

Yodelin Property Owners Association
2080 Valleybrook Lane Bellingham, WA 98229



March 30, 2007

Mr. Tom Tebb
Water Resources, Central Region
Washington State Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3401

\$50.00
Check #
8590574374
4/3/07
RA

Reference: Water Right Application
Yodelin Water System – PWS # 29316C

Dear Mr. Tebb:

The Yodelin Property Owners Association submits the enclosed Water Right Application in order to gain a ground water right for domestic/public water supply for the Yodelin Water System (Public Water Supply No. 29316C). A check for the \$50 fee is enclosed.

This application replaces Application No. S4-31431 submitted in April 1998. The 1998 application sought a water right for surface water. There is substantial history regarding the Yodelin application going back to 1992. The Yodelin system in question was originally approved by the Department of Health and constructed in 1967 with the understanding that the water right for the nearby associated ski area also included the Yodelin recreational home development. In 1992 it was discovered that the Yodelin recreational home development was not included and in fact had no water right. This prompted the Property Owners Association to submit a water right application in 1992. This application was later withdrawn and resubmitted in 1998 along with supporting information.

Recent declarations by the Department of Health necessitate a new water right application. In 2002 the Department of Health (DOH) issued a directive to comply with the Surface Water Treatment Rule or replace the surface water supply with an approved ground water source. In 2003 Yodelin and DOH entered a Bilateral Compliance Agreement that requires Yodelin to abandon the surface water source and utilize a ground water source. In 2004 a test well (DOE # AKG591) was drilled and subsequently developed for use as the ground water source for the Yodelin system. On February 13, 2007 the Department of Health approved our design for the well and associated treatment system. Yodelin is currently awaiting approval of a Conditional Use Permit (Application # CUP2006-035) from Chelan County that will facilitate construction of the new water system required by the Department of Health.

The water usage values in the enclosed water right application are identical to those in the 1998 application and are based on daily measured usage over a period of several months. In addition, a key part of the 1998 application was a comprehensive plan to mitigate the effect of Yodelin water usage on Nason Creek. Yodelin reaffirms its commitment to

mitigation and submits as a Supporting Supplement to this application an updated Mitigation Plan with many of the same elements as the 1998 plan. We believe granting Yodelin the requested water right will serve the overriding public interest and hope that the Department of Ecology will review and favorably act on our application. Please contact me at 360-527-3040 or Steve Melton, the Association President at 425-398-7829 if there are any questions concerning this application.

Sincerely,



Al Hunter

Project Manager, Yodelin Property Owners Association.

Enclosures:

\$50 Filing Fee
Water Right Application
Supporting Supplemental Mitigation Plan

CC: Steve Melton
John Torrence, Torrence Engineering

State of Washington
Application for a Water Right

Attachment No. 1

Attachment to Section 3, Legal Description of the Place of Use

Plat of Yodelin Division 1 within a portion of the SW1/4 of Section 1, T.26N., R. 13
EWM

and

Plat of Yodelin Division 2 within a portion of the SW1/4 of Section 1, T.26N., R. 13
EWM

and

Plat of Yodelin Division 3 within a portion of the SW1/4 of Section 1, T.26N., R. 13
EWM

State of Washington
Application for a Water Right

Attachment No. 2

Attachment to Section 4, Well Log

AL HUNTER COPY

December 3, 2004



Mr. Al Hunter
Yodelin Water System
2080 Valleybrook Lane
Bellingham, Washington 98229

630 6th Street South
Kirkland, WA 98033
425 828 7545
425 828 7548 fax
www.benderllc.com

RE: LIKANE WELL SITE AQUIFER TESTING SUMMARY, YODELIN WATER SYSTEM, STEVENS PASS *DOE WELL NO. #AK9591*

Dear Al:

This letter presents the results of the groundwater development work performed at the Likane well site. Yodelin Water System chose to drill at the Likane Site after permitting complications prohibited drilling at other selected well sites. Between August 31 and September 8, 2004, a six-inch-diameter boring was drilled to 83 feet and completed as a production well. Pumping tests were then performed to evaluate well and aquifer conditions. Water quality analysis results will be presented in a subsequent letter following receipt of the sample results.

The site is located about 200 feet north of Yodelin Place Drive along the east side of the power line (Figure 1). Stevens Creek is located about 80 feet east of the production well. Holt Drilling Inc. was subcontracted by Yodelin Water System to perform the drilling.

The purpose of our work was to evaluate the suitability of the site as a groundwater supply source. Once the well was drilled, testing was performed to evaluate the aquifer supply potential, and to satisfy other water quality requirements for system engineering and permitting purposes. Because the site is proximate to surface water and the well has a relatively shallow completion depth, development of this groundwater source will need to satisfy the Washington State Department of Health's Groundwater Sources Under the Direct Influence of Surface Water (GWI) requirements. MPA and other water quality samples were collected for these purposes.

PRODUCTION WELL DRILLING

Two borings were drilled to bedrock (about 83 feet) between August 31 to September 8, 2004. After drilling the first boring, a bend in the casing was identified at a depth of about 25 to 30 feet. After attempting to remove the drilling rods from the cased borehole, Holt did not believe a well screen could be lowered pass the bend without jeopardizing the integrity of the well screen. Cobbles/boulders were encountered in the upper 30 feet and it was likely that a cobble or boulder shifted against the casing and changed the alignment of the borehole. As such, the well was abandoned by Holt by pulling the casing and filling the borehole with a bentonite grout (satisfying the requirements of WAC 173-160).

A second boring was drilled about 5 feet west of the first boring and was ultimately completed as a production well (PW-1) with a screened interval from 39 to 44 feet. Bender Consulting was on site for

\\Bender1\bender 1 projects\Projects\B-0302 Yodelin\Powerline Pumping Test\Yodelin Aquifer Test Summary.doc

Letter to Mr. Al Hunter
December 3, 2004
Page 2

only limited observation of the construction and development of the second boring. Therefore, we provide below the boring log from the first boring along with the driller's comments from the second boring. The boring log is provided in Figure 2.

The first boring encountered moist silty sand down to about 7 feet. Underlying the surficial soils was a wet, slightly silty, gravelly fine to coarse sand grading to silty, gravelly, fine to coarse sand from 7 to 37 feet. A water bearing, slightly silty, gravelly, medium to coarse sand was encountered from 37 to 48 feet and was underlain by 22 feet of fine sandy silt. The silty sand unit between 28 to 37 feet deep appears to be a confining layer (aquitar) to the underlying aquifer (as discussed in the pumping test results). A wet, slightly silty, gravelly, fine to coarse sand was then encountered from 75 feet to the top of bedrock (about 83 feet). Holt noted in the second boring that the contact between the first water bearing zone and the underlying silt was about 5 feet higher than logged in the first boring.

Air-stem testing of production rates during drilling indicated two potential water bearing zones: 37 to 48 feet (20-25 gpm) and 75 to 83 feet (10-15 gpm). Air-stem (well development) testing of the deeper zone in the second boring showed that with time a well yield greater than 5 gpm could not be achieved. Therefore, the casing was pulled up and the well was screened from 39 to 44 feet. The well was developed for about 1 hour by injecting air through the drill stem. With the drill stem set at about 31 feet, the well produced about 25 gpm during development.

The boring specifications and final well construction are presented as follows; the subsurface conditions encountered and well construction are shown in the boring log in Figure 2. The boring was drilled to a depth of 18 feet using a 10-inch-diameter tri-cone bit and 10-inch-diameter temporary steel casing. Below 18 feet, the boring was drilled using a 5 7/8-inch-diameter tri-cone bit and 6-inch steel casing. Upon installation of the first 20-foot section of 6-inch-diameter casing, a bentonite surface seal was installed between the 10- and 6-inch-diameter casings to a depth of 18 feet. The temporary 10-inch-diameter casing was then removed. The well consisted of 6-inch-diameter steel casing with a 5-inch-diameter telescoping well screen assembly. The screen assembly consisted of a 1 foot sump, 5 feet of 20-slot stainless steel well screen, and about a 2 foot riser/K-packer section. The 6-inch-diameter steel casing was pulled back exposing the sump, well screen, and about 0.5 feet of the riser.

AQUIFER CHARACTERIZATION

Step-drawdown and constant rate pumping tests were performed to gain an understanding of the well yield and the hydraulic properties of the aquifer. Step-drawdown pumping tests were performed in the production well (PW-1) on October 4 and October 6, 2004; a 24-hour constant-rate pumping test was then performed on November 3, 2004. For both pumping tests, the pumping well was equipped with a 1.5 horsepower pump and drawdown was measured by hand and datalogger methods.

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Micro-particulate analysis (MPA) sampling was performed in conjunction with the 24-hour pumping test to evaluate whether the groundwater source contained microorganisms associated with surface water. We understand that this test is one method recommended by the Department of Health to evaluate if the aquifer is hydraulically connected to surface water. MPA sampling involves routing water through a filter at a controlled pressure over a 12 to 24 hour period. Hammond, Collier, Wade, and Livingstone (HCWL) collected field and analytical water quality samples at the end of the step- and constant rate pumping tests for water system design purposes.

Production Well PW-1 Step Pumping Test Results

An initial step pumping test was attempted on October 4, 2004. Upon initial pumping of the well, the water color was dark red and the water level in the well reached the pump intake almost immediately. As such, the well yielded less than 10 gpm. After discussions with you, we re-mobilized to the site on October 6 to redevelop the well. Redevelopment was performed by recirculating a chlorine solution in the well for about 40 minutes.

The PW-1 step-pumping test was then performed after re-development. The static water level in PW-1 was 8.7 feet prior to the start of the test. The pump intake was set above the well screen at a depth of about 37 feet, therefore, providing about 28 feet of available drawdown. The production well was pumped at 13.5 gpm for two hours followed by a second one-hour pumping interval at 25 gpm. The drawdown data for the step pumping test is shown in Figure 3. The resulting drawdown at the end of each step was about 7.5 and 15 feet. The well specific capacity calculated from the first step was 1.8 gpm/ft. The groundwater level did not stabilize during the second step, and indicates that the well efficiency was decreasing with increasing yield.

