   - Jeff Mueller, Water Master
2. Welch Comer & Associates, Inc.:
   - Necia Maiani, P.E. – Sr. Project Manager
   - Karen Osterdock, E.I.T. – Staff Engineer
   - Phil Boyd, P.E. – President and Principal Engineer
3. Katy Baker-Casile, P.E., IDEQ
4. Nancy Mabile, Panhandle Area Council

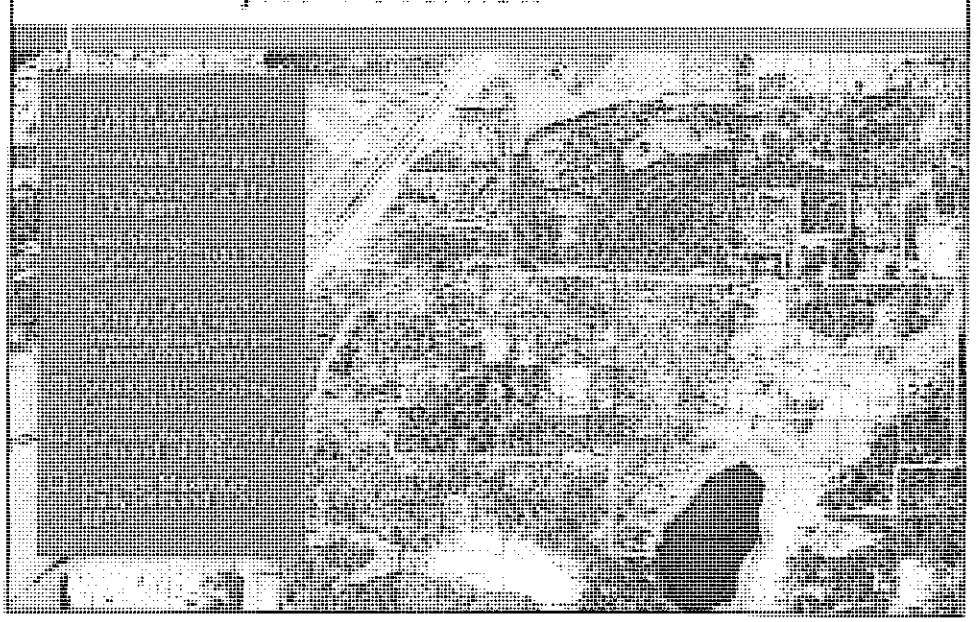
WELCH-COMER

Purpose and Agenda

1. Provide public with an understanding of the existing system and its deficiencies with respect to current standards. (What's the state of the system?)
2. Present the proposed improvement options and associated rate impacts. (How do we improve it and how much will it cost?)

WELCH-COMER

Alpine Meadows Water and Sewer District Water System Overview



Alpine Meadows Water and Sewer District Water System Overview

- Alpine Meadows is a public water system as defined by IDEQ.
- IDEQ regulates public water systems through the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08)
- IDEQ now ***requires*** water systems to prepare and have an approved facility plan before making substantial modifications to the system.

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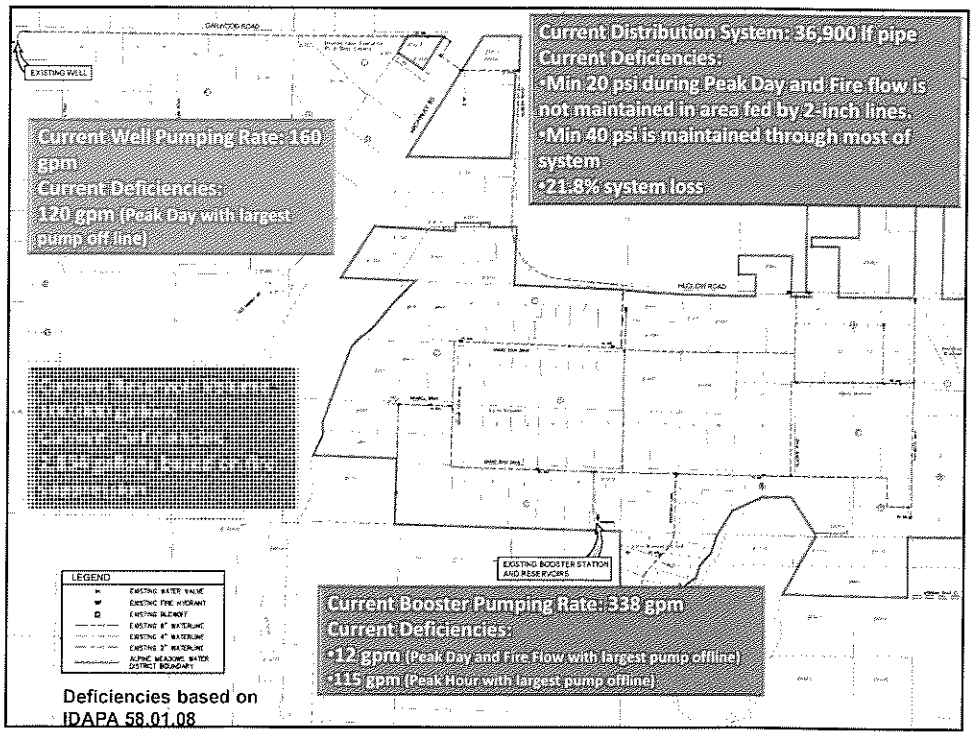
Purposes of a Facility Plan

- **Regulatory**: Analyze the ability of the system to meet regulatory requirements from a ***capacity*** standpoint.
- **Function**: Analyze the system's operational efficiency.
- **Reliability/Serviceability:** Analyze the system's ability to provide and maintain a high level of RELIABLE service.
- **Asset Management:** Provide a tool for the District to manage the system infrastructure operation and growth.

WELCH-COMER

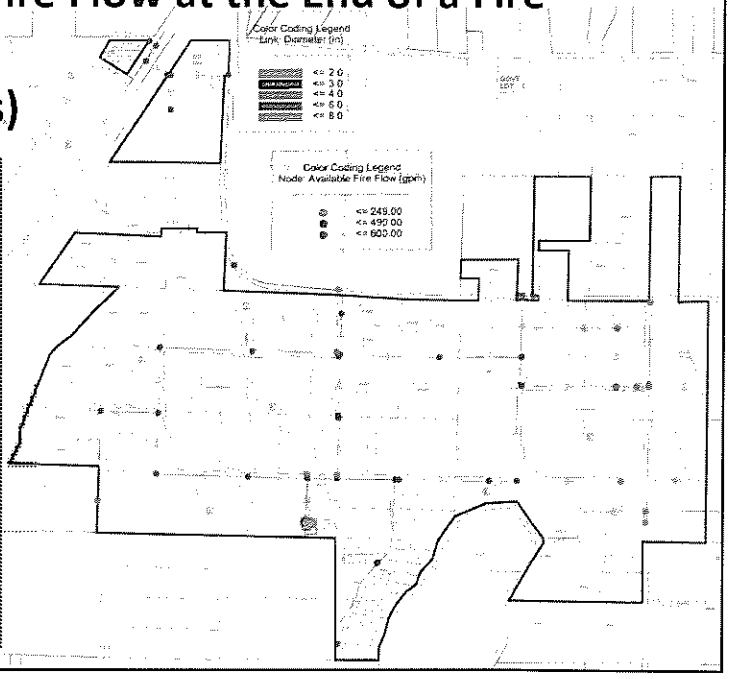
Existing System Evaluation

What's the State of the System?



Deficiencies based on IDAPA 58.01.08

Available Fire Flow at the End of a Fire (250 gpm for 2 hours)



Summary of Deficiencies

1. The system has the following capacity deficiencies:
   - Well is undersized by 120 gpm.
   - Boosters are undersized by 115 gpm.
   - Waterlines are undersized in areas of the system to provide fire flow.
2. The system has a large distribution network which is depreciating (wearing out) and will need to be addressed by the District.
3. The system does not meet the requirements of the Idaho Rules for Public Drinking Water Systems.

WELCH-COMER

Recommended Improvements

How do we fix it?

Overview of Recommended Improvements

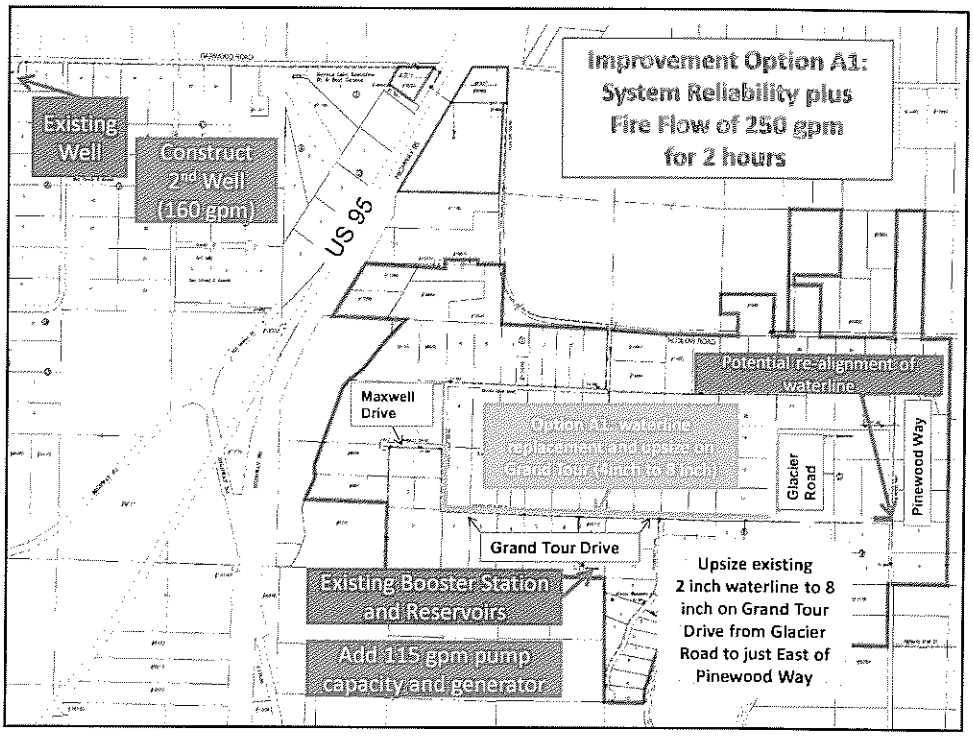
Option A – Address system reliability and provide required fire flow (250 gpm for 2 hours). 9% of distribution system will be replaced.

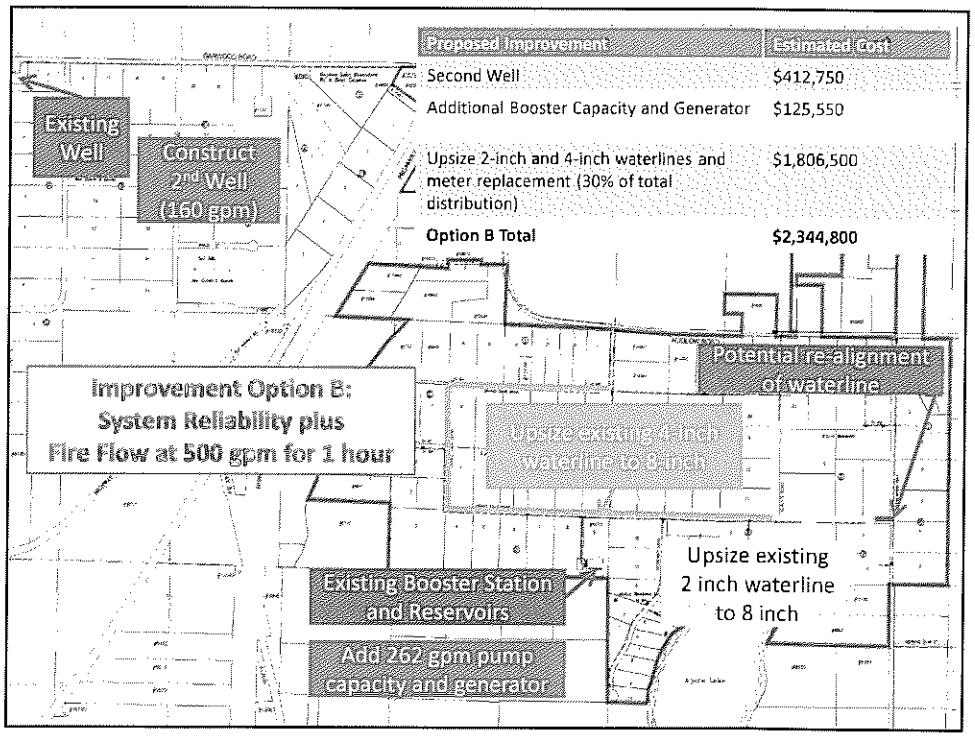
Option A1 – Option A plus replacement of an additional 4,400 feet of waterline. 20% of distribution system will be replaced.

Option B – Address system reliability and provide recommended fire flow (500 gpm for 1 hour). 30% of distribution system will be replaced.

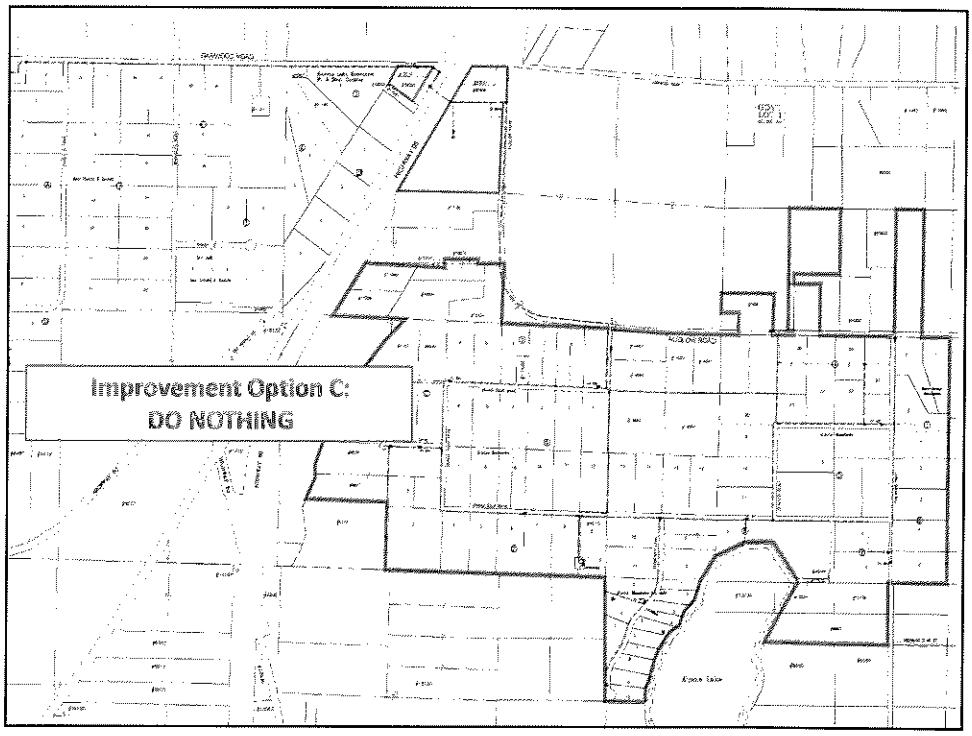
Option C – Do Nothing.

WELCH-COMER





Proposed Improvement	Estimated Cost
Second Well	$412,750
Additional Booster Capacity and Generator	$125,550
Upsize 2-inch and 4-inch waterlines and meter replacement (30% of total distribution)	$1,806,500
Option B Total	**$2,344,800**



Comparison of Improvement Options

	OPTION A/A1 System Reliability plus Fire Flow of 250 gpm for 2 hours	OPTION B System Reliability plus Fire Flow of 500 gpm for 1 hour	OPTION C Do Nothing
Capital Cost	A: $1,093,400 A1: $1,800,000	$2,344,800	$0
Replacement of Distribution System	A: 3,400 LF (9% of system) A1: 7,800 LF (20% of system)	11,100 LF (30% of system)	$0
Fire Flow Achieved	250 gpm for 2 hours	500 gpm for 1 hour	90 to 334 gpm
Back-Up Source	Yes	Yes	No
Back-up Boosters with backup power	Yes	Yes	No
Number of additional connections that could be served (based on source capacity)	40	40	Less than 10 recommended

WELCH-COMER

What are the Benefits of Completing Improvements?

1. Improve system reliability
   - Back-up source and booster capacity
   - Standby power to maintain system pressure in power outage
   - Replacement of depreciated lines (Between 9% - 20% of distribution network*)
2. Bring source and booster capacity up to current state standards for Public Drinking Water Systems
3. Improve fire flow

*** NOTE: Long term, the District needs to keep in mind that even with the proposed improvements, the system contains a large amount of depreciating infrastructure that will eventually wear out and require replacement. The District should set aside funds annually in anticipation of this.**

WELCH-COMER

What Funding is Available?

- The District has been placed on the IDEQ priority list for funding for FY2013.
- The available funding is a low interest loan (total of $1,800,000) at 1.25% for 30 years with **$543,691 (approximately 30%) principal forgiveness**.
- If the District accepts this funding, funds would be available in July, 2012.

WELCH-COMER

Other - Additional Potential Funding Sources

- Idaho Community Development Block Grant
  - Income survey required, eligibility based on 51% Low to Moderate Income
  - Competitive grants, 30% of project cost up to $500,000
  - County sponsors application
  - Can only sponsor one entity in a geographic area at a time
  - Applications are due in November of each year
  - Must have selected financing mechanism secured/in place

WELCH-COMER

District System Upgrades Financing Methods

- Revenue Bond
- Local Improvement District
- Pay as you Go

WELCH-COMER

District System Upgrades Financing Methods

- Revenue Bond
  - Requires voter authorization to borrow funds to complete major improvements
  - Only in-District eligible voters vote (owners or renters)
  - Monthly rate increase to cover loan debt service
  - Only active service pay

WELCH-COMER

District System Upgrades Financing Methods

- Local Improvement District
  - Formed over District parcels
  - One time payment or annual payment option
  - All parcels that receive benefit from the water system (active or not) pay.

WELCH-COMER

District System Upgrades Financing Methods

- Pay as you Go
  - Raise rates to fund budgeted improvements ($202/connection/month will fund $250,000 in improvements per year)

WELCH-COMER

Funding Scenario & Rate Impact
(IDEQ Loan at 1.25% for 30 Years Based on Option A)

	Revenue Bond	LID
Total Estimated Capital Cost:	$1,093,400	$1,093,400
Principal Forgiveness	$330,262	$330,262
Amount Financed	$763,138	$763, 138
Total Annual Payment: (Includes Financing/Admin Costs)	$30,662	$30,662
Number of Connections	103	119
Equivalent Cost per Connection*	Annual: $297.72 Monthly: $24.81	Annual: $257.66 Monthly: $21.47

WELCH-COMER

*These costs do not include monthly base rate

Ways to Reduce Rate Increase Impact for Proposed Improvements

- Apply for additional/other funding/grants
- Phase rate increases over 4 – 5 years starting as early as 2013

* Additionally note that completion of proposed improvements will likely decrease operating and maintenance costs

WELCH-COMER

Funding Scenario & Rate Impact (Revenue Bond) (IDEQ Loan at 1.25% for 30 Years Based on Option A)

Proposed Rate Increase Schedule:

Year	Monthly Increase	Revised Equivalent Residential Monthly Base Rate
2012	---	$36.00
2013	$4.96	$40.96
2014	$4.96	$45.92
2015	$4.96	$50.88
2016	$4.96	$55.85
2017	$4.96	$60.81
Total Increase for Debt Service	**$24.81**	

- Allows District to Cover Interim Interest and Accumulate Emergency Reserve
- 1st Payment Due Within 1 Year of Loan Closure (If loan closes 2017, payment would be due 2018)

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Proposed Schedule

	Facility Plan/Environmental Process	Funding Process
Jan-12	DRAFT Plan Submitted to Board	
Feb-12	Receive Board Comments on DRAFT Plan, Revisions to DRAFT	
Mar-12		DEQ Priority List Published
Apr-12		
May-12	Submit Draft / Meet with IDEQ/ Newsletter Mailing	Discuss Funding/Financing Options
Jun-12	1st Public Informational Meeting (Presentation of Facility Plan)	
Jul-12	Public Input Received/Board Selects Final Project Scope	Board Decision to Move Forward
Aug-12	Environmental Process Begins	Preparation/Submittal of DEQ Application
Sep-12		
Oct-12		LID or Revenue Bond Election
Nov-12		
Dec-12		
Jan-13		
Feb-13		DEQ Review of Loan Application
Mar-13		
Apr-13		
May-13		
Jun-13	Environmental Process Complete	DEQ Loan Offer & District Acceptance
Jul-13		
Aug-13		Design, Bid, Construct
Sep-13		
Oct-13		
Nov-13		

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Environmental Criteria	No Improvements	Improvement Option A/A1	Improvement Option B
Climate and Physical Aspects (Topography, Geology, and Soils)	No Impact	Excavation for New Well and Well House, Line Replacement and Distribution Improvements (Long-Term Impacts Minimal, Short-Term Impact, respectively)	Excavation for New Well and Well House, Significantly More Line Replacement than Option A (Long-Term Impacts Minimal, Short-Term Impact, respectively)
Population, Economic, and Social Profile	No Potential for Growth or Expansion	Increased User Rates; Allow for Growth, Improved Fire Flow and Service	Increased User Rates; Allow for Growth, Improved Fire Flow and Service
Land Use	No Impact	No Impact	No Impact
Floodplain Development	No Impact	Line Replacement in Floodplain (Minor Short-Term Impact)	Line Replacement in Floodplain (Minor Short-Term Impact)
Wetlands and Water Quality	No Impact	Line Replacement in Wetland, and General Disturbance for Line Replacement (Short-Term Impact)	Line Replacement in Wetland, and General Disturbance for Line Replacement (Short-Term Impact)
Wild and Scenic Rivers	No Impact	No Impact	No Impact
Cultural Resources	No Impact	Well Site (Potential Impact)	Well Site (Potential Impact)
Flora and Fauna	No Impact	Site Disturbance (Short-Term Impact)	Site Disturbance (Short-Term Impact)
Recreation and Open Space	No Impact	No Impact	No Impact
Agricultural Lands	No Impact	No Impact	No Impact
Air Quality	No Impact	Construction Emissions, Standby Generator (Short-Term Impact, Intermittent Long-Term Impact, respectively)	Construction Emissions, Standby Generator (Short-Term Impact, Intermittent Long-Term Impact, respectively)
Energy	No Impact	Improved Efficiency, More Pumping (Negligible Effect)	Improved Efficiency, More Pumping (Negligible Effect)
Public Health	Continued Deficiencies in Service, Reliability and Fire Flow	Improve Service, Reliability, and Improve Fire Flow	Improve Service, Reliability, and Improve Fire Flow
Monthly Rate Increase (to fund debt service with a revenue bond)	$0	$24.81/ $40.84	$58.55

Public Comment Period

- The District will be accepting written comments from June 20, 2012 to July 20, 2012.
- The Facility Plan can be viewed at:
  - www.welchcomer.com/projectinformation.html
  - Welch Comer's office at 350 E. Kathleen
  - At the pump house during regularly scheduled meetings (2nd Tuesday of every month at 7:00 pm)

WELCH-COMER

Questions

Revenue Bond vs. Local Improvement District

Revenue Bond	Local Improvement District
• Election held on Specified Election Dates Set by County • Registered Voters vote • Requires simple majority to pass	• Formed over District Boundary Only • Board passes Resolution of Intent to Form LID • LID Formation Hearing is Published then Held • Board Determines whether to Proceed with Formation Based after Hearing • Requires written protest by 60% of resident property owners or written protest by property owners of 2/3 of the lots and lands • If Protested, County Commissioners would review the formation • Reflected as a lien on the property
Payment: • Monthly debt service increase added to the monthly water base rate	**Payment:** • Typically a One-Time (paid right after the LID is closed) or Financed Annual Assessment

WELCH-COMER

Frequently Asked Questions

1. **If no fire protection was to be provided to the system, what would the deficiencies be:**

The system's source and booster deficiencies would not change from those presented since they are driven by peak demands rather than fire flow. The distribution system would not be deficient but would still be depreciated and in need of replacement. But if you are going to upgrade facilities, it makes sense to maximize the benefit to the customer base. Fire protection is an invaluable component to the water system which can benefit a lot of people for a relatively small cost if it is needed.

2. **Why do we need extra source and booster capacity?**

To provide for emergencies such as power outages, pump failures, and fires. This area is vulnerable to all of these. A long term power outage can result in water outages and depressurization of the water system which can expose the system and customers to contamination.

WELCH-COMER

Frequently Asked Questions

3. **Why should we do this now?**

This is an opportune time for the District to bring the system up to standard:

a. The Facility Plan identifies and outlines current system deficiencies and provides a road map for the system's improvements.

b. DEQ has available low interest loan funds and the District has ranked high enough to be eligible for significant principal forgiveness.

c. The bidding environment is still fairly competitive due to the state of the economy.

d. The system will continue to "lose value" and will eventually need to be replace. These improvements would give the District a jump start to the needed long-term investment in the system.

e. The system will have very limited flexibility to add customers, if desired, without upgrades.

WELCH-COMER

Frequently Asked Questions

4. **Why shouldn't we focus on improving the depreciating distribution system?**

a. Improvements to the distribution system won't fix the source and booster capacity deficiencies which are critical to improved customer service. While instantaneous fire flow may be available with some distribution improvement, the system would not have the capacity to support the flow.

b. Improvements to the distribution system which result in an upsize in the main line will require DEQ approval and DEQ will likely require source and booster capacities to be addressed first, if DEQ funds will be used.

c. This is not to say that the District should not be planning for additional replacements long term.

WELCH-COMER

Summary of Water Fees for North Idaho Communities (Updated June, 2012)

COMMUNITY	RESIDENTIAL MONTHLY WATER USE: BASE RATE MONTHLY EQUIVALENT	BASE QUANTITY PER MO.	OVERAGE FEE		MONTHLY RATE FOR 25,000 GALLONS (3,342 CF) PER MONTH
Alpine Meadows Water & Sewer District	$38.00	10,000	$8.00	/1,000 gal	$81.00
Cataldo Water District	$24.00	10,000	$1.50	/1,000 gal	$46.50
Central Shoshone Water District	$55.00	1200 CF	$1.70	/100 CF	$81.43
City of Bonners Ferry	$40.14	1000 CF	$0.02617	/CF	$77.93
City of Coeur d'Alene	$8.51	0	$0.73 $1.04	/1,000 gal 0-30,000 /1,000 gal >30,000	$24.51
City of Harrison	$24.06	3,000	$1.20	/1,000 gal	$52.46
City of Hayden Lake	$28.00	0	$1.10 $1.25	/1,000 gal 0-10,000 /1,000 gal >10,000	$65.25
City of Plummer	$15.50	0		0-6,000 $2.00/1000 gal Next 20,000 $3.00/1000 gal Next 25,000 $3.50/1000 gal Remaining Usage	$85.50
City of Post Falls	$9.02	0		$0.97/1,000 gal >10,000 gal $1.41/1,000 gal	$25.22
City of Priest River	In City - $20.85 Out City - $27.80 Senior - $18.50	12,000		In City $2.85/1,000 gal Senior $2.85/1,000 gal Out of City - $3.80/1,000/gal	In City $57.90 Out City $77.20 Senior - $55.65
City of Rathdrum	$35.25	10,000		$0.50/1,000 gal	$37.25
City of St. Maries	Inside City Limits - $38 Outside City Limits - $42	10,000		$1.20/1,000 gal	Inside City Limits $51 Outside City Limits $55
City of Worley	$21.50	5,000		$ 0-10,000 $1.00/1,000 gal >10,000 $2.00/1,000 gal	$46.50
East Shoshone County Water District	$38.50	10,000		$1.00/1,000 gal	$53.28
Fernwood Water & Sewer District	$47.00	10,000		$0.70/100 gal	$77.50
Hauser Lake Water Association	$26.00	10,000		10,000 - 60,000 $ 90/1000 gal >60,000 $1.00/1000	$33.50
Kingston Water & Sewer District	$35.00	0		$ 25.75/1,000	$73.75
North Kootenai Water District**	$24.44	0		$ 1.690 $1.1571 000 gal $ 0-15,000 $1.1871 000 gal 15,000-50,000 $1.1121 000 gal >50,000 $2.85/1,000 gal	$58.59
Santa Water & Sewer District	$17.00	10,000		$0.20 / 100 gal	$67.00

Notes: Not all rates are updated annually.

** As proposed

Water Rate Increase History

		Base Rate per Connection	Gallons Allowed Within Base Rate	Additional Charge per 1,000 Gallons Used Over Gallons Allowed
2006	Residential	$27.00	10,000	$2.00
	Commercial	$40.00	10,000	$3.00
2007	Residential	$30.00	10,000	$2.00
	Commercial	$43.00	10,000	$3.00
2008	Residential	$33.00	10,000	$2.00
	Commercial	$46.00	10,000	$3.00
Jan. - Dec. 2010	Residential	$30.00	10,000	$3.00
	Commercial	$43.00	10,000	$5.00
Jan. 2012	Residential	$36.00	10,000	$3.00
	Commercial	$49.00	10,000	$5.00

Notes:

1. The 2008 the raise in the base rates was to pay for the US 95 main line relocation. Once this debt was paid, the rate increase was removed.
1. Base rates were raised by 5% in December 2011. In addition, $4.50 was added to the base rate (for both residential and commercial) in order to fund a sinking fund allocated to paying for the Facility Plan. The intent being that the $4.50 charge will be removed once the sinking fund has been fully funded.

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Overview of Pertinent Idaho Rules for Public Water Systems Regulated by IDEQ (IDAPA 58.01.08)

1. **Groundwater Systems:** Must have sufficient source capacity to supply the maximum day demand with largest source off line.
2. **Booster Facilities:** Must have sufficient capacity to supply the following:
   - Maximum day demand (Peak Day) plus fire flow*
   - Peak hour demand (Peak Hour) with any pump out of service
3. **Storage:** Must have sufficient volume to provide:
   - Operational Storage: Volume allocated to pump control
   - Equalization Storage: Volume to supply peak hour demand over 150 min.
   - Standby Storage: Volume to supply 8 hours of average day demand.
   - Fire Suppression: Volume specified by local fire authority

WELCH-COMER

*With largest pump out of service unless waived by local fire authority.

Overview of Pertinent Idaho Rules for Public Water Systems Regulated by IDEQ (IDAPA 58.01.08)

1. **Distribution System**
   - Supply fire flow while maintaining at least 20 psi throughout the system
   - Fire hydrants must be fed by waterlines 6 inches or larger in diameter
   - Supply peak hour demand (Peak Hour) while maintaining at least 40 psi throughout the system
2. **Fire Flow Requirements per the Local Fire Authority:**
   - Requirement: 250 gpm for 2 hours
   - Recommendation: 500 gpm for 1 hour
   - Pump redundancy shall not be required*

WELCH-COMER

*As waived by Northern Lakes

PUBLIC MEETING JUNE 19, 2012

Print Name	Phone	Address
KIMANN EEE	772-3467	16067 N RIDGEWAY
Charlie Nelson	772-3683	15996 N. Ridgeway Lane
Norm Nelson	" "	
Nancy Nabile	772-0584 x3014	11100 N. Airport Dr.
PHIL BOYD	664-9382	350 E KATHLEEN CDA
Ed Kelly	762-3976	1187 E Grand Tour
Jerry Engelbrecht	772-3917	15778 R. Ridgeway
Jack Dering	772-3898	2915 E Grand tour Dr.
Bob Thackston	772-6838	16086 N. Pinewood Way
Trudi Thackston	772-6838	16086 N. Pinewood Way
JOHN L JONES	209-1180	3348 E GRAND TOUR DR
Karen Osterdock	664-9382	350 E Kathleen (Welch Corner)
MARILYN BAUER	772-3565	15852 Ridgeway Ln
Jerry Bauer	772-3565	15852 Ridgeway Ln
Moran Fischer	772-6398	3213 E. Grand Tour
Terry Jones	772-5464	2205 E Grand tour.
Melissa DeMotte	762 8020	16109 N Ridgeway Ln
DAVID ISENSON	762-4760	15720 N. RIDGEWAY
Ellen Kramer	772-2387	16761 N. Pinewood Way
Pat Kramer		
Susie	772-4343	2680 GRAND TOUR
Martha Mellico	772-4549	266E E Hudlow
Jim Leadley	772-2989	2109 E Glacier
Katy Baker-Casile	666-4640	DEQ 2110 Ironwood Pkwy

PUBLIC MEETING JUNE 19, 2012

Print Name	Phone	Address
Dean S. Marcus	772 2568	3461 E. Grand Tour
Tonya L Pereira	772-3914	1767 E. Grand Tour
Rick Smith	772-4556	1761 E Grand Tour Dr.
Jeff Hutchinson	775-0156	16432 N. Pinewood Way
Terry Edelmann	772-3504	2482 E. Glacier
Don Bradway	635-5661	2994 E. Hudlow
Jeff Mueller	691 7877	3027 Grand
Todd Peterson	762-4800	15624 N. Ridge Way Ln
Donna McAdam	755-8083	2540 E. Grand Tour Dr

Board of Directors
Alpine Meadows

7/10/2012

With the improvements set bond at the recent meeting, it will some day be possible to add new hook ups to the water system. Although it may seem premature, I think that the board should seriously consider raising the hook up fees from their current rate. Water is a valuable resource and growth should pay its own way. Acting now will ensure that this happens, because some future board may not be so far sighted. I believe a hook up fee of $750.00 to $1,000.00 is not unreasonable. Any hook ups that are now promised but not paid for would be grandfathered in at the current rate. I know you have alot to deal with now, but I think this is the important to overlook in your long term planning.

Sincerely,
Charlene Nelson

COMMENT / QUESTION FORM

Please CALL me if I can help in any way I will Try.

772-3504 home

699-2131 cell

Terry

Name:	Terry + Angela Eichmann
Address:	7482 E. Gilmore
Email:	Terryspeyguice@Gmail.com

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

Name:	Don Bradway
Address:	7994 E. Hudlow
Email:	DonBRADWAY@YAHOO.COM

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

I'd like that option if you can make the improvements without abandoning us.

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

Name:	Norm + Charlene Nelson
Address:	Nelson1346@Roadrunner.com
Email:	15946 N. Ridgeway Lane

COMMENT / QUESTION FORM

I appreciate the work of the board and staff. Unfortunately support Plan A or Plan B as recommended by the board would place us, not much support either.

Thank you
Judi Thorkelson

Best wishes
Judi

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

Name:	Judi Thorkelson
Address:	4556 N Pinewood Way
Email:	Fruit5838@yahoo.com

COMMENT / QUESTION FORM

WE'VE BEEN HERE SINCE '79 SO HAVE
BEEN THROUGH POOR SERVICE.
I AM 100% FOR PLAN B.
THANKS FOR YOUR WORK

LID SEEMS THE BETTER OPTION

Name:	BOB THACKSTON
Address:	16086 N. PINEWOOD
Email:	BTGRAPHICS@ME.COM

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

It is important that we move forward with this project. The existing system needs, however, new well, meters & I had begin replacing some of the distribution line. I would go with either Alt 5 Bond A1 or B. I would like to see more [illegible] done also by better [illegible]

Name:	Kim Ann Erk
Address:	16527 N Pelouse [illegible]
Email:	[illegible]

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

I think the board did a great job getting us this far.

A | A1 | B

I support plan A or A1 using revenue bond so we can phase in the increase.

Great Job!

Thank You!

Name:	Melissa Demotte
Address:	16109 N Ridgeway Ln
Email:	mdemotte@rvadsunnen.com

Please return your comments no later than **July 20, 2012**:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

NICE JOB!

GO FOR A1

Name:	DAVID BENSON
Address:	15720 N-RIDGEWAY
Email:	SQONE@PACIFIC.NET

Please return your comments no later than **July 20, 2012**:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

NICE JOB!

GO FOR A1

Name:	DAVID BENSON
Address:	15720 N. RIDGEWAY
Email:	SQONE@PACIFIC.NET

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

WE'VE BEEN HERE SINCE '79 SO HAVE BEEN THROUGH POOR SERVICE.
I AM 100% FOR PLAN B.
THANKS FOR YOUR WORK

LID SEEMS THE BETTER OPTION

Name:	BOB THACKSTON
Address:	16086 N. PINEWOOD
Email:	BTGRAPHICS@ME.COM

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

Please call me if I can help in any way I will try.

772-3504 home
699-2131 cell

Terry

Name:	Terry + Angela Edelmann
Address:	2482 E. Glacier
Email:	Terryspeyguide@gmail.com

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

I think the board did a great job getting us this far.

A | A1 | B

I support plan A or A1 using revenue bond so we can phase in the increase.

Great Job!
Thank You!

Name:	Melissa DeMotte
Address:	16109 N Ridgeway Ln
Email:	mdemotte@roadrunner.com

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

Name:	Don Bradway
Address:	2994 E. Hudson
Email:	DONBRADWAY@YAHOO.COM

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

I appreciate the work of the Board and would wholeheartedly support Plan A1 or Plan B as recommended by the Board. Would prefer LID, but would support either.

Thank you
Trudi Thackston

Great presentation y'all.

Name:	Trudi Thackston
Address:	16656 N. Pinewood Way
Email:	trudit53835@yahoo.com

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

Go for Plan A I and strive for Plan B

Repairs are expensive I would just like to see it replaced

Name:	Terry Jones
Address:	2705 E Grand tour
Email:	

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

Jim

Please count our vote for Option 1A (or A1?), unless extra funding is greatly increased from other sources. Then 1B.

The assessment needs to be re done reflecting the new quantity assessment & new funding.

Comments Good meeting

We appreciate all the Board's efforts regarding work & funding, and in particular Kim's efforts. Thanks

Jerry & Marilyn Bauer
[illegible] N. Rainbow Lane

COMMENT / QUESTION FORM

Go for Plan A I and strive for Plan B

Repairs are expensive I would just like to see it replaced

Name:	Terry Jones
Address:	2705 E Grand tour
Email:	

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

mailed

COMMENT / QUESTION FORM

6-25-12

I was very impressed w/ the research and information the board put together – much more than the water board we had in the past – (the 90's) very glad to know we get a generator either way the vote goes. my family and I (1761 E. Grand tour Dr. also) agree that the district needs to completely upgrade. we are raising the 3rd alpine meadows generation and want to pay more now for a better system in their future. water master does great job. * we vote for going w/ 2 million plan ÷ Jim Lindsey does great job also – always has.

