

Valley County Planning and Zoning

PO Box 1350 • 219 North Main Street
Cascade, ID 83611-1350



Phone: 208-382-7115
Fax: 208-382-7119
Email: cherrick@co.valley.id.us

STAFF REPORT:	C.U.P. 23-29 Gearheard Glamping Site
HEARING DATE:	July 13, 2023
TO:	Planning and Zoning Commission
STAFF:	Cynda Herrick, AICP, CFM Planning and Zoning Director
APPLICANT:	Wade & Karla Gearheard 12774 W Woodville ST, Boise, ID 83709
PROPERTY OWNER:	Ralph Engel 3965 S Constitution Way, Boise, ID 83706
LOCATION:	41 Stanley Drive Crown Point Subdivision No. 9 Lot 14 Block 3, located in the NENE Sec. 14, T.14N R.3E, Boise Meridian, Valley County, Idaho.
SIZE:	0.9 acres
REQUEST:	Glamping Site for Short-Term Rental
EXISTING LAND USE:	Single-Family Residential Lot

Wade and Karla Gearhead are requesting approval of a conditional use permit for short-term rental of a geodome or yurt on a wooden deck that does not qualify as a residential dwelling. The structure would be approximately 300-sqft in size.

Maximum of two vehicles at any given time.

Water would be hauled to and from the site. The site has electrical power. The site currently has RV hookups. There are two small sheds on the property that were placed prior to building permit requirements. One of the sheds has a toilet attached to the existing septic system. The septic system is sized for six people.

The dome or yurt would have house-style lights inside and a "front porch" type light at the entrance. Solar-powered path lights may be included. All lighting must be compliant with Valley County Code.

Campfires would occur in an approved fire ring.

Access would be from Stanley Drive, a public road. The 0.9-acre site is addressed at 41 Stanley Drive.

The plat for Crown Point Subdivision No. 9 was recorded on April 13, 1971. This predated the requirement for one-acre minimum lot size for residences on septic systems. This office is not aware of any CCRs or homeowner associations for this subdivision.

FINDINGS:

1. The application was submitted on May 26, 2023.
2. Legal notice was posted in the *Star News* on June 22, 2023, and June 29, 2023. Potentially affected agencies were notified on June 13, 2023. Property owners within 300 feet of the property line were notified by fact sheet sent on June 16, 2023. The application was posted online at www.co.valley.id.us on June 13, 2023; the notice was added on June 21, 2023. The sign was posted on June 29, 2023.
3. Agency comment received:

Central District Health stated the applicant will need to submit an accessory use application showing location of proposed building in relation to the septic system. (June 21, 2023)

Steven Hull, Cascade Fire Chief, listed requirements. (June 29, 2023)
4. Neighbor comment received: none
5. Physical characteristics of the site: sloped and mostly covered in conifer trees.
6. The surrounding land use and zoning includes:
North: Single-Family Residential (Crown Point Subdivision NO. 9 Subdivision)
South: Single-Family Residential (Crown Point Subdivision NO. 9 Subdivision)
East: Single-Family Residential (Crown Point Subdivision NO. 9 Subdivision)
West: Single-Family Residential (Crown Point Subdivision NO. 9 Subdivision)
7. Valley County Code (Title 9): In Table 9-3-1, this proposal is categorized under:
 - 5. Commercial Uses (e) Recreation Business

Review of Title 9 - Chapter 5 Conditional Uses should be done.

9-5B-7: FIRE PROTECTION:

Provisions must be made to implement prefire activities that may help improve the survivability of people and homes in areas prone to wildfire. Activities may include vegetation management around the home, use of fire resistant building materials, appropriate subdivision design, removal of fuel, providing a water source, and other measures. Recommendations of the applicable fire district will be considered.

9-5F-1: COMMERCIAL USES; SITE OR DEVELOPMENT STANDARDS

- A. Minimum Lot Area:
 1. The minimum lot area shall be unlimited herein except for the provisions of subsection 9-5-3A2 of this chapter, and except the minimum area for a ski area shall be forty (40) acres.
 2. Frontage on a public or private road shall not be less than seventy five feet (75') for each lot or parcel.
 3. No frontage is required for recreation business.
- B. Minimum Setbacks:
 2. The minimum setbacks for service and recreation businesses shall be fifty feet (50') from rear, front, and side street property lines and thirty feet (30') from side property lines.
- C. Maximum Building Height And Floor Area:
 1. Building heights shall not exceed thirty-five feet (35') above the lower of the existing or finished grade.

2. The building size or floor area shall not exceed the limitations of subsections 9-5-3A and C of this chapter and title 6, chapter 1 of this code.
 3. No building or combination of buildings may cover more than forty percent (40%) of the lot or parcel, except recreation business buildings may not cover more than one percent (1%) of the lot and agricultural business buildings may not cover more than twenty percent (20%) of the lot or parcel.
- D. Site Improvements:
4. Parking spaces for recreation businesses shall be provided at the rate of one per each four (4) occupants or as determined by the commission.

Definitions: **RECREATION BUSINESS:** Recreation or athletic activities or facilities open to the general public where fees are charged or dues are required for the use of the facility.

SUMMARY:

Compatibility Rating: Staff's compatibility rating is a +38.

The Planning and Zoning Commission should do their own compatibility rating prior to the meeting (form with directions attached).

STAFF COMMENTS / QUESTIONS:

1. This site is within the Cascade Fire District. It is not within an irrigation district nor a herd district.
2. Will the site be rented seasonally or throughout the year? The road is currently maintained only during the summer and is not plowed.
3. The Landscape/Parking Plan does not show setbacks. Parking is not permitted within the setback areas.
4. Staff recommends the sides and rear of the property be marked and/or fence to limit trespass by renters onto neighboring lots.
5. Submit pictures of the fire pit and surrounding area as well as safety equipment available at the fire pit (e.g., water, shovel, fire extinguisher).
6. The septic approval submitted in the Application is for a 3-bedroom home.
7. Who will be monitoring the renters?
8. What is the plan for trash and dirty dish water?
9. Will there be a 24-hour phone number available to renters and to neighbors in case of issues?

ATTACHMENTS:

- Conditions of Approval
- Blank Compatibility Evaluation and Instructions
- Compatibility Evaluation by Staff
- Vicinity Map
- Aerial Map
- Assessor Plat – T.14N R.3E Section 14
- Crown Point Subdivision No. 9

16. Campfires shall be maintained in an established fire ring. Water, shovel, and/or fire extinguisher must be in close proximity.
17. All noxious weeds on the property must be controlled.
18. A smoke detector shall be installed inside the dome or yurt.
19. The site must be kept in a neat and orderly manner.
20. Food should be stored in a manner that does not attract wildlife.
21. Shall clearly post the physical address at the driveway entrance.
22. Noise shall be kept to a minimum between 10:00 p.m. and 7:00 a.m.
23. No parking allowed in the public road right-of-way or in setback areas.
24. Cannot hold events, such as weddings, large family reunions, dances, concerts, etc.
25. Shall obtain a sign permit prior to installation of a sign.
26. Must comply with payment of sales tax in accordance with Idaho State Code, Chapter 36.

END OF STAFF REPORT

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END OF STAFF REPORT

Compatibility Questions and Evaluation

Matrix Line # / Use: _____

Prepared by: _____

YES/NO X Response
Value

Use Matrix Values:

(+2/-2) _____ X 4 _____

1. Is the proposed use compatible with the dominant adjacent land use?

(+2/-2) _____ X 2 _____

2. Is the proposed use compatible with the other adjacent land uses (total and average)?

(+2/-2) _____ X 1 _____

3. Is the proposed use generally compatible with the overall land use in the local vicinity?

Site Specific Evaluation (Impacts and Proposed Mitigation)

(+2/-2) _____ X 3 _____

4. Is the property large enough, does the existence of wooded area, or does the lay of the land help to minimize any potential impacts the proposed use may have on adjacent uses?

(+2/-2) _____ X 1 _____

5. Is the size or scale of proposed lots and/or structures similar to adjacent ones?

(+2/-2) _____ X 2 _____

6. Is the traffic volume and character to be generated by the proposed use similar to the uses on properties that will be affected by proximity to parking lots, on-site roads, or access roads?

