
APPENDIX 13.1
Excerpts from the Priest
Lake Management Plan and
Laws Pertaining to the Plan

Wastewater Treatment

There are over 1,700 equivalent units (EU's) around the perimeter of Priest Lake which generate wastewater. These are single family residences (most used only seasonally), multiple unit resorts, businesses such as stores and marinas, and campgrounds.

There are several methods used to treat wastewater. Over 50% of the EU's are serviced by six sewage lagoon - land application systems operated by separate sewer districts. All systems are designed for effluent only, with each house or resort providing a septic tank(s) to remove solids. The three largest systems are operated by Coolin, Outlet Bay, and Kalispell Bay Sewer Districts, and were constructed in the early 1970's. The sides and bottom of the lagoons were treated with bentonite. Every five years the sewer districts land application permits must be renewed by DEQ. In the 1994 renewal cycle, DEQ presented a view that these three lagoon systems were leaking substantially, posing a threat of contamination to underlying groundwater. This view was primarily based on inflow - outflow data supplied yearly by the sewer districts. However, the flow data was recognized to be inadequate and often inaccurate. The three sewer districts are currently making major improvements in flow instrumentation, land application piping and acreage applied, and are installing monitoring wells. If improved flow instrumentation and monitoring show a threat of groundwater contamination by lagoon seepage, synthetic liners will be required.

There are over 500 homes with individual septic systems. About 290 of these fall within the Granite/Reeder Sewer District on the west side, and the others are mostly Idaho State leased lots on the east side. Many of the individual septic systems were in place prior to 1971 and are considered substandard by current Panhandle Health District (PHD) regulations. Systems installed prior to 1971 could be as close as 50 feet to streams and lakes. Regulations adopted in 1971 required separation distances of 200-300 feet, depending on soil texture. There are also specified separation distances between the septic system and groundwater. The use of drywells was prohibited.

In a few cases, blocks of homes have developed a community drainfield system, for example the Pinto Point Sewer District. Some resorts in the Granite/Reeder area pump or transport their sewage to drainfields away from the lake. Campgrounds not connected to lagoon systems use outhouses, septic tanks, vaulted toilets, and/or drainfields.

There are several features of the Priest Lake area that make proper management of wastewater essential, and justify the upgrading of substandard septic systems. First is the very nature of phosphorus and nitrogen in septic effluent. Phosphorus is very concentrated and in the ground most phosphorus is converted or found as dissolved ortho-phosphate. If this phosphorus seeps into the lake it is immediately available for use by algae (nutrient enrichment). Soils treat septic effluent phosphorus by a strong chemical adsorption. But effective phosphorus treatment requires several feet of soil between the drainfield and groundwater table, and 200-300 feet or more between the drainfield and surface water. Sandy and gravelly soils are not as efficient at phosphorus removal as soils with some loam and clay. As described below, there are several areas in Priest Lake which do meet the conditions for effective phosphorus treatment.

Nitrogen from septic effluent is also very concentrated. Nitrogen in a septic tank begins as ammonia. As ammonia reaches the drainfield, in the presence of oxygen, it becomes converted to nitrate. Soils do not treat nitrate. This ion is extremely mobile and easily moves through soil into groundwater. Nitrate is assimilated by algae when it reaches lake waters.

Algal Growth Potential studies in 1994 by project consultant KCM, Inc. indicated that phytoplankton productivity in the open waters of Priest Lake is co-limited by both phosphorus and nitrogen. The dilution factor of the open waters would likely prevent nutrient enhanced groundwater (from wastewater) to increase this productivity. Studies also measured the amount of biological growth on rocks in nearshore zones of Priest Lake (about 5 meters depth and shallower). Attached algal growth has been found to be fairly luxuriant considering the oligotrophic nature of Priest Lake open waters. Nutrient limitation was not assessed for attached algae. If groundwater seeps into the lake, nearshore, and has an added element of septic effluent, this could provide a nutrient enrichment to attached algae before becoming diluted. The growth of rooted aquatic plants (macrophytes) could also benefit from enriched groundwater in the lake sediments.

A visual effect of nutrient enriched groundwater from septic effluent can be observed when a septic drainfield fails and effluent begins surfacing on the ground. Several of these areas along the shoreline were found during the course of the Priest Lake Project. The stream of water trickling over rocks to the lake has a bright green, long filamentous growth of attached algae.

Around the perimeter of Priest Lake there are aquifers with high water tables. For example, the Priest Lake Project included a groundwater study in the Granite/Reeder Sewer District. Underneath is an aquifer flowing toward the lake, and not confined by clay layers. South of Granite Creek along the lakeshore the water table is high, from 3 to 7 feet below the surface. The soils are highly permeable sands and gravels. There is high density housing with many individual septic tanks and drainfields within 50-200 feet of the lake.

With a high water table and sandy soil, treatment of septic effluent phosphorus would be minimal in this area of Granite/Reeder. Nitrogen from effluent would quickly become incorporated into the groundwater. Monitoring wells in the area showed some wells with nitrate and chloride levels far beyond what could be attributed as background. The suspicion is that nitrate has been elevated by septic plumes. In addition, there is a potential health concern. Wells for drinking water in the area draw water from 35 to 80 feet below the ground with no clay layer separation from the septic systems above.

Studies were also conducted in the Kalispell Bay Sewer District. There is a large aquifer flowing toward the lake and there are two older sewage lagoons in the area. There are some pockets of consolidated clay layers forming a cap over portions of the aquifer. Monitoring wells near the shore did not show nitrate above background levels. One sampling run on monitoring wells installed by the sewer district, just down gradient from the lagoons, did show nitrates and chlorides well above background levels. These wells will be monitored regularly to assess if lagoon seepage water is elevating groundwater nutrient concentrations.

Through a contract with the University of Idaho, a groundwater atlas is being constructed for the perimeter of Priest Lake. In part, this is an effort to identify other aquifer systems that have characteristics similar to the Granite/Reeder area, and would be susceptible to plumes from individual septic systems or leaky sewage lagoons.

The subcommittee on Wastewater Treatment designed Action Items to improve existing treatment systems (AIs 1,2 and 3) and assure adequate management to minimize the introduction of wastewater nutrients into groundwater, streams, and the lake (AIs 4 and 5). All treatment systems will need careful scrutiny to assure they are being operated properly, and their management personnel given appropriate guidance by DEQ and PHD. These two agencies are to ensure that State of Idaho laws and regulations regarding wastewater treatment are strictly enforced and that their programs are carefully coordinated. All users of Priest Lake and its basin will be asked to operate within the parameters of this lake management plan and will be required to meet fully the restrictions of the State of Idaho.

Motorized Watercraft

As discussed in the lake topic Recreation, there is an increasing number of recreationists utilizing the Priest Lake basin. Associated with that trend are increasing numbers of motorized watercraft on the lake.

There are several potential areas of water quality impact related to motorized watercraft. One is the effect of shoreline erosion by boat generated waves. Baseline studies of the Priest Lake Project did not access shoreline erosion. In Priest Lake there are frequent strong winds, and differentiation of bank erosion between natural forces and boat wakes would be difficult. Enforcement and public education of the 10 mph speed limit within 100 feet of shore (pers. comm., Bonner County Deputy Charles Anderson) could help alleviate erosion directly related to boat wakes.

Motorized boats can also resuspend fine sediments in shallow areas through water column disturbances. This can increase turbidity and redistribute total phosphorus attached to sediments. There are two main shallow areas in Priest Lake: one is the southern bay around Coolin, and the other is The Thorofare. An electronic eye set up by the USFS estimated around 10,000 boat trips up The Thorofare to Upper Priest Lake in the summer of 1994. The Thorofare is a no-wake-zone, but violations are occasionally observed. In mid to late summer there is very low flow and the river becomes a long shallow lake. Studies in 1995 will attempt to assess any impact to water quality within The Thorofare caused by motorized watercraft.

A second potential water quality impact is the discharge of wastewater from boats into the lake. This is the focus of the motorized watercraft Action Items. This is also a common concern expressed by the public at planning team meetings.

The Federal Clean Water Act prohibits discharge of untreated sewage or inadequately treated sewage into a lake such as Priest. Any boat with an installed marine sanitation device (toilets and blackwater holding tanks, generally boats 20 ft and longer), and certified by the U.S. Coast Guard, shall be designed and operated to prevent the overboard discharge of sewage into lakes.

Wastewater Treatment	Priority	Lead	Funding Sources
1. The project manager shall assist the Granite/Reeder Sewer District with the planning and development of a community wastewater treatment plan.	1	GRSD, PLPM-DEQ	GRSD
2. Prior to issuance of a permit, a sewer district which intends to construct a sewage lagoon system must provide DEQ with evidence that the system has been designed according to the best available technology. Before a permit can be renewed, it must be established that existing lagoons do not leak beyond the limits specified by their original designs.	1	DEQ-P&C, PLSDs Enf = DEQ-P&C	PLSDs
3. All users of unapproved disposal systems shall have five years after enactment of this Management Plan, in which to meet acceptable standards.	1	PHD, DEQ-P&C, IDL, PLSDs Enf = PHD	Private, PLSDs, PHD
4. Authority and funding shall be extended to the IDL to permit it to manage recreation on the lands under its jurisdiction and to enable it to better enforce existing laws dealing with wastewater management.	1	IDL Enf = IDL	IDL
5. New rules shall be established to better evaluate whether a septic system (either private or public) has failed, and whether the location of a system relative to the lake or its tributaries is adequate to protect these waters; given soil conditions, slope, distance from the shore, presence of and distance from solid rock, existence of an aquifer or other high water table conditions, etc.	1	PHD, DEQ-P&C, PLSDs	PHD, DEQ, PLSDs
6. A monitoring program shall be established to assure that future wastewater treatment will be sufficient to attain the goals of Idaho Code 39-105(3)(p). Specifically, "...the stated goal of the plan shall be to maintain the existing water quality of Priest Lake."	1	PLPM-DEQ	PLMP-DEQ

Notes and Explanations:

Item 1. The Granite/Reeder Sewer District contains about 290 homes, and a few resorts, which are serviced by individual septic systems. Most systems are septic tanks, but it is known that there are a few drywells and cesspools. Many systems were constructed prior to the 1971 regulations and considered substandard. Systems installed prior to 1971 could be as close as 50 feet from the shoreline. In addition, the high density housing area south of Granite Creek overlies a high water table with permeable sands and gravels, and drinking water wells as shallow as 30 feet. Groundwater studies as part of the Priest Lake Project indicate that in some areas background nitrate and chloride levels have been increased by septic effluent, but these results are not conclusive.

Wastewater Treatment Notes, Item 1 continued

The Granite/Reeder area is the only major area on the lake that lacks effective group treatment facilities. There have been efforts in the past to gain approval from residents for the development of a community treatment system, but these efforts have failed. Members of the planning team wastewater subcommittee, and citizens attending team meetings, express a strong opinion that the sewer district develop an effective community wastewater treatment system.

The initial draft lake plan called for a state mandated community-wide wastewater treatment system. Verbal testimony and written comments were given by sewer district members at the August 12th public meeting/hearing, arguing against this state mandate in the plan. Sewer district members expressed that the district was on course to develop a waste handling system, including the hiring of an engineering consultant firm. They stated that waste handling solutions had to consider geographical, population, and priority differences within the sewer district boundaries. They proposed that the most cost/effective method could be multiple systems of differing designs within the district. Cases were given of homes in the sewer district that are within the 1971 guidelines for septic tanks and drainfields and may not need to be part of a community sewer system. District members also stated that attempts to secure funding assistance has met with no success.

On the August 27th meeting of the planning team, comments by the sewer district were considered. The team concurred that at this time the sewer district should be given the opportunity to develop and finance the complex issue of sewage treatment without a state mandate. Action Item #1 was modified, directing the project manager to assist the sewer district in its efforts with the planning and development of a community wastewater treatment plan.

Item 2. Sewage lagoon - land application systems is the most common wastewater treatment method in the watershed, and likely there will be additional systems constructed in the future. The subcommittee felt that for protection of groundwater quality, and to assure that groundwater seeping into the lake will not be nutrient enriched, that all new systems be constructed according to the best available technology. There are three existing sewage lagoon - land application systems, those of the Coolin, Outlet Bay, and Kalispell Sewer Districts, that were constructed in the early 1970's. There is suspicion that they are leaking beyond their original designs. Efforts are currently underway to improve these systems, and through better inflow-outflow measurements and test wells, determine the amount of leakage. These efforts would become provisions for permit renewal.

Item 3. There are known septic systems which do not have a Panhandle Health District permit (unapproved).

Item 4. IDL does not now have the authority or financial support to employ staff to oversee recreation and wastewater management on its lands in the Priest Lake basin. IDL staff acknowledge an ever increasing recreational use on its lands, and the accompanying problems.

Item 5. The subcommittee felt that it was inadequate to evaluate a septic system failure by the appearance of effluent on the ground surface. Failures at this point often lead to wastewater discharge to the lake. New methods and techniques will be sought to detect failures at an earlier stage. Two programs stemming from the PLP will aid in assessing adequate placement of wastewater treatment systems. A Geographical Information System (GIS) is being developed for the Priest Lake basin, and it details slope, geology, soils and location of wastewater treatment systems. Incorporated into the GIS will be a groundwater atlas being developed by the University of Idaho.

APPENDIX A

Selected Sections of Idaho House of Representatives House Bill No. 319 (1991)

1 AN ACT
2 RELATING TO WATER QUALITY MANAGEMENT OF PRIEST LAKE; PROVIDING LEGISLATIVE
3 INTENT; AMENDING SECTION 39-105, IDAHO CODE, TO PROVIDE THAT THE DIRECTOR
4 OF THE DEPARTMENT OF HEALTH AND WELFARE SHALL FORMULATE A WATER QUALITY
5 MANAGEMENT PLAN FOR PRIEST LAKE TO BE SUBMITTED TO THE BOARD OF HEALTH AND
6 WELFARE FOR ITS APPROVAL.

7 Be It Enacted by the Legislature of the State of Idaho:

8 SECTION 1. (1) The Legislature of the state of Idaho finds:

9 (a) That the waters of Priest Lake are threatened with deterioration that
10 may endanger the natural beauty, wildlife and fisheries value, recre-
11 ational use and economic potential of Priest Lake.

12 (b) That preservation and protection of Priest Lake and maintenance of
13 the use and enjoyment of the lake is in the best interest of all citizens
14 of the state.

15 (c) Recreational use of Priest Lake is an important element of the north-
16 ern Idaho economy.

17 (d) Increasing demands upon the lake require coordinated state and local
18 action to maintain the existing water quality of the lake.

19 (2) Therefore, it is hereby declared that the purposes of this act are:

20 (a) To establish a lake water quality management plan for Priest Lake to
21 maintain existing water quality in lieu of an outstanding resource water
22 designation.

23 (b) To establish that the Department of Health and Welfare is responsible
24 for protecting the current water quality of Priest Lake during the manage-
25 ment plan development period.

26 (c) To provide that the final plan will be approved by the board of
27 Health and Welfare and thereafter submitted to the legislature.