Name:	Daniel & Tonya Pereira
Address:	1767 E. Grand tour Dr.
Email:	—

Please return your comments no later than
July 20, 2012:
Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

COMMENT / QUESTION FORM

Welch-Comer

I commend you on a job well done, your presentation understandable and to the point.

I would like to extend a special thank you to the committee members for their involvement.

I as a member of the district we would elect to pursue option A/A1 and revisit option B 7-10 years down the road.

Name:	CAROL JONES
Address:	3348 GRAND TOUR DR
Email:	N/A

Please return your comments no later than **July 20, 2012**:

Alpine Meadows Water & Sewer District
c/o Welch Comer
350 E Kathleen
Coeur d'Alene, ID 83815

Alpine Meadows Public Comment Summary
As of 7/18/2012

Total Number received	**13**
Number indicating approval for Option A	3
Number indicating approval for Option A1	5
Number indicating approval for Option B	5
Number indicating approval for Do Nothing	
No Comment	1

Comments Received:

1. Go for Plan A1 and strive for Plan B. Repairs are expensive. I would like to see it replaced. – Terry Jones (sent twice)
2. Nice Job! Go for A1. – David Benson
3. We've been here since '79 so have been through poor service. I am 100% for Plan B. Thanks for your work. LID seems the better option. – Bob Thackston
4. Please call me if I can help in any way I will try. – Terry and Angela Edelmann
5. I think the board did a great job getting us this far. I support plan A or A1 using revenue bond so we can phase in the increase. Great Job! Thank You! – Melissa DeMotte
6. No comments written – Don Bradway
7. I appreciate the work of the Board and would wholeheartedly support Plan A1 or Plan B as recommended by the Board. Would prefer LID, but would support either. Great Presentation by all. Thank you – Trudi Thackston
8. I was very impressed w/the research and information the board put together – much more than the water board we had in the past (the 90s) very glad to know we get a generator either way the vote goes. My family and I (1761 E. Grand Tour Dr.) agree that the district needs to completely upgrade. We are raising the 3rd Alpine Meadows generation and want to pay more now for a better system in their future. Water master does great job *we vote for going with $2 million plan* Jim Lindsay does great job also – always has. – Daniel and Tonya Pereira
9. Welch-Comer – I commend you on a job well done, your presentation understandable and to the point. I would like to extend a special thank you to the committee members for their involvement. I as a member of the district we would elect to pursue option A/A1 and revisit option B 7-10 years down the road. – Carol Jones

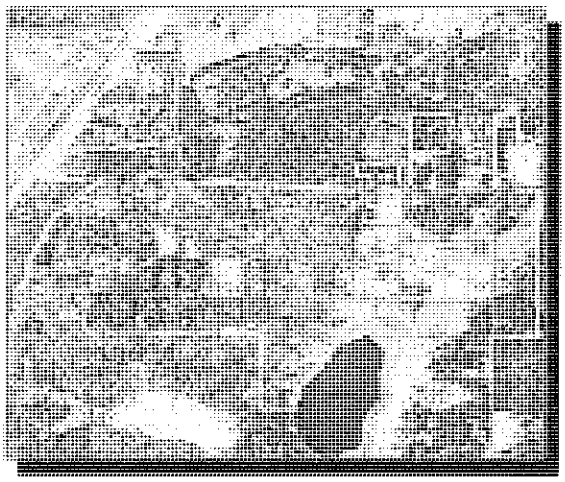
10. Jim – Please count on our vote for option 1A (or A1?), unless extra funding is greatly increased from other sources. Then 1B. The assessment needs to be redone reflecting the new _____ assessment and new funding. Comments – Good meeting. We appreciate all the boards efforts regarding work and funding, and in particular Kim's efforts. Thanks, Jerry and Marilyn Baum

11. Board of Directors – Alpine Meadows Water & Sewer District – 7/20/12 – With the improvements outlined at the recent meeting , it will someday be possible to add new hook ups to the water system. Although it may seem premature, I think that the board should seriously consider raising the hookup fees from their current rate. Water is a valuable resource and growth should pay its own way. Acting now will ensure that this happens, because some future board may not be so far sighted. I believe a hook up fee of $7,000 to $10,000 is not unreasonable. Any hook up that are now promised but not paid for would be grandfathered in at the current rate. I know you have a lot to deal with now, but I think this to important to overlook in your long term planning. Sincerely, Charlene Nelson

12. We feel that option A will make the necessary improvements without overburdening us. – Norm and Charlene Nelson

13. It is important that we move forward with these measures. The backup system generators, boosters, new well, meters, and at least begin replacing some of the distribution lines. I would go with either LID or Bond, A1 or B. I would like to see another leak detection done along the entire main! – Kim Ann Erk

Alpine Meadows Water System



Based on questions received at the June 19th public meeting, we have prepared tables 1 and 2 to summarize and provide a comparison of the proposed improvement options. Table 3 provides a comparison of the District's options for the financial mechanism to implement the proposed improvements.

To view the DRAFT facility plan, June 19th presentation, and these summary slides, please visit: **www.welchcomer.com/projectinfomation.html**

Table 1: Improvement Option Overview

	Option A **Required Fire Flow** **250 gpm for 2 hours**	**Option A1** **Required Fire Flow** **250 gpm for 2 hours with Additional Distribution Improvements**	**Option B** **Recommended Fire Flow** **500 gpm for** **1 hour**
Source Improvements	Construct second well (160 gpm)	Construct second well (160 gpm)	Construct second well (160 gpm)
Storage Improvements	None	None	None
Booster Improvements	Add pumping capacity (115 gpm) and generator	Add pumping capacity (115 gpm) and generator	Add pumping capacity (262 gpm) and generator
Distribution Improvements	Upsize 2" Lines on Glacier and Grand Tour to 8" Line (3,400 LF)	Upsize 4" Line on Grand Tour and 2" Lines on Glacier and Grand Tour to 8" Line (7,800LF)	Upsize 4" Line on Grand Tour and 2" Lines on Glacier and Grand Tour to 8" Line (11,100 LF)
Water Meter Procurement and Installation	Replace aged meters		
Total Estimated Project Cost	$1,093,400	$1,800,000	$2,344,800

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Table 2: Comparison of Improvement Options				
	OPTION A System Reliability plus Fire Flow of 250 gpm for 2 hours	**Option A1 System Reliability plus Fire Flow of 250 gpm for 2 hours with Additional Distribution Improvements**	**OPTION B System Reliability plus Fire Flow of 500 gpm for 1 hour**	**OPTION C Do Nothing**
Capital Cost (total project)	$1,093,400	$1,800,000	$2,344,800	$0
Replacement of Distribution System	3,400 LF (9% of system)	7,800 LF (20% of system)	11,100 LF (30% of system)	None
Fire Flow Achieved	250 gpm for 2 hours	250 gpm for 2 hours	500 gpm for 1 hour	90 to 334 gpm
Back-Up Source	Yes	Yes	Yes	No
Back-up Boosters with backup power	Yes	Yes	Yes	No
Number of additional connections that could be served (based on source capacity)	40	40	40	Less than 10 recommended
Revenue Bond Monthly Rate Increase*	$24.81	$40.84	$58.55	$0.00
LID Assessment One Time Payment LID Annual Assessment* LID Equivalent Monthly Increase*	$6,579 $264 $22.03	$10,830 $435 $36.26	$15,527 $624 $51.99	$0 $0 $0

*Based on IDEQ financing (1.25% over 30 years with principal forgiveness of 30%)

Table 3: Overview of Revenue Bond vs. Local Improvement District	
Revenue Bond	**Local Improvement District**
• Election held on Specified Election Dates Set by State • Registered Voters vote • Requires simple majority to pass	• Formed over District Boundary • Board passes Resolution of Intent to Form LID • LID Formation Hearing is Published then Held • Board Determines whether to Proceed with Formation after Hearing • In order to stop LID: Requires written protests by 60% of resident property owners OR written protests by property owners of 2/3 of the lots and lands • If Protested, County Commissioners would review the formation • Reflected as a lien on the property
Payment	**Payment**
• Monthly debt service increase added to the monthly water base rate	Two Options: • One-Time Lump Sum Payment (paid right after the LID is closed) **OR** • Annual Payment Financed over a 15 to 30 year term
Active Connections	**Properties in District Boundary**
103	119

ALPINE MEADOWS SUMMARY OF COSTS			
	Option A **Required Fire Flow** **250 gpm for 2 hours**	**Option A1** **Required Fire Flow** **250 gpm for 2 hours with Additional Distribution Improvements**	**Option B** **Recommended Fire Flow** **500 gpm for** **1 hour**
Estimated Project Cost	$1,093,400	$1,800,000	$2,344,800
Principal Forgiveness	-$330,262	-$543,691	-$543,691
Principal	$763,138	$1,256,309	$1,801,109
Interest	$156,715.18	$257,990.97	$369,869.09
Total	**$919,853.11**	**$1,514,299.97**	**$2,170,978.09**
Revenue Bond			
Current Connections	103	103	103
Estimated Monthly Rate Increase	**$24.81**	**$40.84**	**$58.55**
LID			
Current Properties within Boundary	116	116	116
LID Assessment (One Time Payment)	$6,579	$10,830	$15,527
LID Annual Assessment	$264	$435	$624
LID Equivalent Monthly Increase	**$22.03**	**$36.26**	**$51.99**

Alpine Meadows Public Comment Summary
As of 7/18/2012

Total Number received	**13**
Number indicating approval for Option A	3
Number indicating approval for Option A1	5
Number indicating approval for Option B	5
Number indicating approval for Do Nothing	
No Comment	1

Comments Received:

1. Go for Plan A1 and strive for Plan B. Repairs are expensive. I would like to see it replaced. – Terry Jones (sent twice)
2. Nice Job! Go for A1. – David Benson
3. We've been here since '79 so have been through poor service. I am 100% for Plan B. Thanks for your work. LID seems the better option. – Bob Thackston
4. Please call me if I can help in any way I will try. – Terry and Angela Edelmann
5. I think the board did a great job getting us this far. I support plan A or A1 using revenue bond so we can phase in the increase. Great Job! Thank You! – Melissa DeMotte
6. No comments written – Don Bradway
7. I appreciate the work of the Board and would wholeheartedly support Plan A1 or Plan B as recommended by the Board. Would prefer LID, but would support either. Great Presentation by all. Thank you – Trudi Thackston
8. I was very impressed w/the research and information the board put together – much more than the water board we had in the past (the 90s) very glad to know we get a generator either way the vote goes. My family and I (1761 E. Grand Tour Dr.) agree that the district needs to completely upgrade. We are raising the 3rd Alpine Meadows generation and want to pay more now for a better system in their future. Water master does great job *we vote for going with $2 million plan* Jim Lindsay does great job also – always has. – Daniel and Tonya Pereira
9. Welch-Comer – I commend you on a job well done, your presentation understandable and to the point. I would like to extend a special thank you to the committee members for their involvement. I as a member of the district we would elect to pursue option A/A1 and revisit option B 7-10 years down the road. – Carol Jones
10. Jim – Please count on our vote for option 1A (or A1?), unless extra funding is greatly increased from other sources. Then 1B. The assessment needs to be redone reflecting the new _____ assessment and new funding. Comments – Good meeting. We appreciate all the boards efforts regarding work and funding, and in particular Kim's efforts. Thanks, Jerry and Marilyn Baum
11. Board of Directors – Alpine Meadows Water & Sewer District – 7/20/12 – With the improvements outlined at the recent meeting , it will someday be possible to add new hook ups to the water system. Although it may seem premature, I think that the board should seriously consider raising the hookup fees from their current rate. Water is a valuable resource and growth should pay its own way. Acting now will ensure that this happens, because some future board may not be so far sighted. I believe a hook up fee of $7,000 to $10,000 is not unreasonable. Any hook up that are now promised but not paid for would be grandfathered in at the current rate. I know you have a lot to deal with now, but I think this to important to overlook in your long term planning. Sincerely, Charlene Nelson
12. We feel that option A will make the necessary improvements without overburdening us. – Norm and Charlene Nelson
13. It is important that we move forward with these measures. The backup system generators, boosters, new well, meters, and at least begin replacing some of the distribution lines. I would go with either LID or Bond, A1 or B. I would like to see another leak detection done along the entire main! – Kim Ann Erk

Alpine Meadows Water & Sewer District
Minutes of Board Meeting
September 11, 2012

The meeting was called to order by Chairman Mike Waldo at 7:00 pm. Board members present were John Jones, Kim Ann Erk, Ed Kelly and Toni Summerlin. Guests were Necia Maiani from Welch-Comer, Charlene Nelson, Jean Kramer and Dannielle Quade the Bond Attorney. There were no conflicts of interest.

John moved and Kim Ann seconded that the minutes of the Special Bond Meeting on September 14th be approved with the clarification that Necia would do the PowerPoint presentation pending approval of that expense. Motion carried. John moved and Ed seconded that the minutes of the August 6, 2012 meeting be approved. Motion carried.

Treasurer's Report:

- The ICRIMP insurance for the district this year is $1512.
- There is a phone tree update and it is dated each time changes are made.
- Kim Ann to speak to Eric Bard about the tree that has fallen on the water meter.
- Kim Ann moved and Toni moved that the Treasurer's report be approved. Motion carried.

Water Master's Report:

- Fences of the Donnelly's and McDonald's need to be moved to allow access to the water meter. Ed will talk with the Donnellys and Kim Ann will speak with the McFarlands.
- Ed will talk with IRWA regarding the CEU's for Jeff for the CUPPS class.
- Kim Ann moved and Toni moved that Jeff attend the DEQ free training class this month to make sure he has the required CEU's for his license renewal. Motion carried.
- The extra testing that DEQ did for the district showed we were in compliance on all tests.
- Kim Ann moved and Ed seconded that the Water Master's report be approved. Motion carried.

Old Business:

- The bond resolution as written by Dannielle Quade was revised as the forgiveness expected cannot be mentioned.
- 46 days prior to the bond election the commissioners vote to print the ballot as the county is now in charge of all elections. We will be on the ballot.
- Kim Ann moved and Ed seconded that the board approve the request for the $1,800,000 grant.
  Mike – yes, John – yes, Kim Ann – yes, Ed – yes, Toni – yes. Motion carried.
- Kim Ann moved and Ed seconded that resolution 2012-2 calling for a Bond Election be approved. Mike – yes, John – yes, Kim Ann – yes, Ed – yes, Toni – yes. Motion carried.
- Kim Ann and John will attend the Kootenai County Commissioners meeting when they are asked to sponsor the bond for the DEQ $1,800,000 grant.
- The expense for Necia of Welch-Comer to provide the PowerPoint presentation at the Public Meeting on October 16th is $1880. The grant would pay 50% of the charge. The Board agrees to have Necia make the presentation.

New Business:

- Job descriptions for both Sect/Treasurer and Water Master were discussed. John categorized the duties for review.
- The purpose is to determine basic job salary and extras requiring additional expense. More review to come.
- Kim Ann moved and Toni seconded that the By-Law review be tabled until next meeting. Motion carried.
- Kim Ann moved and Ed seconded that John be authorized up to $2,500 for a laptop and software. Motion carried.
- Being no further business, John moved and Toni seconded that the meeting be adjourned at 9:06 pm. Carried.

Respectfully submitted Jim Lindsay Sect/Treasurer

Mike May

From: kim erk <toadflax_39@hotmail.com>
Sent: Wednesday, February 06, 2013 14:46
To: Mike May
Cc: Maiani, Necia M; jlindsay@intermaxnetworks.com; ejkelly01@yahoo.com; mjtjwaldo@adelphia.net; Tony Sumerlin; John L Jones
Subject: Alpine Meadows EID clarification
Attachments: Property Owner List Aug 1 2012.xlsx

DEQ
Att: Michael May
Re: Appendix N Public Participation Information - September meeting Minutes

The Minutes of September 11, 2012 under section "Old Business" reflect the Alpine Meadows Water and Sewer District Boards approval to move forward with the $1.8 million project. In the previous pages of this section it clearly outlines the options available to us in the Facility Plan that was presented and commented on by the public. Option A1 is clearly listed as the $1.8 million option. Although we clearly understood we were voting to move ahead with the A1 option of the Facility Plan for $1.8 million, I can see where you might not.

So to clarify it fully for you. In checking the actual recording of the meeting, we most certainly discussed in some length the decision to proceed with the A1 option of the Facility Plan for $1.8 million dollars because of the public support and the positive response we had received for this option. The motion to proceed with this option was passed with the unanimous role call vote of the Board.

I hope this clarifies the issue and I will have our engineers, Welch Comer, include this memo into the EID for additional support of those minutes.

I have also attached the e file of our water users names and addresses.

Sincerely,

Kim Ann Erk
Board Member

Volume 1, Issue 3

September, 2012

ALPINE MEADOWS WATER & SEWER DISTRICT NEWSLETTER

Introduction

Earlier this year, the District completed a Water System Facility Plan ("Plan"). Fifty percent (50%) of the Plan was funded by an Idaho Department of Environmental Quality ("IDEQ") planning grant. The findings of the Plan were presented to the public in June. The District Board appreciated the number of customers that attended the meeting and provided verbal and written comments.

Based on the findings of the Plan and written comments received, the District Board voted to move forward with Improvement Option A1. Option A1 is described further within in this newsletter.

Funding

IDEQ has prioritized the District to receive a low interest loan of up to $1.8 million with approximately 30% ($543,000) principal forgiveness. The interest rate on the loan amount is 1.25% for 30 years. A water rate increase will fund the repayment of the loan. The IDEQ loan requires that the District seek authorization to incur the debt through a revenue bond election, as further described herein.

Additionally, an income survey was completed for the District in September. It was determined that the District is eligible to apply for an Idaho Community Development Block Grant for up to $350,000. This application must be sponsored by Kootenai County. District Board members met with the County Commissioners in September. The County has agreed to sponsor the District's grant application.

If the District is successful in obtaining a Block Grant, we may opt to use the grant funds to:

1. **Complete additional improvements OR**
2. **Apply the grant to the project cost to reduce the rate impact**

The Board looks forward to obtaining your input on the potential use of these funds at the public meeting.

PUBLIC INFORMATIONAL MEETING

PLAN TO ATTEND

TUESDAY, OCT. 16, 2012 6:00 pm at the Fire Station at 1114 E. Hudlow Rd.

Join us for a public informational meeting to present the proposed water improvement project, available funding, rate impact, and revenue bond proposal.

Alpine Meadows Water & Sewer District
P.O. Box 526
Hayden, ID 83835
Phone: 208/772-5313

Board
Mike Waldo, Chairperson
John Jones, Vice Chair
Ed Kelly, Kim Ann Erk, Toni Sumerlin
Secretary/Treasurer, Jim Lindsay
Water Master, Jeff Mueller

Revenue Bond Election

The District Board has scheduled a revenue bond election for November 6, 2012. Voters will be asked to authorize the District to sell revenue bonds in the amount of $1.8 million to finance the proposed improvements. If passed by a simple majority of the qualified electors, the revenue bonds will be repaid only by a water rate increase and will not result in a tax on real property.

A "qualified elector", pursuant to Section 42-4109, Idaho Code, is every citizen of the United States at least eighteen (18) years old who has resided in the District for thirty (30) days, if registered to vote.

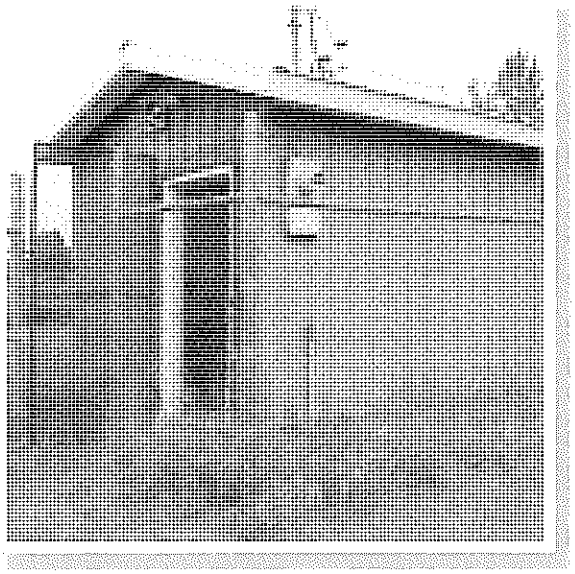
The **POLLING PLACE** will be:

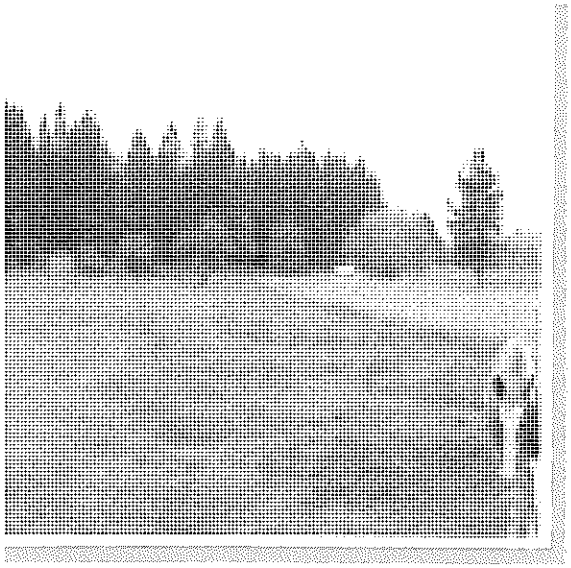
HAYDEN LAKE FRIENDS CHURCH

251 West Miles Avenue Hayden Lake, ID

NOTE: In order to secure funding from IDEQ and to be eligible to apply for the Block Grant, a simple majority of the qualified electors must vote in favor of authorizing issuance of a revenue bond in the amount of $1.8 million.

If the revenue bond is not successful, the District will lose the $1.8 million and will be unable to apply for a Block Grant this year.





Water System Improvements

The proposed system improvements were presented as Option A1 in the Plan. These improvements are described below and displayed on the attached figure.

System Component	Project Description	Estimated Project Cost	Purpose of Improvement
Source	Construct a second well	$412,750	• Provides a back up water supply to supply system demand when the system's existing well is off line.
Storage	No Improvements are Required.	$0	
Booster	Add pumping capacity and back up power generators	$106,650	• Provides back up pumping capacity to support peak hour demand when the largest pump is off line. • Standby power will allow the pumps to continue to operate and maintain system pressure during a power outage.
Distribution Part 1	Upsize 2" Lines on Glacier and Grand Tour from Glacier Road to Maxwell Drive (3,400 lineal feet)	$574,000	• Increases capacity of the distribution network to support the minimum required fire flow of 250 gpm for 2 hours. • Eliminates aging mains to improve system reliability and reduce system loss • Allows for relocation of main line and services to public right of way for operational access
Distribution Part 2	Upsize/Replace the remaining 4,400 lineal feet of line on Grand Tour	$706,000	• Eliminates aging mains to improve system reliability and reduce system loss (Note: The combination of Distribution Improvements Part 1 and 2 results in replacement of approximately 70% of the waterline fronting the majority of the District's customers.)
	Estimated Total Project Cost	**$1,800,000**	

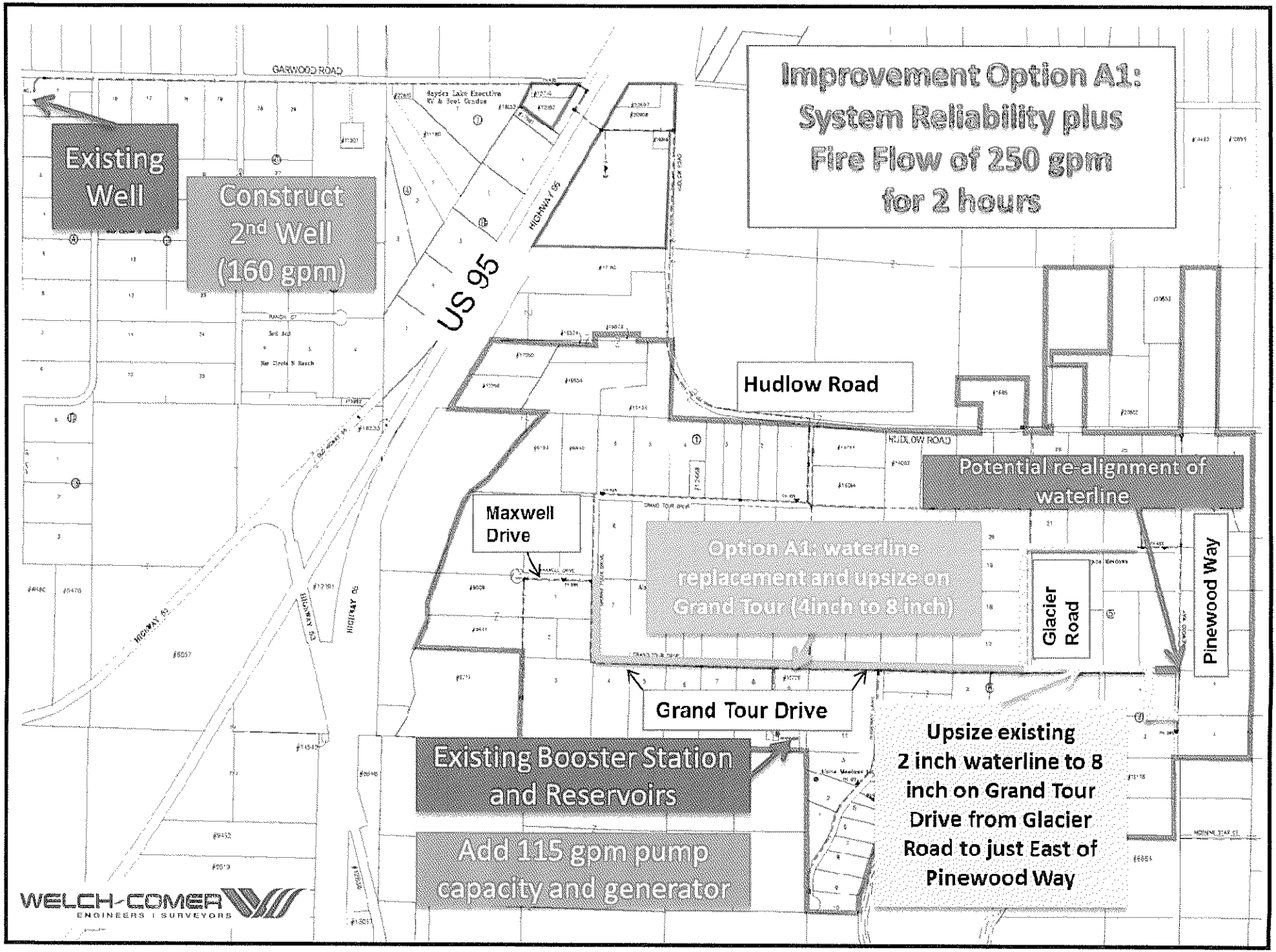
Estimated Project Cost/Funding Summary (Assuming that a Block Grant is not obtained)	
Estimated Total Project Cost	$1,800,000
IDEQ Loan Amount (Required Bond Authorization)	$1,800,000
IDEQ Principal Forgiveness	-$543,681
Net Principal	$1,256,319
Annual Payment (2.75% for 30 yrs)	$50,470.74
Current Active Connections	103
Estimated Monthly Rate Increase per Residential Connection	$40.84

Impacts on Rates

If the revenue bond election is approved by voters, it will be repaid over the next 30 years by an increase in the monthly base rate of approximately $40.84 per month per residential connection*. The District intends to phase the rate increase as follows, in order to lessen the immediate impact on the users:

Year	Proposed Rate Increase	Revised Equivalent Residential Monthly Base Rate
2012	--	$36.00
2013	$8.17	$44.17
2014	$8.17	$52.34
2015	$8.17	$60.51
2016	$8.17	$68.68
2017	$8.16	$76.84

*Based on the loan terms offered by IDEQ


Improvement Option A1:
System Reliability plus
Fire Flow of 250 gpm
for 2 hours
Existing Well
Construct 2nd Well (160 gpm)
US 95
HIGHWAY 95
GARWOOD ROAD
Hudlow Road
HUDLOW ROAD
Potential re-alignment of waterline
Maxwell Drive
Option A1: waterline replacement and upsize on Grand Tour (4inch to 8 inch)
Glacier Road
Pinewood Way
Grand Tour Drive
Existing Booster Station and Reservoirs
Add 115 gpm pump capacity and generator
Upsize existing 2 inch waterline to 8 inch on Grand Tour Drive from Glacier Road to just East of Pinewood Way
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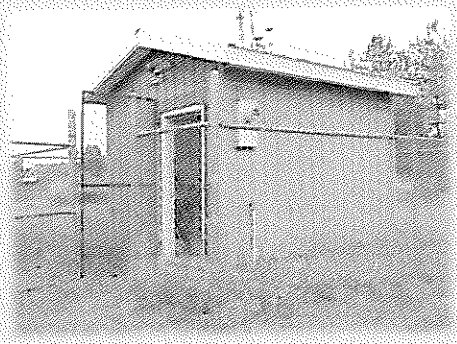
ALPINE MEADOWS WATER AND SEWER DISTRICT

Water System Improvement Project and Revenue Bond



WELCH-COMER

October 16, 2012

Introductions

1. Alpine Meadows Water and Sewer District:
   - Mike Waldo, Chairperson
   - John Jones, Vice Chair
   - Kim Ann Erk, Member
   - Ed Kelly, Member
   - Toni Sumerlin, Member
   - Jim Lindsay, Secretary/Treasurer
   - Jeff Mueller, Water Master
2. Welch Comer & Associates, Inc.:
   - Necia Maiani, P.E. – Sr. Project Manager
3. Danielle Quade, Hawley Troxell
4. Katy Baker-Casile, P.E., IDEQ
5. Nancy Mabile, Panhandle Area Council

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Purpose and Agenda

1. Present the proposed improvement project and associated rate impacts.
2. Discuss the Revenue Bond Election
3. Discuss Block Grant and Request Feedback

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Background

District received Facility Planning Grant	October, 2011
District is Prioritized to Receive DEQ Loan	May, 2012
District Completes DRAFT Facility Plan and Presentation to the Public	June, 2012
District Determines Block Grant Eligibility	September, 2012
District Selects Recommended Improvement Option and Decides to Move Forward with a Revenue Bond	September, 2012
Second Public Meeting	October 16, 2012
REVENUE BOND ELECTION	**November 6, 2012**

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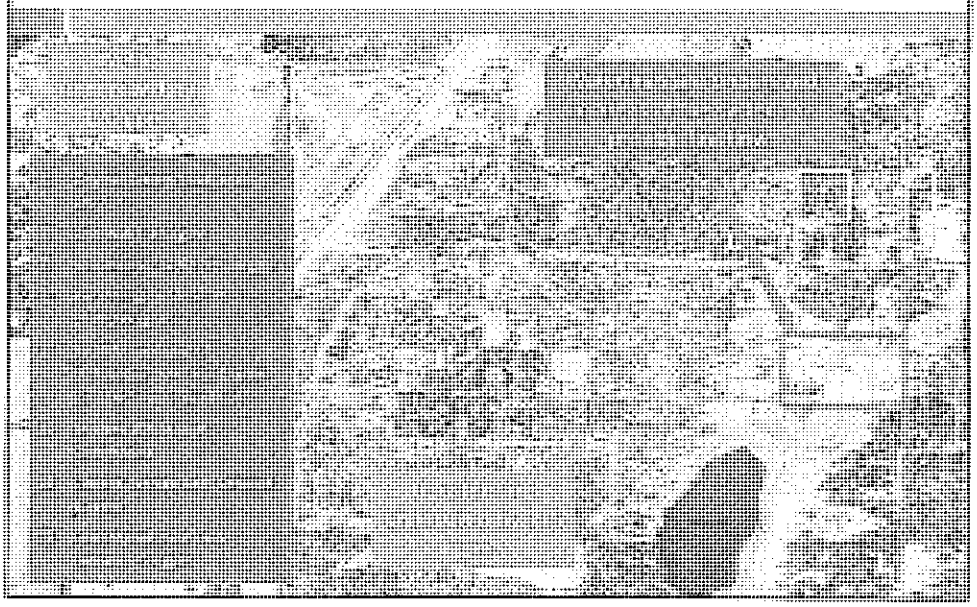
Alpine Meadows Water and Sewer District Water System Overview



Selected Improvements

Option A1 – Address system reliability and provide required fire flow (250 gpm for 2 hours). Replace 7,800 feet of waterline (20% of distribution system).

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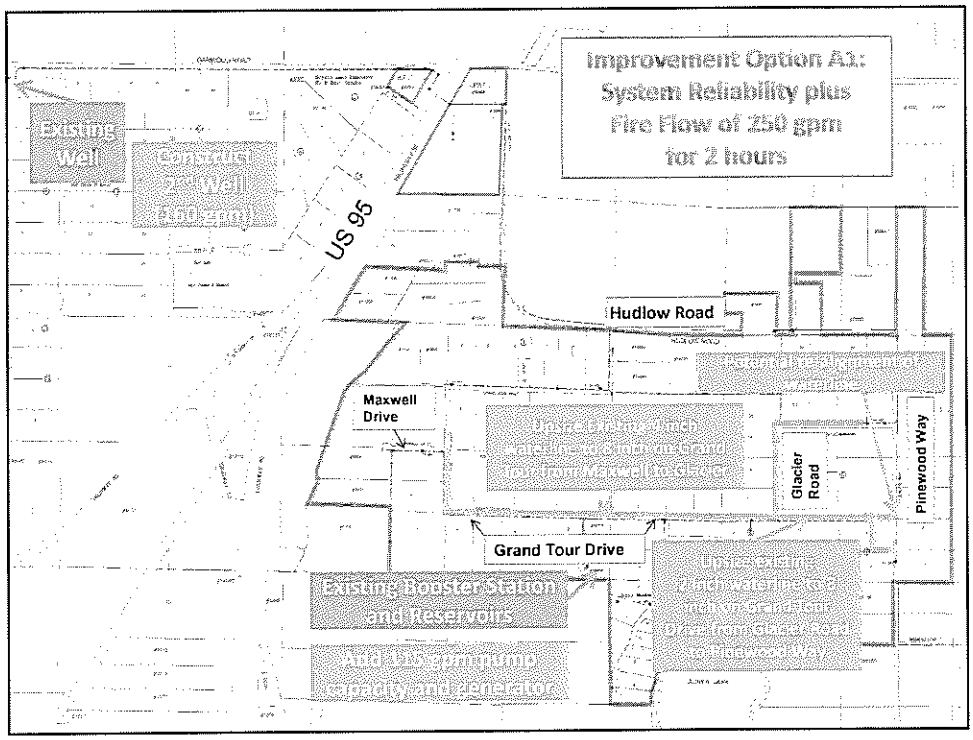
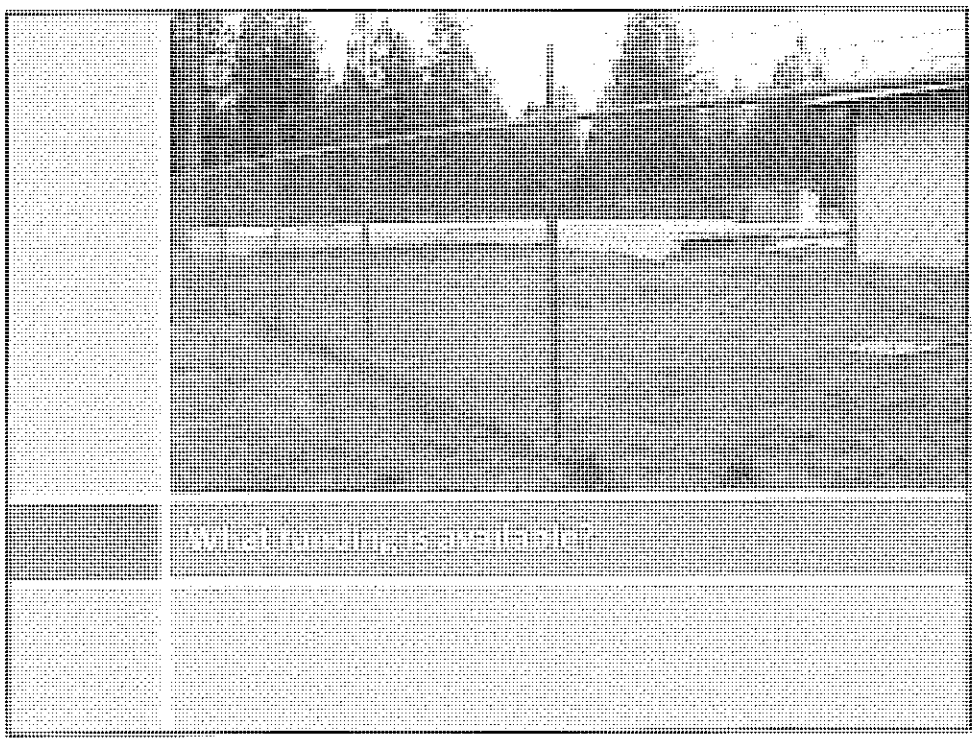


Summary of Selected Improvements

Service Area	Proposed Improvement	Estimated Project Cost	Benefits of Improvement
Source	Construct a second well	$412,750	• Provides a back up water supply to supply system demand when the system's existing well is off line.
Storage	No Improvements are Required.	$0	
Booster	Add pumping capacity and back up power generators	$106,650	• Provides back up pumping capacity to support peak hour demand when the largest pump is off line. • Standby power will allow the pumps to continue to operate and maintain system pressure during a power outage.
Distribution Part 1	Upsize 2" Lines on Glacier and Grand Tour from Glacier Road to Maxwell Drive (3,400 lineal feet)	$574,000	• Increases capacity of the distribution network to support the minimum required fire flow of 250 gpm for 2 hours. • Eliminates aging mains to improve system reliability and reduce system loss • Allows for relocation of main line and services to public right of way for operational access
Distribution Part 2	Upsize/Replace the remaining 4,400 lineal feet of line on Grand Tour	$706,000	• Eliminates aging mains to improve system reliability and reduce system loss (Note: Part 1 and 2 replace approximately 20% of the waterline of the District's customers.)
Estimated Total Project Cost		**$1,800,000**	



IDEQ Funding

- Low interest loan (total of $1,800,000)
- 1.25% for 30 years
- **$543,691 (approximately 30%) principal forgiveness.**
- Voters must approve Revenue Bond Election November 6, 2012 to secure funding.