(+2/-2) _____ X 2 _____

7. Is the potential impact on adjacent properties due to the consuming or emission of any resource or substance compatible with that of existing uses?

(+2/-2) _____ X 2 _____

8. Is the proposed use compatible with the abilities of public agencies to provide service or of public facilities to accommodate the proposed use demands on utilities, fire and police protection, schools, roads, traffic control, parks, and open areas?

(+2/-2) _____ X 2 _____

9. Is the proposed use cost effective when comparing the cost for providing public services and improving public facilities to the increases in public revenue from the improved property?

Sub-Total (+) _____

Sub-Total (--) _____

Total Score _____

The resulting values for each questions shall be totaled so that each land use and development proposal receives a single final score.

9-11-1: APPENDIX A, COMPATIBILITY EVALUATION:

- A. General: One of the primary functions of traditional zoning is to classify land uses so that those which are not fully compatible or congruous can be geographically separated from each other. The county has opted to substitute traditional zoning with a multiple use concept in which there is no separation of land uses. Proposed incompatible uses may adversely affect existing uses, people, or lands in numerous ways: noise, odors, creation of hazards, view, water contamination, loss of needed or desired resources, property values, or infringe on a desired lifestyle. To ensure that the county can continue to grow and develop without causing such land use problems and conflicts, a mechanism designed to identify and discourage land use proposals which will be incompatible at particular locations has been devised. The compatibility evaluation of all conditional uses also provides for evaluations in a manner which is both systematic and consistent.
- B. Purpose; Use:
1. The compatibility rating is to be used as a tool to assist in the determination of compatibility. The compatibility rating is not the sole deciding factor in the approval or denial of any application.
 2. Staff prepares a preliminary compatibility rating for conditional use permits, except for conditional use permits for PUDs. The commission reviews the compatibility rating and may change any value.
- C. General Evaluation: Completing the compatibility questions and evaluation (form):
1. All evaluations shall be made as objectively as possible by assignment of points for each of a series of questions. Points shall be assigned as follows:
 - Plus 2 - assigned for full compatibility (adjacency encouraged).
 - Plus 1 - assigned for partial compatibility (adjacency not necessarily encouraged).
 - 0 - assigned if not applicable or neutral.
 - Minus 1 - assigned for minimal compatibility (adjacency not discouraged).
 - Minus 2 - assigned for no compatibility (adjacency not acceptable).
 2. Each response value shall be multiplied by some number, which indicates how important that particular response is relative to all the others. Multipliers shall be any of the following:
 - x4 - indicates major relative importance.
 - x3 - indicates above average relative importance.
 - x2 - indicates below average relative importance.
 - x1 - indicates minor relative importance.
- D. Matrix - Questions 1 Through 3: The following matrix shall be utilized, wherever practical, to determine response values for questions one through three (3). Uses classified and listed in the left hand column and across the top of the matrix represent possible proposed, adjacent, or vicinity land uses. Each box indicates the extent of compatibility between any two (2) intersecting uses. These numbers should not be changed from proposal to proposal, except where distinctive uses arise which may present unique compatibility considerations. The commission shall determine whether or not there is a unique consideration.
- E. Terms:
- DOMINANT ADJACENT LAND USE: Any use which is within three hundred feet (300') of the use boundary being proposed; and
1. Comprises at least one-half (1/2) of the adjacent uses and one-fourth (1/4) of the total adjacent area; or
 2. Where two (2) or more uses compete equally in number and are more frequent than all the other uses, the one with the greatest amount of acreage is the dominant land use; or
 3. In all other situations, no dominant land use exists. When this occurs, the response value shall be zero.
- LOCAL VICINITY: Land uses within a one to three (3) mile radius. The various uses therein should be identified and averaged to determine the overall use of the land.
- F. Questions 4 Through 9:
1. In determining the response values for questions 4 through 9, the evaluators shall consider the information contained in the application, the goals and objectives of the comprehensive plan, the provisions of this title and related ordinances, information gained from an actual inspection of the site, and information gathered by the staff.
 2. The evaluator or commission shall also consider proposed mitigation of the determined impacts. Adequacy of the mitigation will be a factor.

APPENDIX A

MATRIX FOR RATING

QUESTIONS 1, 2, and 3

QUESTIONS 1, 2, and 3																							
1. AGRICULTURAL																							
						</																	

RATE THE SOLID SQUARES AS +2

Compatibility Questions and Evaluation

Matrix Line # / Use: 20 Recreation
Business

Prepared by: CH

YES/NO X Response Value

Use Matrix Values:

(+2/-2) +2 X 4 +8

1. Is the proposed use compatible with the dominant adjacent land use?

S.F. Residential Subdivision

(+2/-2) +2 X 2 +4

2. Is the proposed use compatible with the other adjacent land uses (total and average)?

See #1

(+2/-2) +2 X 1 +2

3. Is the proposed use generally compatible with the overall land use in the local vicinity?

See #1

Site Specific Evaluation (Impacts and Proposed Mitigation)

(+2/-2) +2 X 3 +6

4. Is the property large enough, does the existence of wooded area, or does the lay of the land help to minimize any potential impacts the proposed use may have on adjacent uses?

It is large enough and has trees

(+2/-2) +2 X 1 +2

5. Is the size or scale of proposed lots and/or structures similar to adjacent ones?

Yes

(+2/-2) +2 X 2 +4

6. Is the traffic volume and character to be generated by the proposed use similar to the uses on properties that will be affected by proximity to parking lots, on-site roads, or access roads?

Same as a residential use

(+2/-2) +2 X 2 +4

7. Is the potential impact on adjacent properties due to the consuming or emission of any resource or substance compatible with that of existing uses?

Yes

(+2/-2) +2 X 2 +4

8. Is the proposed use compatible with the abilities of public agencies to provide service or of public facilities to accommodate the proposed use demands on utilities, fire and police protection, schools, roads, traffic control, parks, and open areas?

No Change

(+2/-2) +2 X 2 +4

9. Is the proposed use cost effective when comparing the cost for providing public services and improving public facilities to the increases in public revenue from the improved property?