Idaho Code § 39-105(3)(p)

(p) The formulation of a water quality management plan for Priest Lake in conjunction with a planning team from the Priest Lake area whose membership shall be appointed by the board and consist of a fair representation of the various land managers, and user and interest groups of the lake and its Idaho watershed. The stated goal of the plan shall be to maintain the existing water quality of Priest Lake while continuing existing nonpoint source activities in the watershed and providing for project specific best management practices when necessary. The plan shall include comprehensive characterization of lake water quality through completion of a baseline monitoring program to be conducted by the department and shall consider existing economics and nonpoint source activity dependent activities of the Priest Lake area. The planning team shall conduct public hearings and encourage public participation in plan development including opportunity for public review and input. Technical assistance to the planning team with state nonpoint source management programs in forest practices, road construction and maintenance, agriculture and mining shall be provided by the department. Technical assistance to the planning team on area planning, zoning, and sanitary regulations shall be provided by the clean lakes council. The plan shall be submitted to the board for its approval at the end of a three (3) year plan development period. Upon review and acceptance by the board, the plan shall be submitted to the legislature for amendment, adoption or rejection. If adopted by the legislature, the plan shall be enacted by passage of a statute at the regular legislature session when it receives the plan and shall have the force and effect of law. Existing forest practices, agricultural and mining nonpoint source management programs are considered to be adequate to protect water quality during the plan development period.

Priest Lake Planning Team Membership

Members

Jill Cobb
Jules Gindraux
Ray Greene
David Hunt
Shirley McDonald
Wayne Newcomb
Frank Nicol
Austin Raine
Donald Stratton
(PLPT Chairman)
Gerald Stern
Larry Townsend
Gordon West

Organization/Affiliation

U.S. Forest Service
Citizen Volunteer Monitoring Program
Idaho Department of Lands
ORW Nominator
Local Timber Industry
Bonner County Commissioners
State Lessees Association
Local Cattle Ranchers
Priest Lake Chamber of Commerce

Timber Industry Consultant
Idaho Department of Parks and Recreation
Selkirk Priest Basin Association

Alternates

Eric Anderson
Harry Batey
Sue Brinkmeyer
Kent Dunstan
Joe Hinson
Roger Jansson
Rick Samples
Stan Roehl
William Soper
Ruth Watkins
R.G. Wright

Local Business
Selkirk Priest Basin Association
Lake Resident
USFS Priest Lake District Ranger
Private Timber Industry
Idaho Department of Lands
Idaho Department of Parks and Recreation
Outlet Bay Sewer District
State Lessees Association
Clark Fork Coalition
Citizen Volunteer Monitoring Program

Technical and Procedural Advisors

Peggy Burge
Lisa Prochnow
Glen Rothrock
Jack Skille
Ed Tulloch

Idaho Board of Health & Welfare
Clean Lakes Council
Idaho Division of Environmental Quality
DEQ
DEQ

Idaho Session Laws 1996, Chapter 323, Section 1
(House Bill No. 807, 1996)

AN ACT

RELATING TO THE PRIEST LAKE MANAGEMENT PLAN; ADOPTING THE PRIEST LAKE MANAGEMENT PLAN ADOPTED IN NOVEMBER, 1995, AND AMENDED FEBRUARY 16, 1996 AND TO PROVIDE DIRECTIONS TO THE LEGISLATURE, STATE AGENCIES, POLITICAL SUBDIVISIONS, THE PRIEST LAKE MANAGEMENT TEAM AND THE DIRECTOR OF THE DEPARTMENT OF HEALTH AND WELFARE.

Be it Enacted by the Legislature of the State of Idaho:

SECTION 1. Pursuant to the requirements of subsection 3.p. of Section 39-105, Idaho Code, the Priest Lake Management Plan, adopted in November, 1995, and amended February 16, 1996, be, and the same is hereby approved. The Legislature of the State of Idaho, state agencies and political subdivisions shall take appropriate actions to implement the plan. The Director of the Department of Health and Welfare shall, in cooperation with other state agencies, political subdivisions and the Priest Lake Planning Team, ensure consistency with the Priest Lake Management Plan and Chapter 36, Title 39, Idaho Code, so that the plan and its implementation are in concert with the provisions of Chapter 36, Title 39, Idaho Code.

Approved March 18, 1996.

APPENDIX 13.2
Treatment Site 1
Appraisal

SUMMARY REPORT
OF
COMPLETE APPRAISAL

FOR

GRANITE-REEDER BAY
SEWER DISTRICT

OF

USFS TRACT
80 ACRES
NW BONNER COUNTY

APPRAISED BY

A. JAMES CADDIS, MAI
Paulsen Center, Suite 379
421 West Riverside Avenue
Spokane, WA 99201

Date of Valuation: February 28, 2002



**CADDIS
VALUATION
SERVICE**

A. James Caddis, MAI

Real Property Appraising & Consulting

March 18, 2002

Telephone/Fax 509/456-8940

Granite-Reeder Bay Sewer District
c/o Welch Comer & Assoc., Inc.
1626 Lincoln Way
Coeur d'Alene, ID 83814

RE: USFS Tract for Exchange
80 acres, Sec. 17

Attention: Vincent D. Aguirre
Chairman of Board
Granite-Reeder Bay Sewer District

Dear Mr. Aguirre:

In accordance with your request, I have examined and made an appraisal of a USFS tract of 80 acres with 498 MBF of merchantable size timber. This is in Section 17 of T61N, R4W. It is for a proposed land exchange between your group and USFS.

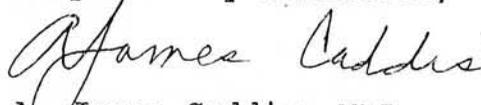
The appraisal report of 40 pages summarizing my examination, analyses, findings, and conclusions is attached. Based upon the information set forth in the attached report, I have concluded that the market value on a cash basis, as of February 28, 2001, is

\$236,000

This valuation is premised upon the assumptions, limiting conditions, descriptions, and certifications given in the attached appraisal report.

This has been an interesting assignment. Thank you for the opportunity to be of service.

Respectfully submitted,


A. James Caddis, MAI

jw

cc: USFS

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SUMMARY OF IMPORTANT FACTS AND CONCLUSIONS

PROPERTY APPRAISED

A tract of land in NW Bonner County about one-quarter mile west of the west edge of Priest Lake and about four miles easterly of Nordman. A little over half has been logged off (west portion) and has a good pre-merchantable size cover of mixed tree species. The easterly portion has a net cruise volume of 498 MBF of merchantable size timber. A paved road (#2512) goes north/south through the property with graveled Hagman Road going easterly from this in the SE portion. Total acreage without easement is 76.25 acres. "Excess" timber, after leaving some for esthetics and screening, is 380 MBF.

LEGAL DESCRIPTION

S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 17, T61N, R4W, B.M.

HIGHEST AND BEST USE

"Speculative" with potential for platting residential lots and/or acreage tracts and/or timber growing and harvesting.

OWNER

U. S. Government, Administered by U. S. Forest Service (Idaho Panhandle National Forests)

DATE OF VALUE

February 28, 2001 (Date of last appraiser inspection)

MARKET VALUE

Total Value: \$236,000

(Land: \$2,000/acre

Excess Timber: \$222/MBF)

ASSUMPTIONS AND LIMITING CONDITIONS

It is assumed that:

There has been no contamination of the property by hazardous or toxic substances. Further, a potential buyer has no liability or cost for existing or potential environmental hazards resulting from ownership prior to the sale.

The property is clear of encumbrances and easements, except as noted herein, and has readily marketable title.

The legal description and the land area are essentially correct.

There are no hidden or unapparent conditions of the property or subsoil which would make it more or less valuable than a comparable property.

Limiting Conditions:

This report is to be used in its entirety. Extractions herefrom render the report invalid.

Information, estimates and opinions which were obtained from others are believed to be reliable.

Legal and engineering matters are not covered by the appraisal.

Maps, plats and exhibits included herein are for illustration only as an aid in visualizing matters discussed within the report. They should not be considered as surveys or relied upon for any other purpose.

Testimony or attendance in court is not required by reason of this appraisal, but can be arranged.

Neither all nor any part of the contents of this report shall be disseminated through advertising media or other public means of communication without the prior written consent of the appraiser.

Boundaries are not visibly marked out on the ground. The appraiser used reasonable judgement in estimating location of boundaries.

This report is confidential between appraiser and client.

Sales data and information related to the appraised ownership is believed to be reliable, but cannot be guaranteed.

The date of value, to which the opinions expressed in this report apply, is set forth in the letter of transmittal. The appraiser assumes no responsibility for economic or physical factors occurring at some later date which may affect the opinions stated herein.

Value, if any, of mineral rights is included in the estimate of value. There is no available market evidence indicating that properties of this type have any measurable increment of value for the mineral rights. There is no known indication of mineral value on this property and such a possibility would be very speculative.

The estimated market value herein is based on a sale of land and timber together. The value of land and timber together may be, and usually is, significantly different than if land and timber are treated as separate units.

The timber is free of any liens or encumbrances and can be harvested in its entirety subject only to provisions of the Forest Practices Act.

No local or governmental objections or restrictions will create unusual or unique delays or costs in operation of this property.

The timber cruise was done accurately and is statistically correct.

An incomplete Federal Land Status Report is in the Addenda. For this appraisal it is assumed that there are no encumbrances on the property other than the Easements cited.

PURPOSE OF THIS APPRAISAL

The purpose of this appraisal is to estimate the current Market Value of fee title to the subject property on a cash basis (as defined below). This is to be used as an aid in arriving at an equitable land exchange between Granite-Reeder Bay Sewer District and U. S. Forest Service.

ESTATE APPRAISED

Value is based upon a free and clear fee simple title (subject to easements as stated and subject to typical public regulations) to the subject property described as follows:

S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 17, T61N, R4W, B.M.

A Statement of Interest Conveyed is in the Addenda and is considered herein. Land with its standing timber is combined for the value. The parcel is valued as if it was for sale on the open market.

MARKET VALUE DEFINITION

As used herein, market value is defined as the amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would be sold by a knowledgeable owner willing, but not obligated, to sell to a knowledgeable purchaser who desires, but is not obligated, to buy. This presumes the property has been exposed on the open market for a reasonable length of time. In this instance, a reasonable time is considered to be three to five months.

SCOPE OF THE APPRAISAL

Since this is essentially a vacant land tract, the Cost and Income Approaches to value were not explored, although some potential subdivision analysis was considered. The overall market in northwest Bonner County for vacant land tracts of various types and sizes, but primarily of timber growing land and wooded recreation or residence land, was examined and analyzed. This is for the general area over the past two years or so. The available evidence from these analyses, which included some comparison of specific tracts to subject, is the basis for valuation of the subject tract. The overall market for

merchantable size timber, especially on such properties, was also examined and given applicable consideration. This included examination and analysis of delivered log prices and of logging costs. The final valuation of subject thus included the value contribution of the "excess" currently economically harvestable merchantable size timber thereon plus the land with its pre-merchantable stocking. A full appraisal was done and all data considered and conclusions reached from such analyses are summarized in this report.

INTRODUCTION

PROPERTY APPRAISED

An 80 acre tract (including roads) with pre-merchantable tree cover on about 42 acres and merchantable timber totalling 498 MBF on the remaining 38 acres (roads included in these acreages). Merchantable timber stand is really on about 35 acres. Total valued acreage without road easement area is 76.25 acres.

LOCATION

This is in northwest Bonner County, Idaho, north of Reeder Bay and about one-quarter mile west of west shore of Priest Lake.

LEGAL DESCRIPTION

S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 17, T61N, R4W, B.M.

OWNER

U. S. Government, Administered by U. S. Forest Service (Idaho Panhandle National Forests)

OWNERSHIP HISTORY

Has been in Federal ownership for many years.

DATE OF VALUE

February 28, 2002 (Date of last appraiser inspection)

APPRAISER'S EXAMINATION

Appraiser examined the property (accompanied by Vincent Aguirre) on February 4, 2002, and made an inspection on February 28, 2002.



Vicinity Map

AREA AND VICINITY DESCRIPTION

Subject is located in northwesterly Bonner County. Nearest major community is Priest River, about 36 miles south of Nordman on State Highway 57 at its junction with U.S. Highway 2. Nordman is the junction of Highway 57 and Reeder Bay Road, and it is four miles easterly on that latter road to subject. The county seat of Sandpoint is about 17 miles east of Priest River on Highway 2.

Current population of Bonner County is about 35,000 people. Sandpoint, the largest city, has almost 7,000. Priest River is the next largest town with only about 2,000. So it can be seen that the largest share of population is essentially rural. The county population growth since 1990 is approximately 30%, with this county being the fifth fastest growing county in Idaho.

This is primarily a timber product county with at least six sawmills plus other smaller wood product plants. Tourism and/or outdoor recreation is becoming more predominant each year in the county as a whole, primarily since it has two major lakes surrounded by mostly public lands. About 82% of the County is considered forest land. About 45% of total land is in Federal ownership and about 15 in State ownership.

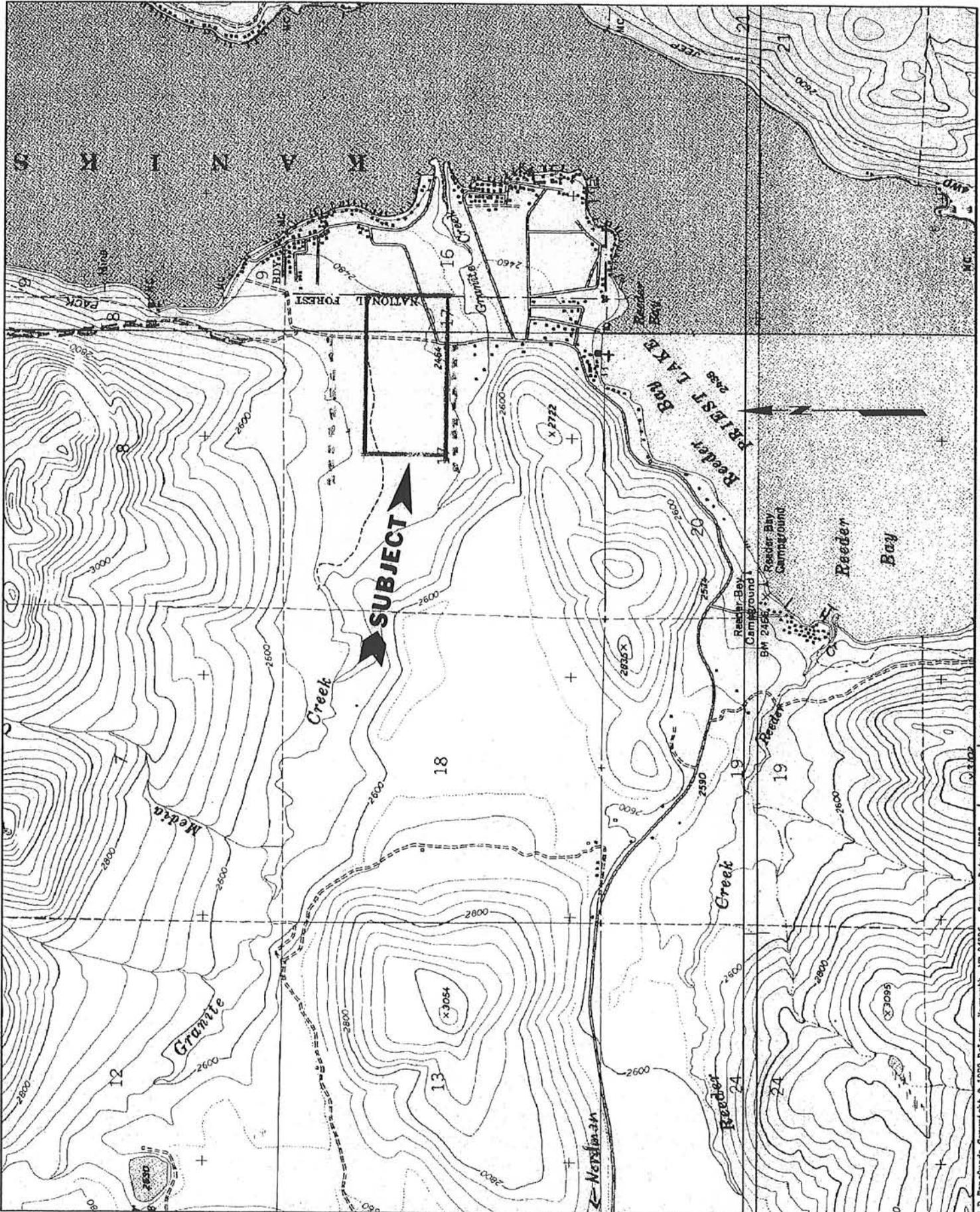
From this it can be seen that privately owned forested lands tend to be somewhat scarce on the market. Tracts near or on public roads have generally been divided into acreage tracts and sold, with many now having residences (seasonal and year-round).