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Estimated Rate Increase Based on IDEQ Funding (assuming that a Block Grant is not obtained)

Estimated Total Project Cost	$1,800,000
IDEQ Loan Amount (Required Bond Authorization)	$1,800,000
IDEQ Principal Forgiveness	-$543,691
Net Principal	$1,256,309
Annual Payment (1.25% for 30 yrs)	$50,478.24
Current Active Connections	103
Estimated Monthly Rate Increase per Residential Connection	$40.84

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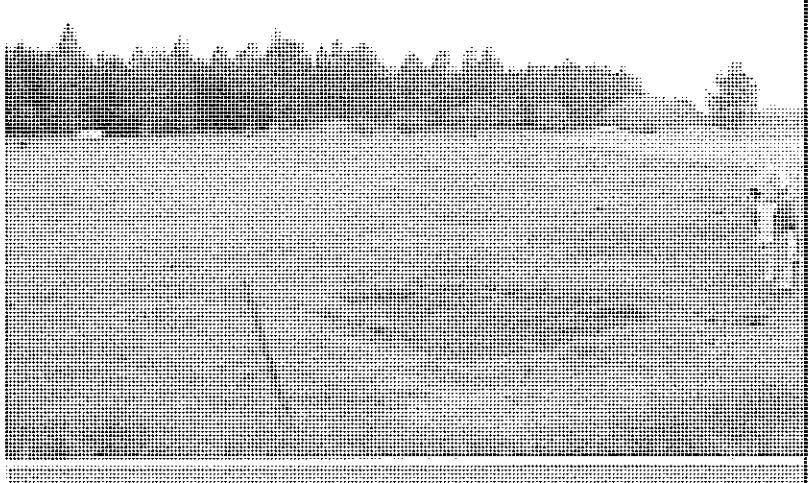

Revenue Bond

- Voters authorize the District to sell bonds to finance the proposed improvements
- Only in-District eligible voters vote (owners or renters)
- Monthly rate increase to cover loan debt service
- Only active services pay

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Revenue Bond Election November 6, 2012

OFFICIAL BALLOT

SPECIAL REVENUE BOND ELECTION

ALPINE MEADOWS WATER AND SEWER DISTRICT
KOOTENAI COUNTY, IDAHO
November 6, 2012

QUESTION: Shall the Alpine Meadows Water and Sewer District, Kootenai County, Idaho (the "District") issue and sell its negotiable revenue bonds up to the amount of $1,800,000 for the purpose of financing the design, acquisition and construction of certain capital improvements to the District's water supply and distribution system and related equipment, and to pay expenses properly incident thereto, and to pay costs of issuance of such bonds, said bonds due in such installments as fixed by the District, the last installment due and payable not more than thirty (30) years from the date of the bonds and to accrue interest at the maximum rate of one and twenty-five hundredths percent (1.25%), as provided in Resolution No. 2012-2 adopted by the Board of the District on September 11, 2012 (such revenue bonds shall be payable from the revenues of the water supply and distribution system, and not from ad valorem property taxes)?

IN FAVOR OF ISSUING REVENUE BONDS UP TO THE AMOUNT OF $1,800,000 FOR THE PURPOSES PROVIDED BY RESOLUTION NO. 2012-2 → ☐

AGAINST ISSUANCE OF REVENUE BONDS UP TO THE AMOUNT OF $1,800,000 FOR THE PURPOSES PROVIDED BY RESOLUTION NO. 2012-2 → ☐

- $1.8 million is the loan amount proposed by IDEQ, which does not include principal forgiveness.
- The estimated rate increase reflects IDEQ's proposed principal forgiveness.

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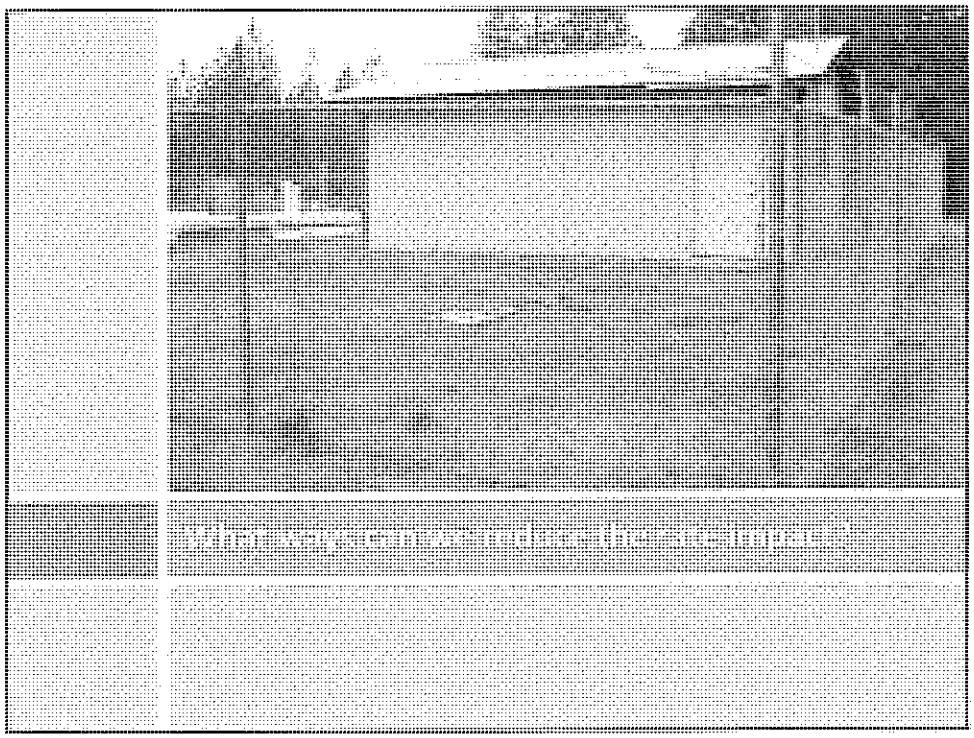

- Phase rate increases over 4 – 5 years starting as early as 2013
  - Allows District to Collect Interim Interest and Accumulate Emergency Reserve
- Block Grant

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Proposed Rate Increase Schedule for Selected Improvements*

Year	Proposed Rate Increase	Revised Equivalent Residential Monthly Base Rate
2012	---	$36.00
2013	$8.17	$44.17
2014	$8.17	$52.34
2015	$8.17	$60.51
2016	$8.17	$68.68
2017	$8.16	$76.84
Total Increase	**$40.64**	

*($1.8 million IDEQ loan, less principal forgiveness, at 1.25% for 30 years)

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Idaho Community Development Block Grant

- District Qualifies!!
- Competitive grants, 30% of project cost up to **$350,000**
- County has agreed to sponsor the District's application
- Applications are due in November of each year
- Voters must approve Revenue Bond Election November 6, 2012 to apply.

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Idaho Community Development Block Grant (cont'd)

- Prior to applying the District must also determine how these funds will be used:
  1. Construct Additional Improvements
  2. Reduce Rate Impact

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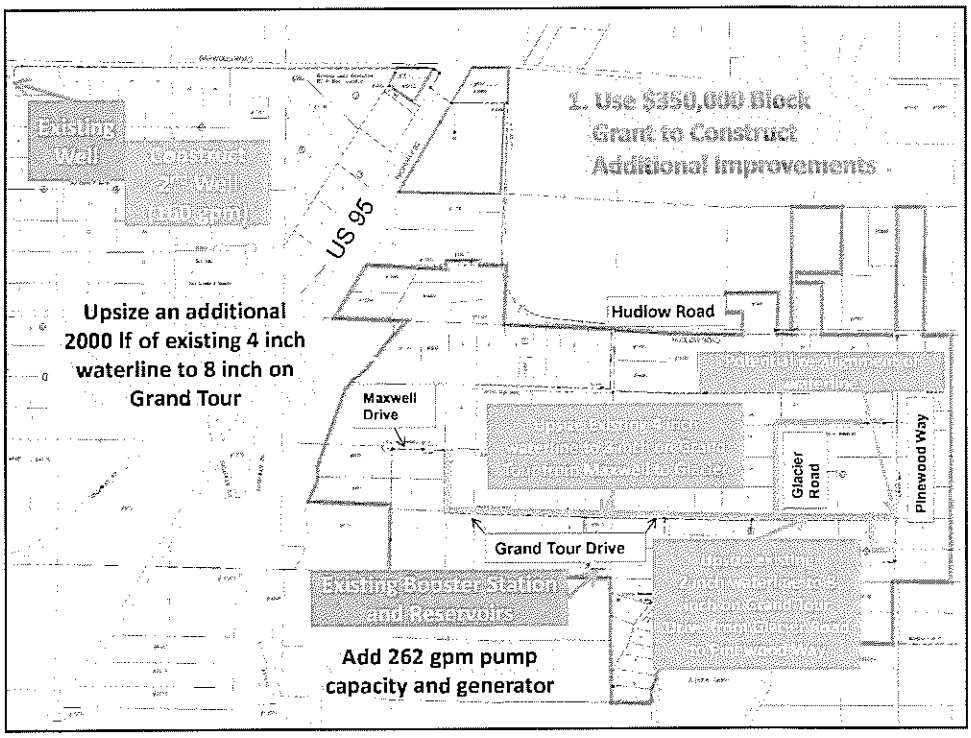


2. Apply $350,000 Block Grant to Reduce Rate Impact

Proposed Rate Increase Schedule*:

Year	Proposed Rate Increase	Revised Equivalent Residential Monthly Base Rate
2012	---	$36.00
2013	$5.89	$41.89
2014	$5.89	$47.78
2015	$5.89	$53.67
2016	$5.89	$59.56
2017	$5.89	$65.46
Total Increase	**$29.46**	**(savings of $11.38 per month)**

*IDEQ Loan and Block Grant, 1.25%, 30 years

WELCH-COMER

Request for Public Input

- IF the District receives a Block Grant, how should these funds be spent?
  1. Construct additional improvements:
     - Add booster pump capacity to increase fire flow to 500 gpm and extend the distribution replacement project an additional 2000 feet on Grand Tour Drive from Maxwell toward Hudlow.
  2. Apply it to the selected improvement option to reduce the total water rate increase.

WELCH-COMER

Questions

Remember to Vote!!
November 6, 2012
At
Hayden Friends Church

Frequently Asked Questions

1. **If no fire protection was to be provided to the system, what would the deficiencies be:**

The system's source and booster deficiencies would not change from those presented since they are driven by peak demands rather than fire flow. The distribution system would not be deficient but would still be depreciated and in need of replacement. But if you are going to upgrade facilities, it makes sense to maximize the benefit to the customer base. Fire protection is an invaluable component to the water system which can benefit a lot of people for a relatively small cost if it is needed.

2. **Why do we need extra source and booster capacity?**

To provide for emergencies such as power outages, pump failures, and fires. This area is vulnerable to all of these. A long term power outage can result in water outages and depressurization of the water system which can expose the system and customers to contamination.

WELCH-COMER

Frequently Asked Questions

3. **Why should we do this now?**

This is an opportune time for the District to bring the system up to standard:

a. The Facility Plan identifies and outlines current system deficiencies and provides a road map for the system's improvements.

b. DEQ has available low interest loan funds and the District has ranked high enough to be eligible for significant principal forgiveness.

c. The bidding environment is still fairly competitive due to the state of the economy.

d. The system will continue to "lose value" and will eventually need to be replace. These improvements would give the District a jump start to the needed long-term investment in the system.

e. The system will have very limited flexibility to add customers, if desired, without upgrades.

WELCH-COMER

Frequently Asked Questions

4. **Why shouldn't we focus on improving the depreciating distribution system?**

a. Improvements to the distribution system won't fix the source and booster capacity deficiencies which are critical to improved customer service. While instantaneous fire flow may be available with some distribution improvement, the system would not have the capacity to support the flow.

b. Improvements to the distribution system which result in an upsize in the main line will require DEQ approval and DEQ will likely require source and booster capacities to be addressed first, if DEQ funds will be used.

c. This is not to say that the District should not be planning for additional replacements long term.

WELCH-COMER

Summary of Water Fees for North Idaho Communities (Updated June, 2012)

COMMUNITY	RESIDENTIAL MONTHLY WATER USE: BASE RATE MONTHLY EQUIVALENT	BASE QUANTITY PER MO.	OVERAGE FEE		MONTHLY RATE FOR 25,000 GALLONS (3,342 CF) PER MONTH
Alpine Meadows Water & Sewer District	$36.00	10,000	$3.60	/1,000 gal	$81.00
Cataldo Water District	$24.00	10,000	$1.50	/1,000 gal	$46.50
Central Shoshone Water District	$55.00	1200 CF	$1.70	/100 CF	$91.41
City of Bonners Ferry	$40.14	1000 CF	$0.01613	/CF	$77.92
City of Coeur d'Alene	$6.51	0	$0.72 $1.04	/1,000 gal 0-30,000 /1,000 gal >31,000	$24.51
City of Harrison	$24.08	3,000	$1.29	/1,000 gal	$52.48
City of Hayden Lake	$28.00	0	$1.20 $2.75	/1,000 gal 0-10,000 /1,000 gal >10,000	$66.25
City of Plummer	$10.50	0		0-5,000 $2.00/1000 gal next 20,000 $3.00/1000 gal next 25,000 $3.50/1000 gal Remaining Usage	$89.50
City of Post Falls	$9.07	0		$0.97/1,000 gal >50,000 gal $1.41/1,00 gal	$33.32
City of Priest River	In City - $20.85 Out City - $27.80 Senior - $18.60	12,000		In City - $2.85/1,000 gal Senior - $2.85/1,000 gal Out of City - $3.80/1,000/gal	In City - $57.90 Out City - $77.20 Senior - $55.65
City of Rathdrum	$15.25	10,000		$0.50/1,000 gal	$22.25
City of St. Maries	Inside City Limits - $38 Outside City Limits - $42	10,000		$1.00/1,000 gal	Inside City Limits - $51 Outside City Limits - $55
City of Worley	$21.50	5,000		5,000-20,000 $1.00/ 1,000 gal >20,000 $2.00/1,000 gal	$46.50
East Shoshone County Water District	$36.50	11,220		$1.00/1,000 gal	$53.26
Fernwood Water & Sewer District	$47.00	10,000		$0.20/100 gal	$72.00
Hauser Lake Water Association	$25.00	10,000		10,000 - 60,000 $.50/1000 gal >60,000 $1.00/1000	$32.50
Kingston Water & Sewer District	$55.00	0		$.75 /1,000	$73.75
North Kootenai Water District**	$24.44	0		0-5,000 $1.19/1,000 gal 5,000-15,000 $1.33/1,000 gal 15,000-40,000 $1.51/1,000 gal >40,000 $2.26/1,000 gal	$58.50
Santa Water & Sewer District	$37.00	10,000		$0.20 / 100 gal	$67.00

Notes: Not all rates are updated annually.

** As proposed

Water Rate Increase History

		Base Rate per Connection	Gallons Allowed Within Base Rate	Additional Charge per 1,000 Gallons Used Over Gallons Allowed
2006	Residential	$27.00	10,000	$2.00
	Commercial	$40.00	10,000	$3.00
2007	Residential	$30.00	10,000	$2.00
	Commercial	$43.00	10,000	$3.00
2008	Residential	$33.00	10,000	$2.00
	Commercial	$46.00	10,000	$3.00
Dec. 2010	Residential	$30.00	10,000	$3.00
	Commercial	$43.00	10,000	$5.00
Jan. 2012	Residential	$36.00	10,000	$3.00
	Commercial	$49.00	10,000	$5.00

Notes:

1. The 2008 the raise in the base rates was to pay for the US 95 main line relocation. Once this debt was paid, the rate increase was removed.
1. Base rates were raised by 5% in December 2011. In addition, $4.50 was added to the base rate (for both residential and commercial) in order to fund a sinking fund allocated to paying for the Facility Plan. The intent being that the $4.50 charge will be removed once the sinking fund has been fully funded.

WELCH-COMBS

What are the Benefits of Completing Improvements?

1. Improve system reliability
   - Back-up source and booster capacity
   - Standby power to maintain system pressure in power outage
   - Replacement of depreciated lines (Between 9% - 20% of distribution network*)
2. Bring source and booster capacity up to current state standards for Public Drinking Water Systems
3. Improve fire flow

* NOTE: Long term, the District needs to keep in mind that even with the proposed improvements, the system contains a large amount of depreciating infrastructure that will eventually wear out and require replacement. The District should set aside funds annually in anticipation of this.

WELCH·COMER

ALPINE MEADOWS WATER & SEWER DISTRICT

WATER SYSTEM IMPROVEMENT AND REVENUE BOND MEETING ROSTER

Date: October 16, 2012 **Time:** 6:00 p.m. **Location:** Northern Lakes Fire Station

NAME	ADDRESS	PHONE	EMAIL
JIM ANN ERK	16087 N Ridgeway Ln	772-3467	toadflax-39@hotmail.com
JIM LINDSAY	2091 E GLACIER RD	772-2989	
Ed Kelly	1882 E Grand Tour Dr	755-3748	
Rick + Jackie Symons	3636 E Hudlow Rd Hayden Id	651-6850	
Jeff Hutchinson	16342 N. Pinewood Way	755-0156	REDCERAVON@YAHOO.COM
JAN P SYMONS	2942 Hayden Lake	772 9959	
Danielle Quade	3376 Fernan Tew CDA	765 7693	gua@hteh.com
Jack Darling			
Nancy Mabile	1100 N. Airport Dr	772 0584 x 3014	nancy@pacni.org
Charlene Nelson	15946 Ridgeway	772-3683	
Norm Nelson	" " "	" "	
Marilyn Bauer	15852 Ridgeway	772-3565	
Jerry Bauer	15852 Ridgeway Cir	772-3565	
Jess Moore	2874 E Hudlow	818 5974	
Gwen Kerber	16000 N Ridgeway	661-9605	thekerbs@hotmail.com
TONI SUMERLIN	2680 GRAND TOUR DR	772-4343	ferretlov@roadrunner.com

NAME	ADDRESS	PHONE	EMAIL
Tim Clark	16452 Pinewood	208-661-0204	
Jeff mueller	3027 Grand	691-7877	
Eric thurow	15983 Ridgeway	255-6285	
Henry Symons	15722 marble lane	208-304-0784	

APPENDIX O

Agency Consultation Correspondence

- Example Agency Consultation Letter and Attachments
- Agency Responses

WELCH-COMER
ENGINEERS · SURVEYORS

208-664-9382
877-815-5672 (toll free)
208-664-5946 (fax)

350 E. Kathleen Ave.
Coeur d'Alene, ID 83815

COPY

August 23, 2012

Katy Baker-Casile
Department of Environmental Quality,
Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

Re: Alpine Meadows Water System – Request for Comments for Preparation of an Environmental Informational Document

Dear Beth Reinhart:

The Alpine Meadows Water and Sewer District is preparing a facility planning document to identify and make necessary improvements to their drinking water system that are cost effective and environmentally sound. The facility plan for this project is being funded 50 percent by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Administration of Planning Grants for Drinking Water Facilities, IDAPA 58.01.22. The grant rule carries DEQ State Environmental Review Process requirements which mirror those of the National Environmental Policy Act (NEPA).

The proposed project consists of several additions and upgrades to the existing system. The project will include improvements to source supply, storage and booster capacity, and distribution. The distribution improvements consist of replacement of depreciated, undersized mains (within public right-of-way) in addition to relocating several meters that are currently outside the right-of-way to within the right-of-way. The source, storage, and booster improvements consist of installing a second well at the current well site, installing additional pumping capacity at the booster station, and installing standby power at the reservoir site.

The project is being proposed due to deficiencies in source supply, storage capacity, and distribution system capacity, per IDAPA 58.01.08. Improvements are necessary to this system in order to improve system reliability and conveyance of fire flows. Enclosed are maps of the proposed project area that depict the proposed improvements.

We request that you advise us of any comments that you may have regarding this project within 30 days, so that the Alpine Meadows Water and Sewer District can proceed with the completion of the Environmental Information Document. If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at Welch, Comer & Associates, Inc. at (208) 664-9382 at your convenience.

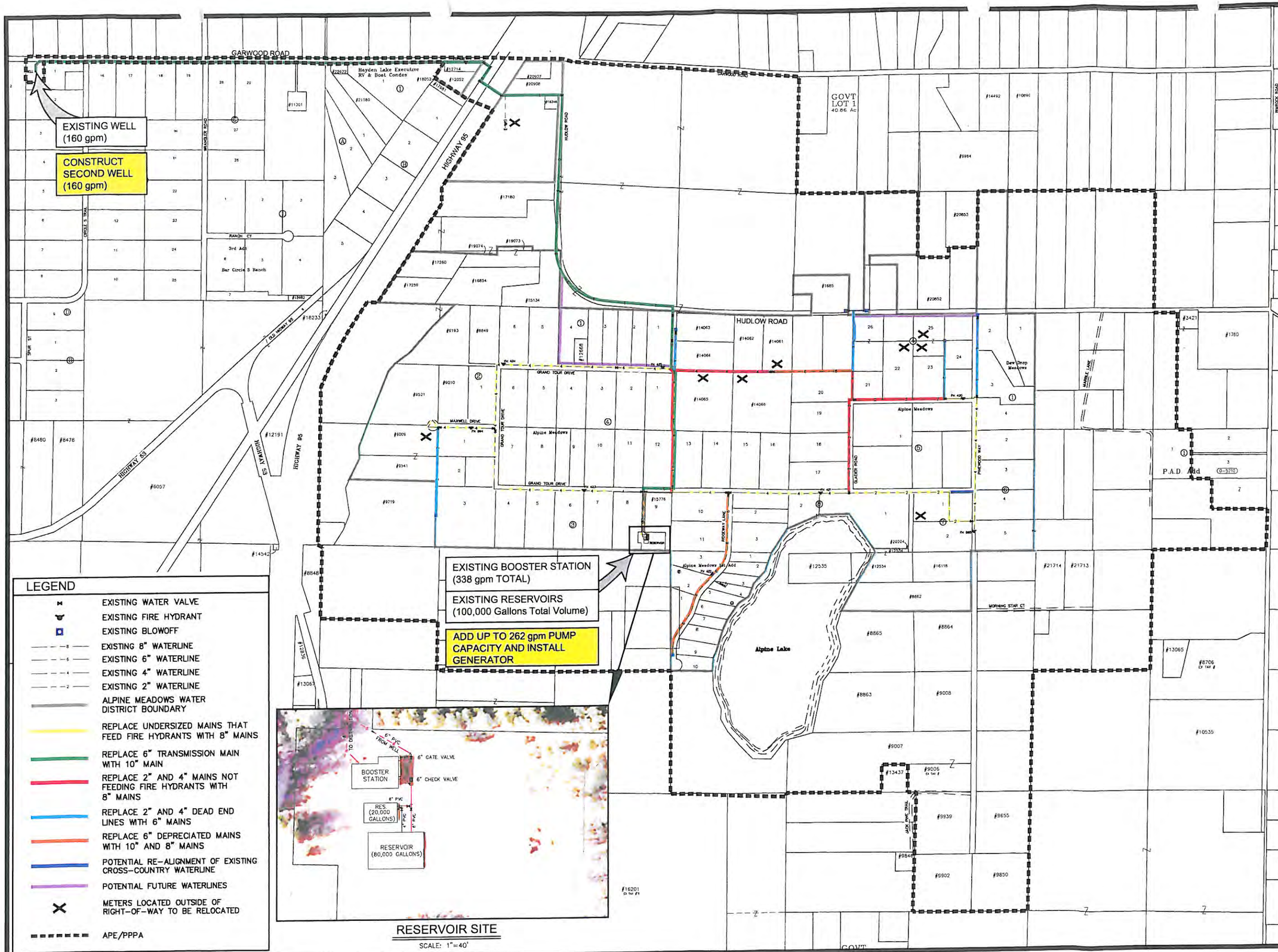
Sincerely,

Ashley Williams

Ashley M. Williams, E.I.T.
Staff Engineer

AMW
Enclosure: Project Area Map

awilliams@welchcomer.com



LEGEND

- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING BLOWOFF
- EXISTING 8" WATERLINE
- EXISTING 6" WATERLINE
- EXISTING 4" WATERLINE
- EXISTING 2" WATERLINE
- ALPINE MEADOWS WATER DISTRICT BOUNDARY
- REPLACE UNDERSIZED MAINS THAT FEED FIRE HYDRANTS WITH 8" MAINS
- REPLACE 6" TRANSMISSION MAIN WITH 10" MAIN
- REPLACE 2" AND 4" MAINS NOT FEEDING FIRE HYDRANTS WITH 8" MAINS
- REPLACE 2" AND 4" DEAD END LINES WITH 6" MAINS
- REPLACE 6" DEPRECIATED MAINS WITH 10" AND 8" MAINS
- POTENTIAL RE-ALIGNMENT OF EXISTING CROSS-COUNTRY WATERLINE
- POTENTIAL FUTURE WATERLINES
- METERS LOCATED OUTSIDE OF RIGHT-OF-WAY TO BE RELOCATED
- APE/PPPA

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GRAPHIC SCALE

(IN FEET)
11x17 SCALE 1" = 1000 ft.
24X36 SCALE 1" = 500 ft.

WELCH-COMER
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Coeur d'Alene, ID 83815
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(toll free) 877-815-5672
(fax) 208-664-5946

NO	DATE	REVISION DESCRIPTION	BY

ALPINE MEADOWS WATER DISTRICT

PROPOSED WATER SYSTEM IMPROVEMENTS

PROJECT NO.:	41068
DESIGNED BY:	K.J.O.
DRAWN BY:	J.A.L.
CHECKED BY:	
DWG NAME:	ACAD-41068PL08.DWG
DATE:	07-27-12
SHEET NO:	

\\Nas-01\cad\Civil3D Projects\41068\Production Drawings\ACAD-41068PL08.dwg, 8/22/2012 1:25:12 PM, julie, 1:2

Williams, Ashley

From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:23 PM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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* those not in the email list were contacted through phone (see phone log)

Williams, Ashley

From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:50 PM
To: 'michael.lucid@idfg.idaho.gov'
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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Williams, Ashley

From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:51 PM
To: Ester.Ceja@deq.idaho.gov
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Ester – I realized that we needed to issue a clarification for the Alpine project. Could you forward it to Jill with the Coeur d'Alene Tribe?

Thanks!! AMW

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
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WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/30/12 TIME: 1:00pm - 2:00pm

PROJECT NAME: Alpine Meadows Water ELD

PROJECT NUMBER: 411068

WELCH-COMER REPRESENTATIVE: Ashley M. Williams

WHO INITIATED COMMUNICATION: Ashley M. Williams

NAME: Bryon Holt PHONE NUMBER: 509-691-6939

ADDRESS: 11103 East Montgomery Dr. Spokane, WA 99206

SUBJECT: clarification for Alpine Meadows Water Project

called regarding clarification on Alpine Meadows Water Project. Potential re-alignment and future waterline may occur outside previously-disturbed areas. Wanted to make sure he was aware.

He had no comment and appreciated the call.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/31/12 TIME: morning

PROJECT NAME: Alpine meadows Water ETD

PROJECT NUMBER: 41068

WELCH-COMER REPRESENTATIVE: Ashley Williams

WHO INITIATED COMMUNICATION: ~~Ashley Williams~~ Don Martin

NAME: Don Martin PHONE NUMBER: 208-665-0458

ADDRESS: 1910 NW Blvd suite 208, Coeur d'Alene, ID 83814

SUBJECT: Clarification for Alpine Meadows Water Project

He is retiring at the end of this year and is not reviewing these projects.

Please forward info to DEQ to let them know.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☒ YES ☐ NO

NOTES:

Email Ester Cega to inform of Don's retirement and no comment on project

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/30/12 TIME: 1:00pm - 2:00pm

PROJECT NAME: Alpine meadows Water EID

PROJECT NUMBER: 410608

WELCH-COMER REPRESENTATIVE: Ashley M. Williams

WHO INITIATED COMMUNICATION: Ashley M. Williams

NAME: Don Martin PHONE NUMBER: 208-665-0458

ADDRESS: 1910 NW Blvd. Suite 208, Coeur d'Alene, ID 83814

SUBJECT: clarification for Alpine Meadows Water Project.

Left voicemail regarding clarification on Alpine meadows Water Project. Potential re-alignment and future waterlines may occur outside previously-disturbed areas. Wanted to make aware of, so if there were any questions - feel free to call.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/30/12 TIME: 1:00pm - 2:00pm

PROJECT NAME: Alpine meadows Water EID

PROJECT NUMBER: 410608

WELCH-COMER REPRESENTATIVE: Ashley M. Williams

WHO INITIATED COMMUNICATION: Ashley M. Williams

NAME: Mike Lidgard PHONE NUMBER: 206-553-1755

ADDRESS: 1200 6th Ave, OWW 130 Seattle, WA 98101

SUBJECT: clarification for Alpine Meadows Water Project.

Left voicemail regarding clarification on Alpine meadows Water Project. Potential re-alignment and future waterlines may occur outside previously-disturbed areas. Wanted to make aware of, so if there were any questions - feel free to call.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/30/12 TIME: 1:00pm - 2:00pm

PROJECT NAME: Alpine meadows Water ~~approach~~ Project EID

PROJECT NUMBER: 41068

WELCH-COMER REPRESENTATIVE: Ashley M. Williams

WHO INITIATED COMMUNICATION: Ashley M. Williams.

NAME: Aubrey Woodcock PHONE NUMBER: 208-762-4939

ADDRESS: 7830 Meadowlark Way, Suite C1 Coeur d'Alene, ID 83815

SUBJECT: clarification for Alpine meadows water project

called regarding clarification on Alpine meadows Water Project. Potential re-alignment and future waterlines may occur outside previously-disturbed areas.

She asked about width of disturbance - 20ft wide to be ~~dis~~ conservative. She appreciated the clarification.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 8/30/12 TIME: 1:00pm - 2:00pm

PROJECT NAME: Alpine meadows Water EID

PROJECT NUMBER: 410608

WELCH-COMER REPRESENTATIVE: Ashley M. Williams

WHO INITIATED COMMUNICATION: Ashley M. Williams

NAME: Allen Beardslee PHONE NUMBER: 208-762-2800

ADDRESS: 7600 Mineral Drive Ste. 100, Coeur d'Alene, ID 83815

SUBJECT: clarification for Alpine Meadows Water Project.

Left voicemail regarding clarification on Alpine meadows Water Project. Potential re-alignment and future waterlines may occur outside previously-disturbed areas. Wanted to make aware of, so if there were any questions - feel free to call.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

Williams, Ashley

From: Williams, Ashley
Sent: Thursday, September 13, 2012 11:12 AM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov); 'michael.lucid@idfg.idaho.gov'; 'Woodcock, Aubrey - NRCS, Coeur d Alene, ID'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov'; Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'; 'Staci Armes'; 'jseier@kcgov.us'
Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are issuing another clarification on the water system improvements for the Alpine Meadows Water District's Water System project. Again, we are in the process of preparing an EID and are conducting agency consultation. You should have received a letter in the mail describing the project and our request for comments.

Clarification: The District would like to add an improvement to the proposed project: install generator at well site. Please refer to the map sent previously for location of the well site.

I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
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From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:23 PM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
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Williams, Ashley

From: Burgan, Michael A NWW <Michael.A.Burgan@usace.army.mil>
Sent: Friday, March 29, 2013 2:22 PM
To: Kim Erk; Williams, Ashley
Subject: Alpine Meadows water & Sewer District approved JD/No permit required letter, file no,. NWW-2012-484
Attachments: 202-484 Approved JD-NPR letter.pdf; 2012-484 Approved JD-NPR Form file size reduced.pdf

Good afternoon Kim and Ashley,

Attached is your letter indicating Alpine Lake, it's unnamed tributary, the unnamed creek that flows out of Alpine Lake, and their adjacent wetlands are not waters of the US, and you do not need a permit from us for your project. Also attached if the actual jurisdictional determination form documenting why I determined the waters were isolated, and you did not need a permit. Sure was a lot of work to document what should have been clear as the nose on your face, but sometimes that is what it takes. At least we got the right answer in the end. Sorry it took so long, and thanks for sticking with it.

If you have any questions, give me a call.

Happy Easter!

Mike Burgan
Environmental Resources Specialist
Coeur d'Alene Regulatory Office
(208) 765-8139

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
COEUR D'ALENE REGULATORY OFFICE
2065 WEST RIVERSTONE DRIVE, SUITE 201
COEUR D'ALENE, IDAHO 83814-5699

REPLY TO
ATTENTION OF

March 29, 2013

Regulatory Division

SUBJECT: NWW-2012-484-C09

Ms. Kim Erk
Alpine Meadows Water and Sewer District
P.O. Box 526
Hayden, ID

Dear Ms. Kim Erk:

Enclosed is our Department of Army (DA) Approved Jurisdictional Determination (AJD) that there are no waters of the United States, including jurisdictional wetlands, within the Alpine Meadows Water and Sewer District's proposed system upgrade project area. Therefore, DA authorization is not required to commence the project. This decision is based upon our review of the information Ms. Ashley Williams of Welch-Comer provided, additional information available to our office, and our February 6th and March 15, 2013, site inspections. The Alpine Meadows Water and Sewer District's (AMW&SD) project is located within Sections 25, 26 and 36 of Township 52 North, Range 4 West, and Sections 30 and 31 of Township 52 North, Range 3 West near latitude 47.82359 and longitude -116.76793, in Kootenai County, near Hayden, Idaho. The AMW&SD's request has been assigned file number NWW-2012-484-C09, which should be referred to in future correspondence with our office regarding this site.

The DA exerts regulatory jurisdiction over waters of the United States (U.S.), including wetlands, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Section 404 of the Clean Water Act requires a DA permit be obtained prior to discharging dredged or fill material into Waters of the U.S., which includes most perennial and intermittent rivers and streams, natural and man-made lakes and ponds, irrigation and drainage canals and ditches that are tributaries to other waters, and wetlands. Section 10 of the Rivers and Harbors Act requires that a DA permit be obtained prior to building structures or conducting work in or affecting navigable waters of the U.S.

Alpine Lake, it's unnamed tributary (Stream 1), and the unnamed stream that flows out of Alpine Lake (Stream 2), and their adjacent wetlands, as shown on the attached Figures 3 and 4, are isolated, intrastate, non-navigable wetlands and/or waters of the U.S. which have no connection to interstate or foreign commerce, and were determined to have no significant nexus to traditionally navigable waters of the U.S. Therefore, pursuant to federal guidance on the *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* and the consolidated

Rapanos v. United States and Carabell v. United States cases, the discharge of dredged and/or fill material into these non-regulated isolated waters and wetlands will not require a DA permit. Please be advised, this jurisdictional determination does not establish any precedent with respect to any other jurisdictional determination under Section 404 of the Clean Water Act.

This approved JD is valid for a period of 5-years from the date of this letter, unless new information supporting a revision is provided to this office before the expiration date. Also enclosed, you will find the Approved Jurisdictional Determination Form addressing wetlands and waters of the U.S. located within the JD review area, and a *Notification of Administrative Appeals Options and Process and Request for Appeal Form* (RFA) regarding this DA Approved Jurisdictional Determination. Should you disagree with certain terms and/or conditions this Approved JD, the Notification of Administrative Appeal Options form outlines the steps to take to file your objection. Please note, the RFA form must be received by the Northwest Division Office no later than **May 28, 2013**.

Nothing in this letter shall be construed as excusing you from compliance with other Federal, state, or local statutes, ordinances or regulations which may affect this work.

We are interested in your thoughts and opinions concerning the quality of service you received from the Walla Walla District, Corps of Engineers Regulatory Division. If you have Internet access, please visit our web site at http://per2.nwp.usace.army.mil/survey.html and complete an electronic version of our Customer Service Survey form, which will be automatically submitted to us. Alternatively, you may call and request a paper copy of the survey, which you may complete and return to us by mail. For additional information about the Walla Walla Regulatory please visit us at http://www.nww.usace.army.mil/BusinessWithUs/RegulatoryDivision.aspx. Your responses are appreciated and will allow us to improve our services.

Please contact me by telephone at 208-765-8139, by mail at the address in the letterhead, or via e-mail at Michael.a.burgan@usace.army.mil if you have any questions or need additional information. For informational purposes, a copy of this letter is being sent to Ms. Williams.

Sincerely,

Michael Burgan
Environmental Resource Specialist

Enclosures:
2012-484-C09 Approved JD-NPR Form
2012-484-C09 Notification of Administrative Appeal Options and Request for Appeal Form

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 28, 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Walla Walla District; NWW-2012-00484, Alpine Meadows Water & Sewer District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Idaho County/parish/borough: Kootenai City: Hayden
Center coordinates of site (lat/long in degree decimal format): 47.8143° Lat. -116.7659° Long.
Universal Transverse Mercator: Zone Northing **N**, Easting **E**.
Name of nearest waterbody: Alpine Lake
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: none
Name of watershed or Hydrologic Unit Code (HUC): 17010305

- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☒ Office (Desk) Determination. Date: November 27, 2012
- ☒ Field Determination. Date(s): January 29, and February 6, 2013

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

- ☐ Waters subject to the ebb and flow of the tide.
- ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☐ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   - ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Alpine Lake, its unnamed intermittent tributary (Stream 1, Figure 3), the unnamed channel flowing out of Alpine Lake (Stream 2, Figures 3 and 4), and their adjacent wetlands are isolated. There are no boat ramps or docks on Alpine Lake (Figure 2). Nor is there public access to Alpine Lake. There is no indication that changes to the water bodies could have an affect on interstate commerce.**

---

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

Alpine Lake is not located in a closed basin. However, Stream 2 flows out of Alpine Lake and down the basalt "rimrock" that forms the eastern edge of the Rathdrum Prairie, and then terminates - looses its definable OHWM. The Rathdrum Prairie consists of glacial flood deposits from catastrophic floods that occurred periodically between 10,000 to 15,000 years ago, when ice dams that formed Lake Missoula (historically located in Montana near the Idaho/Montana border) collapsed sending tremendous amounts of glacial melt water, sands, gravels, cobbles, and boulders down what is now the Clark Fork River into what would become Lake Pend Oreille, and ultimately through the Rathdrum Priarie (Idaho Department of Environmental Quality (IDEQ) website http://www.deq.idaho.gov/regional-offices-issues/coeur-d'alene/rathdrum-prairie-aquifer/geologic-history.aspx, and Montana Natural History Center website http://www.glaciallakemissoula.org/virtualtour/index.html). Once Stream 2 enters the Rathdrum Prairie, Stream 2 and most, if not all streams that flow into the Rathdrum Prairie between Coeur d'Alene, ID, Hauser, ID, and Athol, ID, become loosing streams (dis-tributary), terminating in the Rathdrum Prairie and do not flow into other waters of the US.