HCWL collected water quality samples at the end of the step-pumping test for field and laboratory analyses. The water quality data will be presented in a following letter.

Production Well PW-1 Pumping Test Results

The PW-1 pumping test was started on November 3, 2004 at 10:35 p.m. and was pumped at a relatively constant rate of 10 gallons per minute for about 24 hours. The weather was partially cloudy and no precipitation fell during the test. The test was monitored initially by our staff and later by a Yodelin representative. Maximum drawdown at the end of the pumping phase for the pumping well was about 6 feet. The complete water level data set (pumping and recovery phases) for the pumping well is presented in Figure 4.

The drawdown and recovery data were analyzed using the Cooper-Jacob (1946) straight-line method for the pumping and water level recovery data (Figures 5 and 6). Calculated values of transmissivity using

Letter to Mr. Al Hunter
December 3, 2004
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the drawdown and recovery data were 0.14 and 0.20 ft²/min, respectively. The storage coefficient cannot be calculated from a single well test.

The measured drawdown in Figure 5 deviates from the theoretical straight line fit at about 65 minutes; indicating the presence of a recharge source to the aquifer. In our opinion, the source of recharge to the aquifer is through leakage from the overlying silty sand aquitard as opposed to leakage from Stevens Creek. The drawdown patterns, and fluctuations in water levels suggest drainage of the aquitard into the aquifer, and that barometric pressure fluctuations are driving a confined groundwater level response.

Micro Particulate Analysis Test Results

The MPA testing was performed under the procedures recommended by Edge Analytical Inc. and by using equipment supplied by them. Collection of the MPA sample started at 15:40 on November 3, 2004; the sampling was stopped at 8:50 on November 4, 2004 and the filter sample was packed in a cooler and submitted to Edge Analytical within 24 hours of sample collection. 773 gallons were routed through the filter.

The micro particulate analyses did not detect any of the primary or secondary bioindicators resulting in a score of zero (low risk) as per the US EPA Consensus Method for determining if groundwater is under the direct influence of surface water. The test results will be provided with the water quality results.

Discussion and Recommendations

Analysis of the pumping test data provided consistent values for aquifer transmissivity. Based on a saturated thickness of 11 feet and an average transmissivity of 0.17 ft²/min, the hydraulic conductivity of the aquifer is about 1.5×10^{-2} ft/min. Theoretical drawdown calculations indicate that ~~PW-2~~^{PW-1} would be able to provide 20 gpm with about 15 feet of drawdown over a 10-day pumping period (Figure 7). Typically, the theoretical calculations are not conservative as pumping inefficiencies will lower the actual well yield. However, it is our opinion that the well should have a reliable yield of 20 gpm with less than 25 feet of drawdown. This opinion is based on the assumption that the well screen does not become clogged with mineral scale or organic build-up.

The aquifer does not appear to be hydraulically connected to the creek for two reasons: first, the water level in the aquifer is above that of the creek. The elevation of Stevens Creek was measured to be about 14 feet below the ground surface at the wellhead. The static water level prior to the constant-rate pumping test was 7.41 feet below the ground surface. Secondly, the pumping test data do not indicate a positive hydraulic connection with the creek; rather, they indicate groundwater leakage from the overlying aquitard. In addition, the MPA test results do not indicate the presence of bioindicators that would suggest such a connection (though this is not a conclusive test).

Letter to Mr. Al Hunter
December 3, 2004
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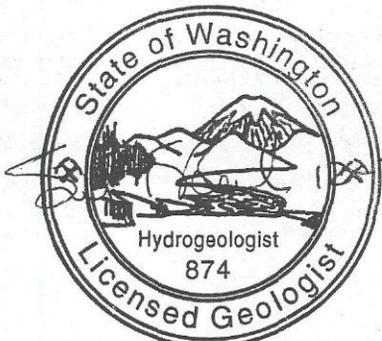
In our opinion, the well will provide a suitable groundwater supply source that will meet the water system's goals. Though the redevelopment performed prior to the second step test did increase the well yield, the test results indicate that the well may still be partially clogged. Since the well became partially plugged between the time of drilling and the pumping tests, the potential for additional clogging may exist. We recommend that additional redevelopment methods be employed prior to connecting the well to the water system. Development methods and treatment options will be best addressed after review of the water quality results by HCWL.

Thank you again for the opportunity to be of service, please call us at (425) 828-7545 if you have any questions.