The Priest Lake area (west side of the County north of Highway 2) has very limited acreage of privately owned lands. Most are along the State highway and the major county roads. Although there are a few relatively large acreages mostly on some flat lands (much of it meadow) along streams and/or major roads, most private lands are in tracts of less than 40 acre size, with many in lots of about one to ten acres.

There is a small community about 14 miles south of Nordman on Highway 57. This is known as Priest Lake (sometimes Lamb Creek). There is a grade school there plus a few commercial shops and there is a golf course with residential lots nearby. There is also a saw mill on the highway at the very southerly end of this community area.

There are several public camp and picnic sites along the west shore of Priest Lake and there is public road along the greatest share of the shoreline. On parts of this shoreline there are residences (mostly seasonal) under special use permit of the USFS. There are also a few areas of private shoreline residences and at least three resorts on this west shore. (The east side of the lake is primarily State owned lands.)

The lake, the roads and the forest and meadow cover create an environment that causes the land market to be continually active (although fluctuating at times) for speculator buyers, for recreation buyers, and for residence buyers with the presence of merchantable size timber often affecting this land market.



Subject Property

7-15-92

USDA-F

16 611040

4491-70



Subject Property

S1/2NE1/4 Sec. 17, T61N, R4W

SUBJECT PROPERTY DESCRIPTION

LOCATION: In northwest Bonner County, Idaho, about one-quarter mile west of the west shore of Priest Lake, a little north of the center of the lake. It is about four miles easterly of the small community of Nordman on Highway 57 and is accessible from there by Reeder Bay Road and Hagman Road.

LEGAL DESCRIPTION: S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 17, T61N, R4W, B.M.

SIZE: 80 acres (including county road easements. SHAPE: Rectangle

ZONING: Rural

ACCESS: A paved county road comes easterly from Highway 57 at Nordman (Reeder Bay Road). It continues northerly to subject and northerly through subject. Just inside south edge of subject graveled Hagman Road (county easement) goes northeasterly off this paved road to serve residential tracts near and on the lake. The paved road (USFS #2512 with county easement) continues north from this Hagman Road junction through the subject and on up the west side of the lake to about Beaver Creek near the Thoroughfare. The county road easements (100 ft. and 66 ft. widths) total about 3.75 acres. The total property acreage considered has the road acreage in it, but this is deducted for the land valuation, although not for the timber valuation. There is a narrow private spur road just outside the south edge of subject going westerly to a residence. A very short distance north of subject's north boundary, there is another private spur road going west from #2512 to serve other private lands there.

VEGETATIVE COVER: The westerly half (approximately) of subject was logged about ten to 12 years ago. That area has a fairly dense cover of pre-merchantable trees (seedling, saplings) of various species. There are a few large seed trees scattered on the edges.

The easterly portion has a good cover of merchantable size trees (averaging near 13 MBF per acre).

This was recently cruised by Chris Hansen, Forester. The cruise was on 38 acres, but about 35 acres are considered as having the merchantable timber. The largest share is western hemlock which is combined with grand fir. Both are highly defective in general. Some was cruised as pulp (35 M), but it not included in the net sawlog volume cited following. (Total cruise Summary is in the Addenda.)

	DF-L	GF-H	WP	RC	Total
Net MBF	70	265	73	90	498 M
Average DBH	15.5"	14.5"	17.3"	14.8"	15.1"
% of species	14%	53.3%	14.6%	18.1%	100%

With the good road frontage and easy terrain, the subject timbered portion would most likely be subdivided into acreage tracts. Continual observation of such properties indicates there is typically an average of about two to three MBF/acre left for aesthetics on such properties. Sometimes it is a little more when screening (such as on roads) is sometimes desired. Subject's buyer would leave some cover for aesthetics and screening and this often includes defective trees. With some adjoining properties being developed, the tendency would be for some increased screening. In this instance, the "excess" timber that can be harvested is considered to be 380 MBF (35 acres @ 3.3 to 3.5 MBF leave trees = 118 M; 498 - 118 = 380 MBF). It is unknown as to exact species allocation, but it would not be greatly different, so percentages are left as cited, resulting in the following volumes:

DF-L	GF-H	WP	RC	Total
53 M	203 M	55 M	59 M	380 M

TERRAIN: Subject has very gentle, almost level terrain with a very small rise just west of Road #2512 near the south edge. Overall, most of the terrain is near 2,500 ft. elevation. The northwest corner is slightly higher and the southeast corner slightly lower. Granite Creek flows easterly (to the lake) just a little south of the south border.

OTHER: There are some nearby residences to the east and south so the road is open year around. The road to the north is not open to vehicles in the winter. Telephone and electric service is along the roads in the southeasterly portion.

ASSESSED VALUE AND TAXES: This is government owned land, so there is no assessment or taxation.

HIGHEST AND BEST USE

Subject's location by residences and with good access and with utilities available tends to eliminate timber growing as a primary use. There would likely be harvesting of at least part of the merchantable size timber, if not all. Possibly some of the west part would have secondary consideration for timber growing and harvesting. The available facilities, easy access, easy terrain and its location near the lake and on the west side road will lead to subject being considered primarily for recreational and/or residential sites.

Subject is considered by Bonner County as Rural in zoning. This allows for segregation into 20 acre or larger tracts without any platting. It can also be considered for platting into five acre or larger tracts, but this takes a permit and more time and cost.

Large tracts such as this are somewhat of a rarity in the market in the general area over the last two or three years, but this apparent scarcity will likely be of benefit in the marketing.

Although it appears that logging is fairly continual on the private and the public lands in the vicinity, this is not an area of timber company ownership of consequence. Timber harvest is occasionally the primary consideration and timber presence is usually a consideration in the land value on any sale, but the lands are typically purchased for homesite or recreation use.

Physically, subject has gentle terrain and good road access, as well as utilities available and commercial development nearby.

Legally, it can be subdivided into 20 acre, or larger tracts without platting, but is also feasible for platting at least a part of it into smaller tracts due to its location and amenities. The market indicates that the most value can be achieved by considering the potential for platting. Smaller lots have a higher unit value, but also higher costs. The roads already separate off two portions to the east with the southeast portion being less than five acres. There could very easily be at least five parcels on the roads and two parcels of 20 acres each in the west part.

After examining the land market in the area, it appears that subject's Highest and Best Use would be "speculative" in that 80 acres have definite potential for some type of segregation into residential tracts, along with consideration of some timber harvesting and possibly some continued timber growing on at least part.

VALUATION

MARKET ANALYSIS:

Subject is essentially vacant land with merchantable timber. The standard Income Approach and Cost Approach to value do not furnish a feasible or applicable indication of value in this area for such a property and are not used herein. Overall analysis of the local market for somewhat comparable lands or properties, some comparison to current property transactions and analysis of land and timber markets, as well as log markets and logging costs, along with the trends of such, form the basis of currently valuing the subject property.

Timber companies are not major purchasers in this area. It is more of a recreation and/or residence area. However, speculative type buyers were, and are, often interested in the merchantable timber. They usually cut it off soon, then sell off the land in whole or in parts. Thus, it is the land for uses other than timber growing that is the main attraction, but the presence of merchantable timber plays a part in the price or value of such land.

There has been a continual demand in this general area for residential and/or recreational homesite tracts. It fluctuates at times, but there has been no major change in recent times. The relative scarcity of private lands tends to keep the market active. Large tracts (over 40 acres) are definitely scarce in the general area. Most have been subdivided and any other coming on the market will very likely be, also.

Sales of tracts for uses other than timber growing and harvesting often sell on contract terms, with some tendency for a little higher price. Tracts with merchantable timber often require a cash outlay for at least the timber. When the purchase is for getting the timber off, the sale is usually on a cash basis. To many timber buyers, the land is of relatively low allocation in the total price. However, if it has definite potential for other use, this allocation is higher. The timber oriented buyer must compete with the buyer considering the other use potential.

As indicated beforehand, the Highest and Best Use of subject is primarily for subdivision into smaller tracts, but the presence of the merchantable timber must be considered.

The information gathered in several years of appraising forest lands, questioning buyers and sellers, and examining numerous forest land sales indicates there are some basic elements affecting value of such lands. These are as follows:

1. When the parcel is primarily for timberland use (to add to other land base), the size of the parcel has little, if any, impact upon the price per acre. However, where other potential use, such as recreation or house site or sites, is applicable to the parcel, then size usually plays a more dominant part, with smaller parcels usually being higher priced due mostly to a larger market. However, differences in access, utilities, etc. will affect the per acre values.

2. There is typically an allocation between land and timber when merchantable size volume is involved. These allocations are generally affected by the parameters set by land and stumpage markets. However, the combination of land and timber when sold as a property is not usually the adding together of the two elements based upon values of each determined from their respective markets. The combination into a total property brings in other elements that may affect value, such as different types of volume measurements, more flexibility in harvesting, marketing, or processing or in objectives, risks as to actual volume, road costs, other costs, etc. Thus, the combination may be less or more than the total of the two elements sold separately, but has been found almost always to be less, sometimes appreciably so.

3. The combination of timber purchased in fee with land generally gives more factors for consideration of the stumpage value and typically precludes treating volume per acre differences in the same proportional increments as is done in a stumpage conversion computation where cost of each harvesting function is the basis. Prices paid for logs delivered at the mill are not dependent upon the volume per acre. Logging costs are affected, but since this is a property value determination involving many other variables, there can be, and usually are, offsetting factors. Volume per acre generally

affects the unit value (value per MBF) only at the extremes of the typical range, or if logging and hauling costs are not typical. Thus 5 M of 15 MBF per acre (for example) could have near the same average unit allocation (price per MBF) out of the actual sale price when considering timber with land.

With most lands in this general area being purchased for recreation or residence use (or subdivision for such), there tends to be a light tree cover on most tracts, usually not exceeding about 3 MBF per acre (average). This is generally considered with the land value and not allocated separately. However, with subject's ample volume there would be some separate consideration for the "excess" timber. Continual examination by the appraiser of other sales with ample timber volume gave parameters of allocation, as did the examination of the current timber market in the area.

Following is a summary and brief description of the sales considered most representative of the market for subject or at least indicating market parameters. Then there is an analysis of the land market and some conclusions reached on land value from that. (Further sales detail is in the Addenda.) Then there is an analysis of the timber market and logging costs. All the market analysis is then utilized to arrive at an estimate of total market value for the subject property.

At least 14 sales and several offerings of forested land were examined and/or considered for a valuation basis for subject land with economic timber. They generally are not directly similar to the subject property in regard to such features as size, access, species, and volumes per acre, but they are indicative of the market for such type of lands. Assessor and auditor records were examined in the subject and nearby counties. Real estate agents, appraisers, foresters, loggers, and timber and land buyers in the general area were questioned as to sales, purchases, costs, etc.

LAND SALES SUMMARY

No.	Seller/Buyer	Date	Price	Acres	Overall Price/acre
1	Bryant/Scacel	8/00	\$206,500	85	\$2,429
Comments: Driveway access; east side. Made up of four parcels.					
2	Nolze/Murphy, Smith	9/00	\$80,000	40	\$2,000
Comments: Poorer access, some wetland.					
3	Walker/D. Martin	5/01	\$57,000	20	\$2,850
Comments: Poorer access.					
4	Gauzza/Pierone	5/01	\$38,000	6.96	\$5,460
Comments: Close by east end of subject. On road.					

Land Market Analysis

The land market in the area is very limited as regards tracts over 40 acres in size. Thus, most of these sales are not of comparable size, but they definitely give market data that can be applied to the subject.

Sale 1 at \$2,429/acre is of near the same size, but has poorer road access. However, it was already divided into four parcels, so could be sold off in smaller parcels. The buyer wanted the total for himself for a residence and the price per acre was higher because of the parceling. Subject is indicated to be near the same unit value with its location, roads and utilities, but a little less due to no parceling and because of additional value for "excess" timber (much more than on the sale tract). A short distance northwest of this sale there is a 40 acre offering at \$2,250/acre and near that are two 20 acre tracts combined offered for \$2,750/acre (all are tree covered).

Sale 2 @ \$2,000/acre is half the size, but much of it is not developable due to the wetlands on it, although it has at least one good site by the single-lane road on its west. Access is poorer than subject and utilities are not present. Priest River does go through the northeast corner.

Sale 3 of 20 acres @ \$2,850/acre gives indication of the potential value of some portions of subject. The westerly half could be two 20 acre tracts with a short driveway into each. Their access would be a little better than that of the sale tract and they are handier to the lake environment.

Sale 4 of 6.96 acres @ \$5,460/acre is included because it almost adjoins the subject. Also, it, and several similar lots of about 5 acres each, (with two adjoining the east edge of subject; \$5,000/acre each) are much the same as part of subject and subject could be similarly divided. These parcels have merchantable size tree cover of near 3 M/acre average. Sale 4 fronts on Hagman Road, the others have short private road access to them. They give good indication of value per acre for portions of subject if it was platted.