According to the Alpine Meadows Water Sewer District (AMW&SD), Alpine Lake was created in the late 1950's by the former landowner, a Mr. Wilcott and the Soil Conservation Service (now the Natural Resource Conservation Service) as a livestock watering pond. The lake was created by constructing a three-foot tall dam across the unnamed intermittent stream channel that flows into the lake from the northeast (Stream 1, Figure 3). At the time, the lake was referred to by locals as "Wilcott's Pond." The property was purchased in the early 1970's by Mr. Tom Richards, who owned Idaho Forest Industries (IFI). IFI logged the property, and then subdivided the property into 5, 10 and 20 acre lots, and created the Alpine Meadows subdivision. IFI turned the water rights over to the AMW&SD in 1984, who still maintains control over the lake (see attached email from Ms. Kim Erk, Board Member AMW&SD, dated 16-Feb-2013). The AMW&SD states Mrs. Richards renamed the pond to Alpine Lake when the subdivision was developed.

AMW&SD indicates the lake has an average depth of approximately three feet deep, with much of it being 18-inches deep or less. Areas closer to the dam are deeper, and presumably served as the borrow source for the material used to construct the dam, but most of the lake is three feet deep or shallower. As such, the AMW&SD contends Alpine Lake does not support recreational boating or fishing due to shallowness and resulting susceptibility to winter fish die offs. The Walla Walla District (NWW) did not attempt to verify the shallowness of Alpine Lake because it is iced over at this time, but believes AMW&SD's statement the lake is very shallow is supported by the fact that submerged vegetation appears to be visible throughout the majority of Alpine Lake in the Google Earth image of the area (Figure 2). The Idaho Department of Fish and Game (IDF&G) also stated the lake is very shallow but could not provide an estimate of the depth when asked on 19-Feb-2013. The NWW also believes the lack of private boat docks and ramps on Alpine Lake supports the AMW&SD's contention the lake does not support recreational use. Given the popularity of recreational boating in northern Idaho, it is likely the landowners around the lake would have constructed docks on the lake if it could support recreational boating.

The NWW and IDF&G acknowledged fish are present in Alpine Lake, but IDF&G has no record of stocking the lake, and added they would not stock the lake because it is too shallow and has no public access. In addition, IDF&G stated they have not completed depth soundings on the lake because it is a private lake, but it is very likely the lake freezes solid or nearly solid in winter. Some fish might be able to over winter in the deeper areas, but during severe winters, they too would likely die. As such, while Alpine Lake does support fish, it does not support populations of fish large enough to keep due to winter fish mortality. It is unknown how fish came to be in Alpine Like, but on 28-Feb-2013 IDF&G stated it is likely someone released fish into the lake in an attempt to create recerational fishing. However, that effort has generally been unsuccessful due to the shallowness of the lake. IDF&G also stated they do not consider Alpine Lake to be navigable or to support recreational boating or fishing

Under Idaho state laws, all lakes, rivers, and streams the State considers to be navigable are owned by the State, and managed by the Idaho Department of Lands (IDL) in trust for the residents of Idaho. However, the map on Kootenai County Assessor's website (http://kcearth.kcgov.us/map/default.html) indicates Alpine Lake is owned by the AMW&SD (Figure 6). In contrast, the same map does not provide ownership information for the lakes in Kootenai County that the State of Idaho considers to be navigable and are managed in trust by IDL such as: Hauser Lake, Twin Lakes, Spirit Lake, Hayden Lake, (all isolated waters that have boat ramps and do support interstate commerce, and are waters of the US), Lake Coeur d'Alene, and Lake Pend Oreille (Figure 1). AMW&SD can own Alpine Lake because the State of Idaho does not consider the lake to be navigable.

The map on the Kootenai County Assessor's website also indicates that with the exception of one 0.6 acre landlocked parcel of wetlands adjacent to Alpine Lake that is owned by the IDF&G, all properties surrounding Alpine Lake are privately owned (Figure 6). As such, there is no public access to Alpine Lake. Idaho law does not require providing access across private property to allow access to landlocked parcels. So while the IDF&G owns a 0.6 acre parcel on Alpine Lake, the parcel cannot be developed and made open to the public without first either purchasing one of the adjacent lots or obtaining an easement from one of the adjacent landowners. However, as stated in AMW&SD's 16-Feb-2013 email, while surrounding landowners, and members of the District have access to the lake for private recreational purposes and livestock watering, due to protective covenants, they cannot use the lake for commercial purposes. As stated above, IDF&G has indicated that even if the protective covenants were not in place, they would not consider openning Alpine Lake up for recreational use due to the shallowness of the lake that makes Alpine Lake susceptible to winter fish die offs.

The AMW&SD also stated in their 16-Feb-2013 email that development of Alpine Lake for commercial or recreational use is not in their current or future plans for the lake.

The USGS's StreamStats interactive map at (http://streamstatsags.cr.usgs.gov/id_ss/default.aspx?stabbr=id&dt=1360970614092) indicates the watershed above Alpine Lake is 1.47 square miles (941 acres), of which: 41% (386 acres) is forested, 37% (348 acres) in agricultural, and 9% urban (85 acres), the rest are miscellaneous uses.

The Walla Walla District (NWW) has completed two approved jurisdictional determinations (AJD's) (File No.'s 2005-1500027 and 2006-1500051), opened one action, but made no official determination (File No. 2006-1200013), and issued one nationwide permit verification (File No. 2006-1500051) for waters within the Alpine Lake watershed and Stream 2 (the unnamed intermittent stream channel that originates from Alpine Lake).

File No. NWW-2005-1500027: On 28-Feb-2005, NWW issued an approved jurisdictional determination - no permit required (AJD-NPR) for approximately 16 acres of wetland adjacent to Stream 2 (Figure 8). In that AJD-NPR, NWW determined Stream 2 was not a water of the US because it was not tributary to other waters of the US and had no nexus to interstate commerce. The AJD was not forwarded to EPA for review prior to issuance because the JD was made prior to the US Supreme Court's Rapanos decision and Guidance. At the request of the landowner, on 18-March-2010, NWW reverified Stream 2 and the 16 acres of wetland adjacent to it were not waters of the United States. As per the Guidance issued following the Rapanos decision, a copy of 18-March-2010 AJD-NPR was provided to the EPA. No response from EPA is included in the file.

File No. NWW-2006-1200013: Based on an email request, the NWW opened an action on a second wetland adjacent to Stream 2 (Figure 8), however, no formal request for a jurisdictional determination or permit application were received, and no jurisdictional determination was issued. This action is important because the electronic file on the NWW shared drive includes an email from EPA questioning the 28-Feb-2005 AJD-NPR for 2005-1500027. The EPA was concerned about the potential for aquatic life to move upstream from Stream 2 into Alpine Lake (identified as 75 acres in the email, however the NWI map indicates Alpine Lake is 39.21 acres of open water with 69.17 acres of PEM and 7.67 acres PFO adjacent wetlands). The file also includes an email from a Project Manager (PM) in the Coeur d'Alene Regulatory Office (NWW-RD) to NWW Regulatory Branch Chief referencing the EPA's email. In his email, the PM indicated he did not believe jurisdiction over Stream 2 was supported based on aquatic biota because of a lack of connection to interstate commerce. The NWW Regulatory Branch Chief responded that unless there were "species that move upstream like kokanee in this specific drainage" he would concur with the NPR determination. The PM coordinated with IDF&G, and on 18-March-2006 received an email from IDF&G indicating the lake was shallow, only supported warm-water fish, and did not support trout. That information was forwarded on to EPA. No response from EPA is included in the file. However, as IDF&G's 18-March-2006 response did not specifically state kokanee were not present in Stream 2, on 19-Feb-2013, NWW-RD staff contacted IDF&G and verified kokanee and other migratory aquatic life are not present in Stream 2. On 19-Feb-2013, IDF&G also stated they have trapped and banded waterfowl on Alpine Lake, but they have no record of stocking the lake. IDF&G indicated it would not be subject to stocking in the future because it is surrounded by private property, and is too shallow.

File No. NWW-2006-1500051: On 14-June-2006, NWW issued an AJD for the unnamed intermittent tributary to Alpine Lake (Stream 1, Figure 3) and wetlands adjacent to the unnamed tributary (Figures 9 and 10). In that determination, the NWW determined the unnamed tributary (Stream 1) and adjacent wetlands were waters of the US because they were tributary to Alpine Lake, and part of an isolated intrastate aquatic system that is subject to interstate commerce, because Alpine Lake could be navigated by small watercraft and is susceptible for use in interstate commerce for recreational purposes. Unfortunately, the electronic file does not include any references to the supporting documentation used in making the determination that Alpine Lake was subject to interstate commerce. The applicant did not appeal the NWW's 14-Jun-2006 AJD, and submitted an after-the-fact permit application for fill discharged into Stream 1 and adjacent wetlands. On 28-September-2006, the NWW verified the discharge of 79 cubic yards of rock and gravel into Stream 1 and 0.055 acre of adjacent wetland was authorized under nationwide permit 39 (File No. NWW-2006-1500051 - the only other permit action in the Alpine Lake system). No mitigation was required.

NWW has reviewed the 14-June-2006 AJD has determined based upon the information below that it was in error in accordance with the SWANCC Guidance dated 15-January-2003. That determinagtion is supported by the SWANCC/RAPANOS Guidance dated 5-June-2007:

1. **There is NO public access to Alpine Lake.**
2. **There are NO public OR private boat ramps or docks on Alpine Lake.**
3. **Protective covenants prevent the current owners of Alpine Lake and its adjacent private landowners from using Alpine Lake for commercial purposes.**
4. **The current owners of Alpine Lake (the AMW&SD) have NO short or long term plans to develop Alpine Lake for commercial or recreational purposes.**
5. **Development of Alpine Lake for commercial use would require removal or modification existing covenants.**
6. **Alpine Lake has an average depth of 3 feet, with much of it 18-inches deep or less.**

7. **The state of Idaho does not consider Alpine Lake to be navigable.**
8. **The IDF&G will not stock Alpine Lake because there is no public access and it is too shallow.**
9. **With all the high quality lakes that provide high quality fishing and recreational boating opportunities available to the public in northern Idaho within 15 miles of Alpine Lake, such as the six lakes listed above and shown in Figure 1 (and multiple others), it is not reasonable, practicable, or realistic to assume Alpine Lake would be used for commercial use. Access would have to be achieved by parking on a busy street, intentionally trespassing through an open field visible from the road and surrounding properties, while portaging a boat nearly 700 feet (at the closest access point that is not through someone elses yard) - mostly through wetlands - into a shallow unstocked lake in order for Alpine Lake to be used for public recreational boating. The six lakes listed above all have public boat ramps, docks, and sewage and picnic facilities, none of which are offered at Alpine Lake. All six are also closer to bait/tackle shops and grocery or convenience stores then Alpine Lake, making their use easier and more convenient. In addition, all six lakes are stocked by IDF&G, whereas Alpine Lake is not.**

   It is not reasonable, practicable, or realistic to assume AMW&SD, the private landowners around Alpine Lake, or their assignee's will ignore or modify the protective covenants preventing the commercial use of Alpine Lake. Nor is it reasonable, practicable, or realistic to assume someone will go through the expense of converting the lake to an average of eight feet deep - generally accepted as the minimum depth required to protect against large scale winter fish die-offs. It would be cost prohibitive to make the lake a substainable to recreational boating/fishing and/or commericial operations.

After taking into consideration the two previous jurisdictional determinations made on Alpine Lake, and Streams 1 and 2, and the above relevant facts, the NWW has determined Alpine Lake has not historically been used for interstate commerce, is not currently subject to commercial use, and will not be susceptible for commercial use in the future.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **square miles**
Drainage area: **acres**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☐ Habitat for:
  ☐ Federally Listed species. Explain findings: .
  ☐ Fish/spawn areas. Explain findings: .
  ☐ Other environmentally-sensitive species. Explain findings: .
  ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is**: Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
  ☐ Discrete wetland hydrologic connection. Explain: .
  ☐ Ecological connection. Explain: .
  ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .
☐ Vegetation type/percent cover. Explain: .
☐ Habitat for:
  ☐ Federally Listed species. Explain findings: .
  ☐ Fish/spawn areas. Explain findings: .
  ☐ Other environmentally-sensitive species. Explain findings: .
  ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

---

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☒ Non-wetland waters (i.e., rivers, streams): **13,300** linear feet width (ft).
☒ Lakes/ponds: 39.21 acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: 76.84 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Project location map dated 7-27-12.
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:1:24K; ID-HAYDEN .
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name:Hayden.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google Earth of Alpine Lake, Image Date 8-20-2011.
or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify):Site visits conducted January 29, and February 6, 2013, by NWW Coeur d'Alene Regulatory staff members..

B. ADDITIONAL COMMENTS TO SUPPORT JD: Alpine Lake is a small, approximately 40 acre, open water feature with no dock structures, boat ramps, public parks, or other signs of potential use for interstate commerce. The map on Kootenai County Assessor's website

(http://kcearth.kcgov.us/map/default.html) indicates that with one small exception, all property surrounding Alpine Lake is privately owned. The one exception is a 0.6 acre landlocked parcel owned by IDF&G with no public access.

The USGS 7.5 minute topographic map for the Hayden quadrangle indicates that Alpine Lake has one unnamed tributary flowing into it (approximately 3,600 linear stream feet)(Stream 1, Figure 3), and one unnamed intermittent channel leaving it (approximately 9,700 linear stream feet) (Stream 2, Figures 3 and 4). The 7.5 minute topographic map for the Hayden quadrangle indicates Stream 2 ends approximately 1.8 miles southwest of Alpine Lake in the southwest quarter of Section 1, Township 51 North, Range 4 West (Figures 3 and 4, and Photos 1 through 9), north of Lancaster Road (called Rockaway Beach RD on 7.5 minute topographic map). The topographic map also indicates Hayden Lake is the closest TNW into which Alpine Lake could be a tributary too - if there were an channel with an OHWM between the two lakes. On 25-January-2013, and again on February 6, 2013, NWW-RD staff members conducted on-site inspections of Lancaster Road and the area where the Stream 2 would cross under Lancaster Road if it made it that far. On January 29, 2013, there was approximately one foot of snow on the ground in the area, but in all three areas where an OHWM might have formed, vegetation was visible sticking through the snow on the upstream side of Lancaster Road. NWW-RD personnel conducted a second inspection on February 6, 2013. Snow was still present, but NWW-RD verified no OHWM was visible on the north side of Lancaster Road (Photos 1 through 9). The area south (down gradient) of Lancaster Road has been developed with a shop constructed approximately where any channel would have crossed under Lancaster Road if one were present. There was no surface connection with a definable OHWM between the end of Stream 2 and Avondale Lake, Hayden Lake, or other waters of the United States. Due to tresspass issues, confirmation of where the exact point of where Stream 2 loses its OHWM as indicated on the USGS topographic map and NWI map indicate was not verfied, however no defined channel or flow patterns indicate any connection to other jurisdictional waters. Based on Google Earth Pro, Alpine Lake is 3.1 straight miles from Hayden Lake, the closest TNW into which it could flow. Based upon USGS topographic map for the Hayden quadrangle, Stream 2 looses its OHWM approximately 2.1 straight miles before it could flow into Hayden Lake. The USGS topographic map and NWI map for the Hayden quadrangle are in agreement that Stream 2 ends in the SW/4 of S-1, T-51N, R-4W, Kootenai County, ID. The NWW-RD found no evidence to the contrary.

The NWW-RD used the contour lines on the 7.5 minute topographic map for the Hayden quadrangle to determine the approximate path surface water would follow to get from the depicted end of Stream 2 to Hayden Lake. The NWW-RD then followed that same pathway on the map on the Kootenai County Assessor's website and determined all land between the down gradient of the end of Stream 2 and Hayden Lake is privately owned. Given the fact the area between the depicted end of Stream 2 and Hayden Lake is privately owned, and the distance separating Stream 2 and Hayden Lake (2.1 straight miles) it is unlikely that any connection could be considered. Any subsurface connection would be speculative in nature due to the distance and the historic drainage patterns of the area.

On 25-February-2013, the EPA Region 10 Drinking Water Group determined completing AMW&SD's proposed water line upgrades will not have a significant adverse impact to the Spokane Valley Rathdrum Prairie Sole Source Aquifer, and funding for the project may proceed.

Alpine Lake, Stream 1, Stream 2, and their adjacent wetlands are isolated with no surface connection to a TNW. Alpine Lake has not historically been used for interstate commerce, is not currently subject to commercial use, and will not be susceptible for commercial use in the future

As per Regulatory Guidance Letter 07-01: Practices for Documenting Jurisdiction Under Section 404 of the Clean Water Act (CWA) and Sections 9 & 10 of the Rivers and Harbors Act (RHA) of 1899, dated 07 June 2007 (RGL 07-01), a copy of this jurisdictioonal determination was forwarded to US Army Corps of Engineers headquarters (USACEHQ) and the Environmental Protection Agency (EPA) on March 6, 2013. On 14 March 2013, USACEHQ requested additional information be submitted to further support the determination Alpine Lake, Streams 1 and 2, and their adjacent and abutting wetlands are isolated. On 20 March 2013, NWW-RD provided the requested information, which is being included in this jurisdictonal determination as Addendum 1. After reviewing the additional information, USACEHQ concurred the subject waters are isolated. EPA did not respond within the 21 day comment period provided in RGL 07-01. Also included in Addendum 1, is a copy of the description of the soil type where Stream 2 is believed to lose its OHWM in Section 1, Township 51 North, Range 4 West that was copied from the Natural Resources Conservation Service's WebSoilSurvey. The WebSoilSurvey indicates soils in the area are Kootenai gravelly silt loams which are very gravelly and well drained, allowing all water in Stream 2 that reaches the Rathdrum Prairie to perculate into the ground and recharge the Rathdrum Prairie Aquifer.

Washington/Idaho state line

Figure 1. Location Map

0 5 10 15km

Date Printed: 02.21.2013 Map Scale: 1:433334

Figure 2. Google Earth image of Alpine Lake. Note lack of docks and boat ramps.

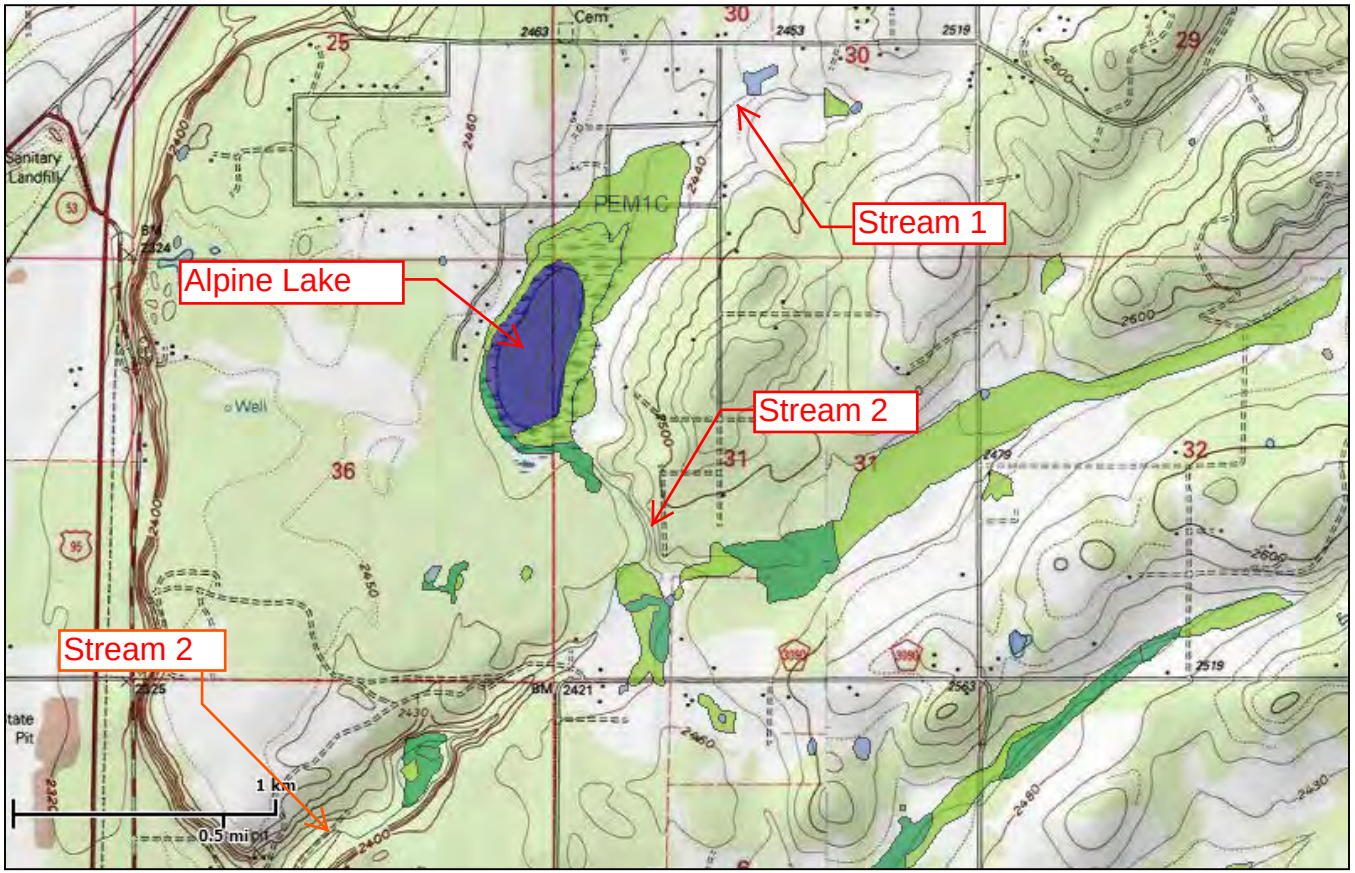
Figure 2. Google Earth image of Alpine Lake

U.S. Fish and Wildlife Service

National Wetlands Inventory

Alpine Lake

Sep 24, 2012



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

North

Figure 3. NWI map of Alpine Lake, unnamed tributary to Alpine Lake (Stream 1), the northern portion of the unnamed stream channel that originates at Alpine Lake (Stream 2), and their adjacent wetlands.

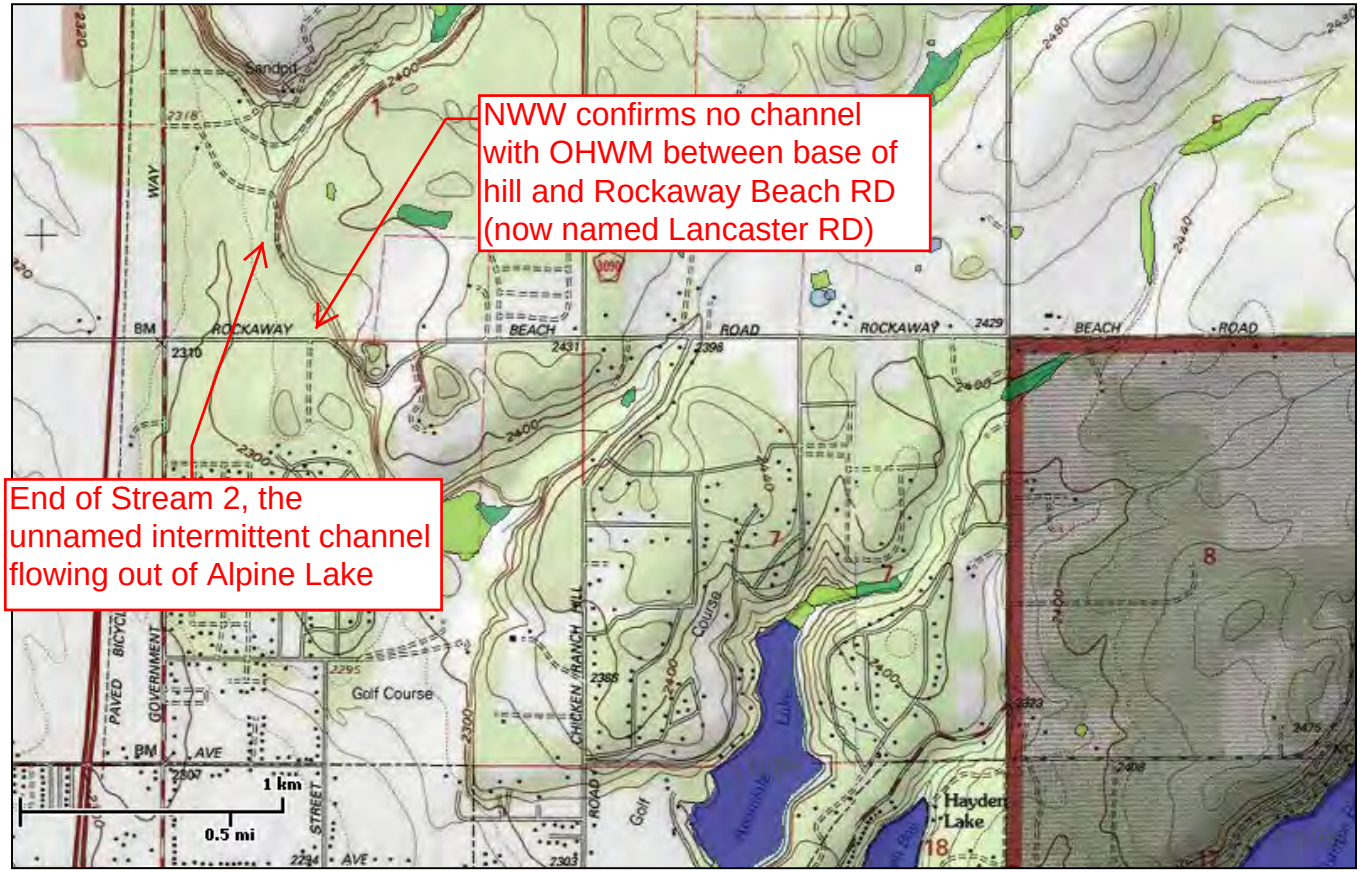
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

U.S. Fish and Wildlife Service

National Wetlands Inventory

Jan 10, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

North

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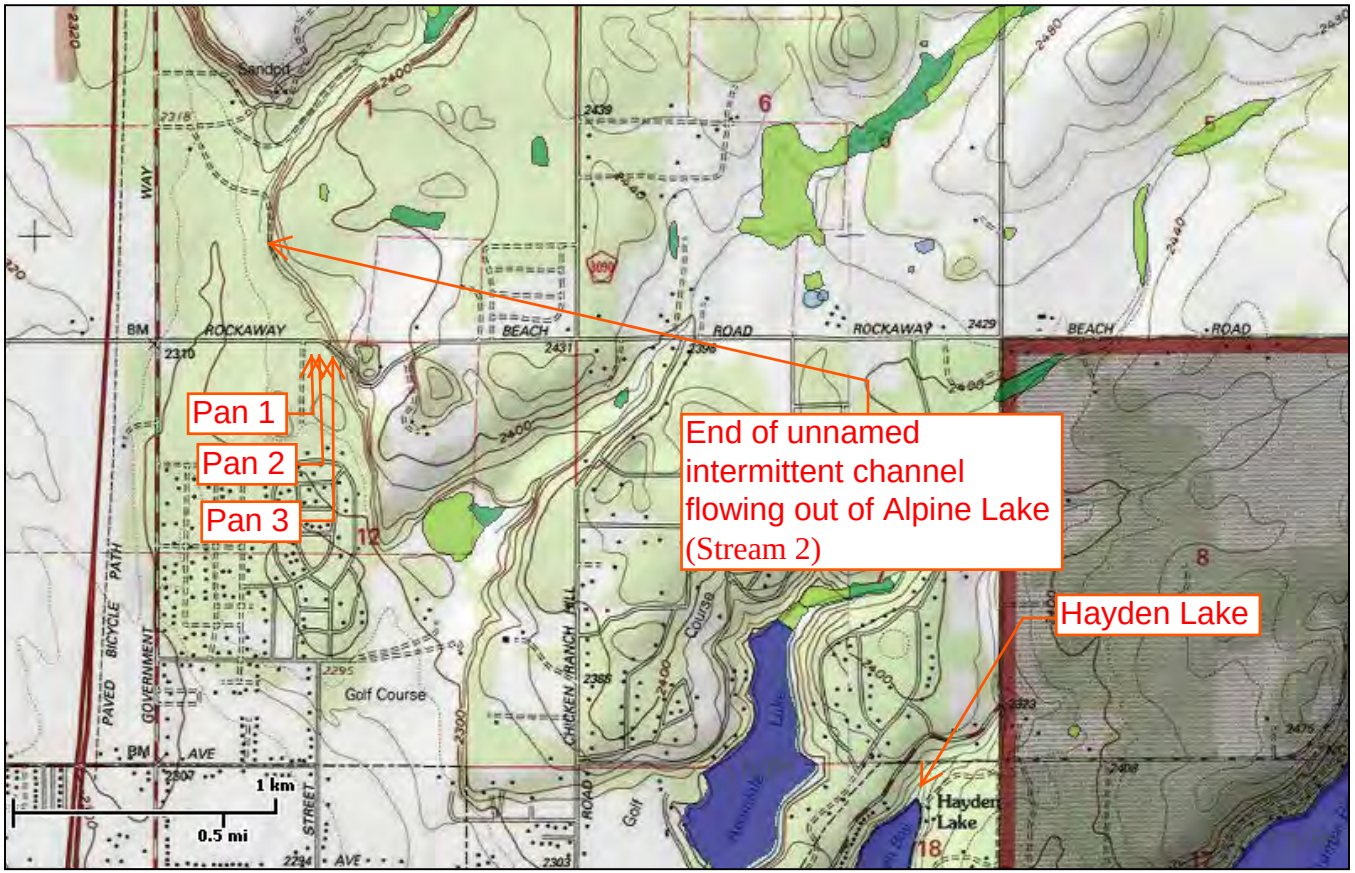
User Remarks:

Figure 4. NWI and USGS topographic map for the Hayden quadrangle showing the southern portion of unnamed stream channel that originates at Alpine Lake (Stream 2), an its temini.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Jan 10, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

North

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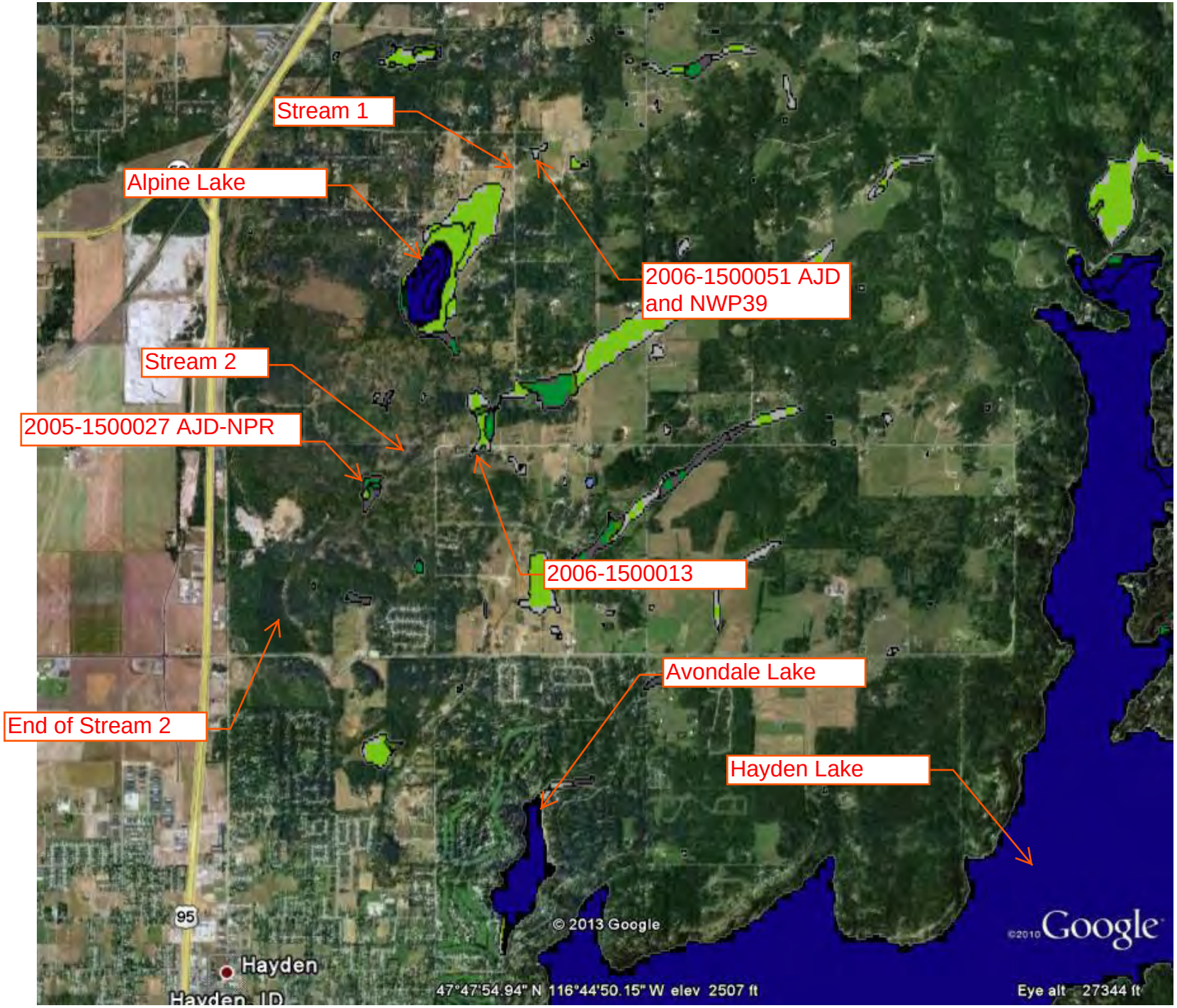
User Remarks:

Figure 5. NWI and USGS topographic map for the Hayden quadrangle showing the locations of where Photos 1 through 9 were taken on 6-Feb-2013.

North

Figure 6. Portion of map on Kootenai County Assessor website showing landlocked parcel of land owned by IDF&G



Scale 1.4" = 1 mile

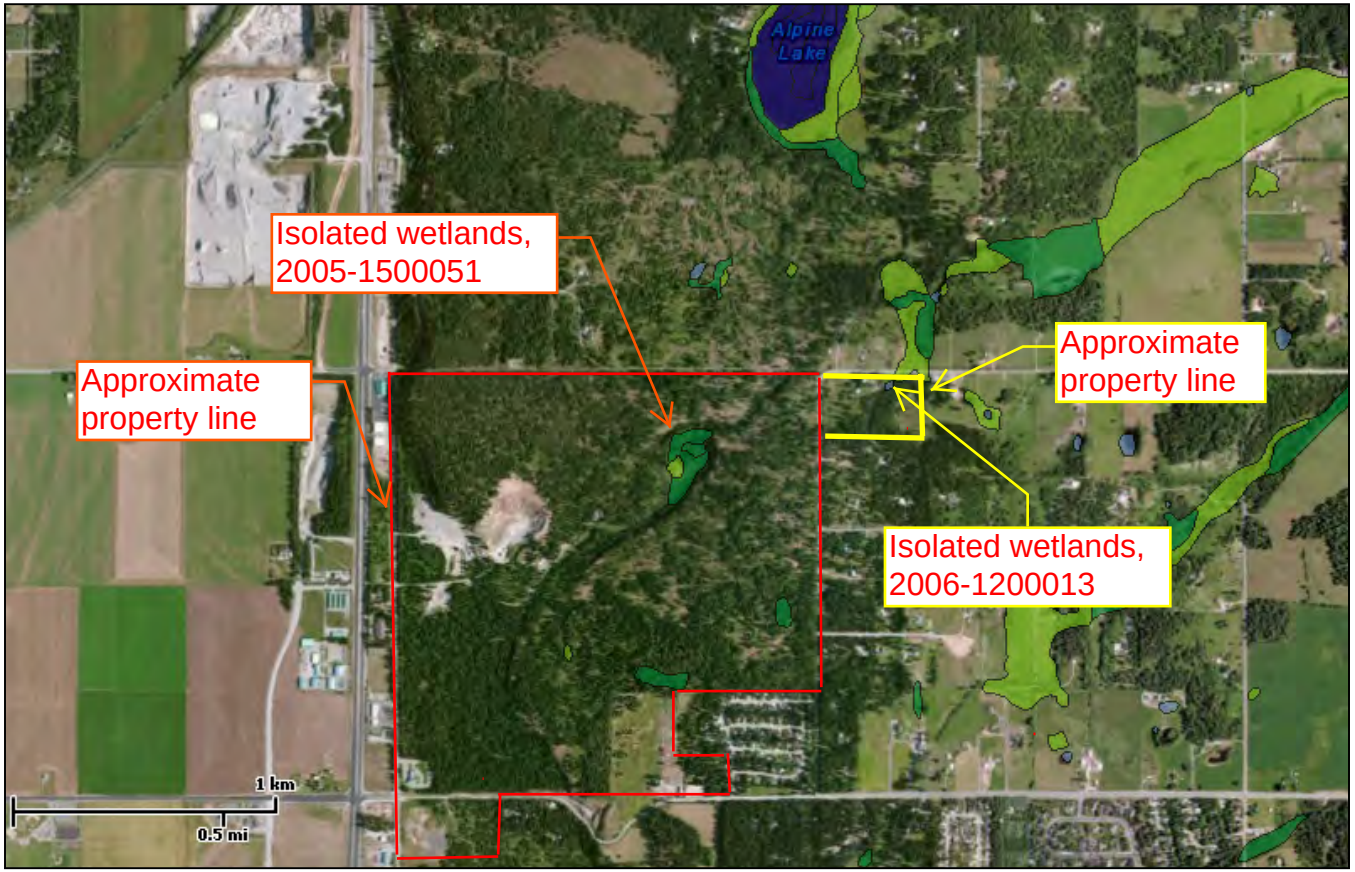
North

Figure 7. Google Earth image of Alpine Lake and area including part of Hayden Lake with NWI map overlay included.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Feb 21, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

North

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User Remarks:

Figure 8. NWI map over Google Earth image of property lines and wetlands determined to be isolated in File No.'s 2005-1500027 and 2006-1200013.