Sincerely,

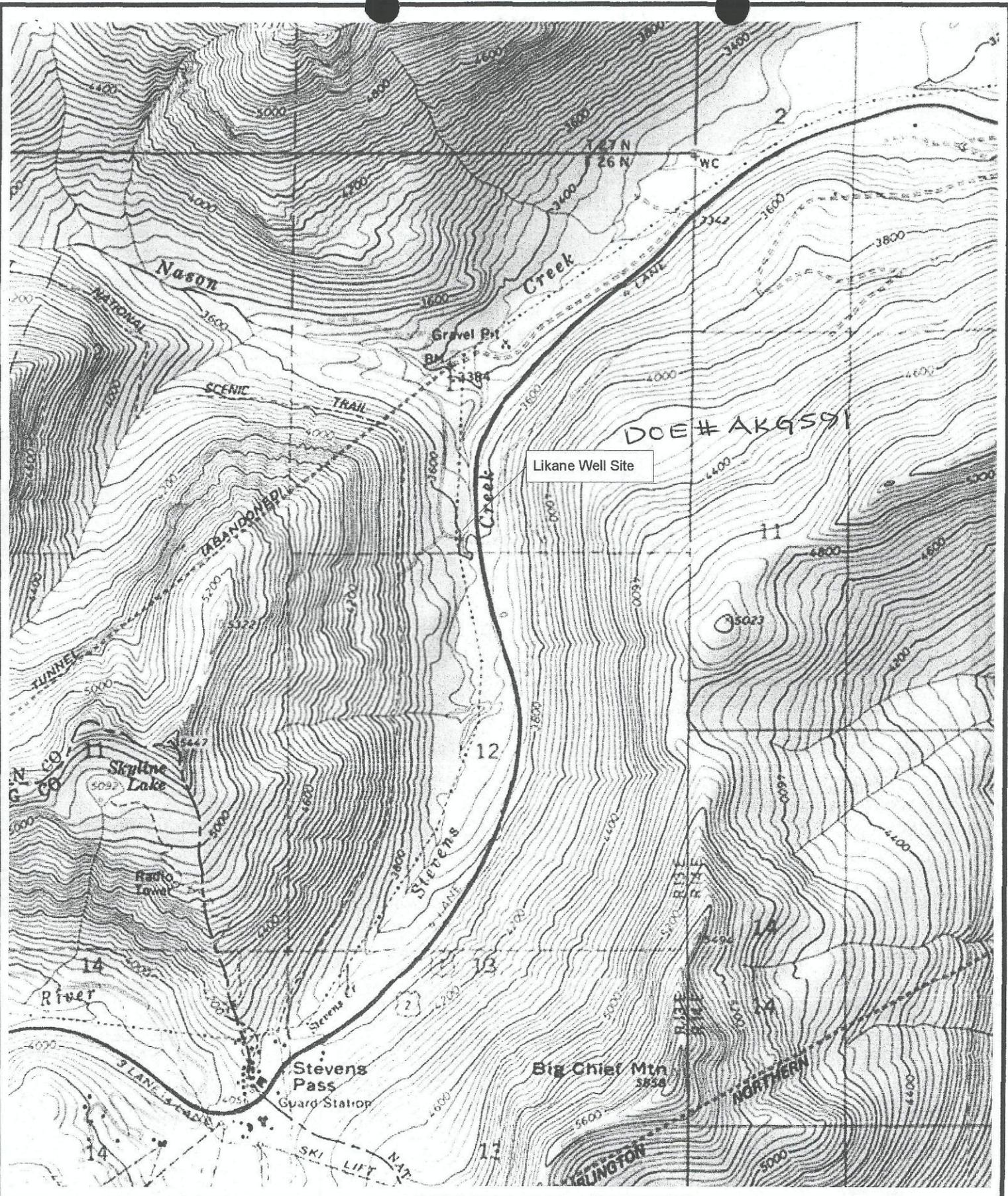
ROBERT O. MIDDOUR

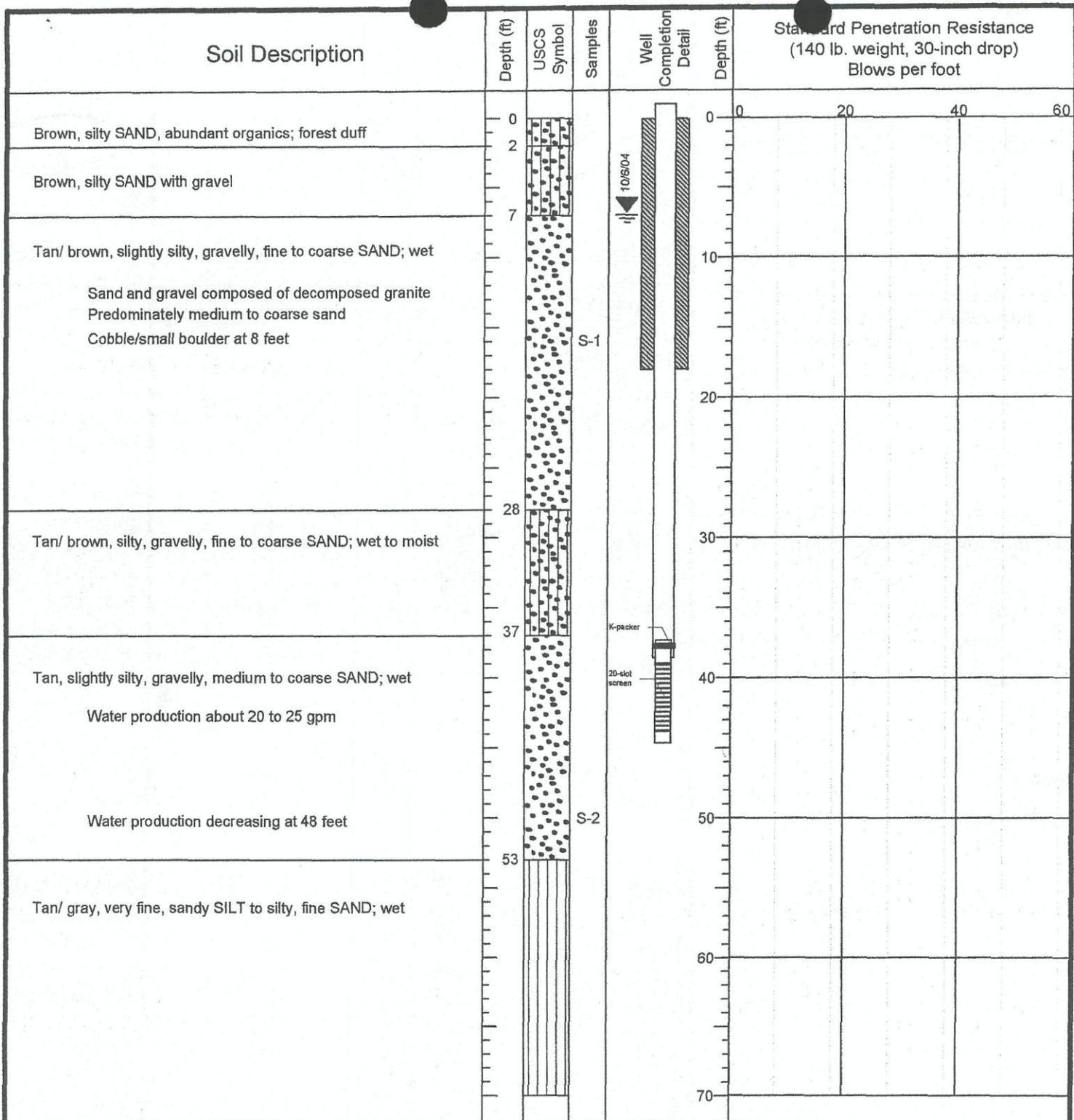
Robert O. Middour L.H.G.


SCOTT F BENDER

Scott F. Bender L.H.G., C.G.W.P.

- Enclosures:
- Figure 1. Site Location Map
 - Figure 2. Production Well Boring Log
 - Figure 3. Production Well Step-Pumping Test, Drawdown
 - Figure 4. Production Well Pumping Test, Drawdown and Recovery
 - Figure 5. Production Well Pumping Test, Drawdown Analysis
 - Figure 6. Production Well Pumping Test, Recovery Analysis
 - Figure 7. Projected Theoretical Drawdown at Various Pumping Rates





NOTES

Drilling Date: 8/31 to 9/8/2004
 Drilling Contractor: Holt Drilling Inc.
 Drilling Method: Air Rotary w/ tri-cone bit
 Boring Diameter: 5 7/8-inch

LEGEND

- Backfill
- Bentonite seal
- Sand pack: natural material
- Pea gravel

- Observed WL during drilling
- Measured WL and date
- 5-inch Telescoping stainless steel 20-slot well screen
- 6-inch Steel casing

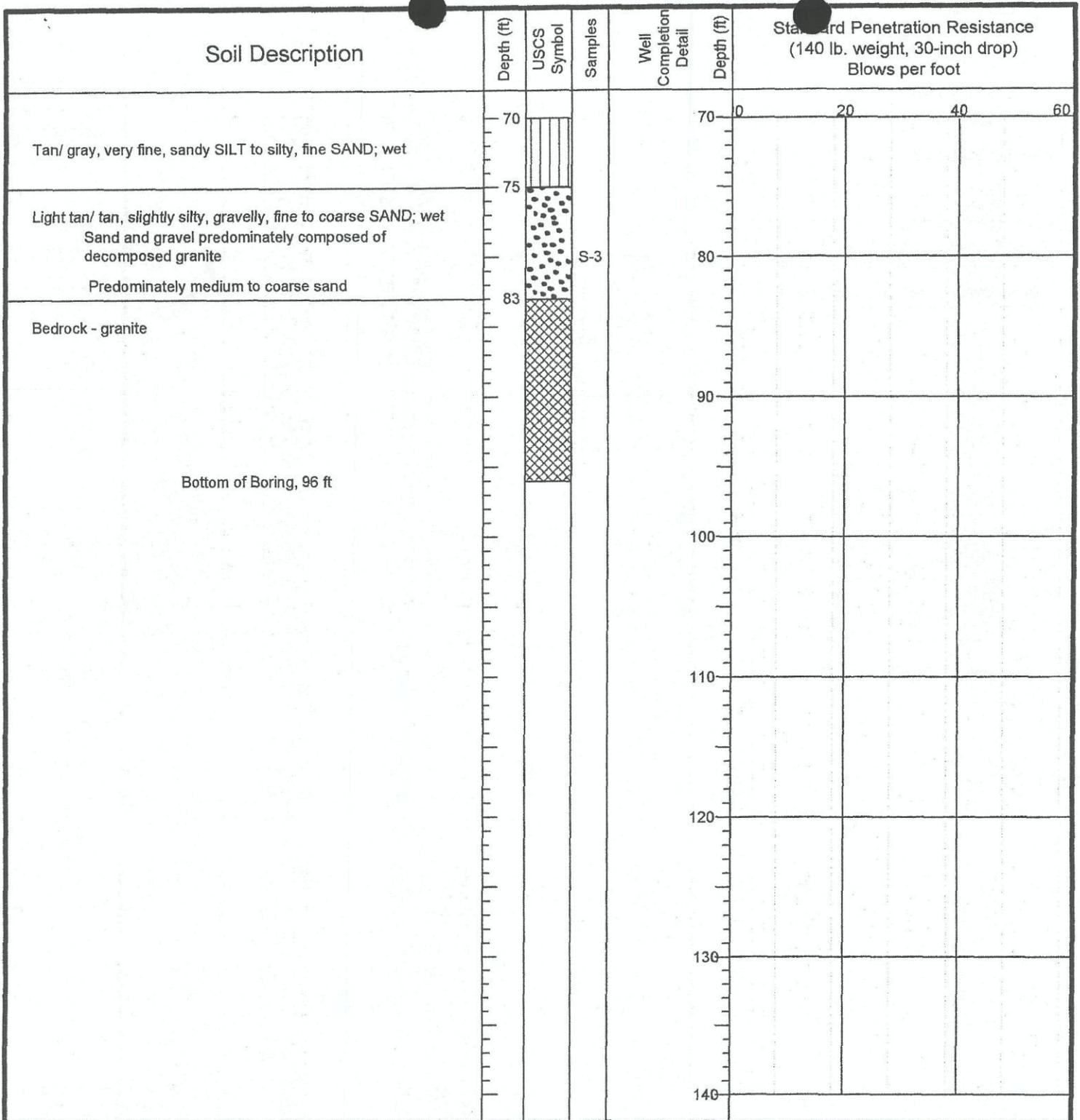


Yodelin Water System
 Alternative Supply Source Testing,
 Stevens Pass, Washington

Log and Completion
 of Likane Site Boring
 DOE # AKG591

B-0302

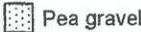
Figure 2
 Page 1 of 2

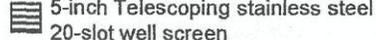
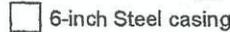


NOTES

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 Drilling Contractor: Holt Drilling Inc.
 Drilling Method: Air Rotary w/ tri-cone bit
 Boring Diameter: 5 7/8-inch

LEGEND

-  Backfill
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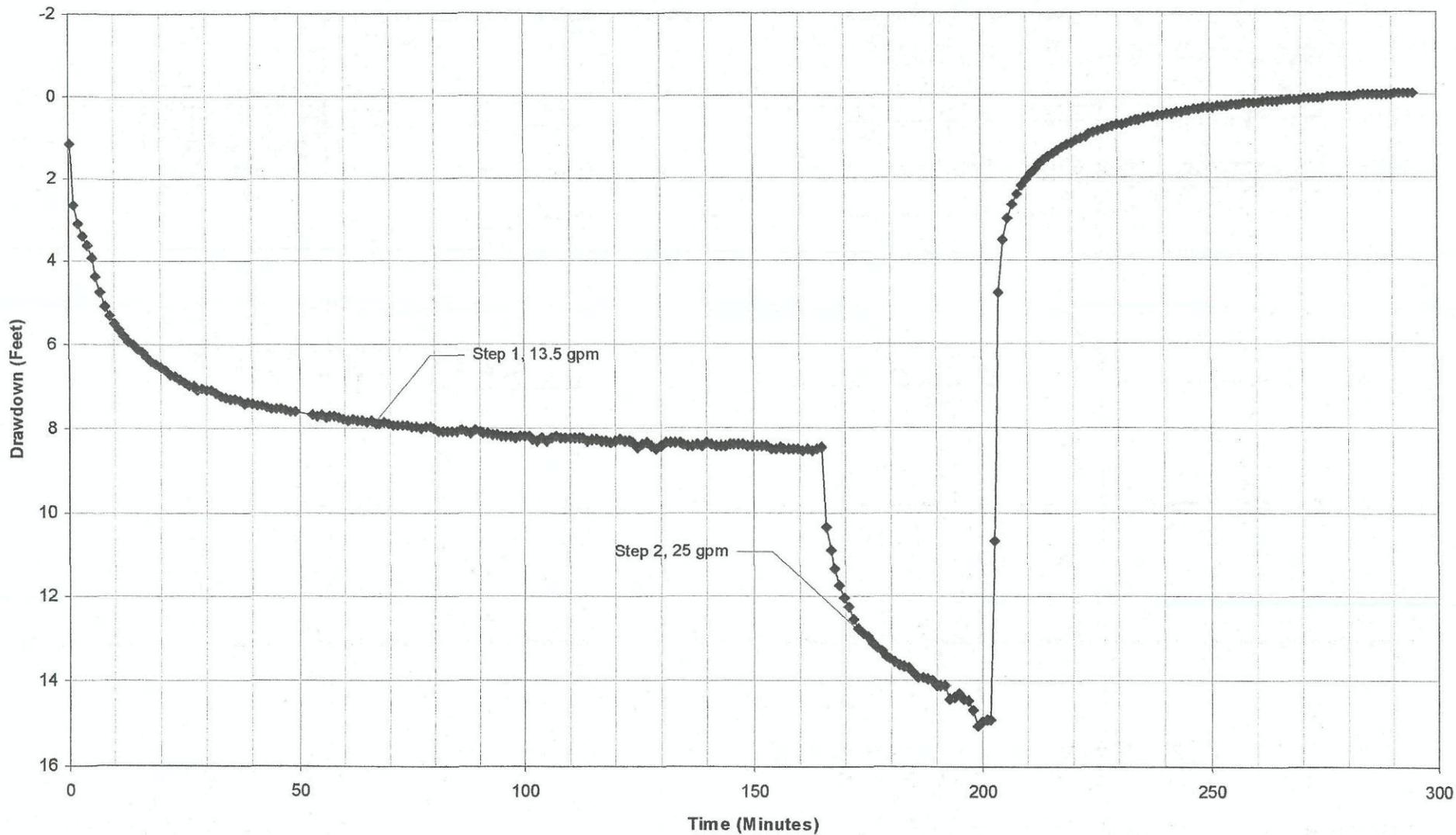