Other sales and offerings were considered including some 1998-99 sales of sizes more comparable with subject. Most sales were about \$1,300 to \$1,800 per acre; subject generally has better features and

market is a little better. A current offering of 94 acres off the Eastside Road was considered. It has a little open area and the rest with a light tree cover. There is narrow private road access. Power and phone are not far. It is divided into four parcels. Asking price is \$2,106 per acre. Subject has better access and location.

Also considered were two tracts sold in 2001 to two sewer districts (one tract to each) in the Priest Lake area. One was 60.46 acres at \$1,439/acre and one was 119.12 acres with about 9 M/acre "excess" timber at \$3,403/acre, or near \$1,400/acre for the land. These properties were not exposed on the open market but were appraised for market value. There was some consideration given to the value as parts of a larger combination of tracts. Subject has much better access, appearance and location than the smaller sale tract. The other tract is larger with more excess volume overall.

Direct consideration was also given to the potential of subdividing subject into small tracts of about five to 20 acres, or so (like some of the sales considered), with these retailing at about \$2,500 to \$6,000 per acre, depending upon size and location. Subject would likely average near \$4,000/acre for retail. This is discounted for costs of segregation, providing access and some utilities, selling and time, and profit and risk, to arrive at a likely "wholesale" value for the larger tract. Continual general market observation has indicated that likely total discount for acreage parcel subdivision of subject would be about 40% to 50%, thus indicating a possible "wholesale" value of about \$2,000 to \$2,400/acre. However, the substantial outlay necessary for the merchantable timber on subject and the extra risk and time concerning land use due to the timber harvest and platting would tend to favor the higher discount, or at least put it near the lower end of the indicated wholesale bracket, or near \$2,000/acre.

Subject is considered as having trees of about 3.5 MBF/acre average on the easterly part to give road screening and aesthetics, much like the adjoining lands, which are primarily small acreage tracts. The road easement acres totalling about 3.75 acres cannot be developed and are currently under County jurisdiction. Therefore this easement acreage is deducted to give the total valuation acres of 76.25 acres.

Subject is an attractive property with good location, access and terrain, as well as utilities being handy and with easy potential for physical subdivision. The roads already provide some dividing of the tract. The overall market evidence of the various sized sales, with emphasis on the larger sizes, leads to the conclusion that subject's land value is about \$2,000 per acre, plus additional for the merchantable timber. Land value allocation is thus 76.25 acres @ \$2000 = \$152,500; this is rounded to \$152,000.

Timber Market Analysis

Subject's timbered portion has an average of near 13 MBF/acre of merchantable size timber or 498 MBF. This could all be harvested, but not likely when considering the property for homesite use. As mentioned previously, there would like be near 3 MBF/acre, or a little more, left on the average for aesthetic and screening purpose. This lowers the "excess" volume that would most likely be removed fairly soon to about 380 MBF. A little more or less could be removed, but this would be considered in the final land allocation and overall valuation would tend to be near the same.

In considering valuation of the subject timber, the market evidence indicates that contribution, or allocation, for merchantable timber is a little lower when compared to somewhat typical stumpage value arrived at by using delivered log price minus typical logging and hauling costs (when considering total volume). This will vary with logging and hauling costs, but "stumpage" with land has a discount, or cost, for the unknown risks along with management costs, etc. Numerous sales examined and/or considered indicate that average timber allocation is near \$175 to \$235 per MBF for tracts of somewhat general features, but can exceed either end of this bracket when land or timber factors are somewhat unusual. The timber allocation is analyzed further on the basis of the log market and costs involved.

Several mills in the area were questioned as to typical prices paid for delivered sawlogs. The mills included Stimson Lumber Co. and J. D. Lumber at Priest River, Priest Lake Lumber on Highway 57 near Lamb Creek, and Riley Creek Lumber at Laclede. Based upon the prices

quoted and the quantity and size, etc. of subject's timber, the following are the likely current prices available for that timber. (Along with ratio of species volume.)

Delivered Log Price per MBF			
DF-L	GF-H	WP	RC
\$430	\$310	\$500	\$600
14%	53.3%	14.6%	18.1%

From this information, the average log price is indicated to be \$407 per MBF.

Timber industry foresters, loggers and contractors have been questioned as to logging and hauling costs. The variables are very many, but it appears there are somewhat typical cost brackets in the area applicable to a tract somewhat like subject, which has a relatively easy logging chance. Stump to truck costs where it is all ground skidding generally range from about \$85 to \$115 per MBF. Haul costs are based upon about a 4.5 MBF average load and \$570 to \$600 cost per day for truck hauling. Slash allocation is typically \$3 to \$5 per MBF. Subject does not have much road costs other than a little maintenance and some landing construction, say near \$2,000. It will have a little higher than normal logging costs since extra care will likely be taken to preserve the land and aesthetics for homesite tract use and some selection cutting is necessary. Thus, the stump to truck cost is above the typical cited. This will also cause slash disposal costs to be up. There is likely a very close haul for much of the timber, but some species will go elsewhere, so there are some varied haul costs. Average is considered at \$33 per MBF. Combining all the foregoing indicates total logging and hauling costs for subject are concluded at \$166 per MBF.

Deducting the concluded upon average total logging and hauling cost from the concluded upon average delivered log price for subject will result in an indication of average "stumpage" value per MBF for subject's merchantable timber. However, as mentioned previously, there is generally still some deduction because it is standing timber considered with the land, not a stumpage sale on its own.

Most stumpage sales are based upon payment according to scale cut (although there are some lump sum sales). Subject timber is an estimated volume in the woods. Marketing and managing of stumpage sales is different than for land and timber combined. Overall, there generally are many more unknowns--or risks--involved in a purchase of timber with land than in a stumpage purchase. Net volume available at the time of cut is the biggest risk, as well as costs, prices, etc. Thus, there is a major difference in consideration of volume value when combined with land as against volume value of a defined amount of stumpage on its own with set requirements on its handling. This difference can be termed a "discount" for unknowns, or risk, profit, management, etc.

Continual analysis by this appraiser of timberland sales where species cruised or estimated volumes are known (and questioning of timber company buyers) indicates that when an approximate total average logging cost considered for that property is subtracted from the reasonable average log value for the timber present, the resulting indicated value is usually above what the timber price allocation is for that sale, indicating a discount is applied--as stated beforehand. Continual sales analysis indicates this "discount" ranges from about 2% to 10% of the net log price, depending upon many variables such as species mix, volume, and quality, as well as access and terrain features and likelihood of price changes. Generally this is with relatively low land value allocations and with average costs applied in the analysis. Subject has relatively low risk as to its features (other than volume) and costs, except for consideration of homesite potential, which places a higher land value than for typical timber land tracts. Consideration of this relatively high land value along with the unknowns and risks as to harvesting without impairing the homesite potential leads to the conclusion that subject's timber "discount" is a little more than it would be for such an easy chance if homesite potential was not involved. Subject's discount is concluded to be 7% to 9%, say 8%, or \$19/MBF. This is added to the direct costs of \$166/M. Combining all the foregoing timber market analysis indicates the following:

\$407 log price less \$185 total costs = \$222 per MBF average timber value.

\$222 X 380 MBF "excess" timber = \$84,360 timber allocation

Rounded to \$84,000

SUMMARY OF PROPERTY VALUE

Most likely the property would be purchased with the idea of subdividing the land. Thus, the timber and land allocation would most likely be as indicated; i.e. land @ \$2,000/acre and 380 MBF of "excess" timber @ \$222. (Potential buyers may differ on the land and timber allocations, but the overall, or total, result should be as indicated herein.) These give a total value as follows:

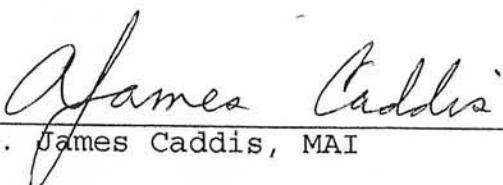
76.25 acres @ \$2,000 per acre	=	\$152,000
380 MBF @ \$222 per MBF	=	<u>\$ 84,000</u>
Total	=	<u>\$236,000</u>

(This is equivalent to \$3095 per acre overall.)

CERTIFICATE OF APPRAISER

I certify that, to the best of my knowledge and belief, . . .

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
- my compensation is not contingent on any action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.
- my analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the reporting requirements of the Uniform Standards of Professional Appraisal Practice and of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute and the Federal Land Acquisition Standards.
- the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- as of the date of this report I have completed the requirements under the continuing education program of the Appraisal Institute.
- Caddis is certified as a General Appraiser by the States of Washington (CA-DD-IAJ737N5) and Idaho (CGA75).
- I have made a personal inspection of the property that is the subject of this report and of the sales relied upon herein.
- No other person provided significant professional assistance to the person signing this report.
- the 80 acres of property with timber that are the subject of this appraisal have a total market value on a cash basis as of February 28, 2002 of \$236,000.


A. James Caddis, MAI



APPRAISER QUALIFICATIONS

A. JAMES CADDIS, MAI

Appraiser/owner of Caddis Valuation Service since July 1988.

Appraiser with Caddis & McFaddin, Inc. and predecessor Barrett & Follevaag, Inc., 1968-1988, co-owner after 1970.

13 years of forest management experience, including 11 years with U.S. Forest Service in North Idaho.

Real Estate Sales with F.S. Barrett & Co., Spokane, 1967-1968. Held Washington Assoc. Broker License to 1988.

Univ. of California, M.A. Public Admin., 1963; Univ. of Michigan, B.S. Forestry, 1956.

Successful completion of Basic Appraisal Courses I and II, Industrial Appraising VII, Litigation Valuation, Standards of Professional Practice; Income Property Appraising 201 by S.R.E.A. and U.S.F.S. Rural Appraising,

Instructor; Appraisal courses, Spokane Community Colleges: 1972-78; SREA Course 101: 1977, 1980.

Memberships:

Currently MAI in the Appraisal Institute (1991 combination of A.I.R.E.A. & S.R.E.A. cited below)

American Institute of Real Estate Appraisers, "MAI", Professional Recognition Award, 1977-80. Certified since 1981.

Pres. Chapter 53, 1980-81, National Governing Councilor, 1984-86. National Appellate Board, 1988-90.

Society of Real Estate Appraisers; Formerly "SRPA". Pres. Spokane Chapter 59, 1979.

Society of American Foresters since 1956.

Spokane Board of Realtors, Wash Assoc. of Realtors, National Assoc. of Realtors.

Qualified as expert valuation and forestry witness in Federal and State Courts, Washington, Idaho, Montana & California.

On American Arbitration Association panel, Northwest.

Member, City-County Historic Landmarks Commission, 1986-89.

Wash. Certified General Appraiser, Idaho Certified General Appraiser.

CA-DD-IAJ737N5

CGA-75

TERRITORY SERVED

Eastern Washington, Northern Idaho, Western Montana, Northeast Oregon.

EXPERIENCE INCLUDES

Current and historic valuation of all types of real property for purchase and sale, exchange, condemnation and other litigation, mortgage security, estates, property division, rights of way (including partial takings), easements and leaseholds; counseling, consulting, feasibility studies.

Property types appraised greatly vary from timber lands and stumpage, rural lands and recreation properties to apartment buildings, nursing homes, sawmills, stores, warehouses, subdivision lands, and many others. *Specialize in forest lands.*

ASSIGNMENTS COMPLETED FOR

Attorneys and Individuals

Financial Institutions and F.D.I.C.

Oil Companies

U.S. Government Agencies: Forest Service, Internal

Revenue Service, Fish and Wildlife Service,

Bureau of Indian Affairs, Dept. of Justice, etc.

State Agencies: Washington, Idaho and Montana

Various County Agencies: Washington and Idaho

Numerous Cities: Washington and Idaho

Airport Boards, Spokane, Pullman, Pasco

School Districts; Spokane, Mead, Cheney, W. Valley, etc.

Spokane, Coeur d'Alene and Yakima Tribes

Insurance Companies

Whitworth College

Pacific Power & Light

Washington Water Power Co.

Inland Empire Paper Co.

Idaho Forest Industries, Inc.

Jacklin Seed Co.

Sunshine Mining Co.

Potlach Corp.

Champion International

Burlington Northern, Inc

Montana Power Co.

Union Pacific Railway

Nature Conservancy

A D D E N D A

USFS 80 ACRES
SECTION 17



Looking North
from junction of
Hagman Rd & Rd 2521.
Subject both sides.
F1 2/4/02



Look East on
Hagman Road.
Subject both sides.
F2 2/4/02



To SE in
Easterly portion.
F8 2/4/02

USFS 80 ACRES
SECTION 17



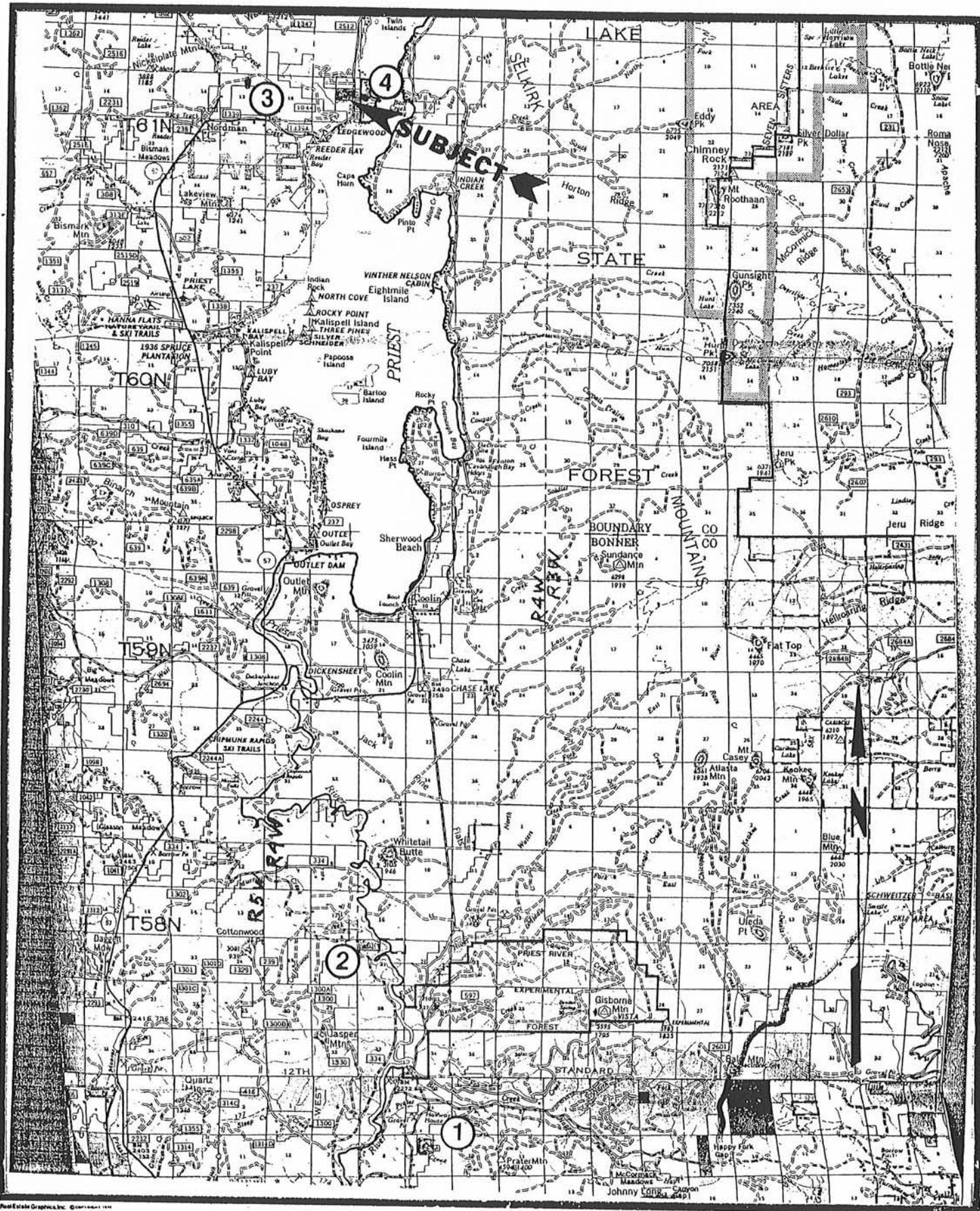
To NW in
West portion
F3 2/4/02



To SE in
west part.
Timber on left
in subject.
F4 2/4/02



To south near
west edge.
F5 2/4/02



Land Sales Map

COMPARABLE LAND SALE NO. 1

DATE: 8/28/00

RECORD #: 569108

SELLER: Ernie Bryant & Gold Junction Development Co.