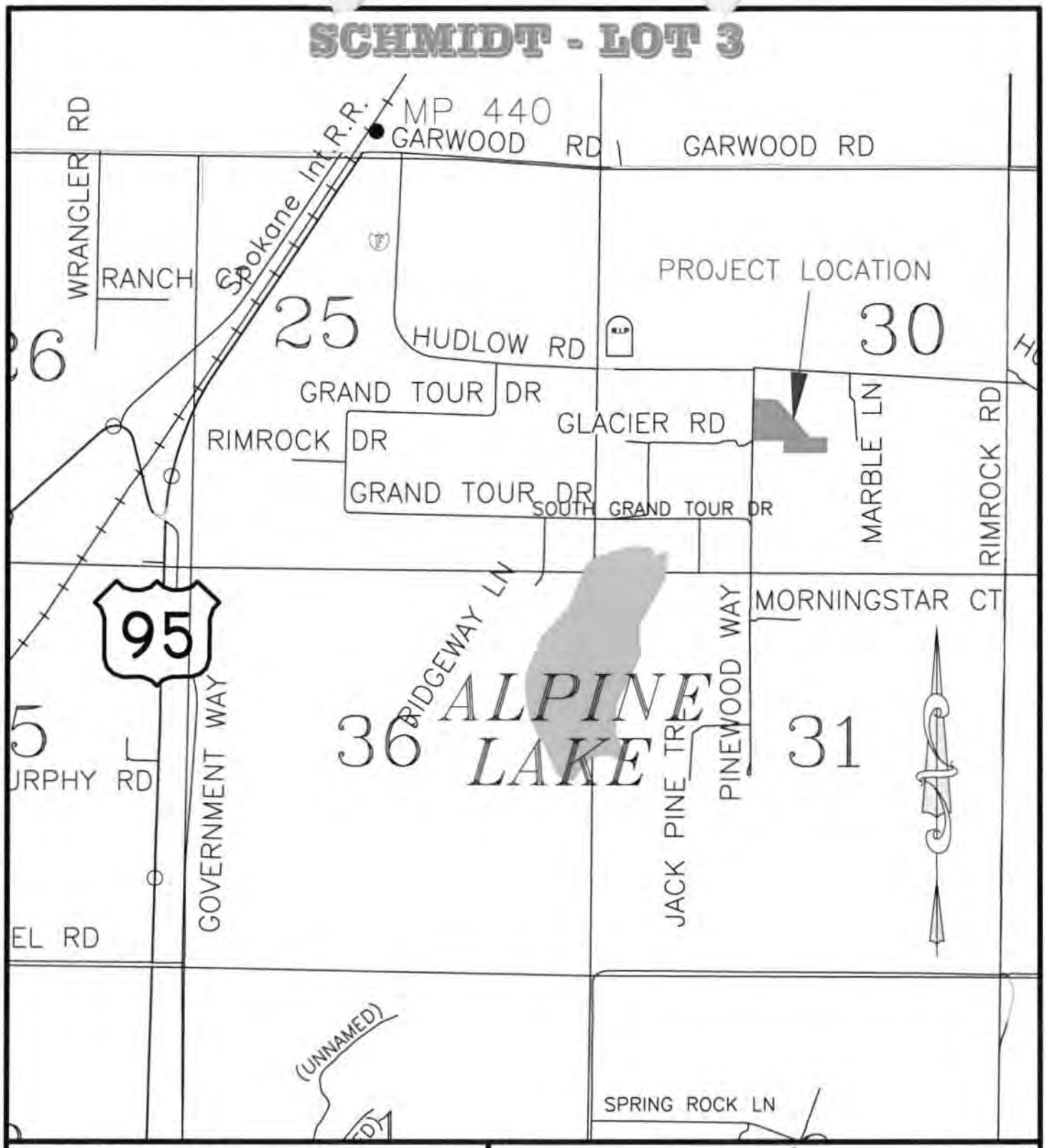

Figure 9. Plat of property where wetlands and unnamed tributary to Alpine Lake were determined to be WUS in File No. 2006-1500051.

ISSUE DATE:	08/25/06	DRAWN BY:	JWE/EAB
DWG FILE:	Vicinity.DWG	SCALE:	NTS
PROJ. # PF 06-128	(OWNER) - GARY SCHMIDT		

INC
INLAND NORTHWEST CONSULTANTS
ENGINEERS • SURVEYORS • PLANNERS
1296 Polston Ave., Suite B, Post Falls, Idaho 83854
PHONE (208) 773-8370 www.incnorthwest.com FAX (208) 777-2128

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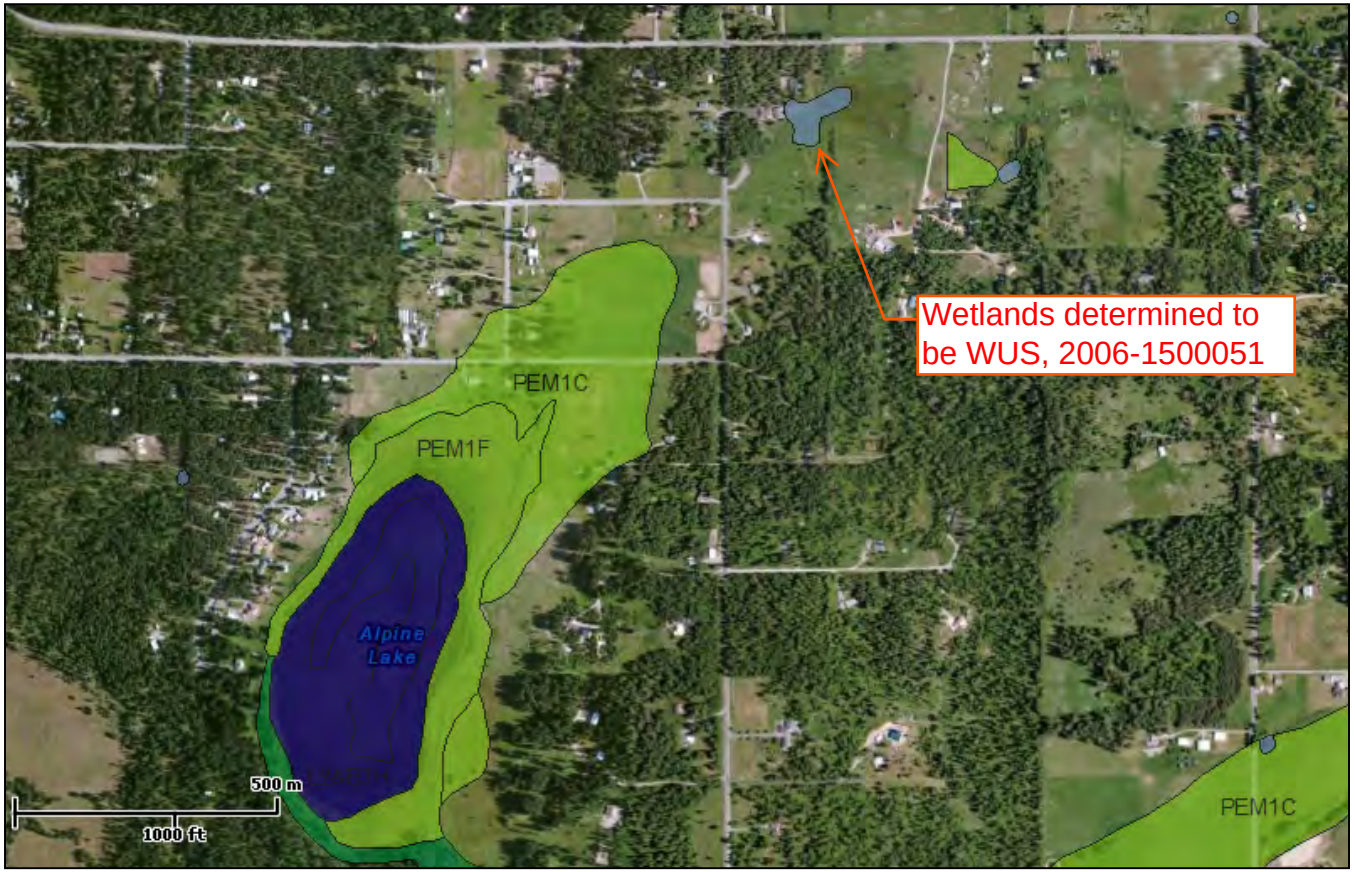
National Wetlands Inventory

Feb 21, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

North

Figure 10. NWI map over Google Earth image of wetlands determined to be WUS in File No. 2006-1500051.

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Burgan, Michael A NWW

From: kim erk [toadflax_39@hotmail.com]
Sent: Saturday, February 16, 2013 10:09 AM
To: Burgan, Michael A NWW
Cc: Maiani, Necia M
Subject: Alpine Meadows Wetland call for EID

Michael Burgan
US Army Corp of Engineers
Coeur d'Alene Office

Subject: Alpine Meadows Water and Sewer District EID Wetland Determination

To follow up with our conversation of Feb 15, 2013. The body of water known as Alpine Lake, which is actually an old farmers stock watering pond , was installed approximately in the late fifties with a designed check structure provided by the Soil Conservation Service(SCS currently known as NRCS) , funded by the ASCS. The Agricultural Stabilization and Conservation Service (ASCS) was an agency of the United States Department of Agriculture <http://en.wikipedia.org/wiki/United States Department of Agriculture> as was SCS. It administered programs concerning farm products and agricultural conservation. It granted loans to farmers for conservation practices and provided technical support.

In the early seventies Idaho Forest Industries (IFI), (owner Tom Richards) purchased it and the surrounding lands, logged and subdivided the land into 5, 10, 20 acre parcels. His wife, Sheila Richards, named the pond Alpine Lake to go with the subdivisions name of Alpine Meadows. IFI turned the water system over to the local landowners and the Alpine Meadows Water and Sewer District was established in 1984. We are regulated by Idaho Code and governed by an elected Board of Directors.

As I stated, the water body is land locked through private ownership and is not a public lake, although the residents do have an access. The average depth of the water is 3 feet or less with much of it in the 18 inch range due to years of sedimentation and in itself prohibits recreational use. The overflow from the pond area outlet flows only a short distance South then disappears into a fractured basalt formation near a gravel pit. The only thing the water raises is mosquitoes and the occasional flock of geese hangs out.

The Alpine Meadows Water and Sewer District has no plans now or in the future to ever develop this water for commercial or recreational use. In addition, the covenants of the area prohibit Alpine Meadows private land owners from commercial use and limits livestock use. Our only intent as a water district for this project is to improve and upgrade a degrading water system, period.

I hope this clarifies this matter and thank you for your assistance in this determination.

Respectfully yours,

Kim Ann Erk
Board Member, Alpine Meadows Water and Sewer District

Photo 1. Four shot pan looking at potential area where the unnamed stream channel that drains out of Alpine Lake (Stream 2) could cross under Lancaster Road. No OHWM was observed in this area. Individual photos of swales most likely to contain OHWM will follow. Note vegetation is visible sticking up through the snow in both swales included in the pan. Photos were taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

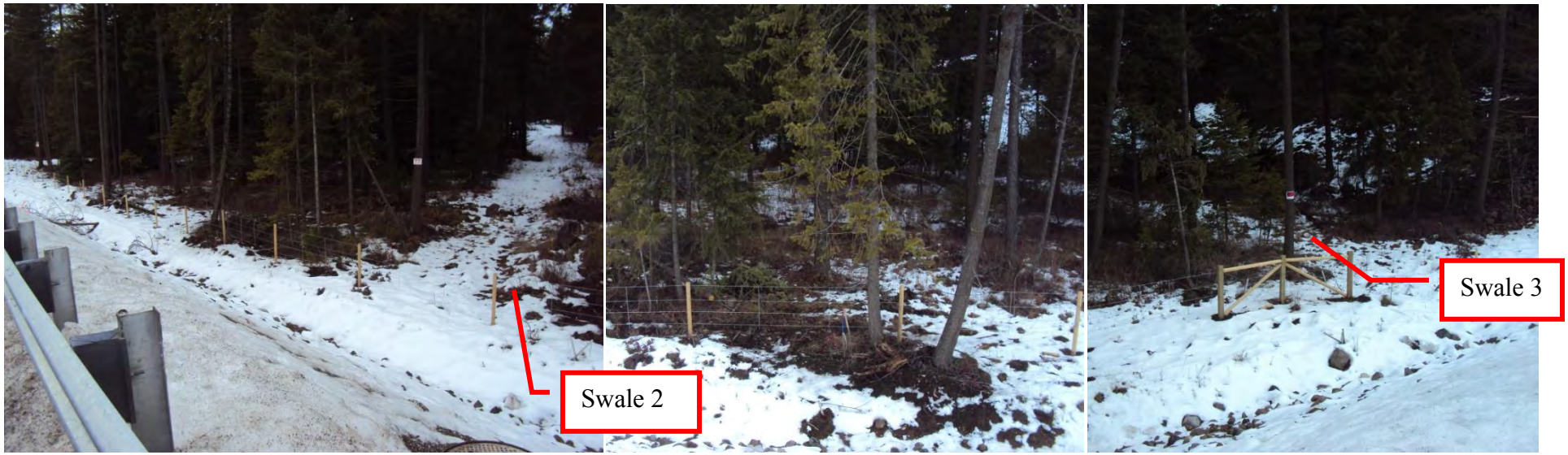


Photo 2. Three shot pan of second potential area where unnamed stream channel draining Alpine Lake (Stream 2) could cross under Lancaster Road. No OHWM was observed in this area. Individual photos of areas most likely to contain OHWM will follow. Note vegetation is visible sticking up through the snow in both swales included in the pan. Photos were taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

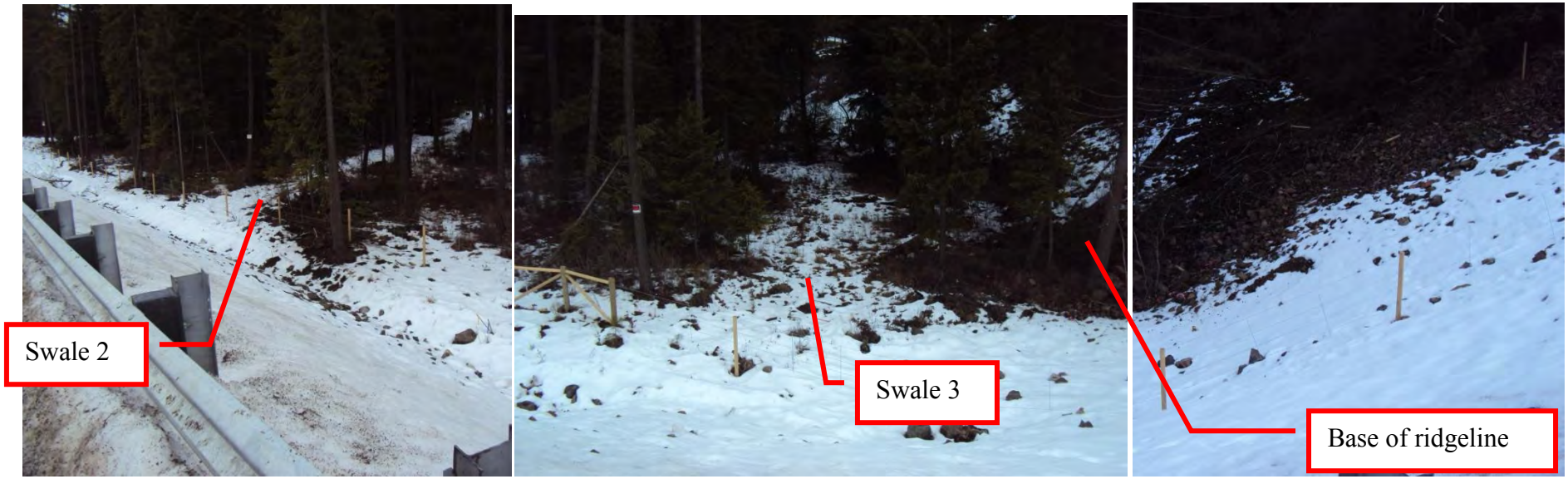


Photo 3. Three shot pan of third potential area where unnamed stream channel draining Alpine Lake (Stream 2) could cross under Lancaster Road. No OHWM was observed in this area. Individual photos of areas most likely to contain OHWM will follow. Note vegetation is visible sticking up through the snow in both swales included in the pan. Also note the base of the "rimrock" ridgeline identified on the 7.5 minute topographic map for the Hayden quadrangle that forms the eastern boundary of area where unnamed stream channel could flow is included in the pan. Photos were taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

Photo 4. Swale farthest to the west of the potential area where unnamed stream channel originating from Alpine Lake (Stream 2) could cross under Lancaster Road. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. This photograph is the first of a four shot pan (Photo 1 above) taken looking northwest from Lancaster Road by Mike Burgan on 6-Feb-2013.

Photo 5. Swale farthest to the west of the potential area where unnamed stream channel originating from Alpine Lake (Stream 2) could cross under Lancaster Road, and area between swales 1 and 2. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. This photograph is the second of a four shot pan (Photo 1 above) taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

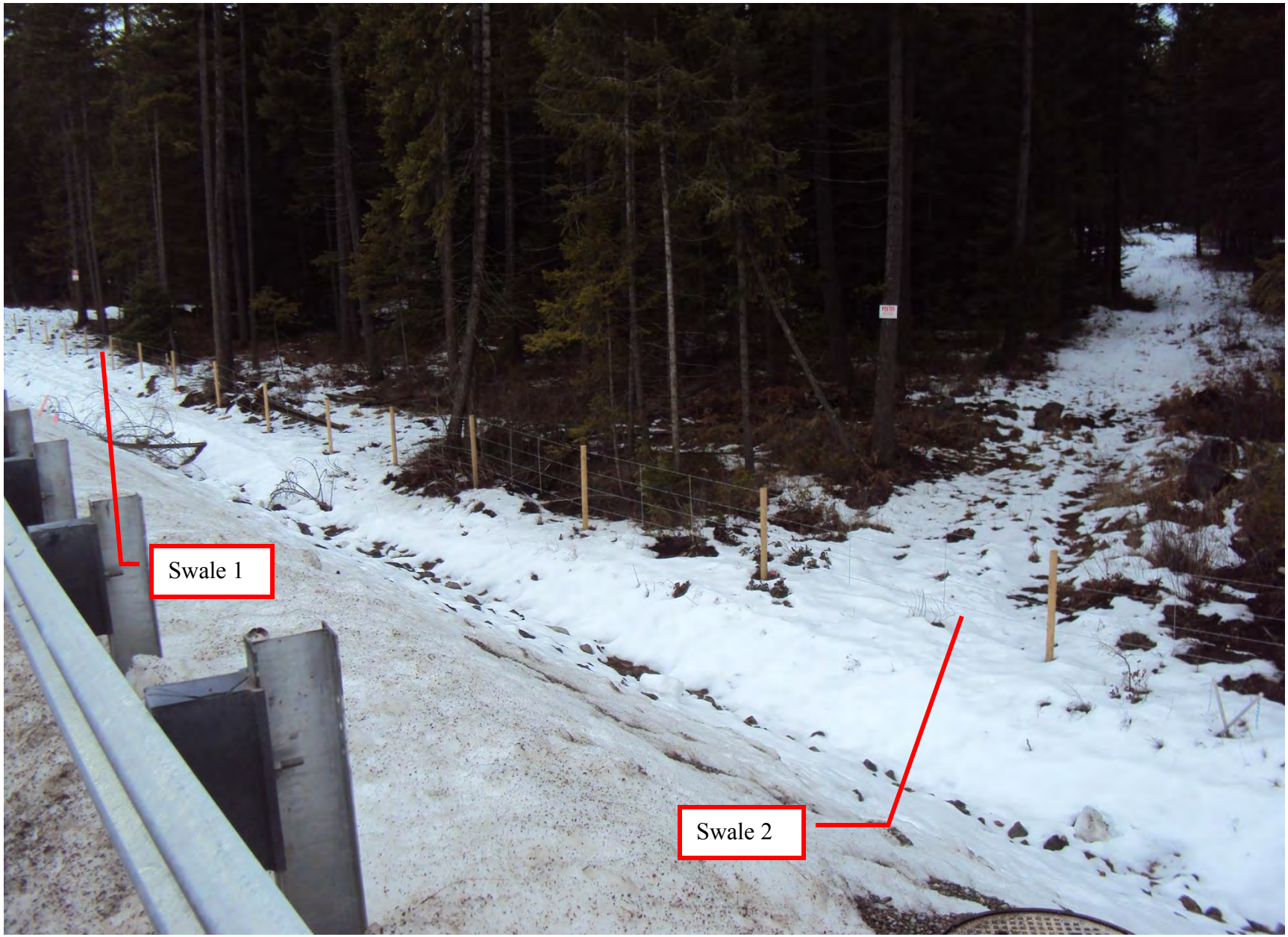


Photo 6. Swale in the middle of the potential area where unnamed stream channel originating from Alpine Lake (Stream 2) could cross under Lancaster Road and area between swales 1 and 2. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. This photograph is the first of a three shot pan (Photo 2 above) taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

Photo 7. Swale in the middle of the potential area where unnamed stream channel originating from Alpine Lake (Stream 2) would cross under Lancaster Road, and area between swale 2 and 3. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. This photograph is the second of a three shot pan (Photo 2 above) taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

Photo 8. Area between swale 2 and 3 on the east side of the potential area where the unnamed stream channel originating from Alpine Lake (Stream 2) could cross under Lancaster Road. No OHWM is visible in the photograph. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. Also, note the tree on the left side of this photograph is the same tree visible on the right side of Photo 7. This photograph is the third of a three shot pan (Photo 2 above) taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

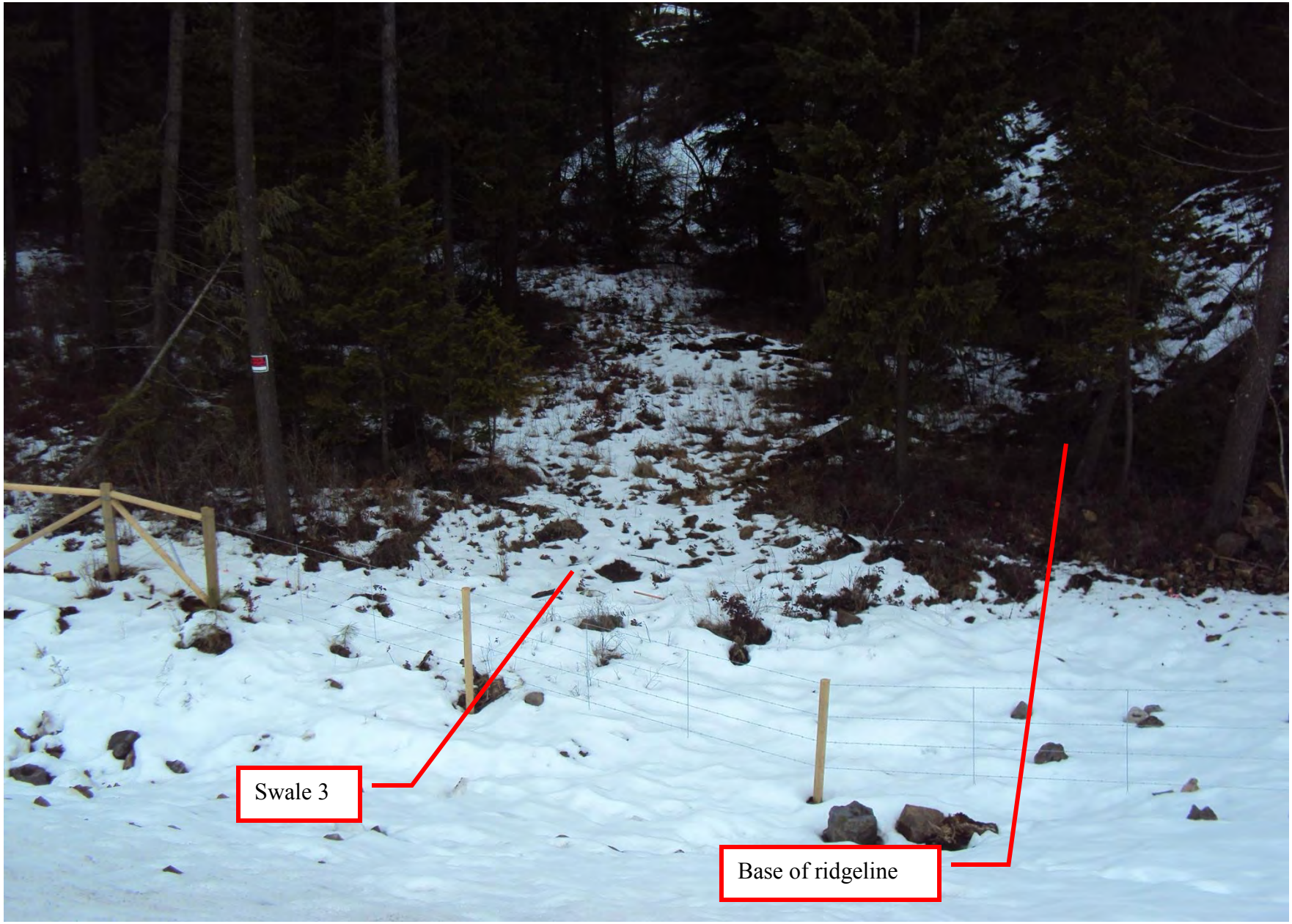


Photo 9. Looking north up swale 3 on the east side of the potential area where the unnamed stream channel originating from Alpine Lake (Stream 2) could cross under Lancaster Road. No OHWM is visible in the photograph. Note vegetation is visible sticking up through the snow in the swale and no OHWM is visible in the photograph. Also note the base of the "rimrock" ridgeline identified on the 7.5 minute topographic map for the Hayden quadrangle that forms the eastern boundary of area where unnamed stream channel could flow is included on the right side of this photograph. This photograph is the second of a three shot pan (Photo 3 above) taken looking north from Lancaster Road by Mike Burgan on 6-Feb-2013.

ADDENDUM 1

Mike Burgan's responses to questions from US Army Corps of Engineers headquarters dated 14-March-2013.

1. *You say that historically Alpine Lake has not been used for interstate commerce and therefore non-navigable. The stream was blocked in the 1950s, do you have historical evidence of owners and use of the stream previous to the 1950s impoundment? Is there a potential that it could have been navigable in fact? Or made navigable with reasonable improvements? (US v. Appalachian Electric Power CO.)*

RESPONSE: Prior to construction of the three-foot tall dam that created what is now called Alpine Lake, the area was historically used for pasture. In fact, the lake was constructed solely to be a livestock watering feature. The unnamed tributary to Alpine Lake (Stream 1) averaged approximately two-feet wide and approximately six-inches deep when inspected on 15-March-2013. That inspection occurred during the timeframe the applicant indicates is peak flow (during spring snow melt/spring runoff). Alpine Lake averages three-feet deep and has no history of commercial use or navigation. Given the shallowness of the lake, and restrictive covenants preventing commercial development, it will take extraordinary measures to make Alpine Lake navigable or subject to commercial use. I have not yet been able to obtain permission to go onto private land to inspect the lower portion of the unnamed creek that originate at Alpine Lake (Stream 2), but have seen part if it through trees from the edge of the road right-of-way from approximately 100 yards away. I could only see very limited sections of Stream 2, but appeared to be out of its banks (could see vegetation sticking up through the water), and approximately three to four feet wide. I could not make an estimation of the depth. However, it should be noted that site is also below the confluence of another unnamed stream channel that is approximately the same size as Stream 1. Because Stream 2 terminates in an upland area (goes entirely sub-surface and recharges the Rathdrum Prairie Aquifer), on private property, and has minimal flow, and reportedly no "white water" even during spring runoff. It would take extraordinary measures to make Stream 1 and Stream 2 navigable.

The Alpine Meadows Water and Sewer District had no knowledge of the unnamed tributary to Alpine Lake (Stream 1) being used for commercial navigation prior to construction of the dam. Historically, dams were constructed on some creeks in northern Idaho to impound water. Timber was then fallen or pulled into the ponds created behind the dams. Once the water was deep enough – usually following snowmelt – the dams were blown, and the resulting floodwaters carried the harvested timber downstream, to rivers or sawmills. However, the topography around the unnamed creek was too flat, and the unnamed creek did not flow into another water that would eventually get to a sawmill. As such, this method of moving harvested timber did not occur on Stream 1 prior to construction of the dam. The Walla Walla District (NWW) has no knowledge of Stream 1, Alpine Lake, or Stream 2 having been used for commercial use or navigation.

2. *In the 1950s the was a dam placed across the intermittent stream channel. Before this, would you have considered the stream navigable and therefore jurisdictional? Does this impoundment sever the navigability according to our regulations or court cases? (US v. Economy Light & Power Co.) Does this impoundment have an impact on the current conditions of the waters and wetlands?*

RESPONSE: No, the stream would not have been considered navigable before the dam was constructed. Therefore, construction of the dam would not have severed navigation. Due to width and depth restrictions, and the fact the stream terminates in the Rathdrum Prairie without flowing into another water, the stream was not historically used for navigation. The impoundment created wetlands around the lake. However, the lake and the wetlands are isolated. There is no surface connection to other waters of the United States. On 15-December-2005, the Walla Walla District issued an approved jurisdictional determination for 13 isolated, non-navigable streams and wetlands that had no nexus to interstate commerce in the area for an Idaho Department of Transportation proposal for improving and widening U.S. Highway 95 between Garwood and Sagle, Idaho. While reviewing the Environmental Impact Statement for the project, it was determined that 13 wetlands and streams were isolated because the streams flowed into the Rathdrum Prairie and lost their definable ordinary high water mark (OHWM). Once entering the Rathdrum Prairie, all creeks went completely sub-surface, with all water recharging the Rathdrum aquifer. They creeks evaluated did not connect with other waters of the United States, and terminated in the Rathdrum Prairie, just as Stream 2 does. It should be noted the NWW did exert jurisdiction over an additional 13 wetlands and streams farther north within the approximately 30 mile long project corridor that were determined to not be isolated. Those stream and wetlands are north of Athol, ID (Figure 1, Location Map that accompanied the 28-Feb-2013 JD form), and do not flow into the Rathdrum Prairie.

Two other examples of streams with lakes on them upstream of where they enter the Rathdrum Prairie but are isolated are Hauser Creek and Rathdrum Creek. The U.S. Geologic Survey's StreamsStats indicates Hauser Creek has a watershed of 21.25 square miles above where it crosses under Idaho State Highway 53. StreamStats indicates Rathdrum Creek has a watershed of 57.86 square miles above where it crosses under Highway 53. I live in Hauser, ID, and drive over both creeks at least once a day going to and from work. The USGS 7.5 minute topographic maps for the Newman Lake and Rathdrum quadrangles indicate both creeks flow approximately 1.5 and six miles (including irrigation ditches) respectively into the Rathdrum Prairie before losing their OHWMs and terminating – recharging the Rathdrum aquifer just as Stream 2 does. It should be noted the NWW has exerted jurisdiction over Hauser Lake (Figure 1, a 600 acre interstate water with a well used public boat ramp) and Twin Lakes on Rathdrum Creek (Figure 1, a 930 acre lake with two public boat ramps).

3. *You say that the USGS Stream Stats calculator indicates that the watershed above and that flows into Alpine Lake engrosses 1.47 square miles (941 acres). Would you consider a physical limit of significance when factoring in watershed contributions? If so, where would you consider the cut off? If this were a perennial system, would it have a significant impact downstream?*

RESPONSE: As indicated above, Alpine Lake and Streams 1 and 2 are isolated. They do not have a direct surface connection to any other water bodies. The closest water body Stream 2 could flow into is Hayden Lake, approximately 2.1 straight miles away from where the USGS map indicates Stream 2 ends. On 29-January-2013 and 6-February-2013, I inspected the area along Lancaster Road where Stream 2 would pass under Lancaster Road looking for a definable OHWM or even a swale where it would hit Lancaster Road. Lancaster Road is downhill from the area identified on the USGS map for the Hayden quadrangle where Stream 2 loses its

OHWM, and forms the southern boundary of where Stream 2 would flow if it were not to sub-out in the Rathdrum Prairie, and no swales or OHWM was observed. However, snow covered parts of the area. So, on 15-March-2013, I walked the entire length of the north side of Lancaster Road where Stream 2 could cross under the road if it made it that far. The area was snow free, and no OHWM or wetlands were observed (Photos 16 through 19). I also drove along Government Way, the road that would form the western side of where Stream 2 could possibly flow if it did not terminate. Again, the area was snow free, and no OHWM, swales, or wetlands were observed. As per the Rapanos Guidance issued on 5-June 2007, and revised 3-December-2008, the NWW has not completed a significant nexus analysis on Alpine Lake, Stream 1, Stream 2, and their abutting and adjacent wetlands, because doing so is not required or appropriate.

4. *Does the lack of boater/user access preclude future access to the pond? Are there other forms of recreation that could be considered? Could a kayak or another small boat navigate from the lake upstream?*

RESPONSE: Yes. Possibly, but they do not require boating or interstate commerce to allow them to be achieved. No, passage upstream would be prevented by lack of definable channel with an OHWM between Alpine Lake and Grand Tour Road (Photo 10). Passage upstream would also be prevented by the two 18-inch corrugated metal pipe culverts that pass under Grand Tour Road, approximately 700 feet upstream of Alpine Lake (Photo 11). Above that point, where an OHWM was observed, navigation would be prevented by the size of the channel and the 28-inch x 16-inch CMP culvert under Pinewood Way (Photos 12, 13, and 14).

5. *One of your points for non-significance is that there are no fish species in this lake. Has there been any sampling done? What type of fish species exist in the stream channels up and down stream? What typically would we expect to find in a lake of this size in this region? What about any other biological sampling?*

RESPONSE: I am not contending there are no fish in Alpine Lake, or seasonally in Stream 1 or 2. I contend (supported by statements made by the applicant and the Idaho Department of Fish and Game - IDF&G), that fish within Alpine Lake regularly experience winter die offs due to the shallowness of the lake. Winter die offs could be the result of depleted oxygen due to prolonged ice and snow cover, and shallowness. In severe winters, it is believed the lake freezes solid because it is so shallow. In other years, it might not freeze solid, but unfrozen areas would be limited to the deepest areas near the dam (presumable the borrow areas where material to construct the three foot tall dam was obtained). Due to their limited size and depth, the carrying capacity of these areas that do not freeze solid would be much less than the entire lake. In addition, due to the length of time the lake is completely covered by ice and snow (this is northern Idaho) preventing photosynthesis and the exchange of oxygen at the lake surface, dissolved oxygen depletion would become an issue, and only the strongest fish would be able to survive normal winters – and then only if the lake does not freeze solid. IDF&G has stated they have not sampled Alpine Lake, or Streams 1 and 2. IDF&G also stated they have no record of stocking Alpine Lake or the streams because they are not open to the public, Alpine Lake is too shallow, and Streams 1 and 2 dry up annually. I did not see any fish in Stream 1 during my March 15, 2013, inspection. In 2005, IDF&G indicated only small warm water fish would likely

be in Streams 1 and 2. When asked in February 2013, IDF&G again said they had no direct knowledge of the species of fish that might be found in Streams 1 and 2 (or Alpine Lake for that matter), but they would typically be small, minnow sized fish that would likely no survive throughout year, because creeks dry up completely/nearly completely and would get too warm. There might be isolated pools in some reaches of Stream 1 and Stream 2 that hold water year-round, but I see no evidence of them in the 9-Jun-1998, 27-Sept-2004, 31-Aug-2005, 12-Sept-2006, and 24-Aug-2012 Google Earth images of the streams. In fact, Streams 1 and 2 appear dry in all but 31-May-2009 satellite photo which was taken after the channel was cleaned out in 2006. And then, water is only visible in Stream 1 where the channel clean-out occurred in 2006, and immediately downstream. All other parts of Stream 1 and Stream 2 appear to be dry.

Photo 10. Three shot pan of Stream 1 below where it flows under Grand Tour Road. Stream 1 carried under Grand Tour Road in two 18-inch round culverts (not visible in photos but photo point is just to the east of culvert 1). No OHWM noted or visible in Stream 1 below Grand Tour Road, however, area is almost certainly wetland, vegetated with reed canary grass (*Phalaris arundinacea*). Area is identified as wetland on national wetlands inventory map. Pan was taken starting looking east-southeast and panning to the west from Grand Tour Road surface by Mike Burgan on 15-March-2013.

Photo 11. Three shot pan of Stream 1 above where it flows under Grand Tour Road. Stream 1 carried under Grand Tour Road in two 18-inch round culverts, which are visible in photo on left side of pan. No OHWM maintained in Stream 1 was it approached Grand Tour Road, however, area is probably wetland. Average channel width approximately two feet deep, and six inches tall during peak flow (snow melt nearly complete). There is an OHWM in area upstream of ponderosa pines in middle photograph, but it is an excavated channel. Pan was taken starting looking west and panning to the east from Grand Tour Road surface by Mike Burgan 15-March-2013.

Photo 12. Looking downstream at Stream 1 below where it flows under Pinewood Way. Average width approximately two feet wide during peak flow (snow melt nearly complete). No effort made to determine width of OHWM in this section as it was entirely on private property. Photo taken looking west from Pinewood Way road surface by Mike Burgan on 15-March-2013.

Photo 13. Looking downstream at unnamed tributary to Alpine Lake (Stream 1) below where it flows under Pinewood Way. Stream 1 carried under Pinewood Way in a 28-inch wide x 16-inch tall squashed culvert. Average width approximately two feet wide, and six inches deep during peak flow (snow melt nearly complete), ordinary high water mark (OHWM) appeared to be approximately 8 to 10-inches wide below the culvert, but did not go onto private property to verify. Photo taken looking southwest from road surface by Mike Burgan on 15-March-2013.

Photo 14. Looking upstream at Stream 1 above where it flows under Pinewood Way. Stream 1 carried under Pinewood Way in a 28-inch wide x 16-inch tall squashed culvert. Average width approximately two feet wide. This was the location of the non-compliance that was the subject of the approved jurisdictional determination (JD) in file No. NWW-2006-1500051. That JD was the result fill placed in wetlands abutting Stream 1 for construction house pad, and the discharge of materials excavated from Stream 1 that had been side cast into wetlands abutting Stream 1. Excavated materials were removed, fill for house pad remained and was permitted under after-the-fact nationwide permit. Note much of the excavated stream channel is revegetated with cattails (*Typha latifolia*). OHWM immediately upstream of culvert appeared to be approximately 8 to 10-inches wide up to *Typha* stand far side of white fence, but did not go onto private property to verify. Photo taken looking northeast from road surface by Mike Burgan on 15-March-2013.