Yodelin Water System
 Alternative Supply Source Testing,
 Stevens Pass, Washington

Log and Completion
 of Likane Site Boring
 DOE # AK9591

B-0302

Figure 2
 Page 2 of 2



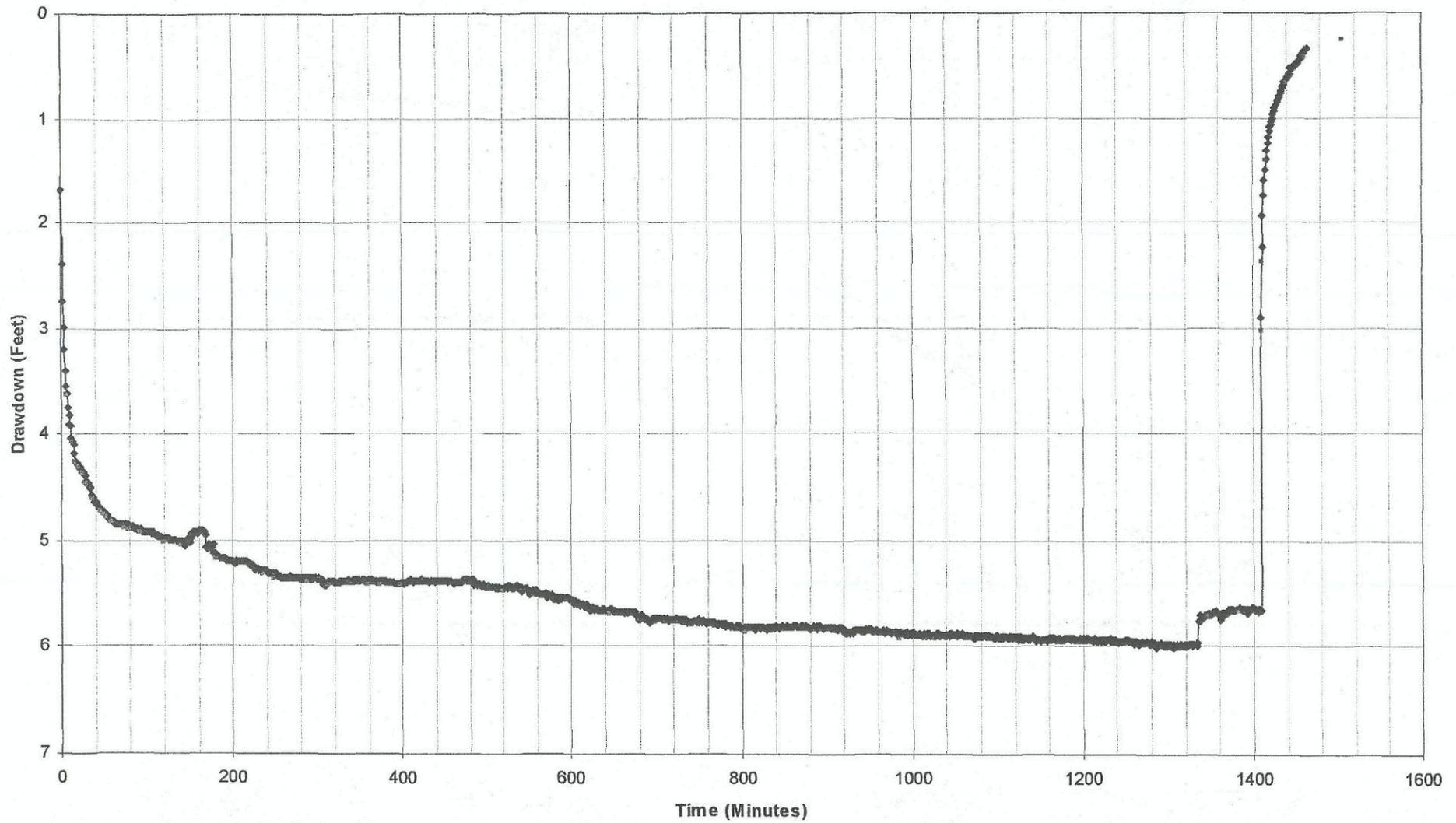
DOE #AKG591



Yodelin Water System
 Alternative Supply Source Testing,
 Stevens Pass, Washington

Production Well Step-Pumping Test
 Drawdown Data

B-0302
 Figure 3



DOE # AKG591

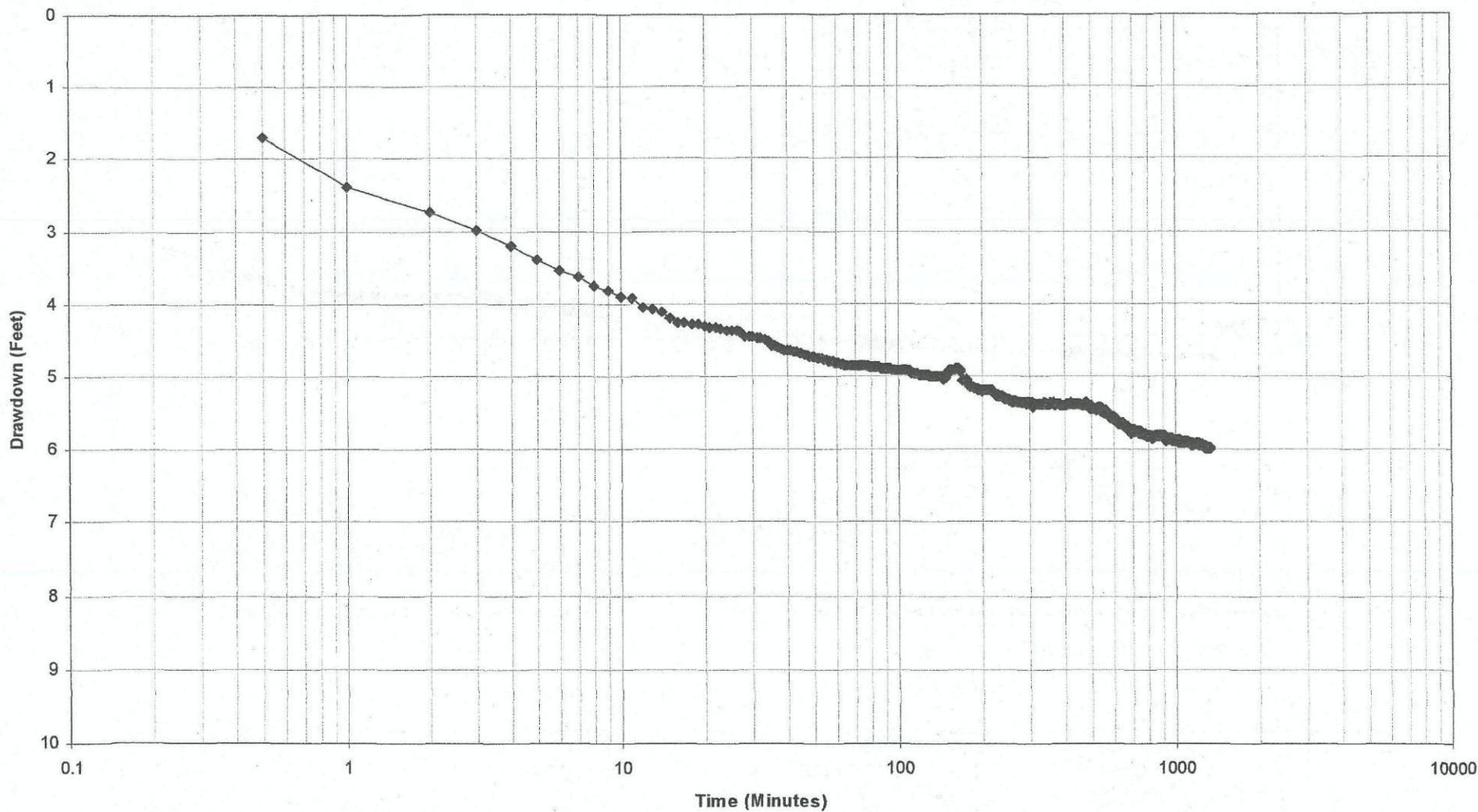


Yodelin Water System
 Alternative Supply Source Testing,
 Stevens Pass, Washington