No Impact

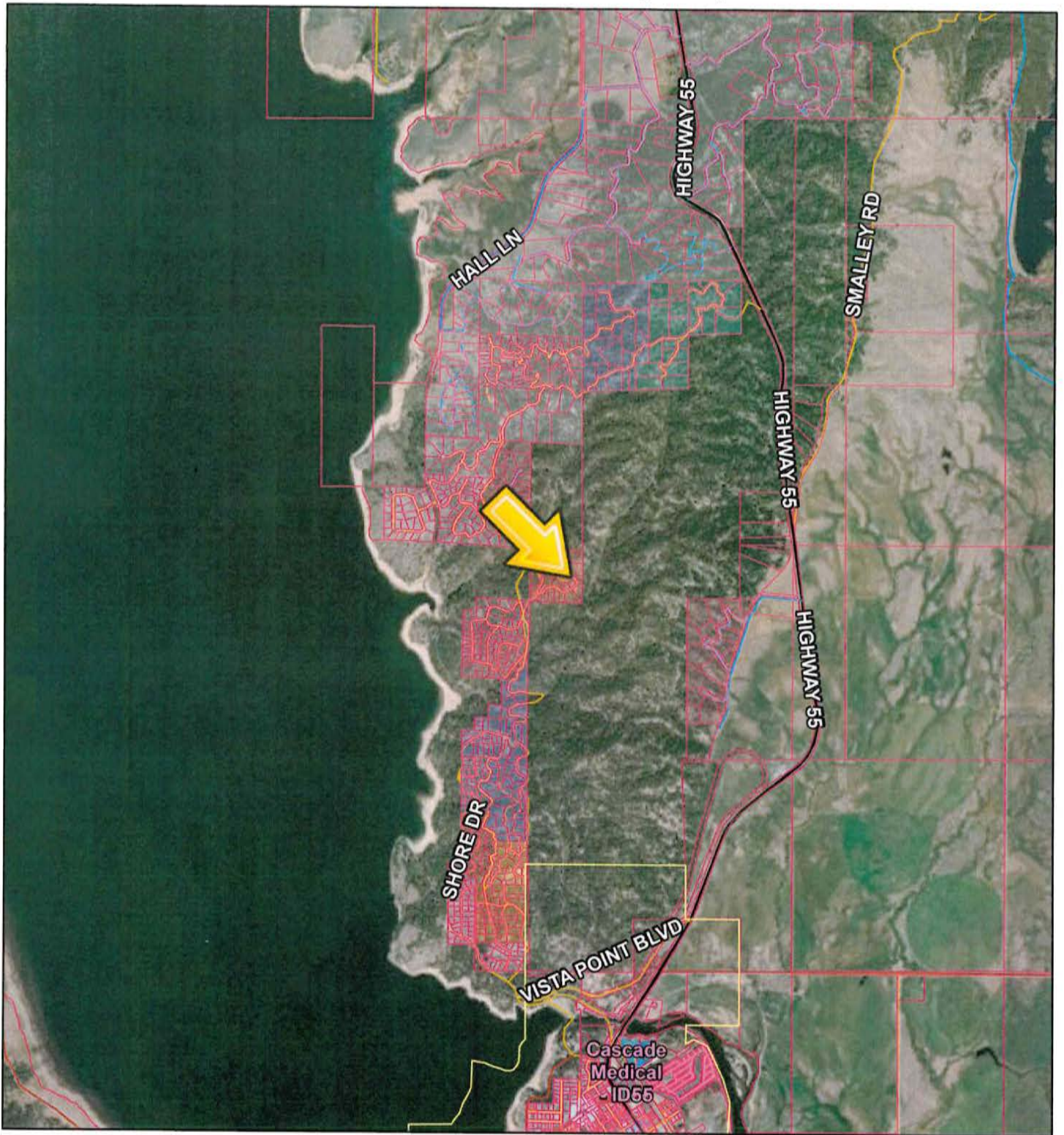
Sub-Total (+) 38

Sub-Total (--)










Total Score +38

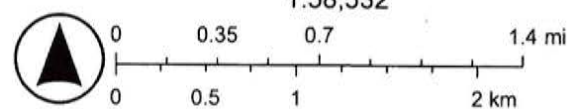
The resulting values for each questions shall be totaled so that each land use and development proposal receives a single final score.

C.U.P. 23-29 Vicinity Map



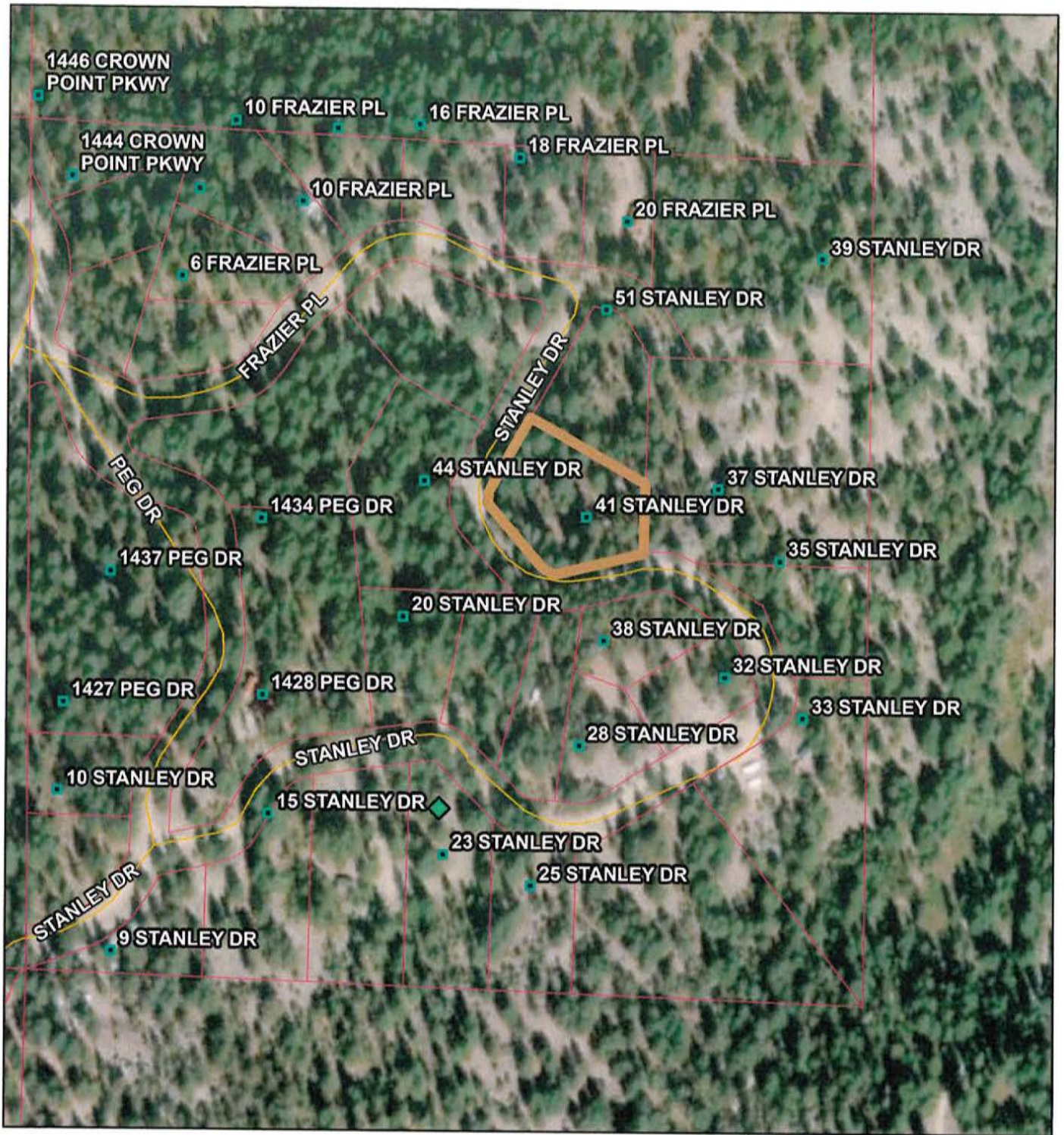
June 2, 2023

- | | |
|--|---|
|  Municipalities |  MINOR COLLECTOR |
|  Parcel Boundaries |  COLLECTOR |
|  Airstrips |  URBAN/RURAL |
| Roads |  PRIVATE |
|  MAJOR |  OTHER |