Photo 15. Four shot pan of area where swale that turns into Stream 1 passes under Rimrock Road, if it had an OHWM this far upstream. US Geologic Survey 7.5 minute topographic map for the Hayden quadrangle depicts Stream 1 as ending between North Marble Lane, and Rimrock Road. However, North Marble Lane is a private road, posted with No Trespassing signs, so no attempt was made to photograph Stream 1 at that point. This location is the closest point accessible from public roads. No OHWM noted or visible in the area. Pan taken looking south-southwest and panning to the north from the Rimrock Road surface by Mike Burgan on 15-March-2013.

Photo 16. Swale 1 in Photo 1, 4, 5 and 6 of approved jurisdictional determination form dated 13-February -2013. Photo taken looking north by Mike Burgan on 15-March-2013 from Lancaster Road.

Photo 17. Swale 2 in Photos 2, 3, and 6 (from nearly same location as first shot of three shot pan that was Photo 2) of approved jurisdictional determination form dated 13-February-2013. Photo taken looking north by Mike Burgan on 15-March-2013 from Lancaster Road.

Photo 18. Swale 3 in Photos 2, 3, 8, and 9 (from nearly same location as second shot of three shot pan that was Photo 3) of approved jurisdictional determination form dated 13-February-2013. Photo taken looking north by Mike Burgan on 15-March-2013 from Lancaster Road.

Photo 19. Northern side of Lancaster Road where Swales 1, 2, and 3 run into fill for Lancaster Road. Note, not culverts under road. Photo taken looking east from the end of Swale 1 by Mike Burgan on 15-March-2013 from edge of Lancaster Road right-of-way.

North

Figure 11. Google Earth image showing general locations of where the six photos were taken during field inspection conducted by Mike Burgan on 15-March-2013

North

Figure 12. Google Earth image showing locations of where photos 1 and 2 were taken during field inspection conducted by Mike Burgan on 15-March-2013

North

Figure 13. Google Earth image showing locations of where photos 3, 4, and 5 were taken during field inspection conducted by Mike Burgan on 15-March-2013. Note, tree line/ match line for matching Figures 13 and 14.

North

Figure 14. Google Earth image showing locations of where photo 6 was taken during field inspection conducted by Mike Burgan on 15-March-2013. Note, tree line/match line for matching Figures 13 and 14.

Kootenai County Area, Idaho

126—Kootenai gravelly silt loam, 0 to 7 percent slopes

Map Unit Setting

- *Landscape:* Outwash plains
- *Elevation:* 2,100 to 2,700 feet
- *Mean annual precipitation:* 25 to 30 inches
- *Mean annual air temperature:* 43 to 46 degrees F
- *Frost-free period:* 90 to 120 days

Map Unit Composition

- *Kootenai and similar soils:* 75 percent

Description of Kootenai

Setting

- *Landform:* Outwash terraces, moraines
- *Down-slope shape:* Linear
- *Across-slope shape:* Linear
- *Parent material:* Volcanic ash and loess over outwash derived from granite and/or gneiss and/or schist

Properties and qualities

- *Slope:* 0 to 7 percent
- *Depth to restrictive feature:* 20 to 40 inches to strongly contrasting textural stratification
- *Drainage class:* Well drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 2.00 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water capacity:* Low (about 4.2 inches)

Interpretive groups

- *Farmland classification:* Prime farmland if irrigated
- *Land capability classification (irrigated):* 3s
- *Land capability (nonirrigated):* 4s
- *Hydrologic Soil Group:* B
- *Other vegetative classification:* Douglas-fir/common snowberry (CN310)

Typical profile

- *0 to 1 inches:* Slightly decomposed plant material
- *1 to 2 inches:* Moderately decomposed plant material
- *2 to 8 inches:* Gravelly silt loam
- *8 to 24 inches:* Gravelly silt loam
- *24 to 28 inches:* Very gravelly loam
- *28 to 62 inches:* Extremely gravelly coarse sand

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **Alpine Meadows Water and Sewer District**	File Number: **NWW-2012-484-C09**	Date: **29 March 2013**
Attached is:		See Section Below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	**E**

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the permit.

OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit,

ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMT

REASONS FOR APPEAL OR OBJECTIONS:

Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: District Engineer ATTN: David B. Barrows Regulatory Division Walla Walla District 201 North 3rd Avenue Walla Walla, Washington 99362-1876 Telephone (509) 527-7150	If you only have questions regarding the appeal process you may also contact: U.S. Army Corps of Engineers Northwestern Division Attn: Mary Hoffman, Appeal Review Officer P.O. Box 2870 Portland, Oregon 97208-2870 Telephone (503) 808-3825

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent:	*Date:*	*Telephone:*

Williams, Ashley

From: Burgan, Michael A NWW <Michael.A.Burgan@usace.army.mil>
Sent: Wednesday, October 10, 2012 9:22 AM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water project

Hi Ashley,

Shane just finished his part. I'll review the paperwork, and send it through our JD coordinator. He'll review it, and send it to EPA and Corps HQ. Knowing our process, it probably will be next week at the earliest before it gets to EPA and Corps HQ. They will then have 21 days to review and concur to disagree. I know it is lengthy for a pretty simple call, but it is a government process, so it cannot be easy. Before 2007, we could make isolated JD calls quickly, but since EPA/HQ issued JD guidance following the Rapanos decision, it's like we are standing in tar.

I'll let you know as soon as I hear something one way or the other. If you have any questions, give me a call.

Mike

-----Original Message-----
From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Wednesday, October 10, 2012 8:32 AM
To: Burgan, Michael A NWW
Subject: RE: Alpine Meadows Water project

Mike,

Now that it's been a few weeks, I was curious where we were with the wetland issue for Alpine. Has Shane found anything or determined anything?

Let me know if you need any further information from me.

Thanks!
Ashley

This email and any attachments are intended solely for the use of the individual to whom they are addressed. If you are not the intended recipient, you must not keep, use, disclose, take action, copy or distribute this email. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. This email and any attachments are the property of Welch Comer Engineers and may contain information that is copyrighted, or confidential and privileged and must not be distributed without Welch Comer Engineers permission. If this email contains contracts, survey or engineering data, design information, recommendations, plans, specifications or GIS information, these documents should be considered draft documents unless explicitly stated otherwise in the email text.

-----Original Message-----
From: Burgan, Michael A NWW [mailto:Michael.A.Burgan@usace.army.mil]

Sent: Friday, September 21, 2012 3:04 PM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water project

Ashley,

No problem. This will be a good one for Shane to cut his teeth on. He'll get it started in next week.

Mike

-----Original Message-----
From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, September 21, 2012 2:40 PM
To: Burgan, Michael A NWW
Cc: Maiani, Necia M
Subject: RE: Alpine Meadows Water project

Mike,

After talking with Ester today regarding the improvements, we determined that we should go ahead and determine if the wetland is jurisdictional or not. The proposed improvements that are located within the wetland area (according to the National Wetland Inventory) are likely to be constructed in the near future (within the next few years) and re-routing around the wetland doesn't look likely. Thus, we think it would be prudent to determine if they are located in a jurisdictional wetland.

Please let me know if you need anything further from us in order to assess the wetland. We would like to get this done as soon as possible so if by some chance the wetland is jurisdictional, we have time to do a delineation before the weather makes it difficult.

Thanks!

Description: AWilliams

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From: Ester.Ceja@deq.idaho.gov [mailto:Ester.Ceja@deq.idaho.gov]
Sent: Tuesday, September 18, 2012 7:04 AM
To: Williams, Ashley
Cc: Michael.A.Burgan@usace.army.mil; Maiani, Necia M; Ester.Ceja@deq.idaho.gov
Subject: RE: Alpine Meadows Water project

Ashley,

Are the distribution system improvements in the wetlands going to change much (in terms of alignment) if at all? What do you know about the wetlands, is it jurisdictional? If Alpine Meadows is seeking federal funding for this project DEQ is subject to compliance with Cross-Cutting Federal Authorities which includes wetlands. That said, we need to know if the wetlands are jurisdictional and if work is going to be completed through that area how will impacts be minimized and or mitigated.

Please remember that when we issue an environmental determination we are suppose to be looking at impacts to the various resources (ESA/floodplains/wetlands/Cultural and Historic resources). We can't issue an environmental determination on a project if we don't know what the impacts and/or mitigation measures will be for work in a wetland.

If has been my experience over the last 5 years that the Corps will review the project description and location of the project and if it appears to be located near or in a wetland then they typically ask that a wetland survey be completed to determine if it's jurisdictional. Maybe we need to have a conference call with the Corps on this project.

Ester

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Monday, September 17, 2012 5:15 PM
To: Ester Ceja
Cc: Burgan, Michael A NWW (Michael.A.Burgan@usace.army.mil); Maiani, Necia M
Subject: Alpine Meadows Water project

Ester,

I have spoken to Mike Burgan with the USACE regarding the Alpine Meadows Water project and he had some comments that I want to make sure that we address and understand.

There are some improvements (distribution) located in wetland areas. He stated that the Corps may not have jurisdiction to require delineations or permitting in this location. However, in order to determine if they do have jurisdiction, it could be a long and involved process with EPA. He is suggesting and asking that the District get a little further along in the design process (i.e. developing an alignment) for these specific water lines, which are located in the wetland areas, before the District and USACE initiate this jurisdiction process.

Would this be acceptable in terms of meeting the requirements of DEQ for the environmental determination or do we need to proceed down a different path?

Please let me know if you have any questions or need any further information. We can schedule a conference call with Mike if that would help.

Thanks!

Description: AWilliams

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Williams, Ashley

From: Williams, Ashley
Sent: Friday, August 24, 2012 1:21 PM
To: 'Slate, Shane P NWW'
Subject: RE: Alpine Meadows Water System (UNCLASSIFIED)

Shane,

The system and service area are located within parts of Sections 26 and 25 of Township 52N, Range 4W and parts of Section 30 in Township 52N, Range 3W. It is just north of Hayden, Idaho (and most addresses of the residents are Hayden addresses).

Let me know if you have any other questions or need anything further from me.

Thanks!
Ashley

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-----Original Message-----
From: Slate, Shane P NWW [mailto:Shane.P.Slate@usace.army.mil]
Sent: Friday, August 24, 2012 1:06 PM
To: Williams, Ashley
Subject: Alpine Meadows Water System (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Hi Ashley,

We just received your letter on the Alpine Water System improvements. I am not familiar with Alpine Meadows at all, could you send me the location info. Either lat/long or PLSS will work.

Thank you,

Shane Slate
Regulatory Project Manager
US Army Corps of Engineers
Walla Walla District
Coeur d'Alene Regulatory Office

208-765-8961
shane.p.slate@usace.army.mil

Classification: UNCLASSIFIED
Caveats: NONE

MEMO

TO: ASHLEY M. WILLIAMS, WELCH-COMER ENGINEERS
FROM: MIKE MAY
SUBJECT: ALPINE MEADOWS THREATENED/ENDANGERED SPECIES AND ESSENTIAL FISH HABITAT
DATE: APRIL 23, 2013

The proposed project for the Alpine Meadows Drinking Water Improvements includes construction of a second well and appurtenances; addition of a pump and generator to the booster station; replacement of existing distribution mains; and replacement of meters.

The project site is located in the Spokane Valley Outwash Plains ecoregion, with gently rolling topography and dry Ponderosa Pine and Douglas fir woodlands (McGrath, et al. 2002, *Ecoregions of Idaho*). The January average snow depth at the nearby Coeur D'Alene weather station is 5 inches, with less snow cover in December, February and March, based on data from 1895 to 2013 (Western Regional Climate Center www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?id1956).

The U.S. Fish and Wildlife Service (USF&WS) threatened and endangered species list dated 02/06/2013 and email correspondence with the USF&WS Northern Idaho Field Office was used for determining endangered and threatened species within Kootenai County. The following species are listed as threatened within Kootenai County:

1. **Canada Lynx** (*Lynx canadensis*) – The Canada Lynx reside in boreal forest landscapes and provide one or more of the following beneficial habitat elements including snowshoe hares for prey, abundant, large, woody debris piles that are used as dens, and winter snow conditions that are generally deep and fluffy for extended period of time. The proposed project is located in suburban foothills environments not typical of boreal forests and having shallow winter snow depths. The proposed project will have "NO EFFECT" on the Canada Lynx.

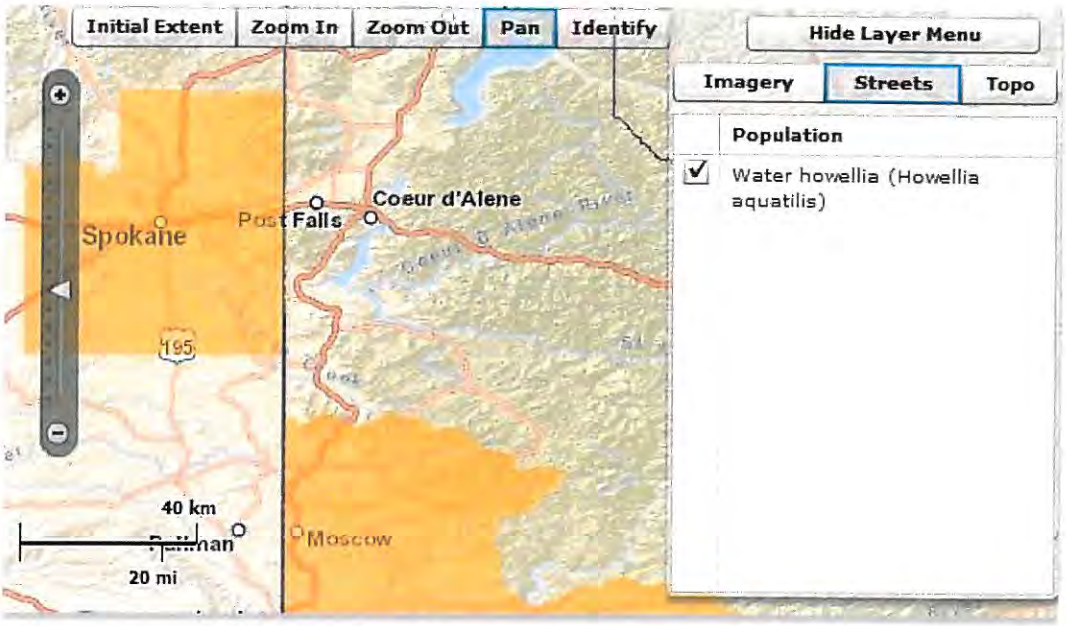
2. **Bull Trout** (*Salvelinus confluentus*) – The project area does not contain critical habitat for bull trout (75FR63898, 2010). Alpine Lake is too shallow to support year around fish populations, and it is an isolated water body that does not discharge to waters of the U.S. The proposed project will have "NO EFFECT" on Bull Trout.

3. **Spalding's Catchfly** (*Silene spaldingii*) – This herbaceous perennial is endemic to the Palouse region, and is found predominantly in Pacific Northwest bunchgrass grasslands and sagebrush-steppe, and occasionally in open-canopy pine stands. According to Byron Holt of the USF&WS, Spalding's catchfly may occur in Kootenai County, but does not occur in the vicinity of Hayden Lake. Therefore, the project will have "NO EFFECT" Spalding's Catchfly.

4. **Water Howellia** (*Howellia aquatis*) – This winter annual grows in shallow water (1-2 meters) often associated with glacial potholes and former oxbows that flood in the spring and are usually at least partly dry by late summer, since the seeds germinate when ponds

are dry. It is not known to be present at the project site, but it is known or believed by the US Fish and Wildlife Service to be present in nearby Spokane County. The edges of Alpine Lake may provide a suitable habitat. However, the project will not disturb Alpine Lake, so it will have "NO EFFECT" on Water Howellia.

Map of Species occurrence

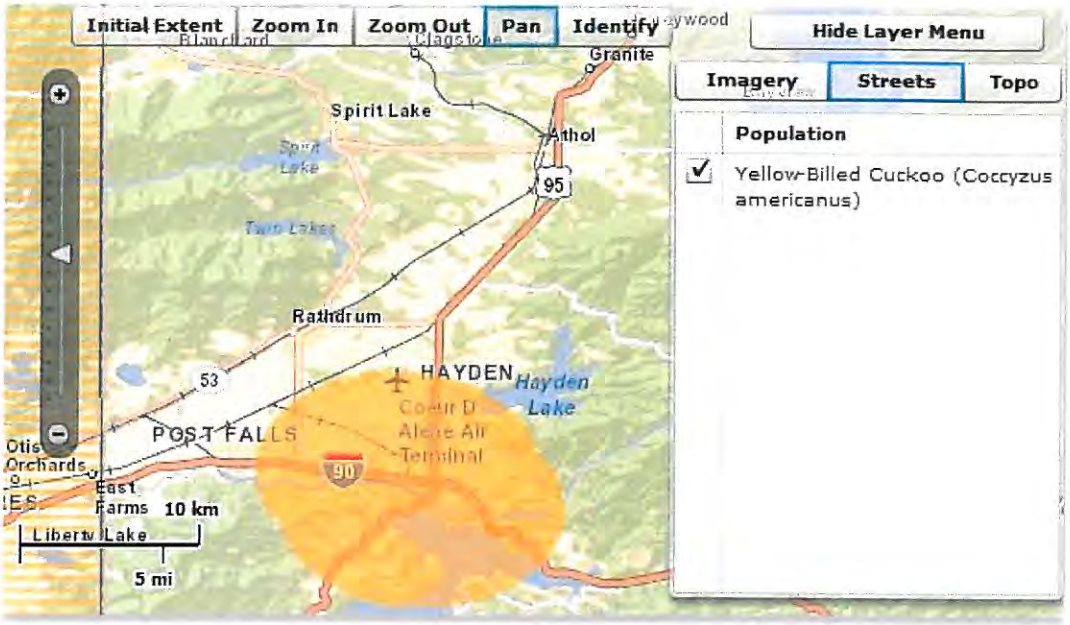


This map represents our best available information about where a species is currently known to or is believed to occur; however, it should NOT be used as an official species list for Section 7 Consultation purposes. To obtain an official species list for this purpose, please visit the Information, Planning, and Conservation (IPaC) System (click here: http://ecos.fws.gov/ipac)

The following have been listed as Candidate Species:

1. **Yellow-Billed Cuckoo** (*Coccyzus americanus*) –Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods and willows. Generally local and uncommon in scattered drainages of the arid and semiarid portions of western Colorado, western Wyoming, Idaho, Nevada and Utah. The Yellow-billed Cuckoo is known or believed by USFWS to be present in the near vicinity of the project area, as shown in the map below. However, USFWS also states that the species was considered a rare and local summer resident in Idaho, with only four records of Yellow-Billed cuckoo in northern and central Idaho over the last century. The majority of sightings have been in the Snake River corridor in southeast Idaho (USFWS 2011, *Species Assessment and Listing Priority Assignment Form*, obtained from http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06R#candidate) . According to Byron Holt of the USF&WS, the Yellow-Billed Cuckoo may occur within Kootenai County, but not in the vicinity of Hayden Lake. Therefore, the proposed project will have "NO EFFECT" on the Yellow-Billed Cuckoo.

Map of Species occurrence



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The following species is listed as a Proposed Threatened Species:

1. **North American Wolverine** (*Gulo gulo luscus*) - The North American Wolverine is a proposed species which is not expected to be found in the proposed project planning area. The proposed project is located in suburban foothills environments. Wolverine distribution is restricted to high elevation areas of deep, persistent and reliable spring snow cover (April 15 to May 14) is the best overall predictor of wolverine occurrence in the contiguous U.S. (http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0FA). Wolverines are known to travel long distances, so any individuals which may be encountered are almost certain to be travelling between other suitable habitats. There is insufficient snow depth at the project site for wolverine dens. The proposed project will have "NO EFFECT" on the wolverine species.

Essential Fish Habitat

The project area is not located within Essential Fish Habitat (EFH) for **Chinook Salmon** (*Oncorhynchus tshawytscha*) or **Coho Salmon** (*Oncorhynchus kisutch*) as identified in the attached EFH map and will have "NO EFFECT."

MLM

Attachments

United States Department of the Interior
Fish and Wildlife Service
Idaho Fish And Wildlife Office
1387 S. Vinnell Way, Room 368
Boise, Idaho 83709
Telephone (208) 378-5243
http://www.fws.gov/idaho

U.S. Fish and Wildlife Service - Idaho Fish and Wildlife Office
Endangered, Threatened, Proposed, and Candidate Species
With Associated Proposed and Critical Habitats in Idaho

April 12, 2013

This Letter and Species List
The U.S. Fish and Wildlife Service (Service) is providing this letter in response to your inquiry regarding federally listed, proposed, and candidate species, and proposed and designated critical habitats that may occur in Idaho. Use the attached Species List to ensure compliance with Sections 7 and 9 of the Endangered Species Act (Act). As a federal agent or designated non-federal representative, use this list in conjunction with best available information to assess whether a proposed action may affect these species or their habitats. If you determine a proposed action may affect a species or their habitats, contact the Service to initiate informal or formal consultation. This list is only valid for a period of 90 days. An updated list can be obtained by downloading the PDF file: www.fws.gov/idaho/species/IdahoSpeciesList.pdf.

Candidate Species Conservation
Though Candidate species have no protection under the Act, they are included in the Species List for early planning consideration. Candidate species could be proposed or listed during the project planning period. The Service advises project proponents to evaluate potential effects to Candidate species that may occur in the project area. Should the species be listed, this may expedite Section 7 consultation under the Act.

Effects Beyond Idaho
If the anticipated effects of an action extend beyond the range of Idaho, please contact the appropriate Service Contact for lists of species and habitats occurring in those adjacent states.

U.S. Fish and Wildlife Service Contacts
Idaho - Idaho Fish and Wildlife Office, Bob Kibler, bob_kibler@fws.gov, (208) 378-5255
Montana - Montana Ecological Services Field Office, (406) 449-5225
Nevada - Nevada Fish and Wildlife Office, (775) 861-6300
Oregon - LaGrande Field Office, (541) 962-8584
Utah - Utah Ecological Service Field Office, (801) 975-3330
Washington - Eastern Washington Field Office, (509) 891-6839
Wyoming - Wyoming Ecological Services Field Office, (307) 772-2374

NOAA Fisheries Species
Listed or proposed species that are under National Marine Fisheries Service's (NOAA Fisheries) jurisdiction do NOT appear on the Service's Species Lists. In Idaho, please contact NOAA Fisheries at (208) 378-5696 or visit NOAA Fisheries' webpage at http://www.nwr.noaa.gov/Species-Lists.cfm for consultation information.

Additional Information
To obtain additional information about the Act, please visit one of the Service's internet sites at http://www.fws.gov/endangered/laws-policies/index.html; http://www.fws.gov/idaho/agencies.htm; or speak with a Service Contact.

This species list was revised by the USFWS on 02/06/2013, and is valid for 90 days after 04/12/2013.

U.S. Fish and Wildlife Service • Idaho Fish and Wildlife Office

CANDIDATE, PROPOSED AND LISTED SPECIES & PROPOSED AND DESIGNATED CRITICAL HABITAT IN IDAHO

	Herps	Birds		Mammals						Fish		Mollusks				Plants							
Common Name	Columbia Spotted Frog (Great Basin Population)	Greater Sage-Grouse	Yellow-Billed Cuckoo	Canada Lynx	Grizzly Bear	Northern Idaho Ground Squirrel	Selkirk Mountains Woodland Caribou	Southern Idaho Ground Squirrel	North American Wolverine	Bull Trout	Kootenai River White Sturgeon	Banbury Springs Lanx	Bliss Rapids Snail	Bruneau Hot Springsnail	Snake River Physa	Goose Creek Milkvetch	MacFarlane's Four-O'Clock	Packard's Milkvetch	Slickspot Peppergrass	Spalding's Catchfly	Ute Ladies'-Tresses	Water Howellia	Whitebark Pine
Scientific Name	*Rana luteiventris*	*Centrocercus urophasianus*	*Coccyzus americanus*	*Lynx canadensis*	*Ursus arctos horribilis*	*Spermophilus brunneus brunneus*	*Rangifer tarandus caribou*	*Spermophilus brunneus endemicus*	*Gulo gulo luscus*	*Salvelinus confluentus*	*Acipenser transmontanus*	*Lanx* sp.	*Taylorconcha serpenticola*	*Pyrgulopsis bruneauensis*	*Haitia (Physa) natricina*	*Astragalus anserinus*	*Mirabilis macfarlanei*	*Astragalus cusickii var parkardiae*	*Lepidium papilliferum*	*Silene spaldingii*	*Spiranthes diluvialis*	*Howellia aquatilis*	*Pinus albicaulis*
Ada		C	C							T					E				P-PCH				
Adams		C		T		T		C	P	T-DCH													C
Bannock		C	C						P														
Bear Lake		C		T					P														C
Benewah				T					P	T-DCH										T		T	
Bingham		C	C						P												T		
Blaine		C	C	T					P	T-DCH													C
Boise			C	T					P	T-DCH													C
Bonner				T	T		E		P	T-DCH													C
Bonneville		C	C	T	T				P												T		C
Boundary				T-DCH	T		E-DCH		P	T-DCH	E-DCH												C
Butte		C		T					P	T-DCH													C
Camas		C		T					P	T-DCH													C
Canyon			C												E				P-PCH				
Caribou		C		T					P														C
Cassia		C	C												E	C							
Clark		C	C	T	T				P														C
Clearwater				T					P	T-DCH													C
Custer		C	C	T					P	T-DCH													C
Elmore		C	C	T					P	T-DCH			T		E				P-PCH				C
Franklin		C		T					P														
Fremont		C	C	T	T				P												T		C
Gem		C						C	P	T-DCH									P-PCH				C

Table Key: C = Candidate Species P= Proposed Species T=Threatened Species E=Endangered Species PCH= Proposed Critical Habitat DCH=Designated Critical Habitat

This species list was revised by the USFWS on 02/06/2013, and is valid for 90 days after 04/12/2013.

U.S. Fish and Wildlife Service • Idaho Fish and Wildlife Office

CANDIDATE, PROPOSED AND LISTED SPECIES & PROPOSED AND DESIGNATED CRITICAL HABITAT IN IDAHO

	Herps	Birds		Mammals						Fish		Mollusks				Plants							
Common Name	Columbia Spotted Frog (Great Basin Population)	Greater Sage-Grouse	Yellow-Billed Cuckoo	Canada Lynx	Grizzly Bear	Northern Idaho Ground Squirrel	Selkirk Mountains Woodland Caribou	Southern Idaho Ground Squirrel	North American Wolverine	Bull Trout	Kootenai River White Sturgeon	Banbury Springs Lanx	Bliss Rapids Snail	Bruneau Hot Springsnail	Snake River Physa	Goose Creek Milkvetch	MacFarlane's Four-O'Clock	Packard's Milkvetch	Slickspot Peppergrass	Spalding's Catchfly	Ute Ladies'-Tresses	Water Howellia	Whitebark Pine
Scientific Name	*Rana luteiventris*	*Centrocercus urophasianus*	*Coccyzus americanus*	*Lynx canadensis*	*Ursus arctos horribilis*	*Spermophilus brunneus brunneus*	*Rangifer tarandus caribou*	*Spermophilus brunneus endemicus*	*Gulo gulo luscus*	*Salvelinus confluentus*	*Acipenser transmontanus*	*Lanx* sp	*Taylorconcha serpenticola*	*Pyrgulopsis bruneauensis*	*Hatita (Physa) natricina*	*Astragalus anserinus*	*Mirabilis macfarlanei*	*Astragalus cusickii var parkardiae*	*Lepidium papilliferum*	*Silene spaldingii*	*Spiranthes diluvialis*	*Howellia aquatilis*	*Pinus albicaulis*
Gooding		C										E	T		E								
Idaho			C	T					P	T-DCH							T			T			C
Jefferson		C	C	T					P												T		
Jerome		C											T		E								
Kootenai			C	T					P	T-DCH										T		T	
Latah			C	T					P											T		T	
Lemhi		C	C	T					P	T-DCH													
Lewis			C							T-DCH										T			
Lincoln		C																					
Madison		C	C	T					P												T		
Minidoka		C	C												E								
Nez Perce				T						T-DCH										T			
Oneida		C	C																				
Owyhee	C	C	C							T-DCH				E	E				P-PCH				
Payette		C						C		T					E			C	P-PCH				
Power		C																					
Shoshone				T					P	T-DCH										T		T	C
Teton				T	T				P														C
Twin Falls	C	C	C										T		E								
Valley				T		T			P	T-DCH													C
Washington		C				T		C	P	T-DCH					E								C

Table Key: C = Candidate Species P= Proposed Species T=Threatened Species E=Endangered Species PCH= Proposed Critical Habitat DCH=Designated Critical Habitat

Mike May

From: Holt, Bryon <bryon_holt@fws.gov>
Sent: Friday, April 26, 2013 08:42
To: Mike May
Cc: ben_conard@fws.gov; jay_martini@fws.gov
Subject: Re: ESA consultation for Alpine Meadows drinking water improvements

Thanks Michael,

While these two species (Spalding's catchfly and Yellow-billed cuckoo) may occur within Kootenai County (and that is why they are on your Kootenai County species list), they do not occur in the vicinity of Hayden Lake. Therefore, because of the scope and location of the project, no Federally listed, proposed, or candidate species are likely to occur in the vicinity of this project.

This response fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(C) of the Endangered Species Act of 1973, as amended. Should the project plans change or if it is delayed more than 90 days, you should verify the current accuracy of this response with the Service.

If you have any further questions, please feel free to contact me.

Regards,

Bryon

On Thu, Apr 25, 2013 at 12:32 PM, <Michael.May@deq.idaho.gov> wrote:

Byron, I noticed that the site map was stripped out of the email when Ben forwarded it to you. I put it back in, and added the cuckoo map for reference.

From: Conard, Ben [mailto:ben_conard@fws.gov]
Sent: Thursday, April 25, 2013 13:02
To: Mike May
Cc: Bryon Holt; Jay Martini
Subject: Re: ESA consultation for Alpine Meadows drinking water improvements

Thank you for your inquiry Michael. I've forwarded your request to Bryon Holt of my staff who supervises all endangered species support. He will get back to you promptly. Let me know if you need me for anything else.

Bryon: Let's be sure DEQ is not expending energy on other species which, although they may be present in this region, are not at issue on this project.

On Thu, Apr 25, 2013 at 11:49 AM, <Michael.May@deq.idaho.gov> wrote:

Mr. Conard,

I am enquiring about the potential for federally-funded improvements to the Alpine Meadows drinking water system in Hayden, Idaho to impact endangered or threatened species. I have specific questions about two of the species on the current (2/6/2013) Idaho species list.

Spalding's catchfly (*Silene spaldingii*): The Species Profile <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1P9> states that "the species is endemic to the Palouse region of south-east Washington and adjacent Oregon and Idaho," but adds that it is found "occasionally in open-canopy pine stands." The project area is a suburban foothills neighborhood with many evergreen trees (see figure below). Is this a habitat likely to be suitable for Spalding's catchfly? If so, what mitigation measures are appropriate? Most of the construction will be in existing paved right of way.

Yellow-Billed Cuckoo (*Coccyzus americanus*): The Species Profile <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06R> contains a map purporting to show that this candidate species is known or believed to exist in the Coeur d'Alene area. However, the 2011 *Species Assessment and Listing Priority Assignment Form* <http://ecos.fws.gov/docs/candidate/assessments/2012/r8/B06R_V01.pdf> states that the species was considered a rare and local summer resident in Idaho, with only four records of Yellow-Billed Cuckoo in northern and central Idaho over the last century. Which is correct? The project area contains a shallow (3 feet) lake with evergreens approaching to about 100 feet from the shore on the southeastern quadrant, but no closer than 500 feet elsewhere. Is this the kind of riparian woodland that would provide suitable habitat? If so, what mitigation measures are appropriate? The nearest that construction activities are expected to approach the lake is a residential street that parallels the western shore at a distance of about 500 feet.

Thank you for your attention to this matter. If I can provide further details, please call or email me.

Mike May
Sr. Water Quality Analyst
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706
(208) 373-0406

Michael.May@deq.idaho.gov

--

Ben Conard, Field Supervisor

U.S. Fish and Wildlife Service

Northern Idaho Field Office

11103 E. Montgomery Drive

Spokane Valley, WA 99206

Phone: (509) 893-8030

Fax: (509) 891-6748

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****
Bryon Holt
U.S. Fish and Wildlife Service
Northern Idaho Field Office, Spokane, WA
Telephone: (509) 893-8014
Fax: (509) 891-6748
email: bryon_holt@fws.gov

****

Mike May

From: Mike May
Sent: Thursday, April 25, 2013 13:33
To: Bryon Holt (USF&WS)
Cc: Ben Conard (USF&WS); Jay Martini
Subject: RE: ESA consultation for Alpine Meadows drinking water improvements

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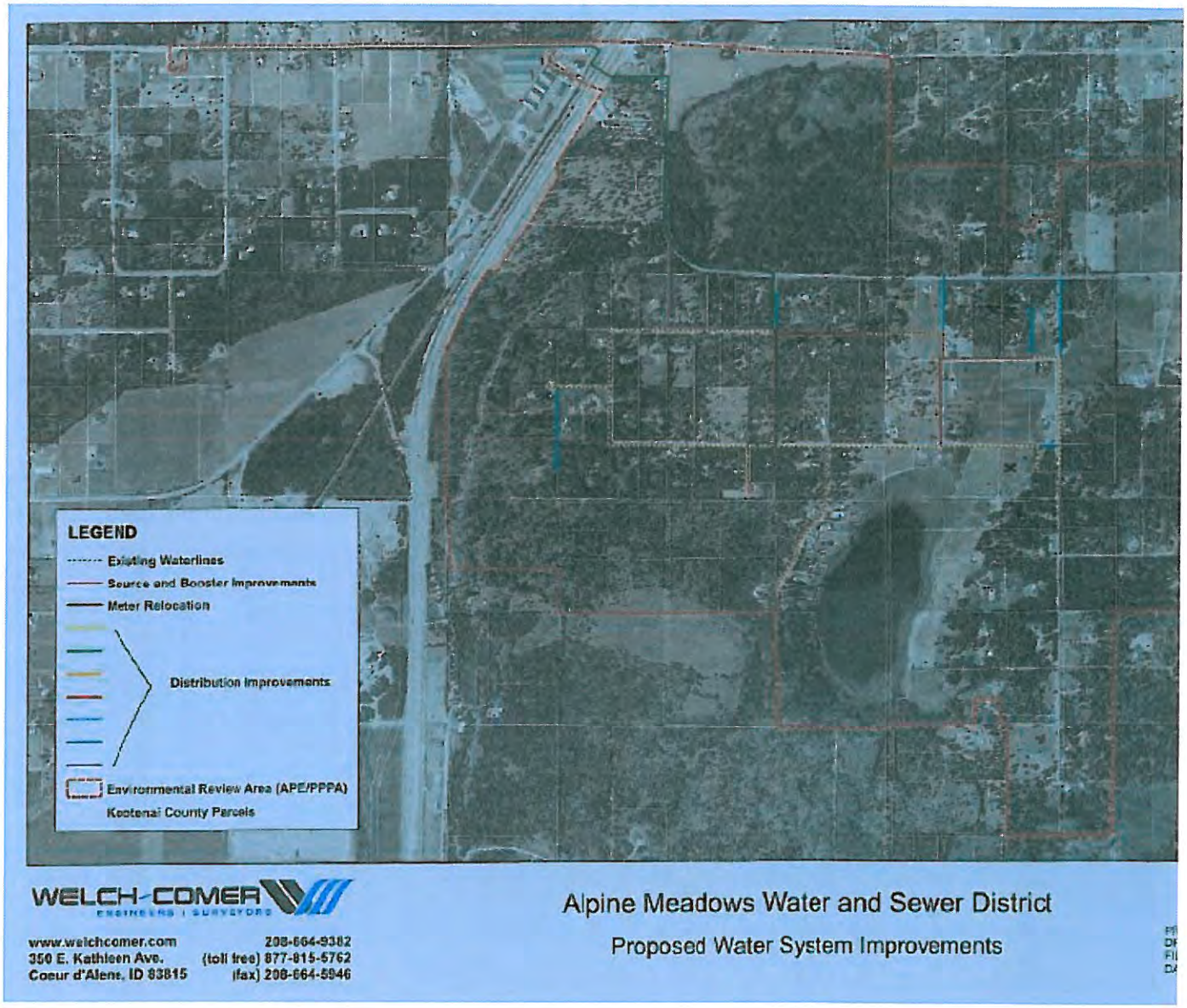
I am enquiring about the potential for federally-funded improvements to the Alpine Meadows drinking water system in Hayden, Idaho to impact endangered or threatened species. I have specific questions about two of the species on the current (2/6/2013) Idaho species list.

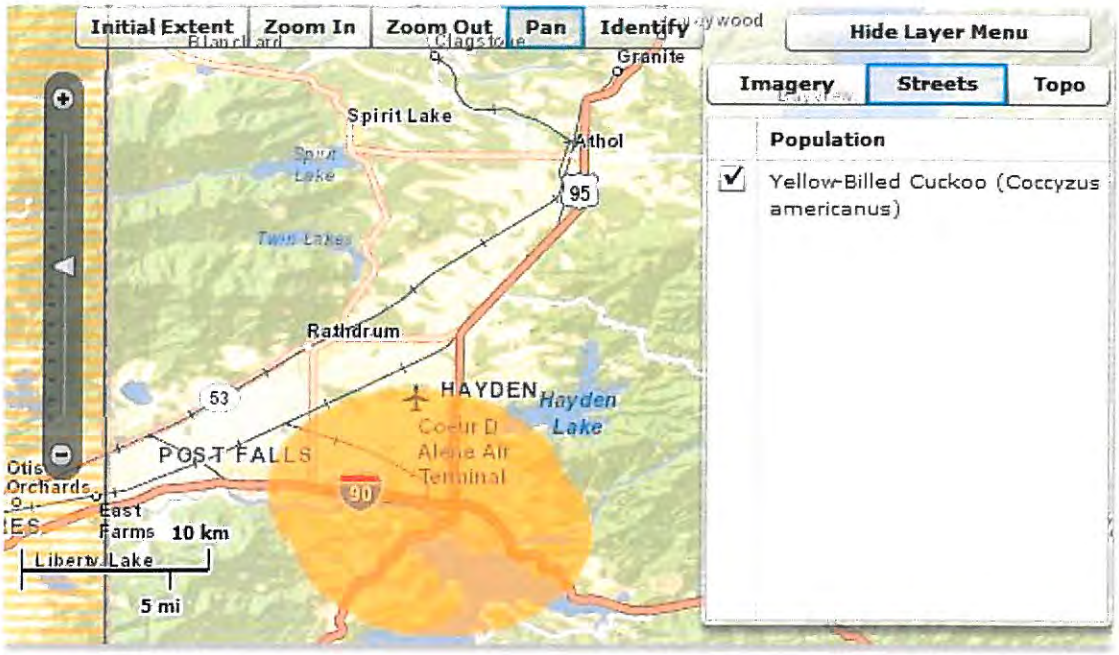


Spalding's catchfly (*Silene spaldingii*): The Species Profile <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1P9> states that "the species is endemic to the Palouse region of south-east Washington and adjacent Oregon and Idaho," but adds that it is found "occasionally in open-canopy pine stands." The project area is a suburban foothills neighborhood with many evergreen trees (see figure below). Is this a habitat likely to be suitable for Spalding's catchfly? If so, what mitigation measures are appropriate? Most of the construction will be in existing paved right of way.