Production Well Pumping Test
 Drawdown and Recovery

B-0302

Figure 4

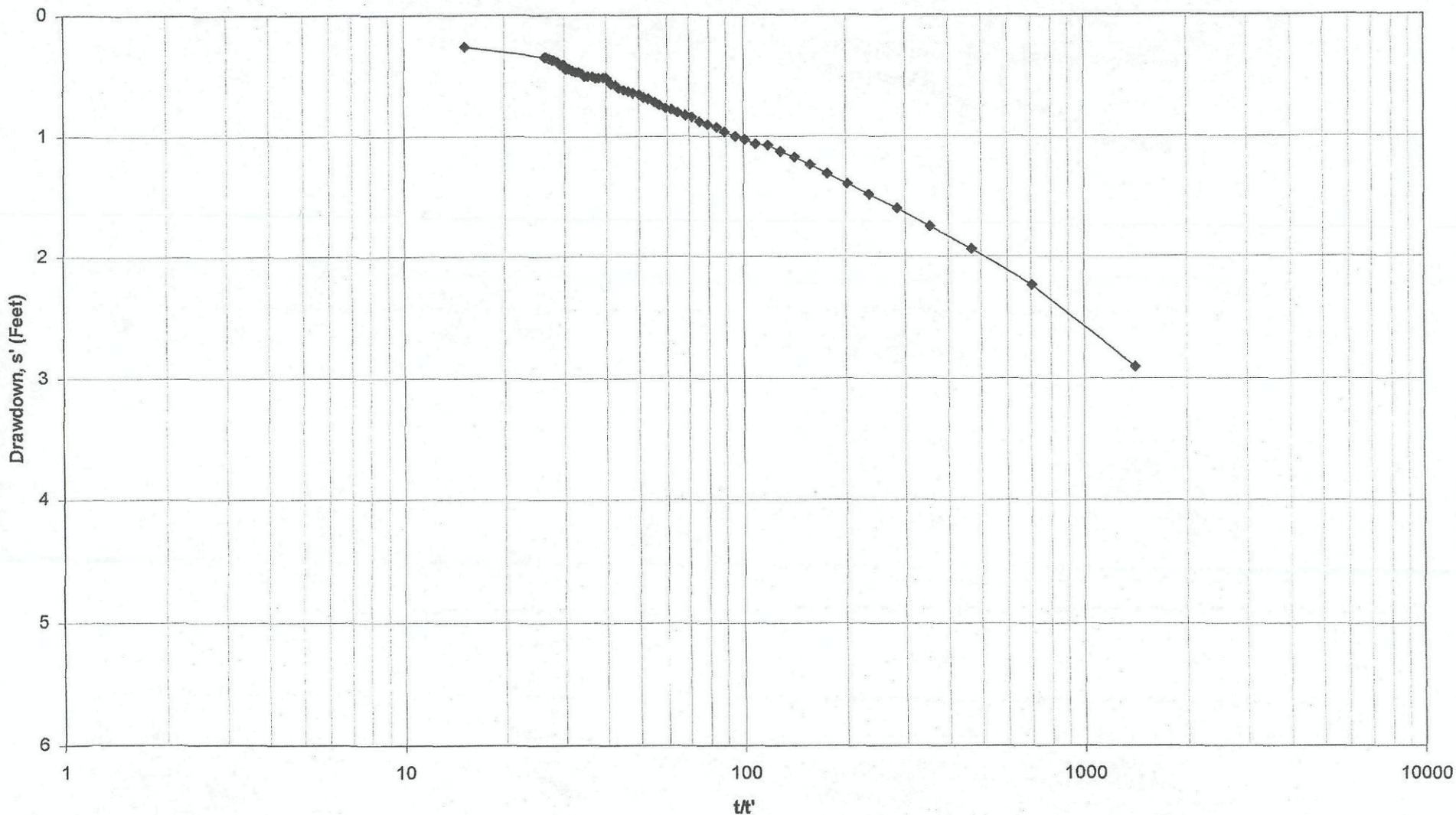


Yodelin Water System
 Alternative Supply Source Testing,
 Stevens Pass, Washington

Production Well Pumping Test
 Drawdown Analysis

B-0302

Figure 5



DOE # AKG591



BENDER
CONSULTING, LLC
Applied Groundwater Solutions

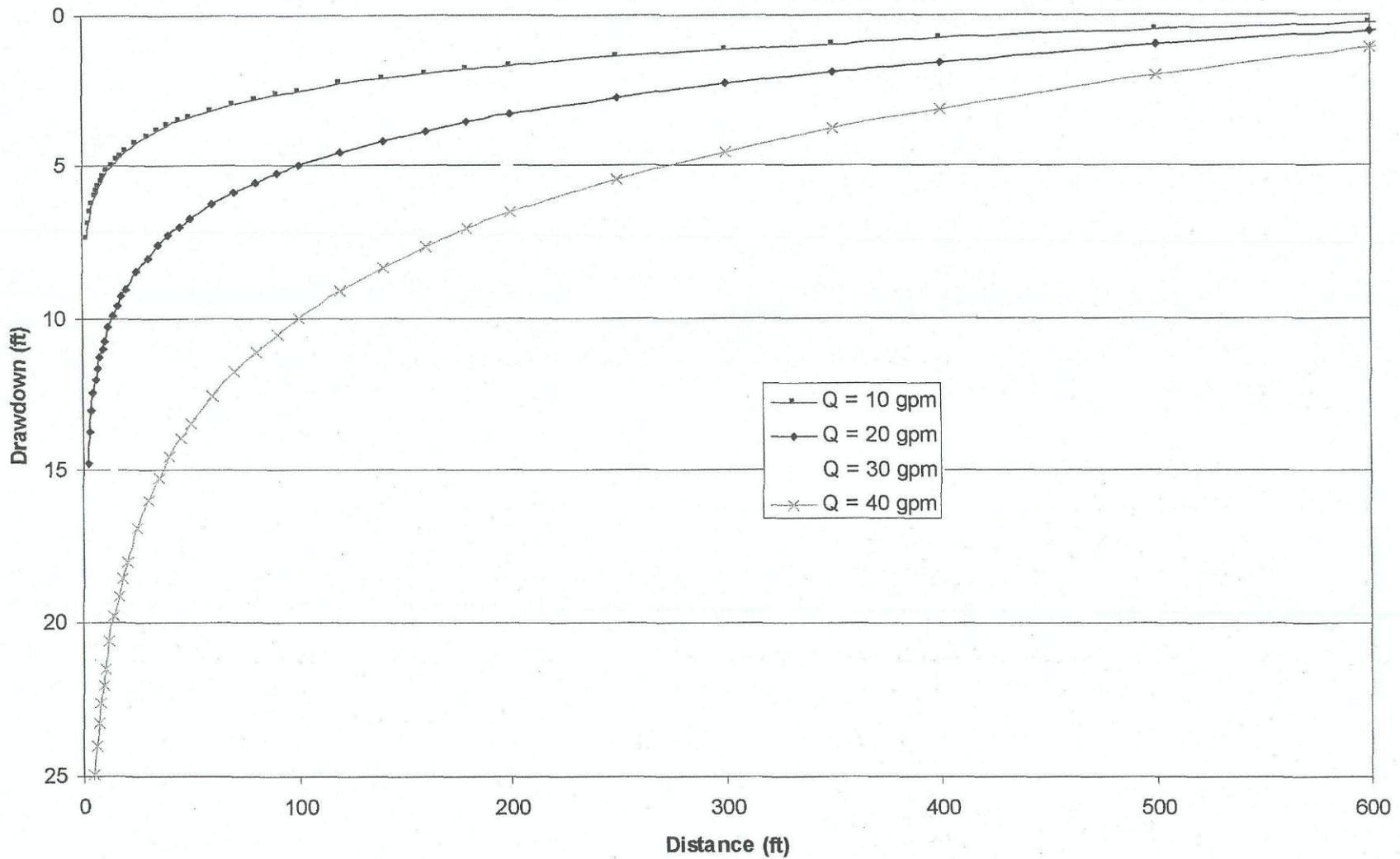
Yodelin Water System
Alternative Supply Source Testing,
Stevens Pass, Washington

Production Well Pumping Test,
Recovery Analysis

B-0302

Figure 6

10 Day Pumping Duration



DOE # AK6591



Yodelin Water System
Alternative Supply Source Testing,
Stevens Pass, Washington

Projected Theoretical Drawdown
at Various Pumping Rates

B-0302

Figure 7

State of Washington
Application for a Water Right

Attachment No. 3
Section 6C, Dept. of Health Approval



STATE OF WASHINGTON
DEPARTMENT OF HEALTH

1500 West 4th Avenue, Suite 305 • Spokane, Washington 99204
FAX: (509) 456-2997

February 13, 2007

Don Marshall
Yodelin Water System
902 43rd St NW
Marysville, WA 98271

Re: Yodelin Water System; PWS ID #29316C; Chelan Co.
Water System Improvements Construction Documents Approved; DOH Project #06-0204

Dear Mr. Marshall:

The construction documents for the above project received in this office April 17, 2006 together with the additional documents received from Torrence Engineering on January 8, 2007 and January 29, 2007 have been reviewed and, in accordance with the provisions of WAC 246-290 are hereby APPROVED.

As required in WAC 246-290-040, within sixty days following the completion of, and prior to the use of, the above project or portions thereof, the enclosed Construction Completion Report must be completed by a professional engineer and returned to this office.

WAC 246-290-120 provides that if the certification of completion has not been submitted within two years of the date of this letter, this approval will become null and void unless you take action at that time to arrange for an extension of the approval period in the manner prescribed.

If you have any questions regarding this approval, please contact me at (509) 456-2774 or dan.mathias@doh.wa.gov.