Earthstar Geographics

C.U.P. 23-29 Aerial Map



June 2, 2023

Permits



CUP 22-38
Glamping Site



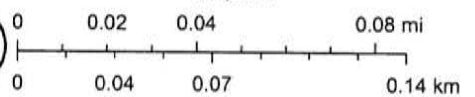
Address Points



Parcel Boundaries

Roads

URBAN/RURAL



Maxar

PLAT TITLE

T W P . 1 4 N R O 3 E S E C . 1 4

VALLEY COUNTY
Cartography Dept.
Assessor's Office
Cascade, ID 83611

Filename:
Valley County Base Map
Scale: 
Date: 12/30/2022
Drawn by: L. Frederick

CUP 23-29

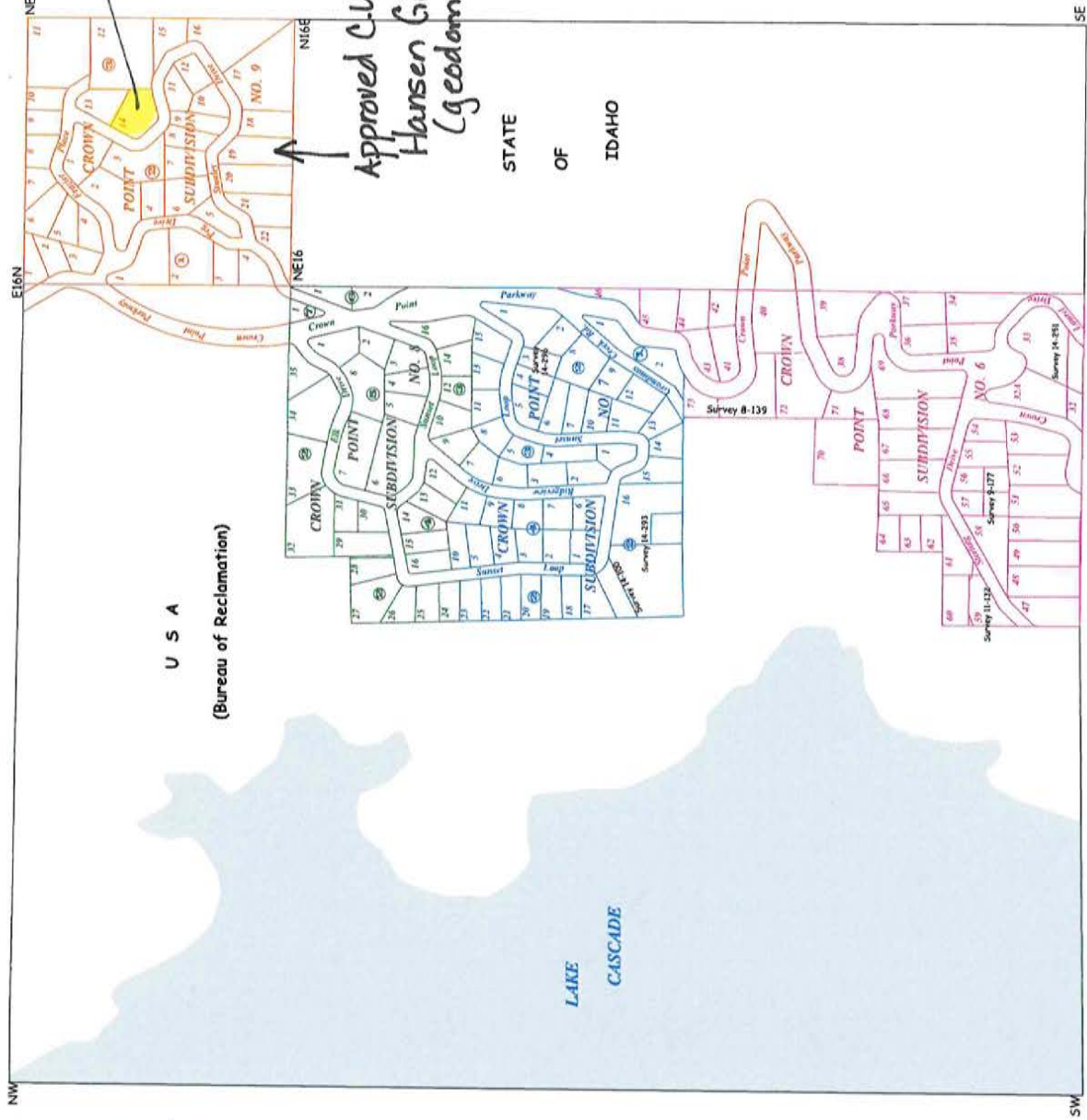
proposed
site

Approved C.U.P. 22-38
Hansen Glamping Site
(geodome)

STATE
OF
IDAHO

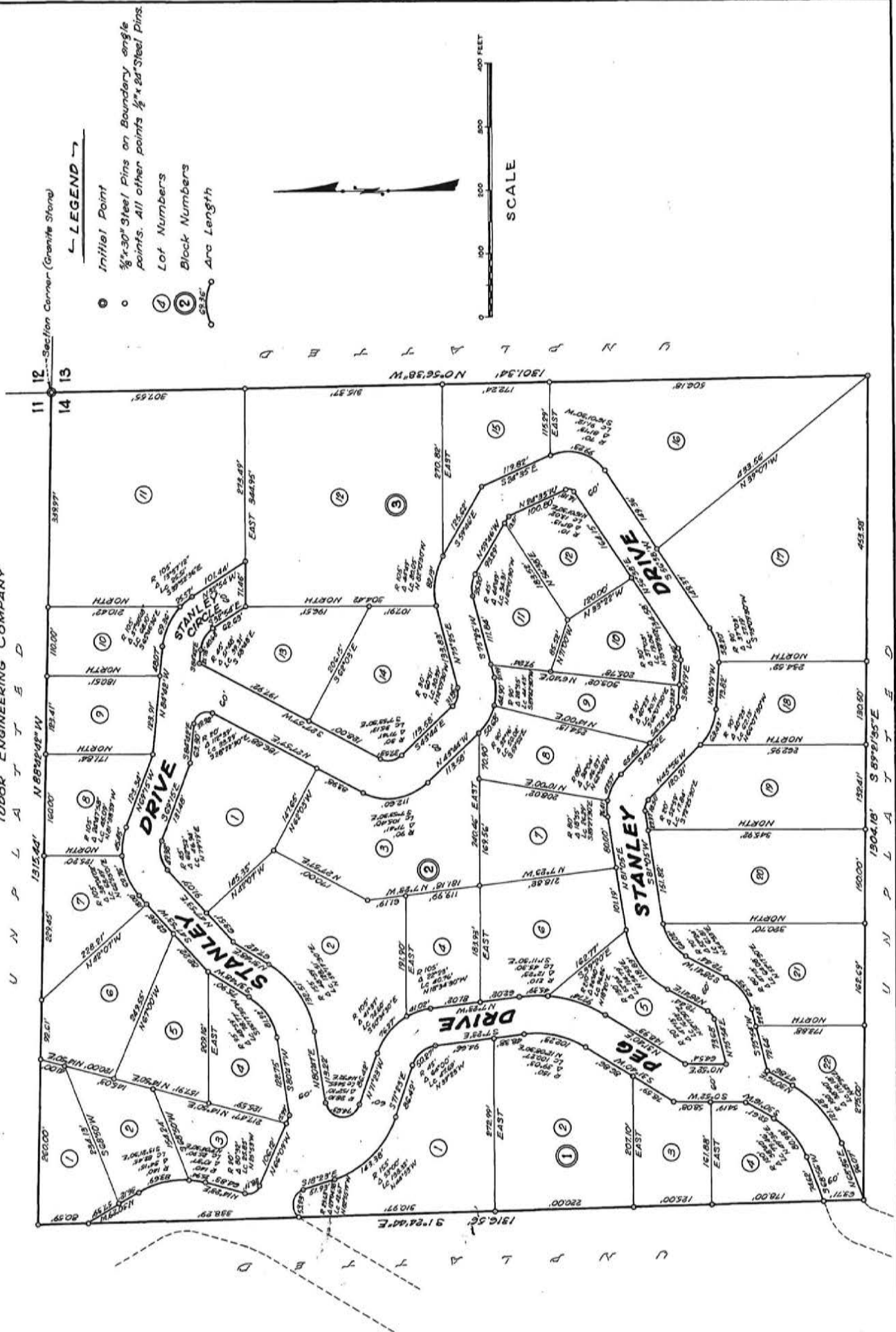
U S A
(Bureau of Reclamation)

LAKE
CASCADE



IN THE NE⁴ OF SECTION 14, T. 14 N., R. 3 E., B. M.,
VALLEY COUNTY, IDAHO

U N A T T E



OWNER'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS: That CALLENDER'S, INC., a corporation organized and existing under the laws of the State of Idaho, and duly qualified to do business within the State of Idaho, does hereby certify that it is the owner of the real property hereinafter described:

Beginning at the section corner common to Sections 11, 12, 13, & 14, T. 14 N., R. 3 E., B.M., Valley County, Idaho, thence N 88° 48' 22" W, 1315.44 feet to a steel pin; thence S 12° 44' 44" E, 1316.56 feet to a steel pin; thence S 89° 21' 55" E, 1504.18 feet to a steel pin; thence N 0° 56' 38" W, 1301.34 feet to the place of beginning.

The owners hereby dedicate to the public, for public use forever the streets and public ways as shown on said plat. Public utility and drainage easements are not dedicated to the public, but easements and the right to build and maintain said public utilities, where required, to service all lots and parcels within this platting is perpetually reserved to the owners of the lots in this subdivision.