BUYER: Ken Scacel & w, Trustees of Scacel Family Trust (Calif.)

PRICE & TERMS: \$206,500

VERIFICATION: E. Bryant 2/27/02

LOCATION: Just east of Eastside Road about 8.5 miles (airline) northerly of town of Priest River.

LEGAL DESCRIPTION: Section 9; W $\frac{1}{2}$ NWSWNE, W $\frac{1}{2}$ SWSWNE, E $\frac{1}{2}$ NWSWNE, W $\frac{1}{2}$ NESWNE, SENW, S $\frac{1}{2}$ NENW, W $\frac{1}{2}$ SWNWNE, T57N, R4W

SIZE: 85 acres

ZONING: Rural

ACCESS: Driveway off East Side Road; crosses other private land. Permanent easement.

TERRAIN: Gentle, slightly rolling; some slope on parts of west and east edges.

VEGETATIVE COVER: Meadow and small pond in center portion. Rest with generally light cover of mostly smaller size trees with more trees along the edges. Near 2 M/acre average.

COMMENTS: Seller owns adjoining acreage on north; lives there (about 80 acres). Electric line close by the west edge of sale property. Had been approved on a percolator test. The property is split into four assessor parcels; one 25 acre and three 20 acres. Intent of seller was to sell individually but buyer wanted total. North and west of this property there is a 40 acre tract for sale at \$90,000 and two 20 acre tracts combined for sale at \$110,000.

ALLOCATION: \$2,429/acre



COMPARABLE LAND SALE NO. 2

DATE: 9/2/00

RECORD #: 569471

SELLER: Harold H. Nolze & w
BUYER: Patrick M. Murphy & Carter G. Smith

PRICE & TERMS: \$80,000
VERIFICATION: Cliff Realty, S. Sommer

LOCATION: On the west side of Priest River near six miles (airline) north of McAbee Falls and near five miles (airline) west of Highway 57.

LEGAL DESCRIPTION: Section 21: N $\frac{1}{2}$ N $\frac{1}{2}$ NW except road and Priest River, T58N, R4W (Parcel 2250)

SIZE: 40 acres (overall) ZONING: Rural

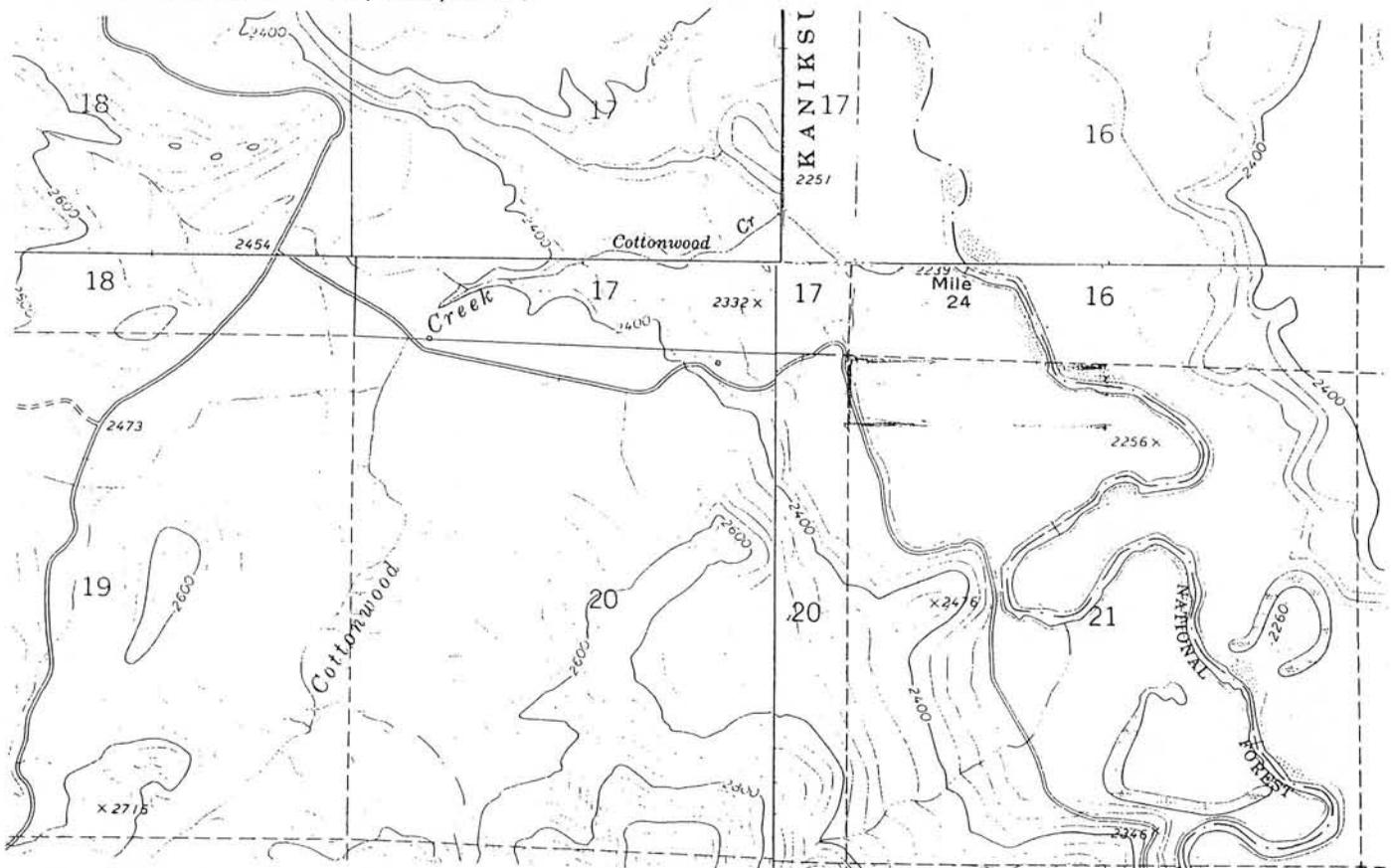
ACCESS: USFS Road #334, 6.9 miles easterly in from Highway 57 (30' easement), touches west edge.

TERRAIN: Good homesite bench on west portion by road. Then drops down to creek level and some wetland. Priest River flows southerly through NE corner.

VEGETATIVE COVER: Tree cover on west portion. Rest is mixture of wetland meadow, brush, some scattered and patchy trees. Some cottonwood as well as conifers.

COMMENTS: Scattered residences along Road 334. Most are seasonal, but some year-round. No utilities touching the sale property.

ALLOCATION: \$2,000/acre



Granite-Reeder Bay

CADDIS VALUATION SERVICE

COMPARABLE LAND SALE NO. 4

DATE: 5/14/01

RECORD #: 581676

SELLER: George Gauzza, Jr. & w
BUYER: James P. Pierone & w

PRICE & TERMS: \$38,000
VERIFICATION: G. Gauzza

LOCATION: On Hagman Road north of Reeder Bay.

LEGAL DESCRIPTION: Section 16, T61N, R4W. Part of GL 3 (SWNW)
(Parcel 3670)

SIZE: 6.96 acres ZONING: Rural

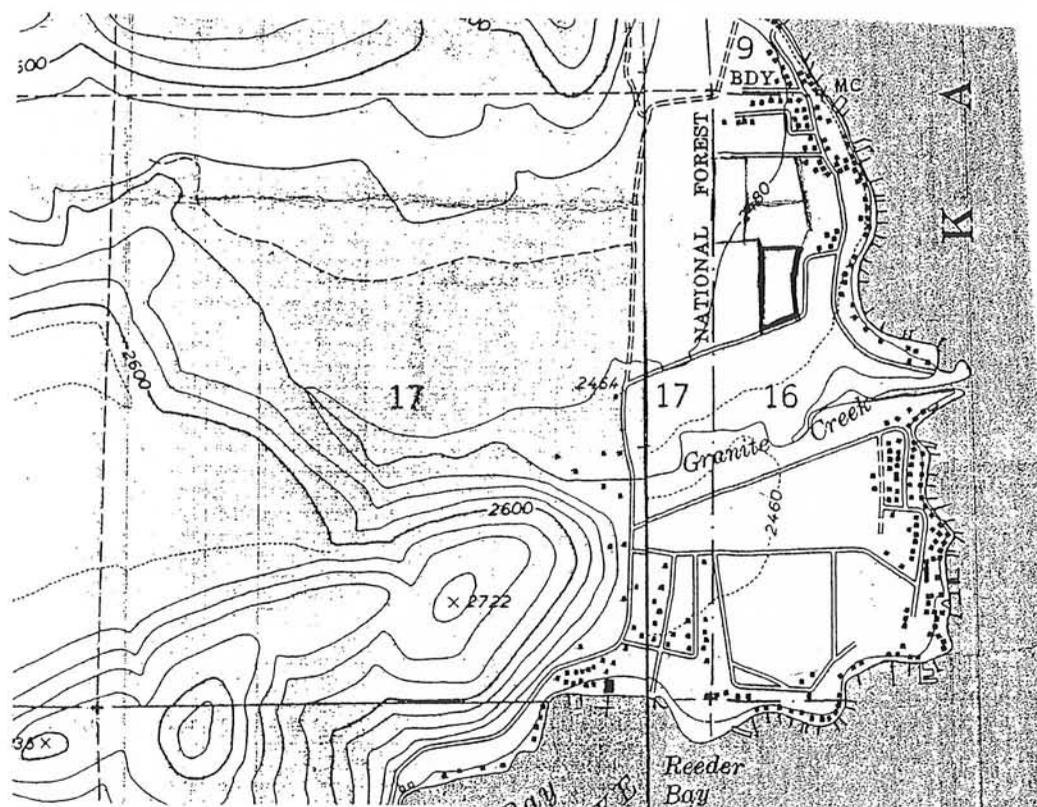
ACCESS: Fronts on graveled Hagman Road about ¼ mile east of West Side Road #2512 (paved).

TERRAIN: Gentle terrain, almost level. About 2,450 ft. average elevation.

VEGETATIVE COVER: Light stand of merchantable size trees over most of the tract. Some pre-merchantable size.

COMMENTS: Buyer is currently having a residence built. Electric and phone are on the road. Tracts adjoining on the north (5 acres each) sold by same seller for \$5,000/acre (more indirect access).

ALLOCATION: \$5,460/acre



Granite-Reeder Bay

CADDIS VALUATION SERVICE



Hansen Timber Management, Inc.

Consulting Foresters

P.O. Box 595

Bayview, Idaho 83803

(208) 683-2995

RECEIVED**FEB 07 2002**

February 5, 2002

Steve Cordes
Welch Comer & Associates, Inc.
1626 Lincoln Way
Coeur d' Alene, ID. 83814

Re: Granite Reeder Timber Inventory (Site 1)

Steve,

As per your request and with the authorization of the Granite Reeder Sewer District Board, a detailed timber inventory of Site 1 was performed by Hansen Timber Management, Inc. The legal description for Site 1 is as follows: the South ½ of the Northeast ¼ of Section 17; Township 61N; Range 4 W; totaling 80 acres. I have enclosed the cruise report along with a topography map of the subject area.

If you have any questions and/or need any assistance in any additional forest related matters please give me a call. Thank you for this assignment.

Sincerely,

Chris Hansen

Enclosures

CERTIFICATION

1. Hansen Timber Management, Inc. has no undisclosed interest in the property, present or contemplated.
2. The property has been inspected by Hansen Timber Management, Inc.
3. This report is true and no important facts have been withheld or overlooked.
4. A cruise is a sampling system used to determine timber volume for timbered property. A statistically reliable cruise will accurately estimate the timber volume provided that the standard error projected is within accepted limits. A cruise is only an estimate and its accuracy is dependent on the variability of the timber size and volume equations used. Hansen Timber Management, Inc. maintains and updates its cruise information continually.



Chris J. Hansen
President
Hansen Timber Management, Inc.

CRUISE SUMMARY

- EPS COMPILER

GRANITE REEDER PROJECT

Federal

USFS

District: PRIEST LAKE

Sale Type: Appraisal

REPORT YR
 2002

SPECIES	GRP	AVE DBH	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
CP	..	16.2	4.5	100.0	25	0	0.00
DF	..	14.9	3.7	10.2	59	53	1.38
DW	..	15.4	3.7	100.0	37	0	0.00
GF	..	13.0	3.0	6.7	89	83	2.16
PU	..	16.9	4.4	90.2	358	35	0.94
RC	..	14.8	2.5	9.1	99	90	2.34
WH	..	15.2	3.6	9.5	201	182	4.77
WL	..	17.5	6.0	15.0	20	17	0.47
WP	..	17.3	5.4	6.4	78	73	1.87
TOTALS		15.6	3.7	44.8	966	533	13.93

TWNSHP	RNG	SECT	BAF	TOTAL AC	NET AC	PLOTS	TRS/PLT	ACRES/PLOT
61 N	04 W	17	20	80.00	38.00	28	8.1	1.4

Subsection: South 1/2 Northeast 1/4 (Site 1)

SPECIES INDEX

WH = Western Hemlock WL = Western Larch
 GF = Grand Fir PU = Pulp
 RC = Red Cedar DW = Dead White Pine
 WP = White Pine CP = Cedar Products
 DF = Douglas Fir

SUBJECT PARCEL DESCRIPTION

The majority of the east half of the subject parcel is heavily stocked with Western Hemlock, Grand Fir, and Red Cedar with lesser amounts of White Pine, Douglas Fir, and Western Larch species. A large percentage of the existing Western Hemlock and Grand Fir trees are highly defective. These trees were cruised as Pulp and, as indicated in the above cruise summary, represent 36 mbf net saw timber volume. The overall timber quality is to be considered below average.