Sincerely,

Dan Mathias, PE
Regional Engineer
Office of Drinking Water
Division of Environmental Health

cc: Chelan-Douglas Health District
Dom Matzinger, PE, Torrence Engineering.
Jeff Johnson, P.E., DOH Asst. Regional Manager



Construction Completion Report

In accordance with WAC 246-290-120(5), a **Construction Completion Report** is required for all approved construction projects. Purveyors **must** submit a Construction Completion Report to the Department of Health (DOH) within sixty (60) days of completion and before use of any water system facility. This includes any source, water quality treatment, storage tanks, booster pump facilities, and distribution projects.

Please type or print legibly in ink:

YODELIN WATER SYSTEM	DOH System ID No.: <u>29316C</u>
Name of Water System	
DONALD MARSHALL	DOH Project No.: <u>06-0413</u>
Name of Purveyor (Owner or System Contact)	(if applicable)
902 43RD ST NW	Date Construction Documents
Mailing Address	Approved by DOH <u>2/13/2007</u>
MARYSVILLE, WA 98271	(If applicable)
City State Zip	

Project Name and Descriptive Title: WATER SYSTEM IMPROVEMENTS

Check one:
 Entire Project Completed. Description of Portions Completed.

Complete (Attach additional sheets as needed):

Professional Engineer's Acknowledgment

The undersigned professional engineer (PE), or their authorized agent, has inspected the above-described project which, as to layout, size and type of pipe, valves and materials, reservoir and other designed physical facilities, has been constructed and is substantially completed in accordance with construction documents reviewed by the purveyor's engineer or approved by the DOH. In the opinion of the undersigned engineer, the installation, physical testing procedures, water quality tests, and disinfection practices were carried out in accordance with state regulations and principles of standard engineering practice.

I have reviewed the disinfection procedures , pressure test results , and results of the bacteriological test(s) for this project and certify that they comply with the requirements of the construction standards/specifications approved by the DOH. (Check all boxes that apply that are consistent with the nature of the project.)

This project changes the physical capacity of the system to serve consumers. The system is now able to serve _____ equivalent residential units (ERUs.) Not applicable



Date Signed

Name of Engineering Firm

Name of PE Acknowledging Construction

Mailing Address

City State Zip

State/Federal Funding Type (if any)

Engineer's Signature

Please return completed form to DOH regional office checked below.

- | | | |
|---|---|---|
| <input type="checkbox"/> NWRO Drinking Water
Department of Health, K17-12
20435 72 nd Ave S, Suite, 200
Kent, WA 98032
(253) 395-6750 | <input type="checkbox"/> SWRO Drinking Water
Department of Health
PO Box 47823
Olympia, WA 98504-7822
(360) 664-0768 | <input checked="" type="checkbox"/> ERO Drinking Water
Department of Health
1500 W. Fourth Ave, Suite 305
Spokane, WA 99204
(509) 456-2997 |
|---|---|---|

The purveyor must attach a completed Water Facilities Inventory (WFI) form in accordance with WAC 246-290-120(6), if applicable. Contact the regional office in your area for WFI forms or additional Construction Completion Report forms.

State of Washington
Application for a Water Right

Attachment No. 4
Section 6D, Water Conservation Plan

Yodelin Property Owners Association
Water Conservation Plan, Public Water System No. 29316C
March 24, 2007

Background

The Yodelin Property Owners Association approved a Water Conservation Plan in 1997. The conservation plan outlined below is a revision to that plan. The 1997 plan was designed for the existing water system that relies on diversions of surface water into two storage tanks that distribute water by gravity through a 4" water main to the 40 cabins. This revised plan addresses a proposed new water system, mandated by the Department of Health, utilizing a single ground water well, a treatment system and a single 35,000-gallon storage tank. Water from the storage tank is pumped into the existing 4" water main. Upon completion of the new system the existing surface water source and tanks will be abandoned. The Department of Health has approved the design for the new system.

The conservation program recognizes the unique character of the Yodelin community. With only 40 cabins, Yodelin is a close community where people know one another. They have learned from dealing with the harsh winter environment how to work together to survive as a community. Examples of this cooperation are the well-attended annual water work parties and semi-annual meetings. The Association's members have evidenced a commitment to water conservation and a willingness to work together to achieve that commitment. At the Association's January 1997 meeting, the members unanimously passed a resolution affirming a commitment to meeting the conservation objectives outlined in the 1997 Conservation Plan. That commitment continues.

Conservation Plan Objectives

1. Minimize daily and total annual water consumption.
2. Minimize operational costs of the water system.
3. Develop education and awareness programs to encourage water conservation.
4. Promote a maintenance program to minimize unnecessary loss of water.

Requirements of Conservation Program

Because the Yodelin system is small, the system falls within the Department of Health and Department of Ecology's category of "fewer than 1000" customers. The required conservation measures for systems of this size are 1) source meter installation and 2) program promotion. In addition, the plan must include an evaluation of the cost and benefits of installing individual service meters and of conservation pricing.

Conservation Plan Elements

Source metering: The new Yodelin water system will include a meter water to measure and totalize all water pumped from the well. The Association will collect data from this meter and publish semi-annual summaries of flow to the Association membership at the semi-annual Association meetings.

Individual service meters: The 10'-12' winter snow pack at Yodelin presents difficulties for accessing and reading service meters. Yodelin has installed 8 individual remote-reading service

meters as of March 2007. The Association will continue the effort to have all individual service connections metered by a date set at the first semi-annual Association meeting after the new system is placed in service. Individual service meters are an important aid in locating service leaks and could serve as the basis for individual water charges if the Association decides to implement such a charge in the future.

Conservation pricing: Yodelin will develop a system-wide conservation pricing mechanism. It will reward the community when yearly water consumption is less than the goal established the previous year and penalizes the community when consumption is more. The Property Association currently assesses the property owners an annual flat fee for water. Under the conservation-pricing plan an increase in water usage above target usage would result in an equal surcharge to all customers. Similarly, a decrease in water usage would mean a reduction in the base fee for water. Should it become necessary to control water usage further, a plan for individual charges could be developed. There are no plans for that at this time.

Ongoing Conservation Activities

Program Promotion

- Include water saving tips in Property Association's mailings.
- Feature a speaker on water conservation at a Yodelin Property Owners' meeting.

Other Measures

- Prepare maintenance procedures (i.e. how to prevent pipes from freezing and breaking by wrapping exposed lines with heat tape and/or insulation, measures to assure that plumbing fixtures do not leak, etc.) for each cabin.
- Continue water system maintenance program to prevent breaks in the line and leaks in the system. The program includes routine maintenance, the annual work party and periodic system upgrades.
- Mark road-side water shut-off valves of individual cabins with 10 foot poles in order to facilitate shut off, if leaks are identified.
- Implement an alert system to notify property owners of periods limited water availability and implement emergency measures that include reducing showers and toilet flushing, banning clothes washing, etc.
- Explore the feasibility of new cabins installing individual gray water systems. If feasible and the Health Department approves, encourage installation of gray water systems in all new cabins.
- Upon sale of an existing unit, plumbing fixtures shall be replaced with the latest technology low-flow fixtures, if not existing. The new cabin owner shall complete such retrofit within one calendar year of sale.

The table below contains a budget and schedule for the Conservation Program. Completion of the Program is in accordance with the schedule shown. The start date is the date that the new water system is placed in service.

Schedule and Budget for Conservation Measures

Measure	Budget	Schedule			
		3 Month	6 Months	1 Year	Up to 3 Years
Water saving tips in mailings.	\$45		X		
Speaker on water conservation.	\$100		X		
Individual cabin maintenance procedures.	\$1		X		
Cabin kits with conservation tips.	\$5		X		
Continue system-wide maintenance program.	No added cost.	X	Ongoing	Ongoing	Ongoing
Mark cabin shut-off valves.	\$200			X	
Notification and emergency water conservation measures.	Volunteer labor No cost.	As needed	As needed	As needed	As needed.
Install gray water systems in new cabins, if feasible.	Unknown				When/if feasible
Upon a cabin's sale, replace fixtures with low flow fixtures, if not existing.	Maximum of \$2600*	X	Ongoing	Ongoing	Ongoing
TOTAL	\$3036				