IN WITNESS WHEREOF, we have hereunto set our hands this 8 day of February, 1971.

CALLENDER'S, INC.

By: Frank D. Callender
Frank D. Callender, President

Attest: Laura Callender
Laura Callender, Secretary

ACKNOWLEDGMENT

STATE OF IDAHO)
COUNTY OF VALLEY)
On this 8th day of February, 1971, before me the undersigned,

a Notary Public in and for said State, personally appeared Frank D. Callender, known to me to be the President, and Laura Callender, known to me to be the Secretary of the corporation that executed the within instrument and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year in this certificate first above written.

My Commission expires 11/15/73
Notary Public for the State of Idaho



CERTIFICATE OF ENGINEER

I, Leslie L. Ankenman, do hereby certify that I am a Professional Engineer, licensed by the State of Idaho, and that this plat, as described in the Owner's Certificate, was drawn from an actual survey made on the ground under my direct supervision, and accurately represents the points plotted hereon, and is in conformity with the State of Idaho Code relating to plats surveys.



Leslie L. Ankenman

ACKNOWLEDGMENT

STATE OF IDAHO)
COUNTY OF ADA)
On this 5th day of Feb, 1971, before me the undersigned,

a Notary Public in and for said State, personally appeared Leslie L. Ankenman, whose name is subscribed to the foregoing "Certificate of Engineer," and acknowledged to me that he executed the same.

My Commission expires 5/10/74

Ronew R. Totten
Notary Public for the State of Idaho



CERTIFICATE OF COUNTY SURVEYOR

I, the undersigned, Registered Engineer for Valley County, Idaho, do hereby certify that I have checked this plat and that it complies with the State of Idaho Code relating to plats and surveys.

Date 2-5-71



David C. Davis
County Surveyor

APPROVAL OF COUNTY COMMISSIONERS

Accepted and approved this 12 day of April, 1971, by the Board of County Commissioners of Valley County, Idaho.



David W. Hall
Chairman

Instrument No. 73718

STATE OF IDAHO)
COUNTY OF VALLEY)
I, hereby certify that this instrument was filed for record at the request of David Callender, at 02 minutes past 9 o'clock A.M., on this 13 day of April, 1971.

F. R. Rasmussen
Deputy
Recorder

J. L. Crutcher
Ex-Officio Recorder

ENTER ACF

STANLEY DR.

00-27

206-15
2015

Traced
boundaries
from
Assessors
Map for
reference

A hand-drawn diagram of a shed layout. The shed is rectangular, with a total width of 10' and a total depth of 16'. The layout is divided into three sections: a 10' x 8' section on the left, a 10' x 10' section in the middle, and a 16' x 10' section on the right. The 10' x 8' section is labeled '10 X 8 SHED w/ Tailer' and '10' x 8''. The 10' x 10' section is labeled '10' x 10''. The 16' x 10' section is labeled '16 X 10 SHED w/ Power'. A 'back' arrow points to the right side of the diagram.

STANLEY DR.

113.58

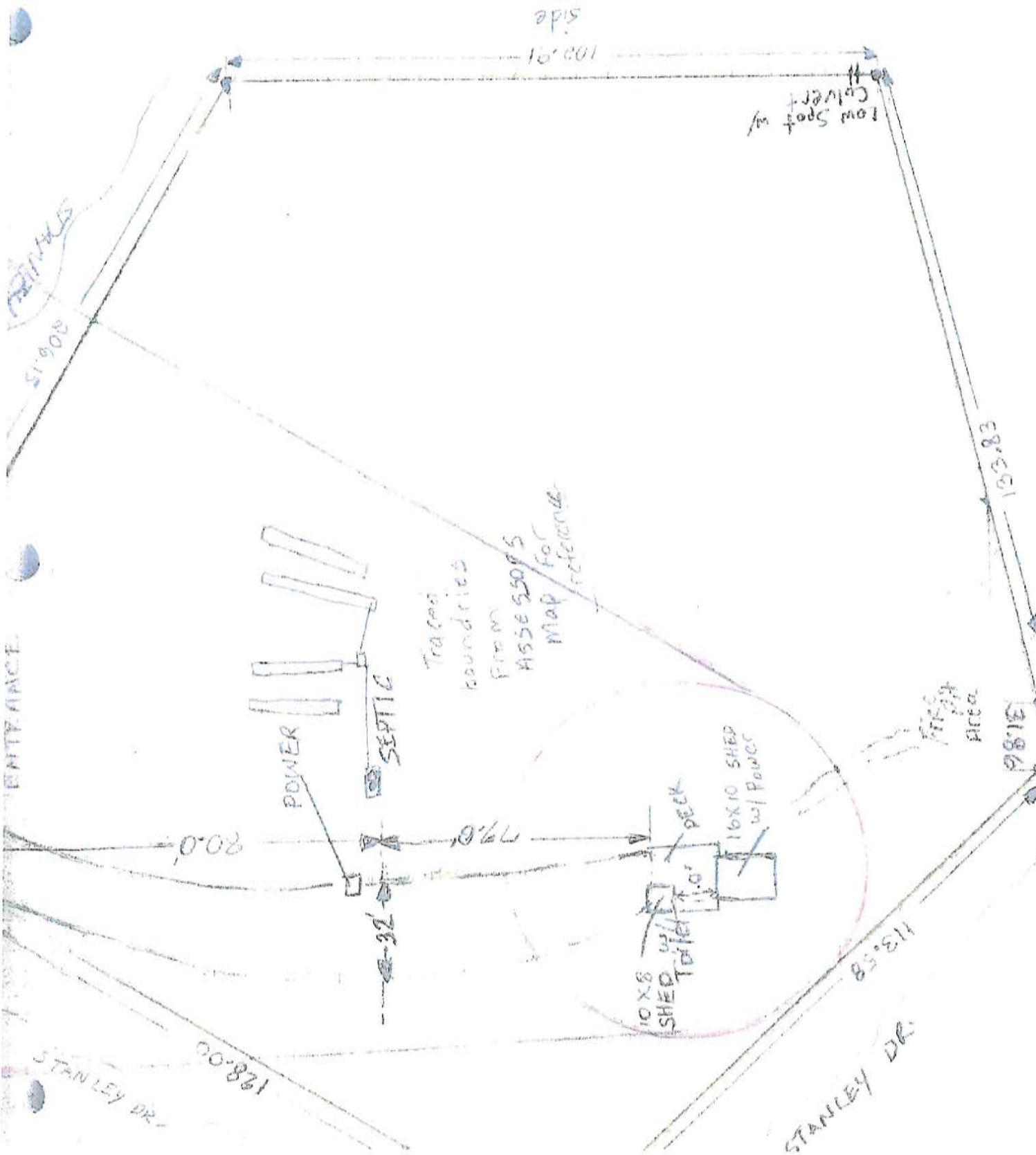
1940

3186

123.83

Low Spot
Cutter

side









Valley County Transmittal
Division of Community and Environmental Health

Return to:

- ☐ Cascade
☐ Donnelly
☐ McCall
☐ McCall Impact
☒ Valley County

Rezone # _____

Conditional Use # CUP 23-29

Preliminary / Final / Short Plat _____

Crown point Sub #9 Lot 14 Blk 3
41 Stanley Drive

- ☐ 1. We have No Objections to this Proposal.
- ☐ 2. We recommend Denial of this Proposal.
- ☐ 3. Specific knowledge as to the exact type of use must be provided before we can comment on this Proposal.
- ☐ 4. We will require more data concerning soil conditions on this Proposal before we can comment.
- ☐ 5. Before we can comment concerning individual sewage disposal, we will require more data concerning the depth of:
☐ high seasonal ground water ☐ waste flow characteristics
☐ bedrock from original grade ☐ other _____
- ☐ 6. This office may require a study to assess the impact of nutrients and pathogens to receiving ground waters and surface waters.
- ☐ 7. This project shall be reviewed by the Idaho Department of Water Resources concerning well construction and water availability.
- ☐ 8. After written approvals from appropriate entities are submitted, we can approve this proposal for:
☐ central sewage ☐ community sewage system ☐ community water well
☐ interim sewage ☐ central water
☐ individual sewage ☐ individual water
- ☐ 9. The following plan(s) must be submitted to and approved by the Idaho Department of Environmental Quality:
☐ central sewage ☐ community sewage system ☐ community water
☐ sewage dry lines ☐ central water
- ☐ 10. Run-off is not to create a mosquito breeding problem
- ☐ 11. This Department would recommend deferral until high seasonal ground water can be determined if other considerations indicate approval.
- ☐ 12. If restroom facilities are to be installed, then a sewage system MUST be installed to meet Idaho State Sewage Regulations.
- ☐ 13. We will require plans be submitted for a plan review for any:
☐ food establishment ☐ swimming pools or spas ☐ child care center
☐ beverage establishment ☐ grocery store

☒ 14. Applicant will need to submit an ACCESSORY USE Application
Showing location of yurt in relation to the septic system.