The majority of the west half of the subject parcel was clearcut a number of years ago. For the most part, this stand is well stocked with mixed regeneration. A few scattered seed trees remain within this clearcut area along with a narrow band of uncut timber along the south edge.

The subject parcel has gentle topography which lends itself to mechanical logging. The majority of the property lines and corners are well established. This parcel is well roaded with excellent access.

SPECIES SUMMARY

FPS COMPILER

GRANITE REEDER PROJECT

Federal

USFS

District: PRIEST LAKE

Sale Type: Appraisal

REPORT YR
 2002

SPECIES	GRP	DBH CLS	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
CP	..	12.0	5.0	100.0	3	0.0	0.00
	..	14.0	4.0	100.0	5	0.0	0.00
	..	15.0	4.0	100.0	4	0.0	0.00
	..	17.0	4.0	100.0	4	0.0	0.00
	..	18.0	5.0	100.0	4	0.0	0.00
	..	21.0	5.0	100.0	5	0.0	0.00
	CP	Ave. DBH:	16.2	4.5	100.0	25	0
DF	..	11.0	3.0	7.0	2	2.3	0.06
	..	13.1	3.0	7.0	3	3.0	0.08
	..	14.0	3.0	7.0	8	7.8	0.21
	..	15.0	4.0	14.9	40	34.3	0.90
	..	17.0	4.0	7.0	3	2.6	0.07
	..	20.0	4.0	10.7	3	2.7	0.07
DF	Ave. DBH:	14.9	3.7	10.2	59	53	1.38
DW	..	11.0	2.0	100.0	2	0.0	0.00
	..	13.0	4.0	100.0	11	0.0	0.00
	..	15.0	4.0	100.0	4	0.0	0.00
	..	17.0	4.0	100.0	9	0.0	0.00
	..	18.0	5.0	100.0	4	0.0	0.00
	..	22.0	5.0	100.0	7	0.0	0.00
DW	Ave. DBH:	15.4	3.7	100.0	37	0	0.00

SPECIES SUMMARY

FPS COMPILER

GRANITE REEDER PROJECT

Federal

USFS

District: PRIEST LAKE

Sale Type: Appraisal

PORT YR
2002

SPECIES	GRP	DBH CLS	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
GF	..	8.0	2.0	7.0	3	2.9	0.08
	..	9.0	2.0	7.0	2	2.3	0.06
	..	10.0	3.0	17.0	7	6.2	0.16
	..	11.0	3.0	12.3	10	8.7	0.23
	..	12.0	3.0	9.0	15	13.8	0.36
	..	13.0	3.0	8.2	8	7.6	0.20
	..	14.0	4.0	9.5	4	3.9	0.10
	..	15.0	4.0	8.1	5	4.7	0.12
	..	16.0	4.0	7.0	9	8.7	0.23
	..	17.0	4.0	7.0	10	9.0	0.24
..	18.0	5.0	7.9	16	14.4	0.38	
GF	Ave. DBH:	13.0	3.0	6.7	89	83	2.16
PU	..	8.0	3.0	90.0	4	0.4	0.01
	..	9.0	3.0	90.0	5	0.5	0.01
	..	10.0	4.0	90.0	18	1.8	0.05
	..	11.0	4.0	90.0	8	0.8	0.02
	..	12.0	4.0	90.0	21	2.1	0.05
	..	13.0	4.0	90.0	6	0.6	0.01
	..	14.0	4.0	90.0	17	1.7	0.04
	..	15.0	5.0	90.0	42	4.2	0.11
	..	16.0	5.0	90.0	35	3.5	0.09
	..	17.0	5.0	90.0	12	1.2	0.03
..	18.0	5.0	90.0	54	5.4	0.14	

SPECIES SUMMARY

FPS COMPILER

GRANITE REEDER PROJECT

Federal

USFS

District: PRIEST LAKE

Sale Type: Appraisal

REPORT YR
2002

SPECIES	GRP	DBH CLS	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
PU	..	19.0	5.0	90.0	41	4.1	0.11
	..	20.0	5.0	90.0	19	1.9	0.05
	..	21.0	5.0	90.0	20	2.0	0.05
	..	22.0	5.0	90.0	18	1.8	0.05
	..	23.0	6.0	90.0	19	1.9	0.05
	..	24.0	6.0	90.0	6	0.6	0.02
	..	26.0	6.0	90.0	13	1.3	0.03
PU	Ave. DBH:	16.9	4.4	90.2	358	35	0.94
RC	..	8.0	1.0	7.0	3	2.9	0.08
	..	9.0	2.0	7.0	6	5.1	0.14
	..	10.0	2.0	7.0	4	3.7	0.10
	..	11.0	2.0	7.0	4	3.8	0.10
	..	12.0	3.0	7.9	12	11.1	0.29
	..	13.0	2.0	9.0	5	4.8	0.13
	..	14.0	3.0	12.8	6	4.9	0.13
	..	15.0	3.0	7.0	3	2.7	0.07
	..	16.0	3.0	16.3	13	11.1	0.29
	..	17.0	4.0	9.4	10	9.4	0.25
	..	18.0	4.0	10.9	4	3.1	0.08
	..	19.0	5.0	15.8	4	3.2	0.09
	..	20.0	4.0	8.5	7	6.8	0.18
..	21.0	4.0	7.0	4	3.7	0.10	
..	22.0	4.0	16.7	7	6.0	0.16	

SPECIES SUMMARY

FPS COMPILER

GRANITE REEDER PROJECT

Federal

USFS

District: PRIEST LAKE

Sale Type: Appraisal

REPORT YR
2002

SPECIES	GRP	DBH CLS	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
RC	..	23.0	4.0	11.3	7	6.5	0.17
RC	Ave. DBH:	14.8	2.5	9.1	99	90	2.34
WH	..	8.0	3.0	15.3	5	4.0	0.10
..	..	9.0	3.0	7.0	9	8.6	0.23
..	..	10.0	4.0	14.4	12	10.2	0.27
..	..	11.0	2.0	7.0	8	7.6	0.20
..	..	12.0	5.0	7.0	6	5.8	0.15
..	..	13.0	4.0	7.0	8	7.7	0.20
..	..	14.0	4.0	10.3	14	12.3	0.32
..	..	15.0	4.0	9.0	8	7.7	0.20
..	..	16.0	4.0	9.1	22	20.3	0.54
..	..	17.0	4.0	10.6	17	15.4	0.41
..	..	18.0	5.0	11.7	31	27.5	0.72
..	..	19.0	5.0	12.8	10	8.9	0.23
..	..	20.0	4.0	9.2	27	24.3	0.64
..	..	21.0	5.0	17.7	5	4.5	0.12
..	..	22.0	5.0	10.1	7	6.2	0.16
..	..	23.0	5.0	18.3	6	4.8	0.13
..	..	24.0	5.0	7.0	6	5.6	0.15
WH	Ave. DBH:	15.2	3.6	9.5	201	182	4.77
WL	..	14.4	6.0	7.0	4	4.0	0.11
..	..	15.0	6.0	7.0	4	4.1	0.11

SPECIES SUMMARY

FPS COMPILER

GRANITE REEDER PROJECT

Federal

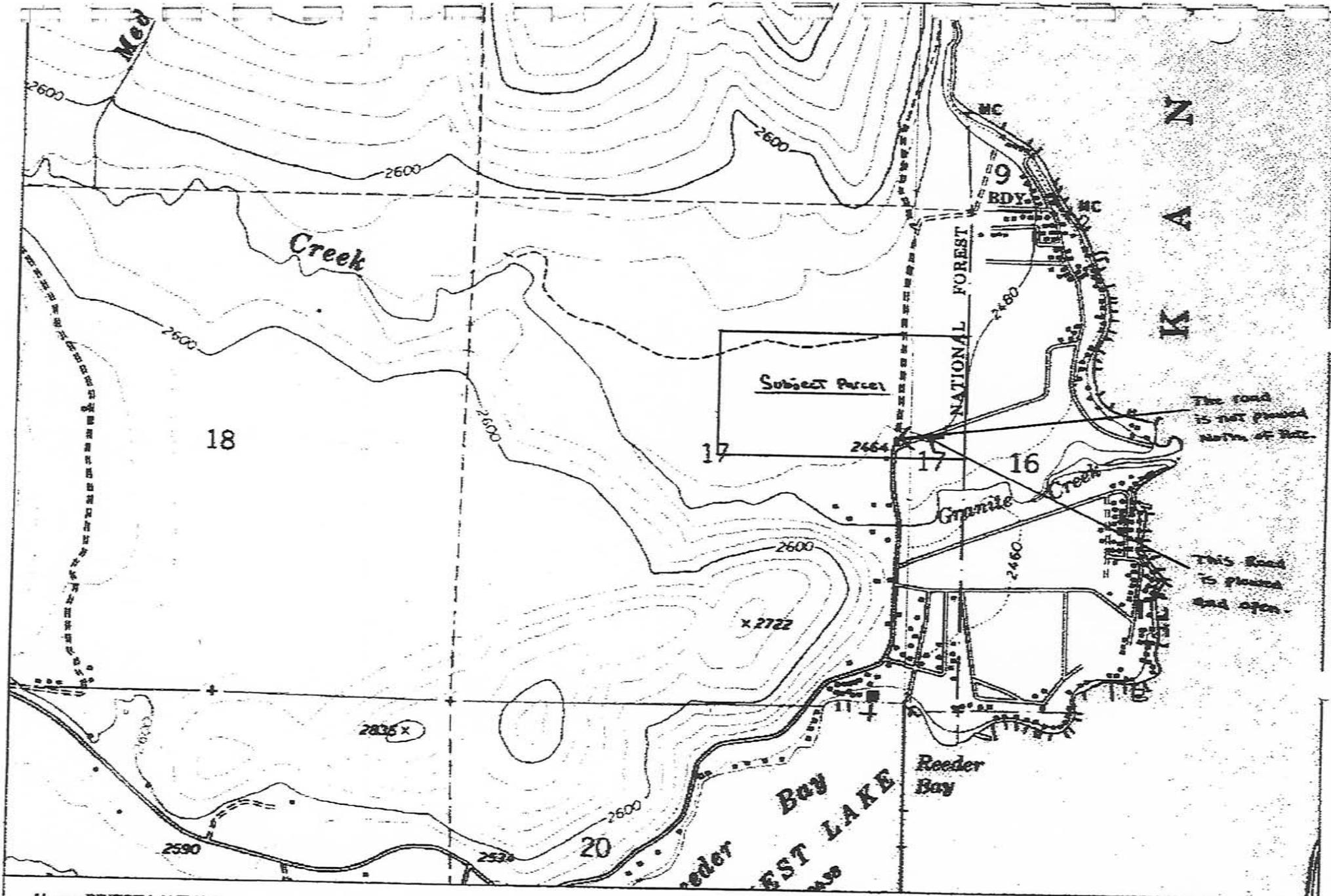
USFS

District: PRIEST LAKE

Sale Type: Appraisal

REPORT YR
 2002

SPECIES	GRP	DBH CLS	16' LGS/T	DEFECT	GROSS	NET	NET VOL/AC
WL	..	17.4	6.0	10.7	4	3.4	0.09
	..	18.9	6.0	16.8	4	3.0	0.08
	..	22.0	6.0	22.0	4	3.2	0.08
WL Ave. DBH:		17.5	6.0	15.0	20	17	0.47
WP	..	9.0	4.0	7.0	1	1.1	0.03
	..	11.0	5.0	7.0	3	2.7	0.07
	..	14.0	5.0	7.0	4	3.8	0.10
	..	15.0	6.0	12.6	4	3.9	0.10
	..	16.0	6.0	25.0	10	7.6	0.20
	..	17.0	6.0	7.0	10	9.6	0.25
	..	19.0	6.0	8.9	23	21.1	0.55
	..	20.0	6.0	9.3	17	15.6	0.41
WP Ave. DBH:		17.3	5.4	6.4	78	73	1.87
TOTALS		Ave. DBH: 15.6	3.7	44.8	966	533	13.93



Name: PRIEST LAKE NW
 Date: 1/20/102
 Scale: 1 inch equals 1324 feet

Location: 048° 38' 22.1" N 116° 53' 07.4" W
 Caption: GRANITE REEDER PROJECT.

FEDERAL LAND STATUS REPORT
Granite Reeder Bay
BLM Serialization No. *, if applicable
Idaho Panhandle NF's - Kaniksu

LEGAL DESCRIPTION (by county)

T. 61 N., R. 4 W. B.M.
Section 17, S1/2NE1/4
Reserved Public Domain.
Lieu Selection 6/4/1897 Northern Pacific Railway on 9/30/64

Subtotal Federal land Bonner County: 80 acres

Total Federal land: 80 acres

RIGHTS PREVIOUSLY CONVEYED OR PERMITTED BY THE UNITED STATES:

1. Recorded outstanding rights (describe lands affected):
 - 1) FRTA Easement granted to Bonner County on February 15, 1968 for non-system road beginning at its junction with FSR 2512 recorded on February 27, 1968 as Instrument No. 114896 in Book 37 of Misc. page 225. Affects SENE.
 - 2) FRTA Easement granted to Bonner County on March 24, 1978 for FSR No. 2512 West Side Priest Lake Road, recorded on May 4, 1978 as Instrument No. 199604 in Book 72 of Misc. page 73. Affects SENE.

2. Existing public roads/other encumbrances not covered by recorded documents (describe lands affected): None found

3. Forest Development Roads:

NONE

4. Special-use permits:
 - a. Special Use Permit issued on December 10, 1990 to Verizon Northwest for a 1056' x 2' right-of-way for a telephone line. This SUP will be replaced by an authorization to be granted by the land exchange proponent at the time of closing of the land exchange.

5. Grazing permits (state whether permittee signed or is willing to sign grazing permit waiver. If not, use must be reserved.): None

6. **Unpatented mining claims** (explain how they will be dealt with): Will request report from BLM.
7. **Oil & gas leases** (list expiration date): Will request report from BLM.
8. **Minerals** (state whether (1) mineral rights are being reserved by U.S., (2) mineral rights are outstanding to third parties, and/or (3) mineral rights being conveyed with the surface: Requested mineral statement from Jim Nieman.
9. **Water rights** (state whether water rights are (1) being conveyed, (2) are being reserved, (3) water rights are outstanding to third parties; or (4) there are no filed water rights affecting the Federal lands: Will send request to Water Resources for water rights report.
10. **Withdrawals**: SENE – PLO 1479 BLM records read segregated 5/25/53. Withdrawn from appropriation under the mining laws, but not from leasing under the mineral leasing laws. Auth 6/4/1897 Serial No. I-04319. Will request BLM to revoke.
11. **Agreements (including Cost-Share)/Memorandums of Understanding**: None found
12. **Legal Access (discuss whether or not there is legal access to Federal Lands being conveyed)**
Access is by county roads.