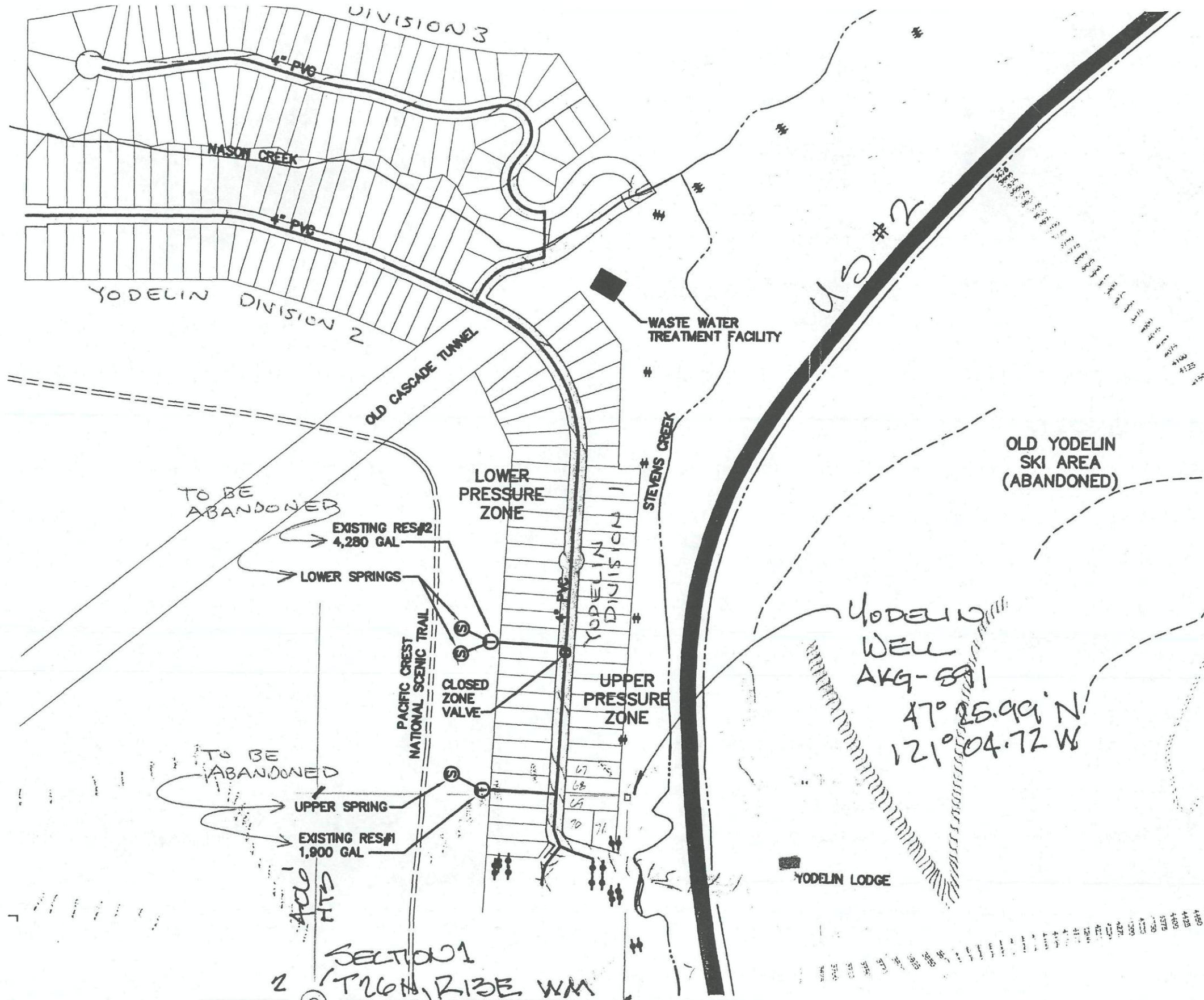
*Assumes that 1/3 of the cabins will change hands in the next 20 years. The owner will assume the cost.

Target Water Savings Projections

The Association will monitor consumption through the first year of service on the new system and will establish an annual target for the following year and each year thereafter.

State of Washington
Application for a Water Right

Attachment No. 5
Section 10, Project Map



LEGEND:

- HWY 2
- OTHER ROAD
- POWER POLE
- PVC WATER MAINS

SEE DWG C3
ALSO

YODELIN Well
LOCATION MAP

SECTION 1
(T26N) R13E WM

State of Washington
Application for a Water Right

Attachment No. 6
Section 11B, Well Agreement



Return Address:

Crossland Law Office
PO Box 566/305 Aplets Way
Cashmere, WA 98815

Reference numbers of related documents:

Grantor:

- 1. Liikane, Kaleva
- 2.

Grantee:

- 1. Yodelin Property Owners Association, a Washington nonprofit corporation
- 2.

Legal Description:

- 1. portion of SW ¼ Section 1, Township 26 North, Range 13 EWM, Chelan County, Washington
- 2.

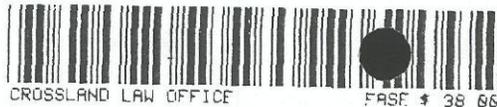
Assessor's Property Tax Parcel Account Number(s): 26 13 01 340 050

EASEMENT GRANT

This Easement Grant is made between Kaleva Liikane, a single man, hereinafter referred to as the "Grantor", and Yodelin Property Owners Association, a Washington nonprofit corporation, hereinafter referred to as the "Grantee".

The following recitals of fact are a material part of this instrument:

A. The Grantor is the owner of a tract of land described as follows and hereafter referred to as "Parcel 1":



That portion of the Southwest quarter of Section 1, Township 26 North, Range 13, EWM, Chelan County, Washington, lying South of the U.S. Forest Service Exchange Survey 208, lying East of Lots 49 to 71, inclusive, Plat of Yodelin, according to the plat thereof recorded in Volume 7 of Plats, page 41, lying West of right of way line of U.S. Highway No. 2, lying North of road platted in said Plat of Yodelin.

B. The Grantee's members are the owners of tracts of land described as follows and hereafter referred to as "Parcel 2":

Lots 1 through 71, Plat of Yodelin, records of Chelan County, Washington according to the plat thereof recorded in Volume 7 of Plats, page 41.

Lots 1 through 51, Yodelin Div. No. 2, records of Chelan County, Washington according to the plat thereof recorded in Volume 7 of Plats, page 44.

Lots 1 through 62, Yodelin Div. No. 3, records of Chelan County, Washington according to the plat thereof recorded in Volume 7 of Plats, page 54.

C. The Grantor wishes to grant and the Grantee wishes to receive easements over, under and across those parts of Parcel 1 described as follows and hereafter referred to as "the easement premises":

Well Easement described as follows:

Domestic water well and a construction and maintenance area 50' in diameter centered on the well head. The well bears the Washington State Department of Ecology well tag number AKG591 and is located and described in Department of Ecology records. Also an easement for placement of a structure to house the well head.

Utility and Water Transmission Line Easement described as follows:

Utility and water lines buried in a common trench from the well head to the Parcel 1 line along a route determined during construction and placement of the utility and water lines. Trench route from the well head may be generally south along the existing driveway to the county road, Yodelin Place or alternately, a route generally southwest to northwest to the Parcel 1 boundary with adjacent properties. Easement is 15 feet wide centered over the common utility trench. The approximate centerline of said trench permanently marked on the surface at end points and angle points. Easement alignment to be described in more detail when construction is complete.



Road Easement described as follows:

Road easement is 20 feet wide and follows the existing driveway alignment from County Road, Yodelin Place to the well head.

D. Parcel 1 is presently improved with a building used for recreational use and Parcel 2 are lots some of which are improved with buildings used for recreational use and others of which are vacant.

Now, therefore, in consideration of mutual benefits and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the following grants, agreements, covenants and restrictions are made:

1. Grant of Easement. The Grantor hereby grants to the Grantee, its successors and assigns, as perpetual easements appurtenant to Parcel 2,

- a. an easement for placement and use of a well;
- b. an easement for utility and water transmission lines;
- c. an easement for ingress and egress over, under and across the easement premises;
- d. a road easement to the well and sanitary control area;

2. Use of Easement Premises. Use of the easement premises is not confined to present uses of Parcel 2, the present buildings thereon, or present means of transportation. The primary purposes of said easement are set forth above. Exclusive use of the easement premises is not hereby granted. The right to use the easement premises, likewise for ingress or egress and except as expressly granted in this document, is expressly reserved by the Grantor. The following uses and conditions shall also apply to these grants of easements:

a. The Grantor grants mutual easements for the use, maintenance, service and repair of the well and utilities. All repairs shall be made promptly and in a manner so as to minimize the disruption of water service to other users. Except in the case of emergency repairs, written notice to Grantor shall be given at least 24 hours before of Grantees intention to make repairs to the water line. After repairs have been completed the premises shall be restored to their original condition as nearly as may be possible.

b. There is a restrictive easement with a radius of 100 feet around the well known as the sanitary control area. There shall be no source of contamination allowed within the restrictive easement. There shall be no improvements, except the structure housing the well



head, within the restrictive easement without first obtaining the written consent of the Chelan/Douglas Health District.

c. Utility and water lines buried in a common trench from the well head to the Parcel 1 line along a route determined during construction and placement of the utility and water lines. Trench route from the well head may be generally south along the existing driveway to the county road, Yodelin Place or alternately, a route generally southwest to northwest to the Parcel 1 boundary with adjacent properties. Easement is 15 feet wide centered over the common utility trench. The approximate centerline of said trench permanently marked on the surface at end points and angle points. Easement alignment to be described in more detail when construction is complete.

d. Road easement is 20 feet wide and follows the existing driveway alignment from County Road, Yodelin Place to the well head. The road shall be maintained in such a manner as to provide summer use.

e. Grantee shall be entitled to place a protective structure over the well head and shall be entitled to maintain and repair said structure.

f. Grantee shall extend an existing road from the well head to the outer boundary of the sanitary control area referred in paragraph 2(b) above.

g. Grantee shall provide an approved electric power connection at the well site for the benefit of Grantor. Grantor shall be responsible for the cost of electric power and for the future maintenance and repair of said power connection.

h. Grantee shall provide a water hookup for Grantor at the well site.

i. Grantee will not unreasonably interfere with the beneficial use of Grantor's property.

j. Grantee shall not remove any trees or other vegetation from the easement property without the prior written consent of the Grantor.

4. Additions to Easement. There shall be no additional property added to Grantee's parcels benefited by this easement without the grant of an additional easement by Grantor. However, Grantee may provide water service connection for use by the Steven's Pass Sewer District, or its successor, for use by operations at the sewer treatment facility. This easement shall not benefit other than for single family residences described in paragraph 2b upon which there are existing dwellings as of the date of this easement and upon lots which have no residences but which are not presently restricted for building by Chelan County by virtue of avalanche danger.

5. Warranties of Title. Grantor warrants that he has good and indefeasible fee simple title to the easement premises.

6. Title Insurance and Escrow. Should Grantee so desire, it may apply forthwith for a title insurance policy insuring the easement hereby granted and Grantor will make available for inspection by the title company any evidence of title in his possession.

7. Running of Benefits and Burdens. All provisions of this instrument, including the benefits and burdens, run with the land and are binding upon and inure to the heirs, assigns, successors, tenants and personal representatives of the parties hereto.

8. Termination of Covenant Liability. Whenever a transfer of ownership of either parcel takes place, liability of the transferor for breach of covenant occurring hereafter automatically terminates, except that the Grantor herein remains liable for breaches of covenants of title set forth herein.

9. Attorneys' Fees. Either party may enforce this instrument by appropriate action and should prevail in such litigation, shall recover as part of costs a reasonable attorneys' fee.