Reviewed By: [Signature]

Date: 6/21/23



Cascade Rural Fire Protection District
P. O. Box 825
109 East Pine Street
Cascade, Idaho 83611-0825
208.382.3200 – Phone
208.382.4222 – Fax

June 29, 2023

TO: Cynda Herrick
Planning and Zoning Director

RE: C.U.P. 23-29 Gearheard Glamping Site
41 Stanley Drive

I have reviewed the application for CUP 23-29 Gearheard Glamping Site located at 41 Stanley Drive. The proposal is to use a yurt (Geodome) for overnight camping. Cascade Rural Fire Protection District (CRFPD) has the following recommendations for approval:

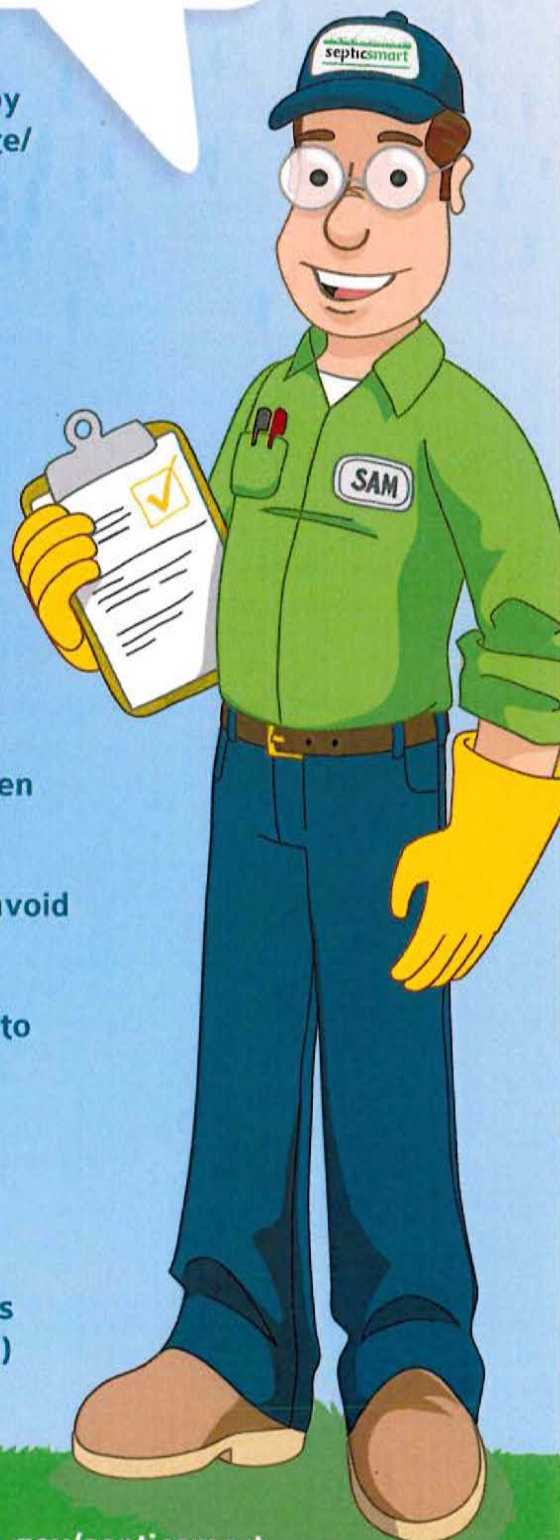
- The design and construction of the Geodome be approved by Valley County Building Department and comply with the International Building Code to be a residential dwelling.
- Since there is no running water on the property, CRFPD recommends an ABC fire extinguisher and shovel be on the property for fire safety purposes.
- Applicant installs a battery-operated smoke detector inside the Geodome.

Please contact me if you have any questions.

Steve Hull
Steven Hull
Fire Chief
Cascade Rural Fire District
steve@cascaderuralfire.com

Top 10 Ways to Be a Good Septic Owner

- ✓ Have your system inspected every three years by a qualified professional or according to your state/ local health department's recommendations
- ✓ Have your septic tank pumped, when necessary, generally every three to five years
- ✓ Avoid pouring harsh products (e.g., oils, grease, chemicals, paint, medications) down the drain
- ✓ Discard non-degradable products in the trash (e.g., floss, disposable wipes, cat litter) instead of flushing them
- ✓ Keep cars and heavy vehicles parked away from the drainfield and tank
- ✓ Follow the system manufacturer's directions when using septic tank cleaners and additives
- ✓ Repair leaks and use water efficient fixtures to avoid overloading the system
- ✓ Maintain plants and vegetation near the system to ensure roots do not block drains
- ✓ Use soaps and detergents that are low-suds, biodegradable, and low- or phosphate-free
- ✓ Prevent system freezing during cold weather by inspecting and insulating vulnerable system parts (e.g., the inspection pipe and soil treatment area)



U.S. Environmental Protection Agency

For more SepticSmart tips, visit www.epa.gov/septicmart



EPA-832-F-16-010 | July 2016

A Homeowner's Guide to Septic Systems



**Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706**

January 2001

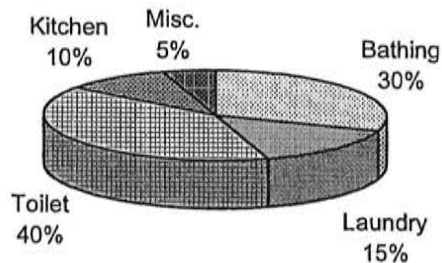


Do you have a home septic system? As an Idaho resident, there is a good chance you do—thirty-six percent of Idaho's homes, or about 210,000 residences, use septic systems to treat their sewage. These systems discharge more than 53 million gallons of wastewater into Idaho's soils annually, and this figure grows each year. In 1999, Idaho's seven health districts issued over 6,100 permits for new septic systems.

Septic systems dispose of household sewage, or wastewater, generated from toilet use, bathing, laundry, and kitchen and cleaning activities. Because septic systems are underground and seldom require daily care, many homeowners rarely think about routine operations and maintenance. However, if a septic system is not properly designed, located, constructed, and maintained, groundwater may become contaminated.

Household Wastewater

Households that are not served by public sewers depend on septic tank systems to treat and dispose of wastewater. Household wastewater carries with it all wastes that go down the drains in our homes, including human waste, dirt, food, toilet paper, soap, detergents, and cleaning products. It contains dissolved nutrients, household chemicals, grease, oil, microorganisms (including some that cause disease), and solid particles. If not properly treated by your septic system, chemicals and microorganisms in wastewater can travel through the soil to groundwater and pose a health hazard.



The average person uses between 50 and 75 gallons of water per day; mostly in the bathroom. Reducing your water use will help your septic system to work more efficiently.

Your Septic System

A conventional septic system has three working parts: a septic tank, a drainfield, and surrounding soil.