RIGHTS TO BE RESERVED BY UNITED STATES:

EXCEPTING AND RESERVING TO THE UNITED STATES, and its assigns:

1. A right-of-way thereon for ditches or canals constructed by the authority of the United States pursuant to the Act of August 30, 1890 (43 U.S.C. 945).

Prepared By _____ Date _____
 Title: _____

cc:
 Forest Land Surveyor
 Appraiser/specialist preparing appraisal waiver-STA cases
 RO-Lands (attach copy to Feasibility Report-Exchanges)
 Regional Title Program Manager (original should go in original title file)1/
 Land exchange proponent/STA applicant1/

1/When dealing with Federal lands that were acquired through exchange or purchase, attach copy of title policy from acquisition file.

APPENDIX 13.3
District Policy Decisions -
Excerpts From Chapter 2 of
the 2002 Wastewater
Facilities Plan

2.2. PRELIMINARY POLICY ISSUES AND DECISIONS

In January 2002, the District made decisions on a list of issues, which would affect how the existing and future growth would be handled in the future. These are explained as follows:

2.2.1. ER'S & HANDLING OF COMMERCIAL SYSTEMS:

An equivalent residence, or ER, is a term used to describe one residential connection on a water or sewer system. Residential connections typically use the same

The Board of Directors has determined the equivalent number of equivalent residences (ER's) for commercial users within the District. These ER's have been established based upon estimated wastewater production, and are listed as follows:



Priest Lake from Elkins Resort

- Grandview Resort-18,
- Elkins Resort-22,
- Kaniksu Resort-20 (to be reviewed with Kaniksu owner),
- Lows Resort-6,
- Granite Creek Resort-7,
- Reeder Bay Camp Ground-8,
- Ledgewood Picnic Area-2.

In addition, Board members toured the District and evaluated the number of potential buildable lots to help in the determination of the number of potential assessment. Their count indicated that there were approximately 269 occupied residential lots and approximately 48 potential buildable residential vacant lots that would likely not be consolidated. This figure was used to estimate the denominator for the Preliminary Local Improvement District (LID) assessments. If an LID is formed, however, each property owner will have the option of whether to consolidate contiguous vacant parcels. Consolidation of contiguous vacant parcels could be accomplished by property owners executing a notarized and recorded agreement with the District, assuming that the parcel would never be built upon. When this process is complete, the number of vacant lots to be assessed under the LID will be determined.

2.2.2. FUTURE SUB-DIVISIONS:

The LID assessments will be computed by dividing the total project costs (minus the STAG Grant) by the total number of lots, parcels, and ER's participating in the LID. Increasing

the number of ER's in this assessment calculation will improve the economy of scale of the project and reduce the amount of the assessments charged to all property owners within the District. Therefore, the Board felt that it is in the best interest of the District to allow owners of large vacant parcels inside the District, as well as vacant parcels adjacent to, but outside the District to commit to purchase ER's under the LID before the project design begins.

Property owners who voluntarily commit to purchase additional ER's not only increase the denominator of the LID assessment calculation, but also help finance construction of additional system capacity as the project is designed and constructed. The District will require potential subdivisions, which purchase ER's in advance to be required to secure preliminary plat approval from Bonner County before the District commits to sell the ER's. This is important in order to avoid the appearance of the Sewer District Board interfering with the democratic land use decision process that Bonner County would normally go through for potential subdivisions. Otherwise, large property owners who purchased advanced ER's from the District could use the pre-purchase of sewer hookups against Bonner County in some future land use decision process. Any advance purchase of ER's from large property owners would be documented by a written contract between the Sewer District and the property owner. The repayment would be secured by the LID assessment against the real property.



Kaniksu

2.2.3. GUEST HOUSES:

Board members estimated that there were approximately 50 guest homes located in the District on lots with a primary residence. The Board determined that it's policy for assessing separate guesthouses located on the same parcel as a primary residence to follow the criteria used by other North Idaho recreational sewer districts. This policy states that a guesthouse would be assessed one additional ER if it is separately inhabitable, independently from the main residence. "Independently inhabitable" will be defined as a guesthouse having both a bathroom (toilet) and a kitchen sink/stove. Guest houses which have a bathroom but no kitchen (kitchen sink/stove) would be considered merely as an extra bedroom similar to a large primary residence, and therefore will not be assessed an additional ER. During the LID process property owners would be informed in advance of this policy and provided a window of opportunity (6 months or so) to remove the kitchen sink and stove from the guesthouse, should they elect to avoid an assessment on their guesthouse. For the purposes of conservative cost estimating in this Plan, additional ER's have not been included for guest homes.

2.2.4. FOREST SERVICE:

The existing pit toilets in Ledgewood cannot be connected to a conventional sanitary sewer system. However, the Forest Service has indicated that they would consider remodeling these restrooms to conventional flush toilets if the Sewer District provided sewer service.

The District feels it should not be required by the Forest Service to pay for easements to serve Forest Service facilities, or tenants located on Forest Service property, since it is considered the responsibility of the Forest Service to provide sanitary sewer and water pollution control facilities to its facilities and tenants.

2.2.5. SEPTIC TANKS:

There are several existing septic tanks, which are relatively new. If the District selects a sewer collection option which employs septic tanks and wishes to consider use of these newer septic tanks, the tanks would have to be pumped out, inspected for water tightness and also retrofitted with manhole access risers for ongoing maintenance. This is not recommended, because the expense to pump, inspect and retrofit tanks often approaches the cost of installation of a new tank, which is known to be water tight and up to the District's standards.

This can be evaluated on a case-by-case basis if the District wishes to utilize a septic tank effluent type of collection system. However, it is important to note that Idaho Division of Environmental Quality, in compliance with IDAPA 58.01.03, "Rules for Individual/Subsurface Sewage Disposal Systems", will still require fifty-feet of separation from private and 100 feet from public drinking water wells to septic tanks, whether the tank is new or existing. In many parts of the District these separation requirements septic tanks are not feasible. Thus far, no requirements have been issued on separation distances between wells and grinder lift stations. However, IDEQ has stated that a minimum of 10 feet between a domestic well and grinder pump will be required.

2.2.6. DESIGN FLOW CRITERIA:

The Board indicated that design flow determinations previously made by the Kalispel Bay Sewer District of 70 gallons per day per household and the Outlet Bay Sewer District of 88 gallons per day per household would help provide the rule of thumb for design criteria for Granite Reeder Sewer District. The Board authorized a use of 75 gallons per day per household for design purposes with a factor of safety of an additional thirty percent. In addition, a seasonal peak use curve over a twelve-month basis, similar to the statistics provided from monitoring Kalispel Bay Sewer District, will be used.

2.2.7. EASEMENTS:

Easements will be required for all pipelines crossing private property or Forest Service property, and for any septic tanks or pump stations located on private property. It should be noted that in order for public funds (either LID funds or STAG grant funds) to be used on private property, the law requires that the facilities be owned and operated by the public sewer district entity. Public facilities may also be located on a permanent easement in the name of the sewer district. This will be a time-consuming task to develop, negotiate and secure notarized signatures on all easements required from property owners and is included in the estimated budget for the alternatives analyzed in this Plan.

2.2.8. REEDER BAY AREA:

It is in the District's best interest to encourage participation of adjoining landowners in the proposed sewer project in order to provide improved economies of scale to the Granite Reeder area. Therefore, potentially developable land in or adjoining the Sewer District will be encouraged to make a decision on joining the Sewer District project during the LID process. However, the incremental cost to provide service will have to be evaluated on a case by case basis.

2.2.9. FUTURE BUY – IN BY LATE COMERS

The District Board does not intend to construct additional capacity for future speculative development in or around the District for properties unless they voluntarily participate in the LID when offered the opportunity. However, if the District elects to sell excess capacity in the future, the policy will be as follows:

- Any future buy-in by property owners, whom did not participate in the original LID, will be charged the equivalent full cost per ER to develop the District's original system, without the allowance of the STAG grant acquired by the District. In other words, future ER's will be charged the full cost per ER, without allowance funded by the STAG grant.
- This capitalization fee (buy-in fee), based on the full cost per ER, will be adjusted annually to account for interest and inflation. This calculation should be included in the District's sewer system ordinance.

The estimated assessment per ER for the District with and without the STAG is included in Section 7.

2.2.10. CONDOMINIUMS

The District has three condominium developments. Each condominium unit will be assessed 1 ER. For the purposes of this Plan each development is assumed to support the following ER's:

- Sundance: There are 14 Sundance condominium units. The units are placed in sets of two. One duplex septic tank or grinder unit will serve each unit.
- Tillakum: There are 9 Tillakum condominium units. The units are all combined. Therefore, one large duplex tank/pump will serve the entire development.
- Hagman: There are 5 Hagman condominium units. Each is spaced individually on its own lot, and will be served by one residential septic tank or grinder unit.

APPENDIX 13.4
Soil Test Results from 1992
Facilities Plan

North 920 Lake

Spokane, Washington 99212

budinger & associates
geotechnical & material engineers

December 8, 1987

Granite-Reeder Bay Water & Sewer District
c/o Welch, Comer & Associates, Inc.
5th & Indiana Avenue
Coeur d'Alene, ID 83814

Attn: Bart North

Job Number D87153

PROJECT: Granite-Reeder Bay Sewer
Priest Lake, ID

SUBJECT: Test Borings

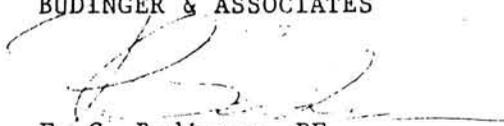
Gentlemen:

At your request, we have drilled four (4) test borings for the subject project, the logs of which are enclosed. Boring locations were selected by the engineer (Bart North) who was present during drilling operations, and established boring elevations.

It is understood that laboratory testing, further drilling and engineering will be conducted at a later date when preliminary design data are available.

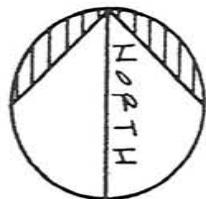
Respectfully submitted,

BUDINGER & ASSOCIATES

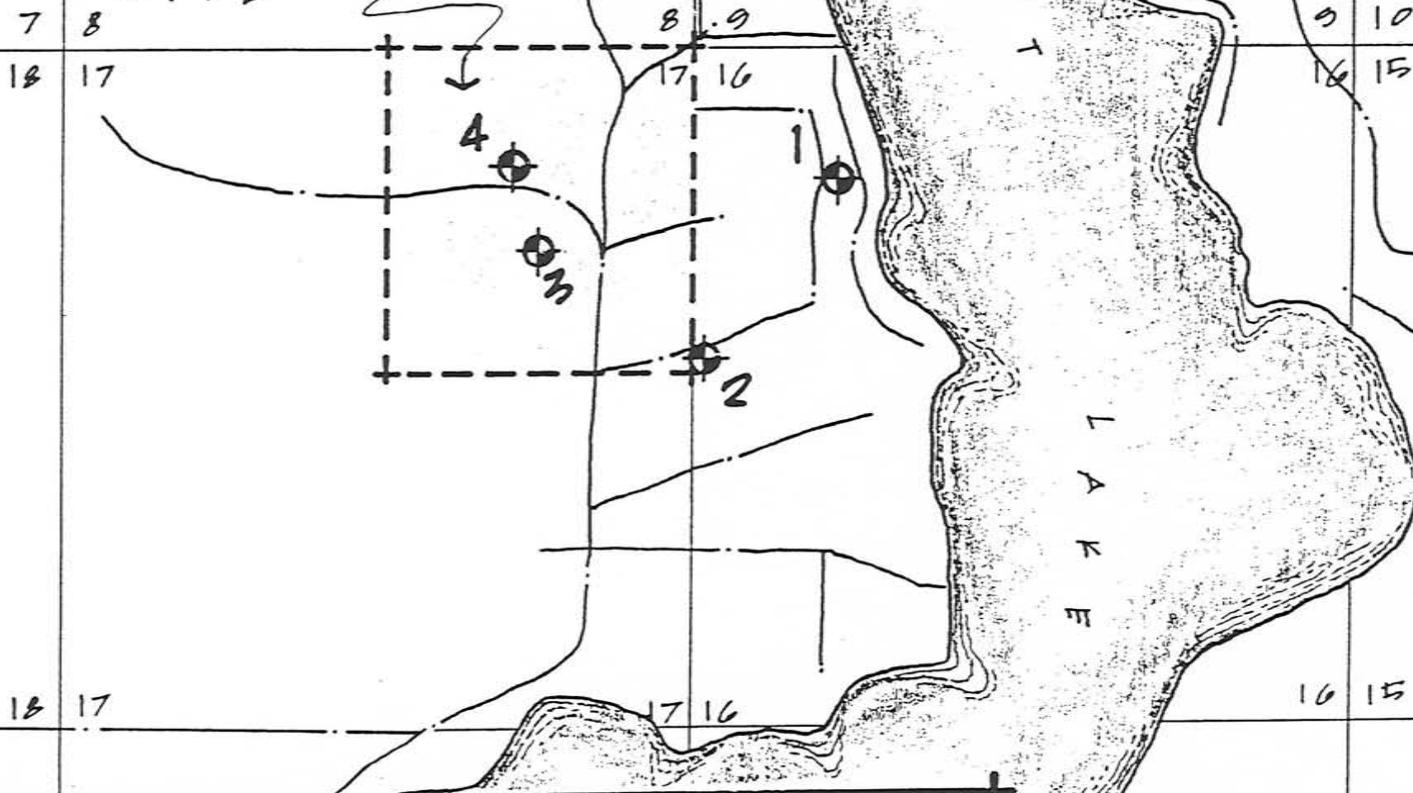

F. C. Budinger, PE

Addressee - 5

FCB/ce



PROPOSED
TREATMENT
SITE



SITE PLAN

FIGURE G.O.1

GRANITE-KEEPER BAY GOWER
PRIEST LAKE, IDAHO
WELCH, COMER & ASSOCIATES, INC.