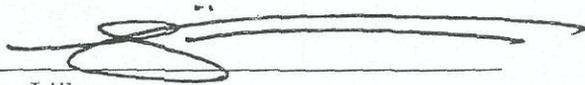
10. Construction. The rule of strict construction does not apply to this Easement Grant. This Easement Grant shall be given a reasonable construction so that the intention of the parties to confer a commercially usable right of enjoyment on the Grantee is carried out.

11. Notice. Grantor's address is 6318 NE Hidden Cove Road, Bainbridge Island, WA 98110, and Grantee's address is Steve Melton, 24012 44th Avenue SE, Bothell, WA 98021. Either party may lodge written notice of change of address with the other. All notices shall be sent by U.S. mail to the addresses provided for in this paragraph and shall be deemed given when placed in the mail. The Affidavit of the person depositing the notice in the U.S. Post Office receptacle shall be evidence of such mailing.

12. Release of Easement. The Grantee herein may terminate this instrument by recording a release in recordable form with directions for delivery of same to Grantor at 6318 NE Hidden Cove Road, Bainbridge Island, WA 98110 last address given pursuant hereto whereupon all rights, duties, and liabilities hereby created shall terminate. For convenience such instrument may run to "the owner or owners and parties interested" in Parcel 1.

IN WITNESS WHEREOF the Grantor and the Grantee have hereunto set their hands and seals this 21 day of JULY, 2005.

GRANTOR:

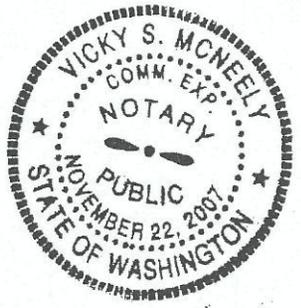

Kaleva Liikane

GRANTEE:



STATE OF WASHINGTON)
) ss.
COUNTY OF WA)

On this day personally appeared before me Kaleva Liikane to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed for the uses and purposes therein mentioned. Given under my hand and official seal this 21 day of July, 2005.



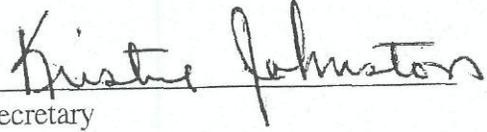
Vicky S. McNeely
(Signature)
Vicky S McNeely
(Printed or typed name)
Notary Public, State of Washington
Residing at Bethell Wa.
My Commission expires Nov 22, 2007

Yodelin Property Owners Association



President

2288478
Page: 7 of 7
89/86/2065 89-24A
Chelan Co, WA
EASE # 38.88
CROSSLAND LAW OFFICE



Secretary

Supporting Supplement to Water Right Application

Mitigation Plan for Public Water System No. 29316C

March 24, 2007

Yodelin Property Owners Association
Supporting Supplement to Water Right Application
Mitigation Plan for Public Water System No. 29316C
March 24, 2007

The Mitigation Plan presented here is not required by any regulatory agency. It is submitted along with the Water Right Application as a good faith effort by the Yodelin Property Owners Association to reduce the impact of ground water withdrawn from the Nason Creek watershed to supply water to the Yodelin area. Yodelin intends to implement the plan upon receipt of a water right from the Washington State Department of Ecology. Completion of the plan shall be in accordance with the schedules shown for each element.

Conservation

- Develop and implement a comprehensive water conservation program, including conservation pricing, for all homeowners. Refer to the Conservation Plan attached for details.

Riparian Vegetation

- Initiate an ongoing program to remove noxious weeds. Begin in the spring following the issuance of a water right.
- Plant native plants, shrubs and trees on disturbed slopes, barren stream banks and dry shrub fields within the Yodelin Development. The fill slopes of North Nason Road from South Nason Road to Nason Creek shall be first priority. Begin the 2nd year following the issuance of a water right and continue each year for 5 years.

Education

- Provide educational materials to all Yodelin cabin owners including the importance and methods of water conservation, watershed protection and restoration, and information about native plants and riparian vegetation. Begin within 6 months following issuance of a water right and continue annually thereafter.
- Implement an alert system to notify property owners of periods of low stream flow and carry out emergency water conservation measures during those periods. Complete system not later than 6 months following issuance of a water right.

Water Quality

- Install and maintain check dams and/or sediment traps on all surface water drainage ditches and structures within the Yodelin development prior to discharging to any creek. Begin in the 2nd year following issuance of a water right and continue thereafter.

Fish Passage

- Monitor culverts on Stevens and Nason Creek from Stevens Pass to Smith Brook and notify the Department of Fish & Wildlife and The Water Quality Section of DOE if obstructions to fish passage are found. Begin in the 1st year following issuance of a water right and continue semi-annually thereafter.

Yodelin Property Owners Association
Water Conservation Plan, Public Water System No. 29316C
March 24, 2007

Background

The Yodelin Property Owners Association approved a Water Conservation Plan in 1997. The conservation plan outlined below is a revision to that plan. The 1997 plan was designed for the existing water system that relies on diversions of surface water into two storage tanks that distribute water by gravity through a 4" water main to the 40 cabins. This revised plan addresses a proposed new water system, mandated by the Department of Health, utilizing a single ground water well, a treatment system and a single 35,000-gallon storage tank. Water from the storage tank is pumped into the existing 4" water main. Upon completion of the new system the existing surface water source and tanks will be abandoned. The Department of Health has approved the design for the new system.

The conservation program recognizes the unique character of the Yodelin community. With only 40 cabins, Yodelin is a close community where people know one another. They have learned from dealing with the harsh winter environment how to work together to survive as a community. Examples of this cooperation are the well-attended annual water work parties and semi-annual meetings. The Association's members have evidenced a commitment to water conservation and a willingness to work together to achieve that commitment. At the Association's January 1997 meeting, the members unanimously passed a resolution affirming a commitment to meeting the conservation objectives outlined in the 1997 Conservation Plan. That commitment continues.

Conservation Plan Objectives

1. Minimize daily and total annual water consumption.
2. Minimize operational costs of the water system.
3. Develop education and awareness programs to encourage water conservation.
4. Promote a maintenance program to minimize unnecessary loss of water.

Requirements of Conservation Program

Because the Yodelin system is small, the system falls within the Department of Health and Department of Ecology's category of "fewer than 1000" customers. The required conservation measures for systems of this size are 1) source meter installation and 2) program promotion. In addition, the plan must include an evaluation of the cost and benefits of installing individual service meters and of conservation pricing.

Conservation Plan Elements

Source metering: The new Yodelin water system will include a meter water to measure and totalize all water pumped from the well. The Association will collect data from this meter and publish semi-annual summaries of flow to the Association membership at the semi-annual Association meetings.

Individual service meters: The 10'-12' winter snow pack at Yodelin presents difficulties for accessing and reading service meters. Yodelin has installed 8 individual remote-reading service

meters as of March 2007. The Association will continue the effort to have all individual service connections metered by a date set at the first semi-annual Association meeting after the new system is placed in service. Individual service meters are an important aid in locating service leaks and could serve as the basis for individual water charges if the Association decides to implement such a charge in the future.

Conservation pricing: Yodelin will develop a system-wide conservation pricing mechanism. It will reward the community when yearly water consumption is less than the goal established the previous year and penalizes the community when consumption is more. The Property Association currently assesses the property owners an annual flat fee for water. Under the conservation-pricing plan an increase in water usage above target usage would result in an equal surcharge to all customers. Similarly, a decrease in water usage would mean a reduction in the base fee for water. Should it become necessary to control water usage further, a plan for individual charges could be developed. There are no plans for that at this time.

Ongoing Conservation Activities

Program Promotion

- Include water saving tips in Property Association's mailings.
- Feature a speaker on water conservation at a Yodelin Property Owners' meeting.

Other Measures

- Prepare maintenance procedures (i.e. how to prevent pipes from freezing and breaking by wrapping exposed lines with heat tape and/or insulation, measures to assure that plumbing fixtures do not leak, etc.) for each cabin.
- Continue water system maintenance program to prevent breaks in the line and leaks in the system. The program includes routine maintenance, the annual work party and periodic system upgrades.
- Mark road-side water shut-off valves of individual cabins with 10 foot poles in order to facilitate shut off, if leaks are identified.
- Implement an alert system to notify property owners of periods limited water availability and implement emergency measures that include reducing showers and toilet flushing, banning clothes washing, etc.
- Explore the feasibility of new cabins installing individual gray water systems. If feasible and the Health Department approves, encourage installation of gray water systems in all new cabins.
- Upon sale of an existing unit, plumbing fixtures shall be replaced with the latest technology low-flow fixtures, if not existing. The new cabin owner shall complete such retrofit within one calendar year of sale.

The table below contains a budget and schedule for the Conservation Program. Completion of the Program is in accordance with the schedule shown. The start date is the date that the new water system is placed in service.

Schedule and Budget for Conservation Measures

Measure	Budget	Schedule			
		3 Month	6 Months	1 Year	Up to 3 Years
Water saving tips in mailings.	\$45		X		
Speaker on water conservation.	\$100		X		
Individual cabin maintenance procedures.	\$1		X		
Cabin kits with conservation tips.	\$5		X		
Continue system-wide maintenance program.	No added cost.	X	Ongoing	Ongoing	Ongoing
Mark cabin shut-off valves.	\$200			X	
Notification and emergency water conservation measures.	Volunteer labor No cost.	As needed	As needed	As needed	As needed.
Install gray water systems in new cabins, if feasible.	Unknown				When/if feasible
Upon a cabin's sale, replace fixtures with low flow fixtures, if not existing.	Maximum of \$2600*	X	Ongoing	Ongoing	Ongoing
TOTAL	\$3036				

*Assumes that 1/3 of the cabins will change hands in the next 20 years. The owner will assume the cost.

Target Water Savings Projections

The Association will monitor consumption through the first year of service on the new system and will establish an annual target for the following year and each year thereafter.