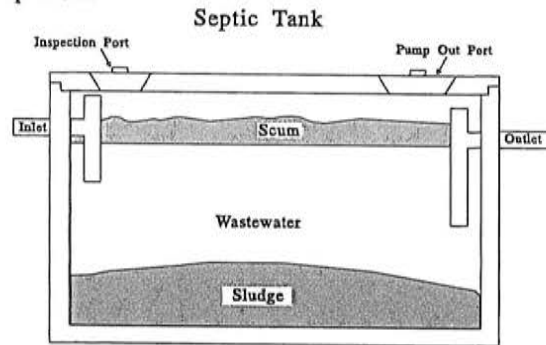
Septic Tank

Septic tanks can be made of concrete, fiberglass, or plastic and must be approved by the state. Minimum sizes of tanks have been established for residences based on the number of bedrooms in the dwelling. In Idaho, a 1,000-gallon septic tank is required for homes with three or four bedrooms. Larger tanks are required for larger homes. Local district health departments issue permits for septic systems and specify the minimum size tank. Some systems installed before the current rules and regulations may have smaller septic tanks.

A septic tank has three main functions:

- to remove as many solids as possible from household wastewater before sending the liquid, called “effluent,” to a drainfield;
- to decompose solids in the tank; and
- to store solids that do not decompose.

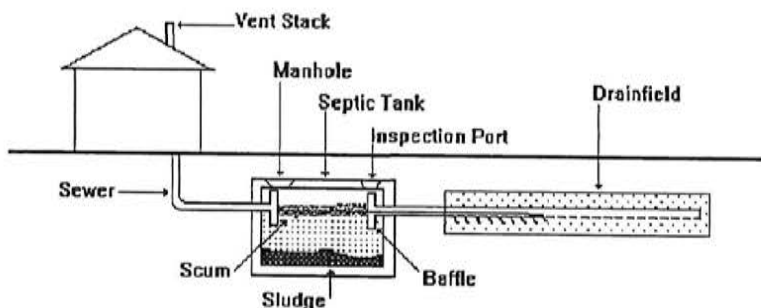
When raw wastewater enters the tank, heavy solids sink to the bottom of the tank as sludge. Light solids, such as grease and paper, float to the surface as scum. During the wastewater storage period, bacteria digest organic material in the wastewater. During this process, the solid material is reduced in volume and composition. Solids that do not decompose accumulate in the tank and eventually must be pumped out.



Tees, or baffles, are provided at the tank's inlet and outlet pipes. The inlet tee slows the incoming wastes and reduces disturbance of the settled sludge. The outlet tee keeps the solids and scum in the tank. As new wastewater enters the tank through the inlet tee, an equal amount of wastewater is pushed out of the tank through the outlet tee. The effluent that leaves the tank has been partially treated but still contains disease-causing bacteria and other pollutants.

Drainfield

Each time raw wastewater enters the tank it forces an equal amount of effluent into a drainfield. A standard drainfield is composed of a series of perforated pipes buried in gravel-filled trenches in the soil. The effluent seeps out of the perforated pipes and percolates through the gravel to the soil.



Soil

The soil below the drainfield provides the final treatment and disposal of the septic tank effluent. After the effluent has passed into the soil, most of it percolates downward and outward, eventually entering the groundwater. Soils are critical to the treatment of septic tank wastewater.

A system that is not functioning properly will release nutrient-rich and bacterial-laden wastewater into the groundwater and/or surface water. These contaminated waters pose a significant public health threat to people that come into contact with them. Wastewater that moves with groundwater can transport bacteria considerable distances. This can result in a threat to public health and adversely affect the quality of ground and surface waters.

Caring for Your Septic System

Installing Your System

In order to have a septic system installed on your property, you must first obtain a permit. Permit applications are available from your local district health department. Next, you must have a site evaluation performed. Make arrangements for this with your district health department and with a licensed septic system installer. Note that not all property is suitable for septic systems, so some permits may be denied. It is recommended that you have a site evaluation performed before you purchase property. Finally, have your system installed by a licensed installer and inspected by your local health district. Provide regular, preventative, maintenance to keep your system running smoothly.

Inspecting Your System

When too much sludge and scum are allowed to accumulate in your tank, the incoming sewage will not have enough time in the septic tank for solids to settle. Solids may flow to the drainfield and clog the pipes, causing the sewage to overflow to the ground surface, where it exposes humans and animals to disease-causing organisms. To prevent this from happening, it is very important to inspect your tank regularly and have it serviced when needed. All tanks have accessible manholes for inspecting and pumping. Some excavation work may be needed to uncover the manhole.

Properly designed tanks should have enough capacity for three to eight years of use before needing service. This is dependent upon the amount of wastewater generated. It is recommended that an average family of four have its septic tank pumped out every three to five years. Don't wait for signs of system failure to have your tank pumped. Your tank should be checked annually to measure sludge and scum levels. A licensed septic tank pumper can provide a septic tank inspection and recommend when the tank should be pumped. A tank inspection should include measuring the depth of scum and sludge and inspecting the tees in the septic tank.

If you do the inspection yourself, it is important to understand that septic tanks always appear full because both the inlet and the outlet are at the top of the tank. What you will need to know is how much of the tank's volume is being taken up by scum and sludge. When sludge and scum take up more than 35 percent of the tank volume, these solids need to be removed by pumping. A pole wrapped in a coarse weave cloth can be used to check the sludge depth. An extension on the pole can be used to measure the scum depth. Record these measurements as part of your pumping records. To check the tees, uncover the inspection ports.

Never allow anyone to enter your septic tank. Dangerous gases and the lack of oxygen can kill in minutes.

While it is impractical to inspect the pipes in your drainfield, it is important to watch for drainfield failure or overuse. See "Warning Signs of System Failure" in this booklet for information.

Maintaining Your System

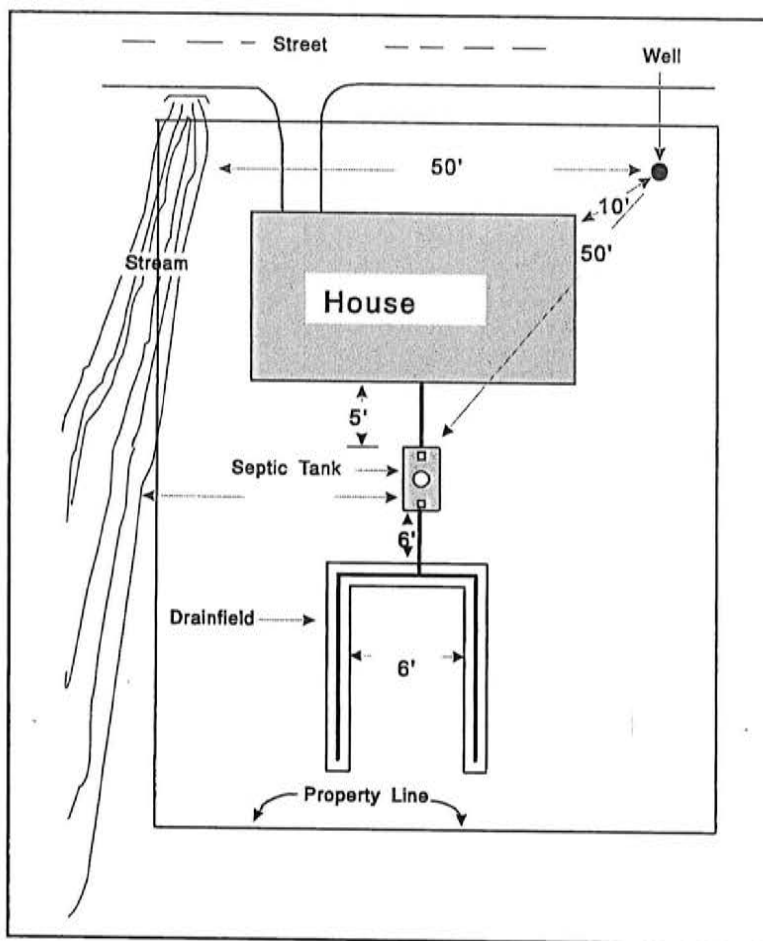
Pumping your septic tank every three years (or as determined by your inspections) will remove accumulations of solids, help keep the drainfield from becoming clogged, and help prevent you from experiencing sewage backups or septic system failure. An accumulation of sludge exceeding 35% of the total water depth in the septic tank could cause solids to enter the drainfield and clog the system. Hire a licensed septic tank pumper to pump your tank for you.