Yellow-Billed Cuckoo (*Coccyzus americanus*): The Species Profile <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06R> contains a map purporting to show that this candidate species is known or believed to exist in the Coeur d'Alene area. However, the 2011 *Species Assessment and Listing Priority Assignment Form* <http://ecos.fws.gov/docs/candidate/assessments/2012/r8/B06R_V01.pdf> states that the species was considered a rare and local summer resident in Idaho, with only four records of Yellow-Billed Cuckoo in northern and central Idaho over the last century. Which is correct? The project area contains a shallow (3 feet) lake with evergreens approaching to about 100 feet from the shore on the southeastern quadrant, but no closer than 500 feet elsewhere. Is this the kind of riparian woodland that would provide suitable habitat? If so, what

mitigation measures are appropriate? The nearest that construction activities are expected to approach the lake is a residential street that parallels the western shore at a distance of about 500 feet.

Map of Species occurrence



This map represents our best available information about where a species is currently known to or is believed to occur; however, it should NOT be used as an official species list for Section 7 Consultation purposes. To obtain an official species list for this purpose, please visit the Information, Planning, and Conservation (IPaC) System (click here: http://ecos.fws.gov/ipac)

Thank you for your attention to this matter. If I can provide further details, please call or email me.

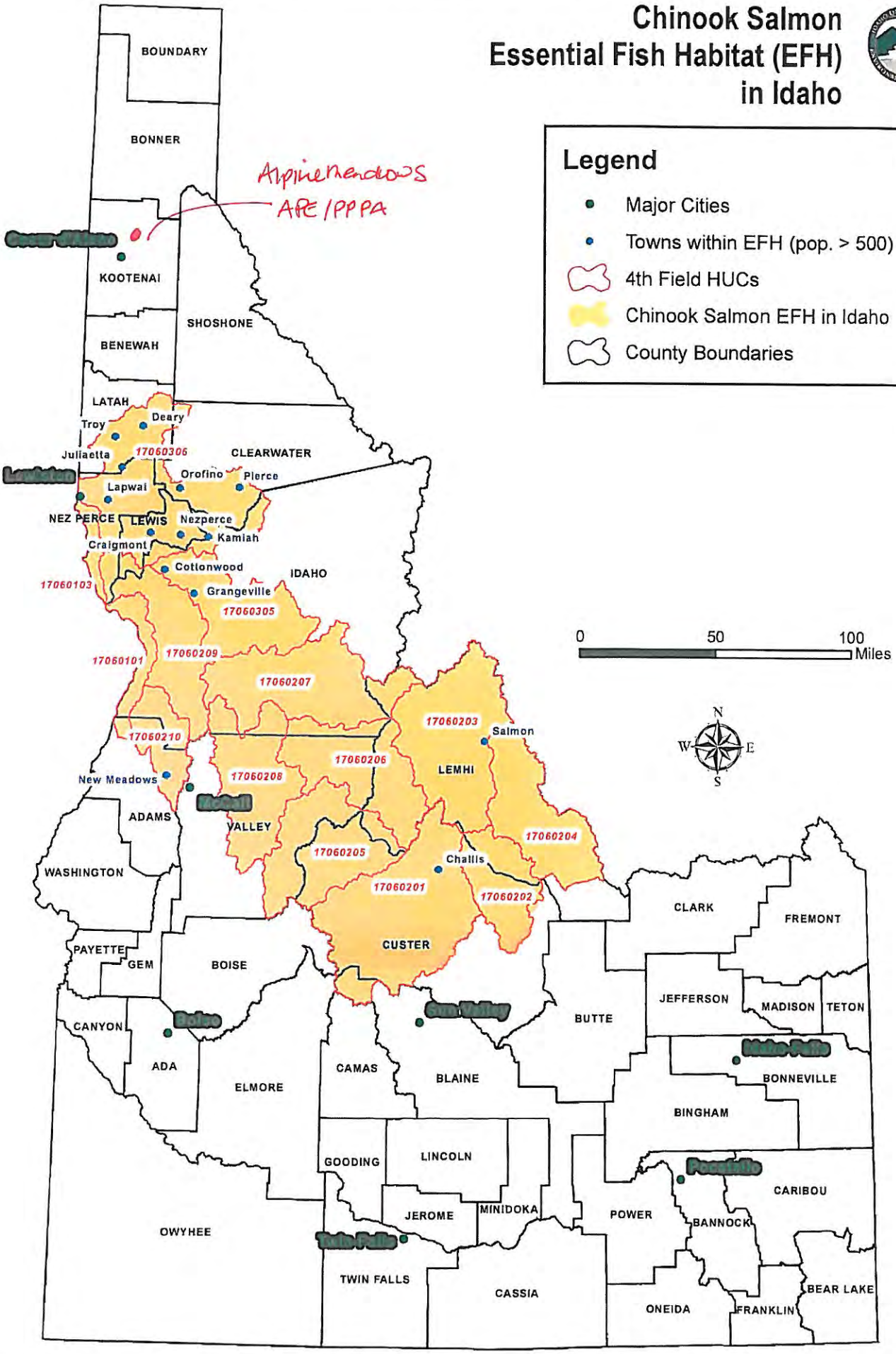
Mike May
Sr. Water Quality Analyst
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706
(208) 373-0406

Michael.May@deq.idaho.gov

--

Ben Conard, Field Supervisor
U.S. Fish and Wildlife Service
Northern Idaho Field Office
11103 E. Montgomery Drive
Spokane Valley, WA 99206
Phone: (509) 893-8030
Fax: (509) 891-6748

Chinook Salmon Essential Fish Habitat (EFH) in Idaho



Williams, Ashley

From: Holt, Bryon <bryon_holt@fws.gov>
Sent: Tuesday, February 05, 2013 8:03 AM
To: Williams, Ashley
Cc: Jay Martini
Subject: Re: Alpine Meadows Water Project

Hi Ashley,

This is to confirm that my September 28, 2012, email response remains accurate.

Thanks,

On Mon, Feb 4, 2013 at 2:17 PM, Williams, Ashley <awilliams@welchcomer.com> wrote:

Bryon,

I am in the process of revising the EID for Alpine Meadows (DEQ had some comments that we need to address). Since it has been more than 90 days since I consulted with you, DEQ is requesting that I confirm that your consultation response (below) is still applicable.

Please let me know if you have any questions or concerns.

Thanks!

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From: Bryon_Holt@fws.gov [mailto:Bryon_Holt@fws.gov]
Sent: Friday, September 28, 2012 9:57 AM
To: Williams, Ashley
Subject: Re: Alpine Meadows Water Project

Hi Ashley,

I have reviewed your email with attached documentation requesting our review of the Alpine Meadows Water System project, located near Alpine Lake in Kootenai County, Idaho. Project implementation will involve improvements to Alpine Meadows Water and Sewer District as outlined in the documents attached to your email. Because of the scope and location of the project, no Federally listed, proposed, or candidate species are likely to occur in the vicinity of this project.

This response fulfills the requirements of U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act of 1973, as amended (Act). Should the project plans change, or if it is delayed more than 90 days, you should verify the current accuracy of this response with the Service.

Sincerely,

****
Bryon Holt
U.S. Fish and Wildlife Service
Northern Idaho Field Office, Spokane, WA
Telephone: (509) 893-8014
Fax: (509) 891-6748
email: bryon_holt@fws.gov
****

"Williams, Ashley" <awilliams@welchcomer.com>

"Williams, Ashley"
<awilliams@welchcomer.com>

09/28/2012 08:41 AM

"bryon_holt@fws.gov" <bryon_holt@fws.gov>

To

cc

Alpine Meadows Water Project

Subject

Bryon,

I've attached the information we sent out to you about a month ago (it's addressed to DEQ – but the same letter was sent to you). Additionally, we issued a few clarifications after we sent this email that might help with your review.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

Clarification: The District would like to add an improvement to the proposed project: install

generator at well site. Please refer to the map sent previously for location of the well site.

Let me know if you have any questions or need any more information from me. We're hoping to get this wrapped up soon, but I also know that you are quite busy. Please let me know if I can help in any way.

Thanks!

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[attachment "S45C-212091007100.pdf" deleted by Bryon Holt/UCRB/R1/FWS/DOI]

--

****

Bryon Holt
U.S. Fish and Wildlife Service
Northern Idaho Field Office, Spokane, WA
Telephone: (509) 893-8014
Fax: (509) 891-6748
email: bryon_holt@fws.gov

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To"bryon_holt@fws.gov" <bryon_holt@fws.gov>

cc

SubjectAlpine Meadows Water Project

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Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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[attachment "S45C-212091007100.pdf" deleted by Bryon Holt/UCRB/R1/FWS/DOI]

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway, Coeur d'Alene, ID 83814 (208) 769-1422

C. L. "Butch" Otter, Governor
Curt A. Fransen, Director

September 26, 2012

Ashley Williams, EIT
Welch Comer Engineers
350 E Kathleen Ave
Coeur d'Alene, ID 83815
awilliams@welchcomer.com

Subject: **Alpine Meadows W&S District, Water System Improvement Projects**, Idaho DEQ Comments on Environmental Impacts

Dear Ashley:

In your letter dated August 23, 2012, you requested comments from the Idaho Department of Environmental Quality (DEQ) on the environmental impacts from the proposed drinking water system improvements listed in the letter. The proposed projects are needed to improve the existing water system. The proposed projects are the following:

1. Construct a second well;
2. Install up to 262 gpm of additional booster pump capacity;
3. Install a standby power generator at the reservoir site for the booster pumps and at the well site for the well pumps; and,
4. Replace between 3,400 feet to 7,800 feet of existing water mains.

DEQ is supportive of these projects which will improve public health protection for the water users. The following are the DEQ comments on the proposed drinking water system improvements and the potential environmental impacts from the proposed projects related to surface water quality/storm water control and air quality issues:

Drinking Water
DEQ has received the report titled "Draft Water Facility Plan for Alpine Meadows Water System, May 2012" prepared by Ashley Williams, E.I.T. of Welch Comer Engineers. This report provides the basis for the proposed improvement projects listed above. DEQ has not yet provided comments on this report. The facility plan, Environmental Information Document and plans and specifications will need to be approved by DEQ prior to starting construction on any of these improvements. In addition, a well site approval by DEQ will be required prior to completing the facility plan.

Surface Water Quality and Storm Water Control
Storm water controls will need to be developed that adequately protect surface waters and ground water from being impacted during and after construction. The local stormwater control authority should be contacted for details on the appropriate collection/treatment/disposal requirements. Control of sedimentation and erosion during construction activities must be achieved by the use of acceptable best management practices (BMPs) and is considered the responsibility of the owner/developer/contractor for the project. The project may require compliance with the Construction General Permit, a program

administered by the U.S. Environmental Protection Agency. This requirement is designed to prevent pollution of waters of the U.S. during construction projects. More information on this requirement can be found at: http://yosemite.epa.gov/R10/WATER.NSF/NPDES+Permits/Region+10+CGP+resources/

Air Quality

Kootenai County is classified as "Attainment" or "Unclassified" for all Criteria Pollutants; however, it is an area of concern for particulate matter and currently includes the "Interim Air Quality Plan" for managing particulate matter emissions in the county. Potential air quality impacts may arise with land clearing, demolition, construction and the subsequent operational phases of the project.

The project plans must incorporate reasonable controls on fugitive dust sources during all phases of the project. All reasonable precautions shall be taken to prevent particulate matter (dust) from becoming airborne, as required in IDAPA 58.01.01.651. A project specific dust control plan that incorporates adequate levels of control measures is encouraged.

The project plan should describe the proper disposal of demolition and construction debris. Open burning of demolition or construction debris is not an allowable form of open burning as defined by IDAPA 58.01.01.600. Demolition and construction debris must be treated in accordance with solid waste regulations.

Depending on the facility's standby (emergency) power installations, the operation is likely exempted from permitting requirements and limited per IDAPA 58.01.01.222.02.**d.** "*Stationary internal combustion engines used exclusively for emergency purposes which are operated less than five hundred (500) hours per year and are fueled by natural gas, propane gas, liquefied petroleum gas, distillate fuel oils, residual fuel oils, and diesel fuel; waste oil, gasoline, or refined gasoline shall not be used*". Additionally, proposed EPA MACT standards may apply to your standby generator. The web-based tool at: http://www.epa.gov/ttn/atw/rice/output/quiz.html may be able to assist you in determining applicable federal requirements.

If you have any questions about air quality issues, please call Mark Boyle at 769-1422 or email him at mark.boyle@deq.idaho.gov. Thank you for the opportunity to provide input on these projects.

Sincerely,

John Tindall

John C. Tindall, P.E.
John.tindall@deq.idaho.gov

File: Alpine Meadows EID TRIM
c: Katy Baker-Casile, P.E., DEQ, Coeur d'Alene katy.baker-casile@deq.idaho.gov
Ester Ceja, DEQ State Office, Boise ester.ceja@deq.idaho.gov

Williams, Ashley

From: Cyndi Grafe <Grafe.Cyndi@epamail.epa.gov>
Sent: Wednesday, October 03, 2012 1:53 PM
To: Williams, Ashley
Cc: werntz.james@epa.gov
Subject: Re: Alpine Meadows Water Project EID Agency Consultation

Dear Ms. Williams,

Thank you for the opportunity to review the Alpine Meadows Water Project . After checking with my colleagues, the USEPA R10 Idaho Office does not have any comments regarding the proposed project.

Best regards,

Cyndi Grafe
U.S. EPA, Idaho Office
950 W. Bannock Street
Boise, ID 83702
phone: (208) 378-5771, fax: (208) 378-5744

----- Forwarded by James Werntz/R10/USEPA/US on 10/02/2012 08:50 AM -----

"Williams, Ashley" ---09/21/2012 04:23:45 PM---Dear Agency Contacts, We are writing to remind you that the 30 day period for agency consultation is

From: "Williams, Ashley" <awilliams@welchcomer.com>
To: "Katy.Baker-Casile@deq.idaho.gov" <Katy.Baker-Casile@deq.idaho.gov>, James Werntz/R10/USEPA/US@EPA, Susan Eastman/R10/USEPA/US@EPA, "mary.mcgown@idwr.idaho.gov" <mary.mcgown@idwr.idaho.gov>, "rjansson@idl.idaho.gov" <rjansson@idl.idaho.gov>, "michael.lucid@idfg.idaho.gov" <michael.lucid@idfg.idaho.gov>, "allen.beardslee@idwr.idaho.gov" <allen.beardslee@idwr.idaho.gov>, Michael Lidgard/R10/USEPA/US@EPA, "Bryon_Holt@fws.gov" <Bryon_Holt@fws.gov>, "dennis.porter@commerce.idaho.gov" <dennis.porter@commerce.idaho.gov>
Date: 09/21/2012 04:23 PM
Subject: Alpine Meadows Water Project EID Agency Consultation

---

Dear Agency Contacts,

We are writing to remind you that the 30 day period for agency consultation is ending on September 23rd (Sunday) for the Alpine Meadows water project. I have not heard from you yet and wanted to make sure you didn't have any questions or need any further information from me.

Please provide any comments (or "no comment") to us as soon as possible so that we can proceed with the Environmental Information Document development.

Feel free to call or email if you have any questions or comments.

Thanks,

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From: Williams, Ashley
Sent: Thursday, September 13, 2012 11:12 AM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov); 'michael.lucid@idfg.idaho.gov'; 'Woodcock, Aubrey - NRCS, Coeur d Alene, ID'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov'; Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'; 'Staci Armes'; 'jseier@kcgov.us'
Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are issuing another clarification on the water system improvements for the Alpine Meadows Water District's Water System project. Again, we are in the process of preparing an EID and are conducting agency consultation. You should have received a letter in the mail describing the project and our request for comments.

Clarification: The District would like to add an improvement to the proposed project: install generator at well site. Please refer to the map sent previously for location of the well site.

I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

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From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:23 PM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
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[attachment "S45C-212091007100.pdf" deleted by Cyndi Grafe/R10/USEPA/US]

Williams, Ashley

From: Williams, Ashley
Sent: Wednesday, October 10, 2012 9:12 AM
To: Lidgard.michael@Epamail.epa.gov
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Mike,

I just wanted to check with you one last time to see if you have any comments or concerns regarding the Alpine Meadows water project. Information on the project was sent to you via mail and there were some clarifications (listed below). I would like to make sure you don't have any comments or concerns that need to be addressed.

Let me know if you have any questions or need anything further from me.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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To: Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'rjansson@idl.idaho.gov'; 'michael.lucid@idfg.idaho.gov'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov'; Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'
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Cc: Maiani, Necia M; Osterdock, Karen
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Sent: Thursday, August 30, 2012 1:23 PM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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Williams, Ashley

From: Kim Erk <toadflax_39@hotmail.com>
Sent: Monday, February 25, 2013 5:16 PM
To: Williams, Ashley; Maiani, Necia M; Mike May
Cc: Mike Waldo; John L Jones; Ed Kelly; Toni Sumerlin; Jim and Mary Ann Lindsay; Jeff Mueller
Subject: EPA approval received

Ashley and Necia,
I just got off the phone with EPA. They quote

> *"...find that the project will not have a significant adverse impact on the Spokane Valley Rathdrum Prairie Sole Source Aquifer and therefore the funding may proceed"*

unquote.

The email that they sent also confirms the same. They apologized for the delay. So we are moving along. I don't have Mike B. Army Corp of Eng email address. Can you forward this to him?

Thanks.
Kim Ann

Sent from my iPad

Williams, Ashley

From: Kim Erk <toadflax_39@hotmail.com>
Sent: Monday, February 25, 2013 11:54 AM
To: Maiani, Necia M; Williams, Ashley
Cc: John L Jones; Ed Kelly; Toni Sumerlin; Mike Waldo; Jeff Mueller; Jim and Mary Ann Lindsay
Subject: Fwd: Alpine Meadows Water Project EID Agency Consultation

Follow Up Flag: Follow up
Flag Status: Flagged

Sent from my iPad

Begin forwarded message:

From: "Jennings, Marie" <Jennings.Marie@epa.gov>
Date: February 25, 2013, 11:35:10 AM PST
To: Kim Erk <toadflax_39@hotmail.com>
Subject: FW: Alpine Meadows Water Project EID Agency Consultation

Hi Kim

Below is the approval of the project to begin. We have had staff shortages and loss of personnel; however, any long delays should be elevated up so that they can be resolved in a timely manner. I really appreciated your phone call this morning. I will be able to contact you at 5:00 pm today.

From: Eastman, Susan
Sent: Monday, February 25, 2013 11:03 AM
To: Michael.May@deq.idaho.gov
Cc: Jennings, Marie
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Thank you for submitting your project for review. We have reviewed the information provided and find that the project will not have a significant adverse impact on the Spokane Valley Rathdrum Prairie Sole Source Aquifer and therefore the funding may proceed.

EPA reviews federally financially assisted projects that are proposed in federally designated Sole Source Aquifer review areas to determine if the projects have a potential to contaminate the aquifer through a recharge zone so as to create a significant hazard to public health. Such projects are submitted to EPA by federal, state, and local governments, and by the public.

This correspondence only addresses the Sole Source Aquifer Program, any other federal environmental requirements are your responsibility to ensure compliance. Please retain this email for your records.

Thank You,

From: Michael.May@deq.idaho.gov [mailto:Michael.May@deq.idaho.gov]
Sent: Thursday, February 21, 2013 12:27 PM
To: Eastman, Susan; Eastman, Susan
Cc: awilliams@welchcomer.com; Ester.Ceja@deq.idaho.gov
Subject: FW: Alpine Meadows Water Project EID Agency Consultation

I am writing to follow up on my voice messages from earlier today and from last week. Alpine Meadows Water & Sewer District near Hayden, Idaho is planning an upgrade to its potable water system. The existing well and proposed new well lie within the bounds of the Spokane-Rathdrum Prairie Sole Source Aquifer (SSA), and the service area itself lies within the SSA source area. Their engineer, Ashley Williams of Welch-Comer, has submitted a Sole Source Aquifer worksheet and request for SSA consultation on multiple occasions since August 23, 2012.

We cannot proceed to awarding federal funding for this project through the Drinking Water State Revolving Fund without a project review regarding the Spokane-Rathdrum Prairie SSA. Please review the attached materials and indicate whether there are any concerns or mitigation measures that are appropriate. If you have any questions, feel free to contact Ashley Williams at Welch-Comer Engineers or myself.

Thank you for your attention to this matter.

Mike May
Sr. Water Quality Analyst
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706
(208) 373-0406
Michael.May@deq.idaho.gov

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Tuesday, February 12, 2013 14:52
To: Mike May
Cc: Maiani, Necia M
Subject: FW: Alpine Meadows Water Project EID Agency Consultation

Mike,

Below is the consultation request I sent into Susan Eastman last week. How long shall we wait for a response? At what point does DEQ potentially need to step in?

Let me know what your thoughts are concerning this issue.

Thanks!

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From: Williams, Ashley
Sent: Monday, February 04, 2013 2:42 PM
To: Eastman.Susan@epamail.epa.gov
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Susan,

I am in the process of revising the EID for this project, and as part of the comments issued by DEQ, they requested that I follow up with you one more time for consultation since the federal nexus comes from the state revolving fund (which is funded through EPA).

I have attached the information that was sent to you (the agency letter is addressed to Katy Baker-Casile, but an identical letter was sent to you). Please review this information and let me know if you have any comments or questions.

Thanks!

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From: Williams, Ashley
Sent: Wednesday, October 10, 2012 8:37 AM
To: Eastman.Susan@epamail.epa.gov
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Susan –

I just wanted to check with you one last time to see if you have any comments or concerns regarding the Alpine Meadows water project. Information on the project was sent to you via mail (including the sole source aquifer checklist) and there were some clarifications (listed below). I'm checking with you specifically because the project will be drilling a secondary well on the Spokane Valley-Rathdrum Prairie Aquifer (for back-up purposes), and I would like to make sure you don't have any comments or concerns that need to be addressed.

Let me know if you have any questions or need anything further from me.

Thanks!

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Subject: Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are writing to remind you that the 30 day period for agency consultation is ending on September 23rd (Sunday) for the Alpine Meadows water project. I have not heard from you yet and wanted to make sure you didn't have any questions or need any further information from me.

Please provide any comments (or "no comment") to us as soon as possible so that we can proceed with the Environmental Information Document development.

Feel free to call or email if you have any questions or comments.

Thanks,

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Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

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Clarification: The District would like to add an improvement to the proposed project: install generator at well site. Please refer to the map sent previously for location of the well site.

I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

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Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

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********************** ATTACHMENT NOT DELIVERED  ******************

This Email message contained an attachment named
  image001.jpg
which may be a computer program. This attached computer program could
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contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

Williams, Ashley

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To: Eastman.Susan@epamail.epa.gov
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Let me know if you have any questions or need anything further from me.

Thanks!

Ashley Williams, E.I.T.
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208–664–9382
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Cc: Maiani, Necia M; Osterdock, Karen
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Cc: Maiani, Necia M; Osterdock, Karen
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If you have any questions or need any further information, please feel free to contact me.

Thank you,

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service
7830 Meadow lark Way, Suite C-1
Coeur d'Alene, Id 83815
Phone: 208-762-4939
Fax: 208-762-9859

September 13, 2012

Ashley M Williams, E.I.T.
Welch-Comer Engineers
350 E Kathleen Ave
Coeur d'Alene, ID 83815

Dear Ashley,

I have recently reviewed the Alpine Meadows Water and Sewer District Improvement Project and have found no concerns with the project. Most mainlines are being replaced in existing areas, with minimal disturbance existing mainlines to move them into right-of-ways. Please keep us informed of any updates on the project.

Sincerely,

Aubrey Woodcock
DISTRICT CONSERVATIONIST

Williams, Ashley

From: Williams, Ashley
Sent: Friday, September 28, 2012 10:56 AM
To: Staci Armes
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Staci,

I just wanted to confirm what we discussed in our telephone conversation on Sept. 18th.

We discussed the existing tank site which was originally permitted for 80,000 gallons but is now used for 100,000 gallons (which is existing, not part of the proposed new project). You were going to check into this a little further and see if there was anything the District needed to do regarding this issue. Did you find anything out regarding the site?

Also, we discussed the FCR permit (flood review permit) that would be required for the distribution line that would be replaced in the floodplain area for Alpine Lake. This involves an application and site plan that would need to be filed prior to construction.

Additionally, we discussed that the new well house would require a building permit from Kootenai County. Was there any follow up on this issue?

Let me know if you have any questions or concerns.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
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From: Staci Armes [mailto:sarmes@kcgov.us]
Sent: Monday, September 10, 2012 8:54 AM
To: Williams, Ashley
Cc: Justin Seier
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Good Morning Ashley!

I will take a look and get back to you as soon as I can.

Just so you know, Justin Seier is now the Floodplain Administrator. He can be reached at jseier@kcgov.us .

Thanks,
Staci Armes

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Monday, September 10, 2012 8:22 AM
To: Staci Armes
Cc: McGown, Mary
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Staci,

We are working with the Alpine Meadows Water and Sewer District to develop an Environmental Information Document relating to their proposed water system improvements. I have sent a letter and map of the improvements to several agencies, including Mary McGown (below). Her response is below, and she suggested that I contact you to determine if a floodplain development permit is required or if you think we'll need anything else. I am attaching the information that was sent to the agencies (and Mary McGown).

Please let me know if you have any questions or need any further information from me. Feel free to call or email.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
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From: McGown, Mary [mailto:Mary.McGown@idwr.idaho.gov]
Sent: Friday, September 07, 2012 1:34 PM
To: Williams, Ashley
Cc: Staci Armes
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Ashley,

I have reviewed the information you provided about the Alpine Meadows Water Project. It appears that one line replacement that feeds fire hydrants, may cross the flood hazard zone associated with Alpine Lake at its very northern tip. If excavation will occur in the A zone, it will need to be permitted by Kootenai County with a floodplain development permit. Because the flood hazard boundary is close to the one project component on the map I reviewed, I suggest you seek a final determination from the Kootenai County floodplain administrator as to whether a floodplain development will be required. Contact Staci Armes, sarmes@kcgov.us or 446-1078.

Mary G. McGown, Ph.D., CFM
State Floodplain Coordinator
Idaho Department of Water Resources
322 E. Front Street
P.O. Box 83720
Boise, ID 83720-0098
(208) 287-4928
(208) 830-4174 mobile
(208) 287-6700 fax

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Thursday, August 30, 2012 2:23 PM
To: mary.e.reinhart@usace.army.mil; Katy.Baker-Casile@deq.idaho.gov; werntz.james@epa.gov; ligard.michael@epa.gov; Eastman.Susan@epamail.epa.gov; McGown, Mary; allen.bearslee@idwr.idaho.gov; gary.bahr@agri.idaho.gov; rjansson@idl.idaho.gov; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 3/28/13 TIME: ~3:00pm

PROJECT NAME: Alpine Meadows Water System EID

PROJECT NUMBER: 410108

WELCH-COMER REPRESENTATIVE: Ashley Williams

WHO INITIATED COMMUNICATION: Ashley Williams

NAME: Greg Taylor (IDWR) PHONE NUMBER: 208-762-2800

ADDRESS: 7600 Mineral Drive, Ste 100 Coeur d'Alene, ID 83815

SUBJECT: wetland impacts

I told Greg briefly about the wetland determination made by the Corps and the project.

He asked some about water rights (which I followed up with on email). He said he was not concerned about the wetlands

WELCH-COMER FOLLOW-UP REQUIRED? ☒ YES ☐ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☒ YES ☐ NO

NOTES:

emailed on 3/28/13 at 3:28pm.

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

Williams, Ashley

From: Williams, Ashley
Sent: Thursday, March 28, 2013 3:28 PM
To: 'greg.taylor@idwr.idaho.gov'
Cc: Maiani, Necia M
Subject: Water Project and Wetland Impacts
Attachments: S45C-213032814160.pdf; S45C-213032814240.pdf

Greg,

Thanks for talking with me today about Alpine Lake Water and Sewer District water project. I have attached a map of the existing system and service area and then a map of the wetlands (with the proposed improvements shown on the map).

The District is completing an environmental document and as part of that we have consulted with the Corps. They have determined that the wetland is not jurisdictional, and I wanted to follow up with you to see if IDWR has jurisdiction and/or if you have any comments related to the wetlands.

Separately, we discussed the District's water rights. The District has a water right for their existing well (which is the only source of water for the system). The system surrounds Alpine Lake, which is not used by the District in any way as a source of water.

Please let me know if you have any questions or concerns.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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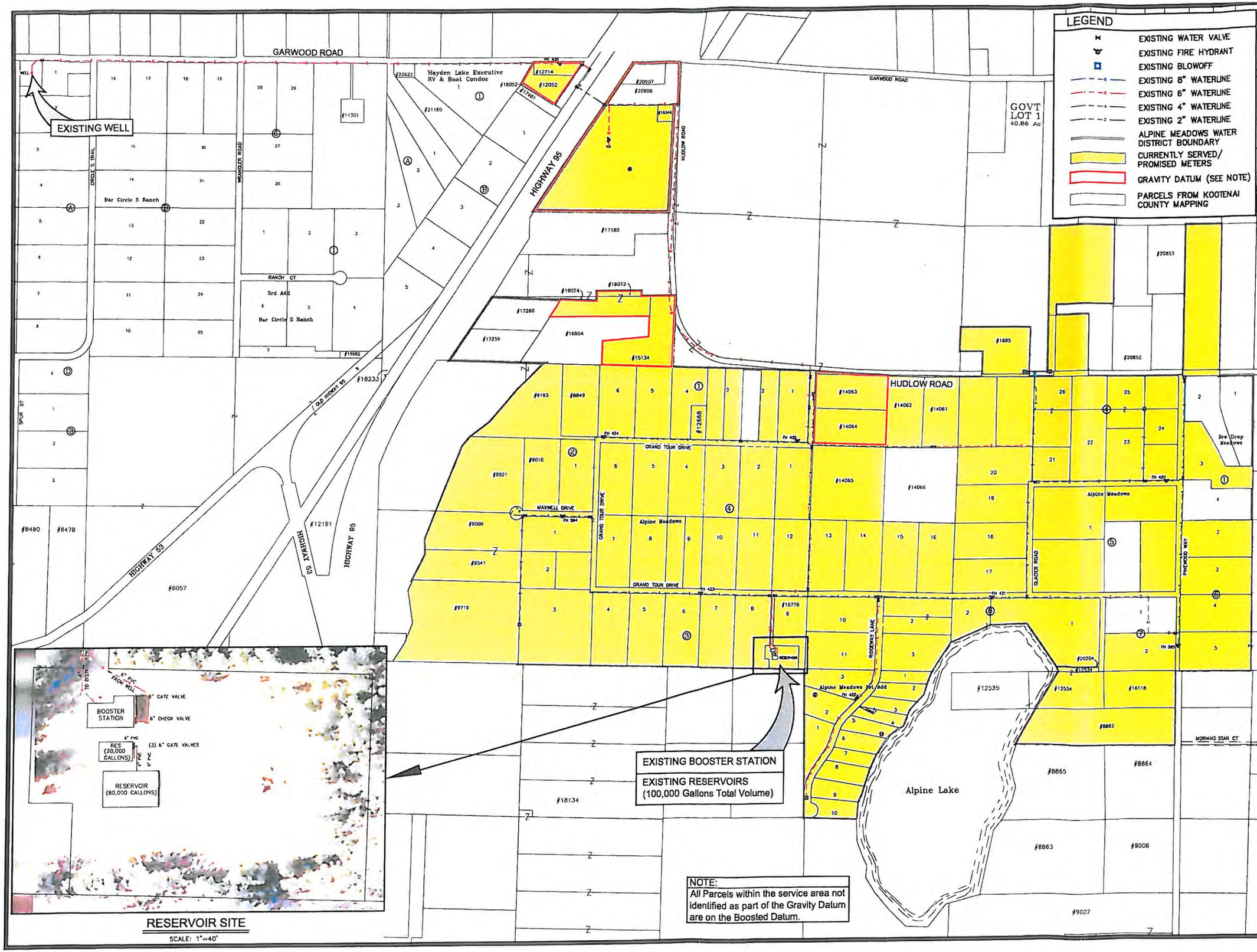

NOTE:
All Parcels within the service area not identified as part of the Gravity Datum are on the Boosted Datum.

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Coeur d'Alene, ID 83815
208-664-9382
(toll free) 877-815-5672
(fax) 208-664-5946

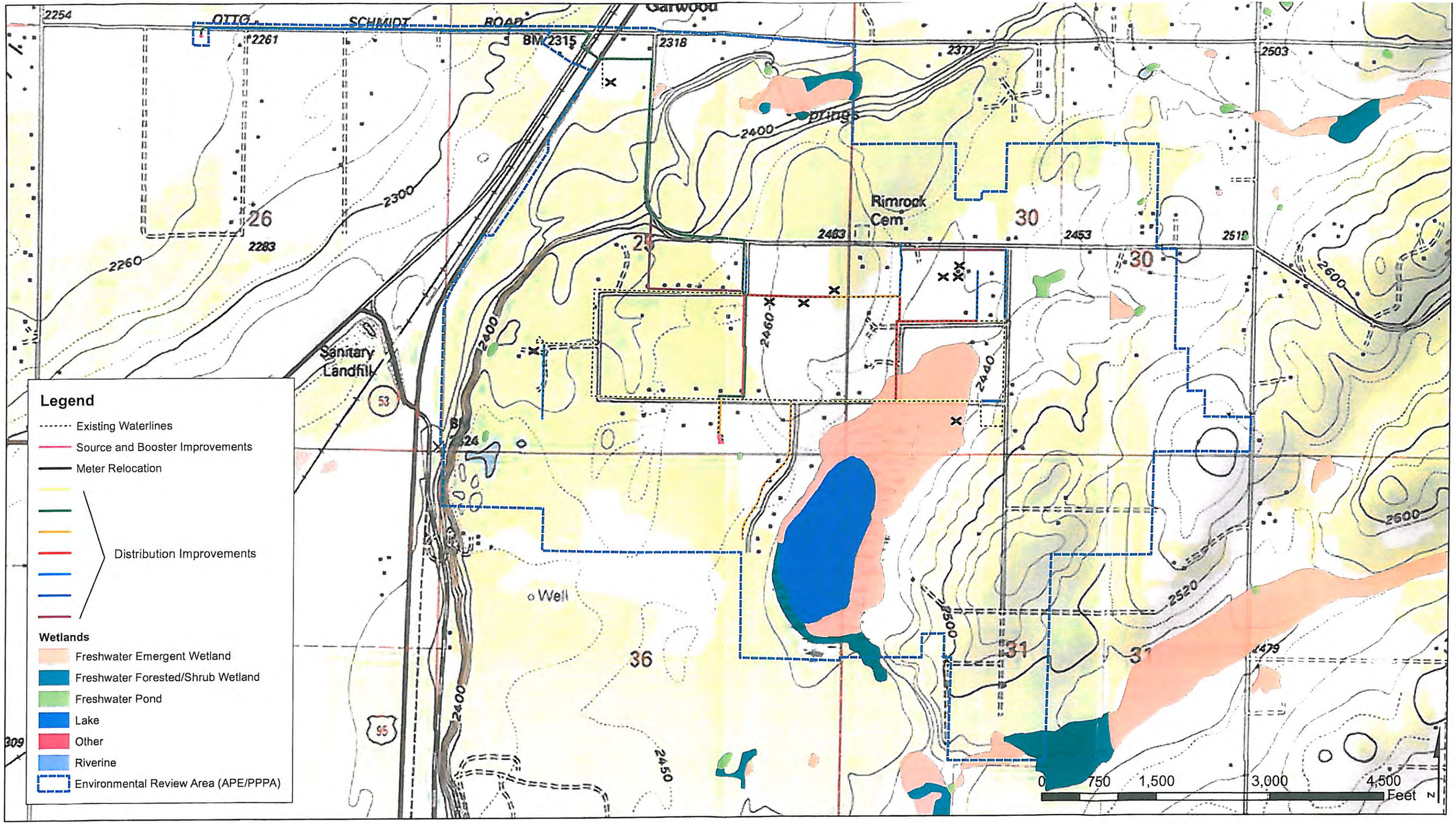
NO	DATE	REVISION DESCRIPTION	BY

ALPINE MEADOWS WATER AND SEWER DISTRICT
EXISTING SERVICE AREA MAP

FIGURE 2.1

PROJECT NO.:	41068
DESIGNED BY:	K.J.O.
DRAWN BY:	J.A.L.
CHECKED BY:	
DWG NAME:	ACAD-41068PL02.DWG
DATE:	05-11-12
SHEET NO:	

\\Nas-01\cad\Civil3D Projects\41068\Production Drawings\ACAD-41068PL02.dwg, 5/14/2012 9:14:56 AM, julie, 1:2



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83815
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(toll free)
877-815-5762
(fax) 208-664-5946

Alpine Meadows Water and Sewer District

Wetlands

Sources:
Kootenai County GIS Department
US Fish and Wildlife National Wetland Inventory
USA Topo Maps

PROJECT NO.....41068
DRAWN BY.....AW
FILENAME.....Wetland_11x17L
DATE.....8/30/12

Williams, Ashley

From: Beardslee, Allen <Allen.Beardslee@idwr.idaho.gov>
Sent: Thursday, October 11, 2012 9:14 AM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Ashley,

Alpine Meadows will be required to obtain a approved Well Drilling Permit from IDWR prior to the construction of their back up well. Please include the approval letter from DEQ for site separation & engineered plans and specifications for well design.

If this back up well will be used in conjunction with existing wells, Alpine Meadows should contact our staff at this office to file for a Transfer to add a point of diversion to their water rights. However, If the use of water from this well will be covered under an existing water right when it is in operation, no additional filing will be required.

If you have any further questions, please feel free to contact me at this office.