OCT. 27, 1987

JOB NO. D87153

BUDINGER & ASSOCIATES

DEPTH	METHODS	ELEVATION			STRATUM	DEPOSIT	SURFACE		
		MOISTURE	CONDITION	COLOR			Grass		
0									
1	BORING TERMINATED @ 20' HSFA	Fairly Moist	Soft	Lt. Brown	Alluvial	SAND	moderately well graded slightly micaceous		
2									
3									
4									
5									
6									
7									
8			Very Moist	Firm	Lt. Brown	Alluvial	SAND	moderately well graded slightly micaceous	
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20		Saturated							

KEY

-  CUTTING
-  UNDISTURBED GPLIT. SPOIL
(BLOWG/FT. UNLESS INDICATED)

* Above Lake Level 10/27/87

HSFA = 8" Hollow-Stem Flight Auger

VISUAL DESCRIPTION

Job Number D87153
10/27/87

Granite-Reeder Bay Sewer
Priest Lake, ID

DEPTH	METHODS	ELEVATION ?				SURFACE Dead Wood/Brush	
		Sl. Moist	Dense	Lt. Brown Tan	Surficial	SAND (fine) small amount SILT small amount GRAVEL poorly graded slightly micaceous	
0	HSFA						
1							
2							
3							
4							
5							
6							BOULDER
5 adjacent attempted borings, refused at 6'							
* Above Lake Level 10/27/87							
HSFA = 8" Hollow-Stem Flight Auger							

5 ADJACENT ATTEMPTED BORINGS, REFUSED AT 6'

METHODS

TRATUM

DEPTH

Job Number D87153
10/27/87

Granite-Reeder Bay Sewer
Priest Lake, ID

		ELEVATION 65.3' *			SURFACE Dead Wood/Gravel	
DEPTH	METHODS	MOISTURE	CONDITION	COLOR	STRATUM	DEPOSIT
0		Moist	Fairly Firm	Lt. Brown Tan	Surficial	SAND
1						small amount SILT
2						small amount GRAVEL
3		Moist	Dense	Dk. Brown		poorly graded (fine)
4						slightly micaceous
5						
6					Alluvial	GRAVEL
7						some SAND
8		Very Moist	Dense	Grey/Lt. Brn.		occasional COBBLE & BOULDER
9						moderately well graded
10						slightly micaceous
11	(50)					
12					Alluvial	GRAVELLY SAND
13						occasional COBBLE & BOULDER
14						moderately well graded
15						micaceous
16						angular to subangular
17						
18						
19						
20						
21	(26)					
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45		Saturated				
46						
47						* Above Lake Level 10/27/87
48						
49						
50						
	HSFA					HSFA = 8" Hollow-Stem Flight Auger

* Above Lake Level 10/27/87

HSFA = 8" Hollow-Stem Flight Auger

**HCI** **Howard Consultants, Inc.**

Consulting Geotechnical Engineers & Geologists
W. 280 Prairie Avenue, Coeur d'Alene, ID 83814 208-772-2428

March 4, 1992
Project No. 3303-10

Mr. Bart North
Welch Comer and Associates, Inc.
610 W. Hubbard, Suite 220
Harbor Plaza
Coeur d'Alene, Idaho 83814

RE: Geotechnical Engineering Evaluation
Proposed Wastewater Treatment Site
Reeder Bay, Priest Lake, Idaho

Dear Mr. North:

Howard Consultants, Inc. has completed the authorized geotechnical engineering evaluation for the proposed wastewater treatment facility to be constructed in the southeastern quarter of Section 18, Township 61 North, Range 5 West, Boise Meridian. The purpose of this evaluation was to assess the soil and geologic conditions in the vicinity of the proposed treatment site with respect to planning and design. This letter summarizes our field observations and office research regarding the site.

Well Log Data

Five water well logs from the vicinity of the site are on file with the Idaho Department of Water Resources (IDWR), and are available for review. The earliest well was drilled in the summer of 1978, and the most recent was drilled in the fall of 1991. The wells are all located within 2,000 feet of the proposed quarter section of the wastewater treatment site (southeast quarter of Section 18). The wells ranged from 78 to 552 feet in total depth.

One of the water wells was drilled approximately one-quarter mile west of the northwest corner of the quarter section. This well was drilled to a total depth of 105 feet and encountered gravel, sand and boulders. Fine grained soils were not encountered. The static water level at the time of drilling (September 12, 1984), was 78 feet below the ground surface.

A cluster of three water wells were drilled approximately one-quarter mile west of the southwest corner of the quarter section site. These wells were five-hundred and fifty-two feet, ninety-one feet, and seventy-eight feet in total depth. Sand and gravel soils were encountered between twelve to twenty-five feet below the ground surface. Below this level, interbedded fine sands and clays were encountered. In the deeper of the water wells, hard

granite bedrock was encountered below or "at" one hundred and twenty-three feet below the ground surface. Static water levels were measured at seventy-four feet, thirty-seven feet, and thirty-two feet below the ground surface respectively. In addition, these wells were drilled in August of 1991, September of 1985, and July of 1978, respectively.

One of the water wells was drilled in close proximity to the southeastern corner of the quarter section site. This well was drilled to a total depth of one hundred and twenty-five feet in November of 1990. Sand was encountered to a depth of twenty feet, underlain by fine sand and clay to a depth of eighty-four feet, underlain by granite bedrock from eighty-four to a total depth of one hundred and twenty-five feet below the ground surface. The static ground water level was measured at forty feet below the ground surface.

In general, the water well information on file with the Idaho Department of Water Resources indicates that bedrock materials in the area are at a depth of approximately one hundred and twenty-five feet below the ground surface. Above that level, interbedded layers sand, gravel, silt, and clay material can be anticipated. In general, the soils are indicated as coarse grained, granular, moderate to high permeability materials, with the exception of fine grained clay layers.

Surface Conditions

The site, located on the southeast quarter of Section 18, was relatively level, with an overall relief of approximately 10 to 20 feet (see Site Schematic, Plate 1). Test pits TP-1 through TP-3 were lower in elevation than test pits TP-4 and TP-5. Test pits TP-4 and TP-5 were slightly higher by about 5 to 10 feet in elevation. Site vegetation consisted primarily of Pine and Fir trees as well as small deciduous shrubs and grasses. At the time of our site visit, the site was blanketed with 6 to 24 inches of snow.

Site Evaluation Procedures

Five exploratory test pits were excavated in the southeastern corner of Section 18, in order to evaluate the type and generalized engineering properties of the subsurface materials in the vicinity of the proposed wastewater treatment facility. The materials encountered were visually classified and logs of the soil profiles were prepared at the time of our field observations. Representative samples of the subsurface materials were collected to serve as a record of the materials encountered in the test pits.

The test pits were excavated by a Case 580 E, rubber tire mounted backhoe using a 24-inch wide bucket equipped with standard soil excavation teeth. The test pits were excavated to an average depth of 13 feet below the ground surface. The test pits were loosely backfilled at the conclusion of the field evaluation. An effort was made to tamp the backfill to reduce settlement. However, the backfill will consolidate with time.

Subsurface Conditions

The site soils generally consisted of a section of approximately 8-inches of topsoil, underlain by alternating layers of sand, silt and gravel alluvium (see test pit logs, Plate 2). The sand was typically coarse grained and contained approximately 20 to 30% gravel. Silty materials tended to be of uniform size distribution and contained some fine sand and silt. These materials appeared to be alluvial and/or glaciofluvial in nature. The native sands and gravels tended to have high permeabilities and a low run-off rate. The sandy silt material tended to have moderate percolation/permeability. All of the site soils have a low shrink/swell potential and appear to be moderately to well drained.

The alluvial sands and gravels at the site tended to become coarser grained toward the northwest. The material encountered in test pits TP-1 through TP-3 tended to be interbedded with fine grained silt and sandy silt. The silty soils were not encountered in test pits TP-4 and TP-5. This indicates that the permeability and percolation rates of the alluvium increases towards the northwest portion of the site.

Discussion

Our preliminary findings and subsurface exploration indicates that the site is suitable for the proposed wastewater treatment facility. The soils encountered in our subsurface exploration program consisted primarily of coarse sands and gravelly sands with interbedded layers of fine sandy silt and silty sand. These materials tended to have a moderate to high percolation rate. Topsoils and subsoils encountered extended to a depth of 2 to 3 feet below the ground surface, and contained a low to moderate amount of organics. The topsoils were typically sandy silt and silty sand.

Well log data obtained from the Idaho Department of Water Resources suggests that the site is underlain by alternating layer of sandy gravel and gravelly sand interbedded with silty and clayey layers. This material extends to an average depth of one hundred and twenty-five feet below the ground surface. Below this level, two of the well logs encountered granitic bedrock material. The granular alluvial layers (sands and gravels) tend to have a high permeability and high infiltration rate. However, layers of silt and clay material may be present in portions of the site. These materials tend to have a low permeability and percolation rate.

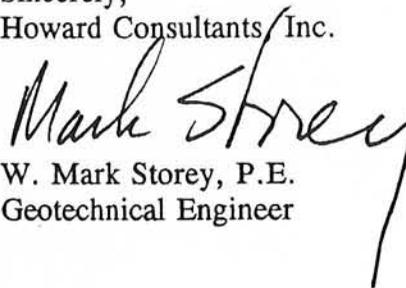
Perched ground water was encountered in exploratory test pits TP-2 and TP-3. The ground water was perched on a fine sandy silt and was likely the result of melting snow infiltration. This perched ground water table was not encountered in TP-1, TP-4 or TP-5. Evidence that this was a permanent ground water condition was not detected at the time of our site studies. We would anticipate that at a minimum, a series of two to four deep exploratory borings would be required in order to characterize the alluvial soils and permanent ground water condition at the property.

Evaluation Limitation

This report has been prepared to assist in the feasibility and planning for the proposed wastewater treatment facility that will serve the Reeder Bay/Granite residential area, on Priest Lake, Idaho. Our services consist of professional opinions and conclusions made in accordance with generally accepted geotechnical engineering principles and practices. This acknowledgement is in lieu of all warranties either expressed or implied.

If you have any questions regarding this letter, please call.

Sincerely,
Howard Consultants/Inc.



W. Mark Storey, P.E.
Geotechnical Engineer

WMS/km



HCI



Consulting Geotechnical Engineers & Geologists

TEST PIT LOGS

Reeder Bay, Priest Lake
Bonner County, Idaho

<u>TEST PIT NUMBER</u>	<u>DEPTH (FEET)</u>	<u>SOIL DESCRIPTION</u>
TP-1	0.0 - 0.7	TOPSOIL , SILT and SAND (SM/ML) - medium to dark orange brown, moist, loose.
	0.7 - 2.5	SUBSOIL , SAND (SM) - contains silt and minor pebbles, medium orange brown, moist, loose to medium dens.
	2.5 - 9.0	ALLUVIUM , SAND (SP) - coarse grained, contains gravel, grades coarser with depth, medium grey to brown, very moist, medium dense to dense.
	9.0 - 13.0	ALLUVIUM , Silty SAND (SM) - fine grained, grades siltier with depth, medium tannish brown, very moist, medium dense to dense.

Test pit was terminated at 13.0 feet.
Ground Water Elevation: Not encountered at time of excavation.
Excavated on February 18, 1992.

TP-2	0.0 - 0.5	TOPSOIL , SILT and SAND (SM/ML) - medium to dark orange brown, moist, loose.
	0.5 - 2.0	SUBSOIL , Silty SAND (SM) - medium orange brown, contains minor pebbles, moist, loose to medium dense.
	2.0 - 6.0	ALLUVIUM , SAND (SP) - coarse grained, contains gravel, medium orange brown, moist to wet, medium dense.
	6.0 - 11.5	ALLUVIUM , SILT (ML) - contains fine sand and minor clay, mottled tan brown grey, wet, stiff.
	11.5 - 13.0	ALLUVIUM , sandy SILT (ML) - fine grained, contains minor clay, light olive grey, moist to wet, dense/stiff.

Test pit was terminated at 13.0 feet.
Ground Water Elevation: Perched ground water encountered at 6.0 feet.
Excavated on February 18, 1992.

BY _____ DATE _____

FILE _____

CHECKED BY _____

TEST PIT LOGS

Reeder Bay, Priest Lake
Bonner County, Idaho

<u>TEST PIT NUMBER</u>	<u>DEPTH (FEET)</u>	<u>SOIL DESCRIPTION</u>
TP-3	0.0 - 0.7	TOPSOIL , SILT and SAND (SM/ML) - medium to dark orange brown, moist, loose.
	0.7 - 2.0	SUBSOIL , Silty SAND (SM) - medium orange brown, contains minor pebbles, moist, loose to medium dense.
	2.0 - 8.5	ALLUVIUM , SAND and GRAVEL (SP/GP) - medium orange to grey brown, moist to wet, medium dense to dense.
	8.5 - 11.0	ALLUVIUM , SILT (ML) - contains fine sand and minor clay, mottled grey/tan brown, wet, stiff.

Test pit was terminated at 11.0 feet.

Ground Water Elevation: Perched ground water encountered at 8.5 feet.

Excavated on February 18, 1992.

TP-4	0.0 - 0.5	TOPSOIL , SILT and SAND (SM/ML) - medium to dark orange brown, moist, loose.
	0.5 - 3.5	SUBSOIL , Silty SAND (SM) - medium orange brown, contains minor pebbles, moist, loose to medium dense.
	3.5 - 8.0	ALLUVIUM , SAND (SP) - coarse grained, medium grey to brown, moist, medium dense to dense.
	8.0 - 10.0	ALLUVIUM , Sandy SILT (ML) - mottled tan/brown, moist, medium dense to dense.
	10.0 - 12.0	ALLUVIUM , Silty SAND (SM) - medium grey and tan, moist, medium dense to dense.

Test pit was terminated at 12.0 feet.

Ground Water Elevation: Not encountered at time of excavation.

Excavated on February 18, 1992.

BY _____ DATE _____

FILE _____

CHECKED BY _____

TEST PIT LOGS

Reeder Bay, Priest Lake
Bonner County, Idaho

<u>TEST PIT NUMBER</u>	<u>DEPTH (FEET)</u>	<u>SOIL DESCRIPTION</u>
TP-5	0.0 - 0.5	TOPSOIL , SILT and SAND (SM/ML) - medium to dark orange brown, moist, loose.
	0.5 - 2.5	SUBSOIL , Silty SAND (SM) - medium orange brown, contains minor pebbles, moist, loose to medium dense.
	2.5 - 7.0	ALLUVIUM , GRAVEL and SAND (GP/SP) - coarse grained, medium grey to brown, moist, medium dense to dense.
	7.0 - 11.0	ALLUVIUM , SAND (SP) - coarse grained, contains pebbles, medium grey, moist, medium dense to dense.
	11.0 - 13.0	ALLUVIUM , SAND (SP) - fine to medium grained, medium grey, moist, dense.

Test pit was terminated at 13.0 feet.

Ground Water Elevation: Not encountered at time of excavation.

Excavated on February 18, 1992.

BY _____ DATE _____

FILE _____

CHECKED BY _____

APPENDIX 13.5

Archaeological Assessment

ARCHAEOLOGICAL AND HISTORICAL SURVEY REPORT

HERITAGE RESOURCES INVESTIGATIONS OF THE
GRANITE-REEDER WATER AND SEWER DISTRICT
WASTEWATER MANAGEMENT SYSTEM

Bonner County, Idaho

by
Lorelea Hudson
and
Simone Carbonneau Kincaid

Prepared for
Welch Comer & Associates, Inc.
Coeur d'Alene, Idaho
and
Granite-Reeder Water and Sewer District
Priest Lake, Idaho

April 2, 2002
NWAA Project No. ID01-16

Northwest Archaeological Associates, Inc.
5418 20th Avenue NW, Suite 200
Seattle, Washington 98107

The following Archaeological and Historical Survey Report has been removed from this document because “Specific locations of historic properties are exempt from disclosure under the Freedom of Information Act pursuant to 5 U.S.C. 552(b) (5)”

(from *Idaho Panhandle National Forests Heritage Guidelines/Site Investigation Strategy 2003*, page 5)