Mapping Your System

In order to take proper care of your septic system, you must know the location of the septic tank and drainfield. The location of your septic tank can be determined from plot plans, septic system inspection records, architectural or landscape drawings, or from observations of the house plumbing. If you do not have access to drawings, find where the sewer pipe leaves your house. Some installers mark the location where the waste pipe comes out of the house with an "S" on the foundation. You may want to do this as well. Probe in the ground 10 to 15 feet directly out from the location where the pipe leaves your house to find your tank.

Once the septic tank has been located, make several plot plan diagrams (with measurements) that include a rough sketch of your house, septic tank cover, drainfield area, well, and any other permanent reference points (such as trees or large rocks) and place them with your important papers. You'll find a sample system diagram on the next page, and a place to draw your own inside the front cover of this booklet. You may also want to hang a diagram in your garage and provide one to your local district health office.

Maintain a permanent record of any septic system maintenance, repair, sludge and scum levels, pumping, drainfield condition, household backups, and operations notes.



Create a septic system diagram, similar to this one, for your system.

Warning Signs of System Failure

While proper use, inspections, and maintenance should prevent most septic tank problems, it is still important to be aware of changes in your septic system and to act immediately if you suspect a system failure. There are many signs of septic system failure:

- surfacing sewage or wet spots in the drainfield area;
- plumbing or septic tank backups;
- slow draining fixtures;
- gurgling sounds in the plumbing system;
- sewage odors in the house or yard (note that the house plumbing vent on the roof will emit sewage odors and this is normal); and
- tests showing the presence of bacteria in well water.

If you notice any of these signs, or if you suspect your septic tank system may be having problems, contact a licensed septic system professional or your local district health agency for assistance.

Septic System Dos and Don'ts

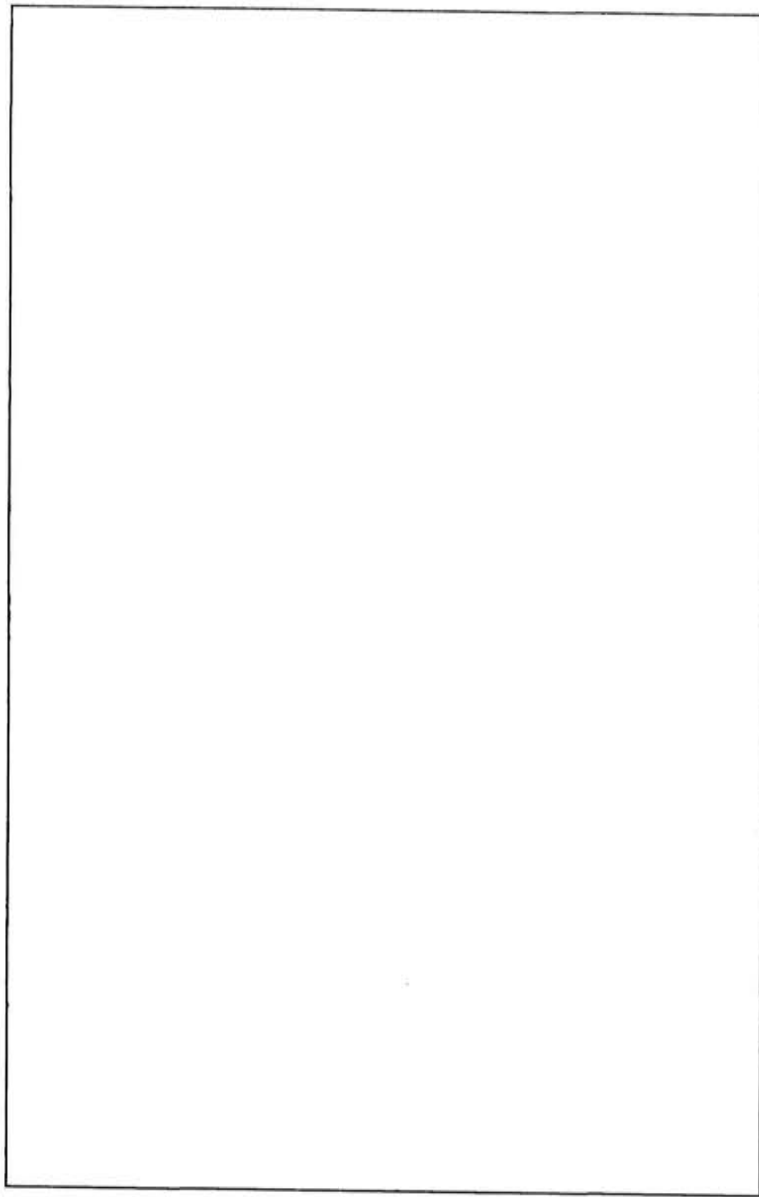
Proper operation of a septic system can prevent costly repairs or replacement. Observing the following guidelines will help to keep your system running efficiently.

Do

- ...practice water conservation. The more wastewater you produce, the more wastewater your system must treat and dispose. By reducing and balancing your use, you can extend the life of your system and avoid costly repairs.
 - Use water saving devices such as low flow showerheads.
 - Repair leaky faucets and plumbing fixtures immediately.
 - Reduce toilet reservoir volume or flow.
 - Take short showers.
 - Take baths with a partially filled tub.
 - Wash only full loads of dishes and laundry.
 - Shut off the water while shaving or brushing your teeth.
 - Balance your water use (e.g., avoid washing several loads of laundry in one day).
- ...keep accurate records. Know where your septic tank is, keep a diagram of its location using the space provided in this booklet, and keep a record of system maintenance.
- ...inspect your system annually. Check the sludge and scum levels inside the tank and periodically check the drainfield for odors, wet spots, or surfacing sewage.
- ...pump your system routinely. Pumping your septic tank is probably the single most important thing you can do to protect your system.
- ...keep all runoff away from your system. Water from roofs and driveways should be diverted away from the septic tank and drainfield area. Soil over your system should be mounded slightly to encourage runoff.
- ...protect your system from damage. Keep vehicles and livestock off your drainfield. The pressure can compact the soil or damage the pipes. Before you dig for any reason, check the location of your system and drainfield area.
- ...landscape your system properly. Plant grass over the drainfield area. Don't plant trees or shrubs or place impermeable materials, such as concrete or plastic, over the drainfield.
- ...use cleaning chemicals in moderation and only according to manufacturer's directions.

Don't

- ...flood irrigate over your system or drainfield area. The best way to irrigate these areas is with sprinklers.
- ...use caustic drain openers for clogged drains. Use boiling water or a drain snake to clean out clogs.
- ...enter a septic tank. Poisonous gases or a lack of oxygen can be fatal.
- ...use septic tank additives. They are not necessary for the proper functioning of your tank and they do not reduce the need for pumping. In fact, some additives can even harm your system.
- ...flush harmful materials into your tank. Grease, cooking oil, coffee grounds, sanitary napkins, and cigarettes do not easily decompose in septic tanks. Chemicals, such as solvents, oils, paints, and pesticides, are harmful to your systems operation and may pollute groundwater.
- ...use a garbage disposal. Using a garbage disposal will increase the amount of solids entering the septic tank and will result in the need for more frequent pumping.



Map your septic system here

For More Information

If you need to obtain a permit for a new or replacement septic system, or if you have questions about septic systems and their operation and maintenance, please contact your local health district.

Panhandle District Health Department
8500 N. Atlas Road
Hayden, ID 83835
208-415-5100

North Central District Health Department
215 10th Street
Lewiston, ID 83501
208-799-0353

Southwest District Health Department
920 Main Street
Caldwell, ID 83605
208-455-5400

Central District Health Department
707 N. Armstrong Place
Boise, ID 83704
208-327-7499

South Central District Health Department
1020 Washington Street North
Twin Falls, ID 83303
208-734-5900

Southeastern District Health Department
1901 Alvin Ricken Drive
Pocatello, ID 83201
208-239-5270

District 7 Health Department
254 "E" Street
Idaho Falls, ID 83402
208-523-5382