Al Beardslee
IDWR
Northern Regional Office
(208) 762-2804

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Wednesday, October 10, 2012 8:38 AM
To: Beardslee, Allen
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Allen,

I just wanted to check with you one last time to see if you have any comments or concerns regarding the Alpine Meadows water project. Information on the project was sent to you via mail and there were some clarifications (listed below). I'm checking with you specifically because the project will be drilling a secondary well on the Spokane Valley-Rathdrum Prairie Aquifer (for back-up purposes), and I would like to make sure you don't have any comments or concerns that need to be addressed.

Let me know if you have any questions or need anything further from me.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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From: Williams, Ashley
Sent: Friday, September 21, 2012 3:23 PM
To: Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'rjansson@idl.idaho.gov'; 'michael.lucid@idfg.idaho.gov'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov'; Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'
Subject: Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are writing to remind you that the 30 day period for agency consultation is ending on September 23rd (Sunday) for the Alpine Meadows water project. I have not heard from you yet and wanted to make sure you didn't have any questions or need any further information from me.

Please provide any comments (or "no comment") to us as soon as possible so that we can proceed with the Environmental Information Document development.

Feel free to call or email if you have any questions or comments.

Thanks,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
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From: Williams, Ashley
Sent: Thursday, September 13, 2012 11:12 AM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov); 'michael.lucid@idfg.idaho.gov'; 'Woodcock, Aubrey - NRCS, Coeur d Alene, ID'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov'; Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'; 'Staci Armes'; 'jseier@kcgov.us'
Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are issuing another clarification on the water system improvements for the Alpine Meadows Water District's Water System project. Again, we are in the process of preparing an EID and are

conducting agency consultation. You should have received a letter in the mail describing the project and our request for comments.

Clarification: The District would like to add an improvement to the proposed project: install generator at well site. Please refer to the map sent previously for location of the well site.

I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
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Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

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Thank you,

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Williams, Ashley

From: Williams, Ashley
Sent: Wednesday, October 10, 2012 9:08 AM
To: mary.terra-berns@idfg.idaho.gov
Subject: Alpine Meadows Water Project
Attachments: RE: Alpine Meadows Water Project EID Agency Consultation; S45C-212091007100.pdf

Mary,

Mike Lucid forwarded me onto you for comments on the Alpine Meadows Water project. I have attached the email chain with information on the project (including clarifications). I've also attached the information you should have received in the mail (it's addressed to DEQ, but an identical letter was sent to you).

Please let me know if you have any questions or need any further information from me. We are hoping to wrap up the document soon and so please let me know if I can help in any way.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
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Williams, Ashley

From: Lucid,Michael <michael.lucid@idfg.idaho.gov>
Sent: Wednesday, October 10, 2012 9:04 AM
To: Williams, Ashley
Cc: Terra Berns,Mary
Subject: RE: Alpine Meadows Water Project EID Agency Consultation
Attachments: image001.jpg

Hi Ashley,

Mary Terra-Berns is the contact for comments.

Thanks!
mkl

From: Williams, Ashley [awilliams@welchcomer.com]
Sent: Wednesday, October 10, 2012 8:40 AM
To: Lucid,Michael
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Mike,

I just wanted to check with you one last time to see if you have any comments or concerns regarding the Alpine Meadows water project. Information on the project was sent to you via mail and there were some clarifications (listed below). I'm checking with you specifically because we typically receive comments from IDFG, so I would like to make sure you don't have any comments or concerns that need to be addressed.

Let me know if you have any questions or need anything further from me.

Thanks!

[AWilliams]
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Thanks,

[Description: AWilliams]
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Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

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I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

[Description: AWilliams]
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To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov<mailto:Katy.Baker-Casile@deq.idaho.gov>; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov<mailto:Eastman.Susan@epamail.epa.gov>; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov<mailto:howard.lunderstadt@id.usda.gov>; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov<mailto:Suzi.Pengilly@ishs.idaho.gov>)
Cc: Maiani, Necia M; Osterdock, Karen
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If you have any questions or need any further information, please feel free to contact me.

Thank you,

[Description: AWilliams]

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STATE OF IDAHO

RECEIVED SEP 17 2012 By

C. L. "BUTCH" OTTER
GOVERNOR
CELIA R. GOULD
DIRECTOR

September 13, 2012

Ashley Williams
Welch – Comer Engineers
350 E. Kathleen Ave.
Coeur d Alene, ID 83815

Dear Ms. Williams:

Thank you for inquiring with the Idaho State Department of Agriculture (ISDA) with regards to your work with the Alpine Meadows Water and Sewer District. The public works project being proposed will be an important project for the citizens of that area.

We have reviewed the planning documents provided to us. At this time we do not have comments or questions related to this project.

Thank you for contacting our agency. Feel free to contact us in the future (main number - 208-332-8500, my number - 208-332-8597).

Sincerely,

Gary Bahr

Gary Bahr

Water Quality Programs

PC: Water Program File

WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 3/28/13 TIME: ~2:00pm

PROJECT NAME: Alpine Meadows Water System EID

PROJECT NUMBER: 410108

WELCH-COMER REPRESENTATIVE: Ashley Williams

WHO INITIATED COMMUNICATION: Ashley Williams

NAME: Jim Brady (IDL) PHONE NUMBER: 208-769-1577

ADDRESS: 3706 Industrial Ave. South Coeur d'Alene, ID 83815

SUBJECT: Wetland Impacts

I told Jim briefly about the wetland determination made by the Corps and the project.

He said the IDL does not have ownership or jurisdiction there and did not comment further.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

Williams, Ashley

From: Roger Jansson <RJansson@idl.idaho.gov>
Sent: Monday, September 24, 2012 2:14 PM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water Project EID Agency Consultation

Dear Ms. Williams,

The Idaho Department of Lands has no comment on this project.

Roger

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, September 21, 2012 3:23 PM
To: Katy.Baker-Casile@deq.idaho.gov; werntz.james@epa.gov; Eastman.Susan@epamail.epa.gov; mary.mcgown@idwr.idaho.gov; Roger Jansson; michael.lucid@idfg.idaho.gov; allen.beardslee@idwr.idaho.gov; Lidgard.michael@Epamail.epa.gov; Bryon_Holt@fws.gov; dennis.porter@commerce.idaho.gov
Subject: Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are writing to remind you that the 30 day period for agency consultation is ending on September 23rd (Sunday) for the Alpine Meadows water project. I have not heard from you yet and wanted to make sure you didn't have any questions or need any further information from me.

Please provide any comments (or "no comment") to us as soon as possible so that we can proceed with the Environmental Information Document development.

Feel free to call or email if you have any questions or comments.

Thanks,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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From: Williams, Ashley
Sent: Thursday, September 13, 2012 11:12 AM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov); 'michael.lucid@idfg.idaho.gov'; 'Woodcock, Aubrey - NRCS, Coeur d Alene, ID'; 'allen.beardslee@idwr.idaho.gov'; 'Lidgard.michael@Epamail.epa.gov';

Bryon_Holt@fws.gov; 'dennis.porter@commerce.idaho.gov'; 'Staci Armes'; 'jseier@kcgov.us'
Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts,

We are issuing another clarification on the water system improvements for the Alpine Meadows Water District's Water System project. Again, we are in the process of preparing an EID and are conducting agency consultation. You should have received a letter in the mail describing the project and our request for comments.

Clarification: The District would like to add an improvement to the proposed project: install generator at well site. Please refer to the map sent previously for location of the well site.

I realize that some of you have already responded to our agency request. If this clarification requires a change in your consultation response, please let me know. Otherwise, I will assume that your response has not changed.

If you have any questions or need any further information, feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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From: Williams, Ashley
Sent: Thursday, August 30, 2012 1:23 PM
To: 'mary.e.reinhart@usace.army.mil'; Katy.Baker-Casile@deq.idaho.gov; 'werntz.james@epa.gov'; 'ligard.michael@epa.gov'; Eastman.Susan@epamail.epa.gov; 'mary.mcgown@idwr.idaho.gov'; 'allen.bearslee@idwr.idaho.gov'; 'gary.bahr@agri.idaho.gov'; 'rjansson@idl.idaho.gov'; howard.lunderstadt@id.usda.gov; Suzi Pengilly (Suzi.Pengilly@ishs.idaho.gov)
Cc: Maiani, Necia M; Osterdock, Karen
Subject: Clarification for Alpine Meadows Water Project EID Agency Consultation

Dear Agency Contacts:

We are issuing a clarification on the distribution improvements for the Alpine Meadows Water District's Water System project. We are in the process of preparing an Environmental Information Document and are conducting agency consultation; you should have received a letter in the mail describing the project and our request for comments.

Clarification: Replacement of existing lines will occur within previously-disturbed areas. Future waterlines (re-alignment of existing lines or new waterlines) may occur within areas that have not been previously-disturbed. Please refer to the map sent previously for further information.

If you have any questions or need any further information, please feel free to contact me.

Thank you,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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Williams, Ashley

From: Lunderstadt, Howard - RD, Coeur d' Alene, ID <Howard.Lunderstadt@id.usda.gov>
Sent: Monday, August 27, 2012 2:58 PM
To: Williams, Ashley
Subject: Alpine Meadows

Ashley,

We have no comments on the Alpine Meadows Water system environmental information document.

Thanks

Howard R. Lunderstadt | Area Specialist (Community Programs) Rural Development U.S. Department of Agriculture
7830 Meadowlark Way, Suite C3 | Coeur d'Alene, ID 83815
(208) 762-4939 ext 126 | Fax# (208) 762-9799 www.rurdev.usda.gov

"Committed to the future of rural communities"
"Estamos dedicados al futuro de las comunidades rurales"

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WELCH, COMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS

PHONE LOG

DATE: 9/28/12 TIME: 12:45 pm

PROJECT NAME: Alpine Meadows Water ETD

PROJECT NUMBER: H1068

WELCH-COMER REPRESENTATIVE: Ashley Williams

WHO INITIATED COMMUNICATION: Ashley Williams

NAME: Tony Tenne PHONE NUMBER: 208-334-2470

ADDRESS: 700 West State St. Boise, ID 83720

SUBJECT: Agency consultation for ETD

Dennis Porter forwarded my message onto him. They have no comments. He was on a tour of the system last weekend it seemed to be a good project.

WELCH-COMER FOLLOW-UP REQUIRED? ☐ YES ☒ NO

FOLLOW-UP COMMUNICATION REQUIRED? ☐ YES ☒ NO

NOTES:

350 E. Kathleen Avenue, Coeur d'Alene, ID 83815 · (208) 664-9382 · Fax (208) 664-5946

www.history.idaho.gov

Idaho • State Historical Society

C.L. "Butch" Otter
Governor of Idaho

Janet Gallimore
Executive Director

Administration
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2682
Fax: (208) 334-2774

Membership and Fund Development
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 514-2310
Fax: (208) 334-2774

Historical Museum and Education Programs
610 North Julia Davis Drive
Boise, Idaho 83702-7695
Office: (208) 334-2120
Fax: (208) 334-4059

State Historic Preservation Office and Historic Sites
Archeological Survey of Idaho
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3861
Fax: (208) 334-2775

Statewide Sites:
• Franklin Historic Site
• Pierce Courthouse
• Rock Creek Station and
• Stricker Homesite

Old Penitentiary
2445 Old Penitentiary Road
Boise, Idaho 83712-8254
Office: (208) 334-2844
Fax: (208) 334-3225

Idaho State Archives
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2620
Fax: (208) 334-2626

North Idaho Office
112 West 4th Street, Suite #7
Moscow, Idaho 83843
Office: (208) 882-1540
Fax: (208) 882-1763

DATE: August 30, 2012
TO: Ashley Williams, Welch-Comer
FEDERAL AGENCY: EPA
PROJECT NAME: Alpine Meadows Water and Sewer District Improvements

Section 106 Evaluation

The field work and documentation presented in this report meet the Secretary of the Interior's Standards.

X No additional investigations are recommended. Project can proceed as planned.

Additional information is required to complete the project review. (See comments below.)

Additional investigations are recommended. (See comments below).

Identification of Historic Properties (36 CFR 900.4):

X No historic properties were identified within the project area.

Property is not eligible. Reason:

Property is eligible for listing in the National Register of Historic Places.

Criterion: _ A _ B _ C _ D Context for Evaluation:

X *No historic properties* will be affected within the project area.

Assessment of Adverse Effects (36 CFR 800.5):

Project will have *no adverse effect* on historic properties.

Property will have an *adverse effect* on historic properties. Additional consultation is required.

Comments:
If archaeological remains are discovered, halt work in the vicinity of the discovery and contact your archaeological consultant immediately.

Susan Pengilly

Susan Pengilly, Deputy SHPO
State Historic Preservation Office

August 30, 2012
Date

Historical Society is an Equal Opportunity Employer.

Williams, Ashley

From: Ester.Ceja@deq.idaho.gov
Sent: Thursday, October 25, 2012 11:53 AM
To: Williams, Ashley
Subject: RE: Alpine Meadows EID

Ashley,

Please consider this a response on the CDA THPO consultation. I consulted with the CDA THPO on the Alpine Meadows project and I did not receive any comments on the project.

Thanks,
Ester

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Thursday, October 25, 2012 12:20 PM
To: Ester Ceja
Subject: Alpine Meadows EID

Ester,

While you were out for the workshop, you mentioned that the Tribe did not have any concerns for the Alpine Meadows Project. Can you confirm this through email so that I have documentation of their comments?

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

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From: Ester.Ceja@deq.idaho.gov [mailto:Ester.Ceja@deq.idaho.gov]
Sent: Wednesday, October 10, 2012 3:27 PM
To: Williams, Ashley
Subject: RE: HLRWSD EID

Ashley,

I'm swamped today, sorry I haven't gotten back to you on this I will tomorrow. You know what it's like when you've been out of the office for four days.

I followed up with the CDA tribe today and didn't hear back on Alpine Meadows.

Ester

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Wednesday, October 10, 2012 12:06 PM
To: Ester Ceja
Subject: RE: HLRWSD EID

Ester,

Just to clarify, this is for Hayden Lake Recreational Water and Sewer District. They are one of the three entities of Hayden Area Regional Sewer Board (HARSB), which I emailed you about yesterday. HARSB is made up of Kootenai County (airport), City of Hayden, and HLRWSD (around Hayden Lake). HARSB has hired JUB to do their facility plan (Paul Klatt, whom you met last year) and we are doing the EID.

HLRWSD has already had their plan approved and their comment period. They've also already had their public meeting and the Board has approved the selected alternative.

Let me know if you have any other questions.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
350 E. Kathleen Ave.
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From: Ester.Ceja@deq.idaho.gov [mailto:Ester.Ceja@deq.idaho.gov]
Sent: Wednesday, October 10, 2012 11:02 AM
To: Williams, Ashley
Subject: RE: HLRWSD EID

Ashley,

If the FPS hasn't been approved for public comment and the public participation section hasn't been completed, why is the District looking at sending agency consultation letters out before an official selection has been made?

Ester

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Wednesday, October 10, 2012 11:58 AM

To: Ester Ceja
Subject: HLRWSD EID

Ester,

Hayden Lake Recreational Water and Sewer District is getting ready to send out agency consultation for their EID. I'm attaching the maps that I will be sending out along with the letter describing the project. Could you review this quickly to make sure that there isn't anything else I should be including? I have the APE/PPPA and the improvements. I've also added the service area boundary for clarification.

Let me know if you have any questions or comments.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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Williams, Ashley

From: Ester.Ceja@deq.idaho.gov
Sent: Thursday, August 23, 2012 4:13 PM
To: Williams, Ashley
Cc: Maiani, Necia M
Subject: RE: Alpine Meadows Agency consultation

Ashley,

Thanks for the information. I've sent the information on to the CDA Tribe THPO today. I'll keep you posted.

Ester

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Wednesday, August 22, 2012 5:14 PM
To: Ester Ceja
Cc: Maiani, Necia M
Subject: Alpine Meadows Agency consultation

Ester,

Please find the attached information for the agency consultation for the Alpine Meadows Water System improvements. Please send this information onto Jill Wagner with the Coeur d'Alene Tribe. We are sending the information to the other pertinent agencies tomorrow.

Let me know if you need anything further or have any questions.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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Williams, Ashley

From: Mary Ausburn <mausburn@kcgov.us>
Sent: Tuesday, October 30, 2012 11:52 AM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water & Sewer District

Hi Ashley,

I met with Scott yesterday and discussed your project. I think we may be able to do a minor modification to the original Conditional Use Permit. I'm hoping we will be able to have a decision by the end of the week. An issue did come up during our discussion related to the reservoir. The original CUP was for an 80,000 gallon reservoir, although we noticed that the current capacity is 100,000 gallons. Do you have (or are able to obtain) information related to the 20,000 gallon increase? It does not appear the CUP was modified for that increase, so if necessary we can include it in the minor modification to "legitimize" it.

Thanks,

Mary Ausburn
Planning Manager
Kootenai County Community Development
451 Government Way
P.O. Box 9000
Coeur d' Alene, ID 83816-9000

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, October 26, 2012 2:55 PM
To: Mary Ausburn
Subject: RE: Alpine Meadows Water & Sewer District

Thanks Mary!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
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From: Mary Ausburn [mailto:mausburn@kcgov.us]
Sent: Friday, October 26, 2012 2:55 PM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water & Sewer District

Hi Ashley,

I will refresh my memory and get back to you on Monday – still have the email string. I'll go over the follow-up information you provided on 10/5/12 with my supervisor and see if he agrees that a minor modification is appropriate.

Have a great weekend.

Mary Ausburn
Planning Manager
Kootenai County Community Development
451 Government Way
P.O. Box 9000
Coeur d' Alene, ID 83816-9000

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, October 26, 2012 2:15 PM
To: Mary Ausburn
Subject: RE: Alpine Meadows Water & Sewer District

Mary –

Did this issue require any further follow-up? I can't determine from reading through the emails if we had addressed this and would wait until we had design documents prepared.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208–664–9382
208–664–5946 (fax)
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From: Mary Ausburn [mailto:mausburn@kcgov.us]
Sent: Friday, October 05, 2012 3:49 PM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water & Sewer District

You're welcome!

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, October 05, 2012 3:10 PM
To: Mary Ausburn
Subject: RE: Alpine Meadows Water & Sewer District

Mary –

That makes a lot more sense. I guess nobody really explained it to me while we were discussing this project, and I didn't really think about it either. Thank you for clarifying!

Thanks,

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
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From: Mary Ausburn [mailto:mausburn@kcgov.us]
Sent: Friday, October 05, 2012 3:09 PM
To: Williams, Ashley
Subject: RE: Alpine Meadows Water & Sewer District

Chapter 23 of the Kootenai County Code provides for minor modifications of permitted conditional use permits. The modifications may be granted by the Director if it is determined that the changes would not constitute a substantial change to the findings and conclusions in the original approval and the proposed location, size, design and operating characteristics of the proposed use and the conditions under which it will be operated or maintained will not be detrimental to the public health, safety or welfare, or materially injurious to properties or improvements in the vicinity.

According to Kootenai County records, the original Conditional Use Permit (CUP) for the reservoir was approved on June 17, 1987. The only condition placed on the approval at that time was a requirement that Kootenai County building codes and regulations of other agencies must be met.

Hope this helps. I'll follow-up with additional information as the project moves forward.

Have a great weekend!

Mary Ausburn
Planning Manager
Kootenai County Community Development
451 Government Way
P.O. Box 9000
Coeur d' Alene, ID 83816-9000

From: Williams, Ashley [mailto:awilliams@welchcomer.com]
Sent: Friday, October 05, 2012 9:25 AM
To: Mary Ausburn

Cc: Maiani, Necia M; Osterdock, Karen
Subject: RE: Alpine Meadows Water & Sewer District

Mary,

Can you clarify what the "minor modification" means or entails?

At this point in the planning phase of the project, the proposed waterline replacement/installation consists of the following (near term and future lines):

- 8-inch line: 22,800 lineal feet
- 10-inch line: 15,200 lineal feet
- 6-inch line: 4,100 lineal feet

The additional well will be used as back-up in the event of emergency or pump failure. The noise levels may increase but it is not anticipated to be significant. The standby power at the reservoir will be stationary. The storage facility has sufficient capacity to provide current and projected demands. Approval for work within the right-of-way will be obtained during the design process.

I would like to add that we are in a very preliminary planning phase of this project. Necessary permits (from your department and other entities) will be obtained when the design has been more finalized.

Thanks!

Ashley Williams, E.I.T.
Staff Engineer
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
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From: Mary Ausburn [mailto:mausburn@kcgov.us]
Sent: Thursday, October 04, 2012 11:54 AM
To: Williams, Ashley
Subject: Alpine Meadows Water & Sewer District

Hi Ashley,

After talking with you earlier in the week, I met with Scott Clark (Community Development Director) to review the letter you provided regarding the proposed project. Before we can determine if a minor modification is appropriate for this situation, we will need additional information. Please provide a description of the proposal that includes a greater level of detail than what was provided in the initial letter. For example, what size (diameter & length) are the pipes that are being replaced/relocated; will the additional well be used as back-up or primary; will the noise levels increase with the

installation of additional pumping capacity? Is the standby power at the reservoir site going to be stationary or portable? Does the storage facility have sufficient capacity for additional water? Has approval been obtained for work within the right-of-way?

You can provide the additional information via email if you prefer. Once we receive your response, it will be reviewed to determine if a minor modification is appropriate.

Please call if you have any questions, my phone number is: (208) 446-1082.

Best regards,

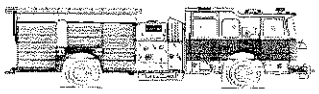
Mary Ausburn
Planning Manager
Kootenai County Community Development
451 Government Way
P.O. Box 9000
Coeur d' Alene, ID 83816-9000

APPENDIX P

- Fire District Communication

Northern Lakes Fire Protection District

Proudly serving the areas of and surrounding Hayden and Rathdrum



Hayden Area (208) 772-5711 • Fax: (208) 772-3044
Rathdrum Area (208) 687-1815 •Fax (208) 687-2088
www.northernlakesfire.com

March 6, 2012

Welch-Comer
350 E. Kathleen Ave.
Coeur d' Alene, Idaho 83815

Attention Necia Maiani, P.E.,

The meeting I had with you and two members of the Alpine Meadows Water District on February 29, 2012, provided the Fire District with a better understanding of the data you had requested in your letter dated November 16, 2011.

To recap some of the issues discussed in the meeting, the Fire District establishes fire flow requirements for rural water systems with several variables. Travel distance from our staffed stations, size of structures, size of lots, pumping capabilities of our fire trucks, response times of water tenders from other agencies and criteria from the Idaho Surveying and Rating Bureau (ISR&B) are all part of the decision making process to determine how much fire flow is needed. ISR&B is a State of Idaho regulatory agency

Yes, the International Fire Code talks of a 1,000 gpm minimum for residential dwellings but, the Fire Code also allows the Fire Chief to reduce fire flow requirements in rural or small communities where the development of full fire flow requirements is impractical.

The Fire District does the fire flow testing during the summer months on week days and weekends and will contact a water district if we see major changes to the fire flows. To this date I do not know of any concerns with the Alpine system.

The Fire District and ISR&B do not take into consideration that pumps may be down sometimes or the system may compromised in some way. All we require is that we are notified of such an issue so we can arrange for additional water to be trucked to the area in the event of a fire. In addition, with some of the small rural water systems we have, our response plans automatically dispatch additional water tenders to certain areas.

Alpine Meadows Water District was approved many years ago for having adequate fire flows. The minimum fire flow allowed to receive a rating by ISR&B is 250 gpm at 20 psi for a two hour duration. Through the years we have tested the fire hydrants and have found that most fall into the category of approximately 300 to 400 gpm at 20 psi. The flow testing that the Fire District does is conducted when all pumps are on line and the system is not compromised by something else. We do not have a requirement that these flows be maintained with any of the pumps offline and we realize that flows could be lower during some heavy use periods.

You presented five questions that I will attempt to answer:

1. What is adequate fire flow for this system?

    - **Current;** Adequate fire flows for the system would be not less than 250 gpm at 20 psi which, per our test records, the Water District has been meeting, if not exceeding.
    - **Future;** The Fire District would like to see fire flow capability increased to somewhere around 400 to 500 gpm at 20 psi. Our test data shows some hydrants are currently providing those flows.

2. What is the recommended fire flow for Alpine Meadows Water District?

    - **Current;** As stated above, not less than 250 gpm at 20 psi.
    - **Future;** Again as stated above, fire flows somewhere between 400 and 500 gpm at 20 psi

3. If the flow will be reduced to 250 gpm for 2 hours, what is the reasoning and how do we explain this to IDEQ?

    - I assume the reduction talked about in the question is related to what the International Fire Code requires. In the same appendix that addresses fire flow, the fire code gives the Fire Chief the authority to lower required fire flows.
    - IDEQ accepts the Fire District's requirements for adequate fire flows for water systems.

4. Will the Fire District provide written approval of the system capacity that is available based on what is reflected above.

    - Yes, I believe this document states that the Water District has been providing approved fire flows.

5. The funding/reviewing agencies may request input from the State Fire Marshal, will this be consistent

    - Yes, The Fire Marshal's office would agree with the way we set requirements for fire flows.

In addition, if the Alpine Meadows Water and Sewer District wishes to expand their coverage, The Fire District would support that. We would not require additional storage or pumping abilities for fire flows as long as what is already there is maintained. Additional water storage for the added domestic use may be required so as to not affect available fire flows. Additional fire hydrants on six inch lines may need to be installed in the new coverage areas. As far as commercial development, what is currently there has been approved. Additional commercial development would require increased fire flows in those expanded areas which, would be determined by the size of the structure and construction materials used.

Thank you for your patience on acquiring this information. The Fire District is available to attend another meeting if you think it would be beneficial.

Sincerely

Dean S. Marcus

Dean S. Marcus
Fire Chief

Osterdock, Karen

From: Maiani, Necia M
Sent: Monday, March 26, 2012 3:23 PM
To: Osterdock, Karen
Subject: FW: Alpine Meadows Water and Sewer District
Attachments: Alpine meadows water.pdf; ISR&B.pdf

From: Dean Marcus [mailto:dmarcus@northernlakesfire.com]
Sent: Monday, March 26, 2012 2:35 PM
To: Maiani, Necia M
Subject: RE: Alpine Meadows Water and Sewer District

Your understanding is correct in that ISR&B's requirements are 250 gpm for 2 hours at 20 psi at a minimum to receive ISR&B classification as an approved fire flow water system. The Fire District agrees with that approval.

ISR&B verification process for that is field testing at random locations, with yearly verification by the Fire District, and data provided by the water district that list holding capacities, number of hydrants, pipe sizes, % of normal operating level and gallons pumped in a yearly period. (see attached)

ISR&B as well as the Fire District does not use computer modeling to evaluate the overall system.

ISR&B approval continues as long as the Fire District completes random field testing and no significant changes are noted in the testing process. ISR&B will revisit the area every 8 to 10 years and actually witness field testing done by the Fire District and re-verify system capacities.

ISRB was here in 2009 and provided a letter of classification for several water districts in our Fire District. (see attached)

Answer to question 1. a. No. They currently have a classification of 4 which is the lowest # a residential area would benefit from. Improvements to the water system would not change the rating. Improvements to the water system will certainly help to maintain the classification.

2. a. 1 hour would be acceptable.
   b. 250 gpm is the minimum to design for, but seeing as 250 gpm is at the lower end of desired fire flows, designing for a better flow is advisable. That would be up to Alpine based on their budget. The Fire District will not require any changes to the current system. Adding additional coverage area would require additional hydrants on six inch lines and the ability to maintain current flows. Additional commercial development may require improvements based on what is to be constructed.

I know it seems difficult to get an easy black and white answer to your questions. If this was a new water system, requirements would be higher, but would still be based on many variables that would involve evaluating what is practical to accomplish.

The Fire District does not typically require an upgrade to an existing water system unless it would be necessary to supply existing flows to a new area of service.

New requirements, such as additional hydrants and six inch lines to new areas would be required, but updating the existing system would not be necessary if current flows could be maintained in the new area. Please be reminded we are only addressing fire flows, not domestic use

Reply if you have more questions or need additional clarity.

Dean S. Marcus
Fire Chief
Northern Lakes Fire Protection District
208-772-5711
dmarcus@northernlakesfire.com
Idaho Fire Chiefs' Association District 1 Director
Acting Chief Timberlake Fire Protection District
"Take Time to Show Pride"

From: Maiani, Necia M [mailto:nmaiani@welchcomer.com]
Sent: Friday, March 23, 2012 11:24 AM
To: Dean Marcus
Cc: Kim Erk
Subject: RE: Alpine Meadows Water and Sewer District

Dean:

I met with the Alpine Board last night.

There is still confusion as to what your most recent letter is requesting for fire flow.

My understanding is that the minimum flow requirement for the Alpine water system is 250 gpm for 2 hours at 20 psi based on the ISR and B. Is my understanding correct?

The questions that arose during the Board meeting last night are as follows:

1. If the Alpine makes improvements to the water system:
    a. Are there any facility improvements that Alpine could make to the water system that would change the system's classification and thus fire flow requirement?

2. You reference that you "would like to see fire flow capability increased to somewhere around 400 to 500 gpm at 20 psi":
    a. Is the duration 2 hours?
    b. Is 400 gpm the minimum flow that Alpine should design improvements for OR is 250 gpm the minimum flow and anything above that Alpine's choice based on their own budget?

Based on last night's meeting and the above questions, I think it would be beneficial for myself and at least one of the Board members to meet with you one more time. What is your availability next Thursday or Friday?

Thanks,
NM

From: Dean Marcus [mailto:dmarcus@northernlakesfire.com]
Sent: Tuesday, March 06, 2012 1:34 PM
To: Maiani, Necia M
Subject: RE: Alpine Meadows Water and Sewer District

Hi, yes meeting with DEQ might be a good idea. Here is our letter. It is a little long as I wanted to recap the conversation we had at the meeting. Let me know one way or the other if this meets you needs.

Thanks,

Dean S. Marcus
Fire Chief
Northern Lakes Fire Protection District
208-772-5711
dmarcus@northernlakesfire.com
Idaho Fire Chiefs' Association District 1 Director
Acting Chief Timberlake Fire Protection District

From: Maiani, Necia M [mailto:nmaiani@welchcomer.com]
Sent: Tuesday, March 06, 2012 08:35 AM
To: Dean Marcus
Subject: RE: Alpine Meadows Water and Sewer District

Hi again:

I just checked the calendar this morning...a little ahead of myself...the meeting is actually next Tuesday....so you have a little more time. The Board indicated that they didn't think you or I needed to be at this meeting...if there are enough questions that arise from the constituents, they will hold a separate special meeting and ask us both to attend.

You can address the letter to me.

Perhaps it is worth having a round table with you and DEQ to make sure we are covering everything they require and establish a protocol for communications with the Fire District(s) for planning purposes to eliminate any future misunderstandings. Let me know if you think that would be worthwhile and I will set something up with DEQ.

Thanks!
NM

Necia Maiani, P.E.
Senior Project Manager
WELCH-COMER
208-664-9382
208-664-5946 (fax)
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

From: Dean Marcus [mailto:dmarcus@northernlakesfire.com]
Sent: Monday, March 05, 2012 6:27 PM
To: Maiani, Necia M
Subject: RE: Alpine Meadows Water and Sewer District

Hi,

I think I will have the final draft ready tomorrow morning. I have several meetings in the AM. I will make every effort to get it too you before noon.

Do you want it addressed to you or Karen?

I have also heard the DEQ is stirring some things up with fire districts over approving fire flows. I would appreciate it if you will keep us very much in the loop as to what DEQ has to say about our document.

If there is a conflict between what we believe we have the right to approve and what they say needs to happen I would like to be involved in the conversation.

I have spoken to the State Fire Marshal and he is in full support of the way we have been approving fire flows.

If it will help, I can attend the Board meeting.

Please e-mail me after you receive the document if you have questions or call my cell 660-0126

Sincerely,

Dean S. Marcus
Chief
Northern Lakes Fire Protection District
dmarcus@northernlakesfire.com
Idaho Fire Chiefs Association District One Director

From: Maiani, Necia M [mailto:nmaiani@welchcomer.com]
Sent: Monday, March 05, 2012 04:49 PM
To: Dean Marcus
Cc: Osterdock, Karen
Subject: RE: Alpine Meadows Water and Sewer District

Hi Dean:

Thanks for taking the time to meet with us and the Alpine Board members last week.

When would you anticipate having a letter with the fire requirements out to us?

The Board meets tomorrow night, and I would like to give them an update on the status of this if I can.

Thanks!
NM

Necia Maiani, P.E.
Senior Project Manager
WELCH-COMER
208-664-9382
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350 E. Kathleen Ave.
Coeur d'Alene, ID 83815
www.welchcomer.com

From: Dean Marcus [mailto:dmarcus@northernlakesfire.com]
Sent: Sunday, February 26, 2012 5:11 PM
To: Maiani, Necia M
Subject: RE: Alpine Meadows Water and Sewer District

Yes, it will see ya then

Dean S. Marcus
Chief
Northern Lakes Fire Protection District
dmarcus@northernlakesfire.com
Idaho Fire Chiefs Association District One Director

From: Maiani, Necia M [mailto:nmaiani@welchcomer.com]
Sent: Friday, February 24, 2012 04:01 PM
To: Dean Marcus
Subject: Alpine Meadows Water and Sewer District

Hello Dean:

I left you a phone message, but wanted to also leave you an email.

Kim Erk and John Jones are available and would like to meet with you and I on February 29, 2012 at the Welch Comer office. Can you please confirm that 1 pm that day will work for your schedule?

Thanks,
NM

Necia Maiani, P.E.
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ALPINE MEADOWS WATER DISTRICT

Address:	PO Box 526, Hayden, ID 83835
Phone number:	208-772-5313
Primary contact:	Jeff Mueller
Contact number:	208-691-7877

6" (or more) PVC Mains 7 hydrants
4" (or less) PVC Mains 4 hydrants

10 Hydrants

420
421
422
423
424
425
426
430
594
595

20,000 gallon reservoir
80,000 gallon reservoir
100,000 total (both reservoirs are connected together)

Reservoirs are kept at 90% normal operating level

Existing well is at 1700 W Garwood Road

2008-2009 (one year period) 2,164,000 gallons pumped

Alpine Meadows

August 2009

WATER DEPARTMENT SURVEY

In the last three years what was the maximum daily consumption _____ MGD or GPM _____. Date of maximum daily consumption _____.

Average daily consumption _____ MGD or GPM _____

PLEASE DESCRIBE WATER PRODUCTION SUCH AS WELLS, SPRINGS, FILTER PLANT, OR OTHER. LIST CAPACITIES BELOW.

CAPACITIES IN MGD OR GPM

There was an Estimate of 109000 gal Max day

existing well is at 1700 W Garwood Rd

2008-2009 (one year period) 2,164,000 gallons of water was pumped

WATER STORAGE FACILITIES

NAME	MAXIMUM CAPACITY	NORMAL OPERATING LEVEL
	20,000	
	80,000	90% normal operating level

BOOSTER PUMPS AND CAPACITIES

NAME	CAPACITY	NAME	CAPACITY

HYDRANTS **TOTAL NUMBER OF HYDRANTS** 10

HYDRANTS ON 6 INCH OR LARGER MAINS

THREE WAY 7 TWO WAY _____

HYDRANTS ON 4 INCH OR SMALLER MAINS

THREE WAY 4 TWO WAY _____

INSPECTION OF HYDRANTS

FREQUENCY OF TESTING OR FLUSHING

ANNUAL SEMI-ANNUAL OTHER

PLEASE DESCRIBE PROCEDURE

Annually – every 3rd year a full flow test is conducted. Alternate years

Flush is performed.

Northern Lakes Fire Protection District

Proudly serving the areas of and surrounding Hayden and Rathdrum

Hayden Area (208) 772-5711 • Fax: (208) 772-3044
Rathdrum Area (208) 687-1815 •Fax (208) 687-2088
www.northernlakesfire.com

November 17, 2011

Welch-Comer
350 E. Kathleen Ave.
Coeur d'Alene, ID 83815

Attention Karen Osterdock, E.I.T.,

The following conditions are based on fire flow requirements from the 2009 International Fire Code, Appendix B.

B105.1 One- and two-family dwellings.
The minimum fire-flow and flow duration requirements for one- and two-family dwellings having a fire-flow calculation area that does not exceed 3,600 square feet (344.5 m2) shall be 1,000 gallons per minute (3785.4 L/min) for 1 hour. Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5m2) shall not be less than that specified in Table B105.1.

B105.2 Buildings other than one- and two-family dwellings. The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

Table B105.1 does not allow fire flows for commercial buildings to have fire flows of less than 1500 gallons per minute for duration of 2 hours. The flow requirements will increase from there based on square footage of the building and the construction type.

The Northern Lakes Fire District reviews each water system on a case by case basis. As per the fire code the fire chief is authorized to reduce the fire flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire flow requirements is impractical.

Any improvements that can be made to the existing system will be beneficial for improving the abilities for fire control and extinguishment. The Fire District would be happy to meet and look at any proposed improvements and give feedback to these improvements.

If you have any questions, please call 208-772-5711.

Thank you,

Tyler Drechsel

Tyler Drechsel
Fire Inspector

WELCH-COMER
ENGINEERS | SURVEYORS

208-664-9382
877-815-5672 (toll free)
208-664-5946 (fax)

350 E. Kathleen Ave.
Coeur d'Alene, ID 83815

November 16, 2011

Mr. Dean Marcus
Northern Lakes Fire Protection District
125 W. Hayden Avenue
Hayden Lake, ID 83835

Re: Alpine Meadows Fire Flow

Dear Dean:

The Alpine Meadows Water and Sewer District ("District") has authorized Welch Comer & Associates to complete a Water System Facility Plan for their water system, which is within the Timberlake Fire Protection District. Attached is a System Overview Map for your reference. The Facility Plan will evaluate water source, storage, booster and distribution system capacities for current and potential future service areas. Thus, we would like to request your input regarding "reasonable" fire flow and corresponding duration requirements for planning purposes.

We understand that fire flow requirements are based on many different elements such as building size, type, and contents. However, we hope that you may be able to provide us with a "typical" fire flow requirement and duration for the general categories of residential and commercial areas. Our objective is to plan for and provide source and storage capacities for reasonable current and future demands on the system. The District will analyze on an individual basis new connections and subdivisions using the actual fire flow requirements established by the Fire District when they are annexed.

Feel free to contact me at either (208)664-9382 or kosterdock@welchcomer.com should you have any questions or comments or wish to discuss this in person.

Sincerely,

Karen J. Osterdock

Karen J. Osterdock, E.I.T.
Project Engineer

KJO/kdh
Enclosure