

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES**AMENDED****APPLICATION FOR PERMIT**

To appropriate the public waters of the State of Idaho

AMENDEDIdent. No. 29-14042**RECEIVED****JUN 06 2013**Department of Water Resources
Eastern RegionPhone 360-650-07771. Name of applicant(s) Bar None Ranch LLCName connector (check one): ☐ and ☐ or ☐ and/orMailing address: 1200 Bay LaurelCity Menlo ParkState CAZip 94025Email: blaine@scginc.com2. Source of water supply Unnamed creek (Snodgrass Creek) which is a tributary of Dempsey Creek (See Attached)

3. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
10S	38E	28		NE	NW		Bannock	unnamed stream	Snodgrass Creek

4. Water will be used for the following purposes:

Amount .13393 cfs for Power Generation purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)5. Total quantity to be appropriated is (a) .13393 cubic feet per second (cfs) and/or (b) _____ acre-feet per year (af).

6. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source. See Attached

b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11.

For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☒ No

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☒ No

e. If well is already drilled, when? _____; drilling firm _____;

Well was drilled for (well owner) _____; Drilling Permit No. _____.

7. Description of proposed uses (if irrigation only, go to item 8):

a. Hydropower; show total feet of head and proposed capacity in kW. Gross Head 223' Net Head 207' 24 KWH/Day

b. Stockwatering; list number and kind of livestock. _____

c. Municipal; show name of municipality or the applicant's qualifications as a municipal provider. _____

d. Domestic; show number of households _____

e. Other; describe fully. _____

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8. Description of place of use:

- If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S	38E	28					P												

Total number of acres to be irrigated: 0

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? N/A

10. a. Who owns the property at the point of diversion? Roland Evans, Bar None Ranch LLC, Storch Family Trust
b. Who owns the land to be irrigated or place of use? Roland Evans, Bar None Ranch LLC, Storch Family trust
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: Land is owned jointly by family members who have no objection to project

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. See attached

12. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.


Signature of Applicant
Blaine F Nye, Ranch Manager
Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)

For Department Use:

Received by _____ Date _____ Time _____ Preliminary check by _____

Fee \$ \$100.00 Received by Km Receipt No. E038192 Date 11-19-12

\$50.00

Km

E038790
29-14042

6-10-13

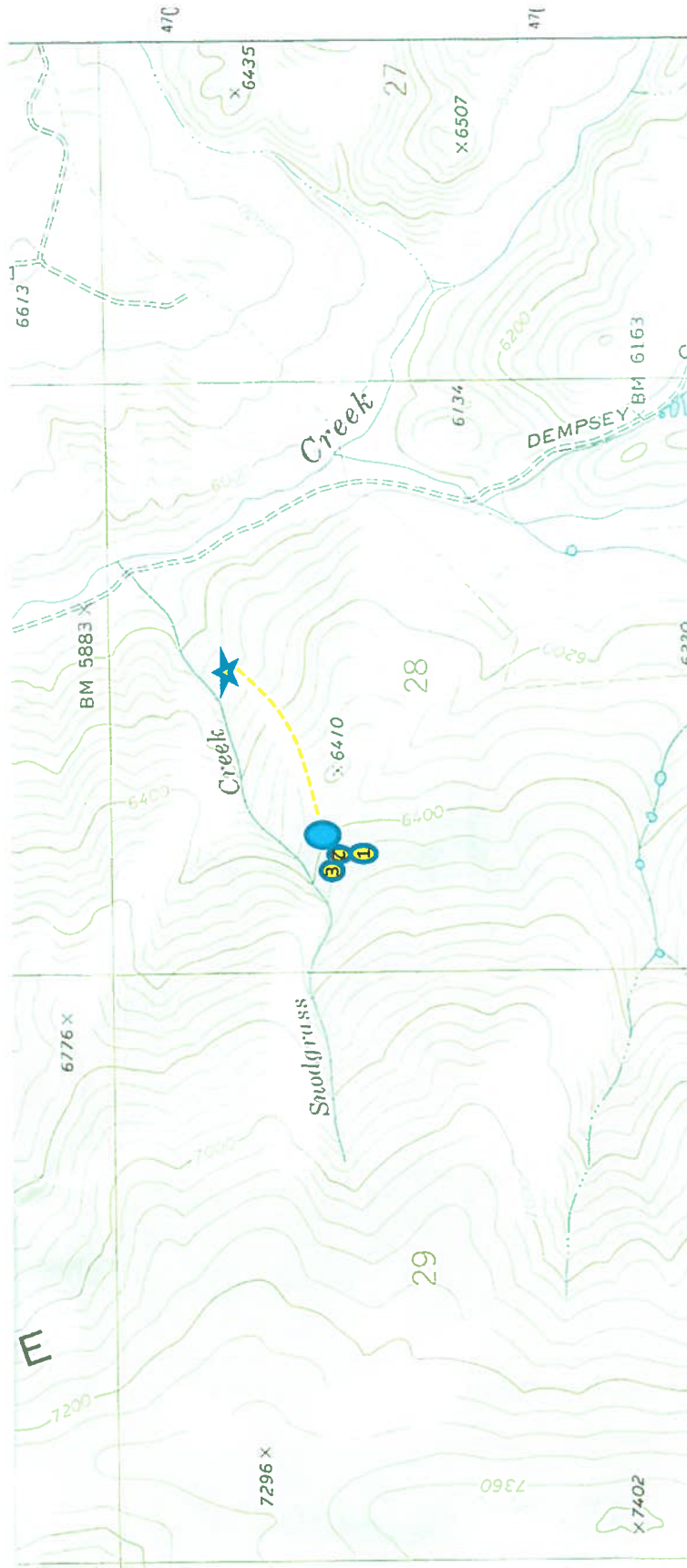
Bar None LLC Snodgrass Creek Project

- *All work will be performed using a backhoe and hand tools, shovel, etc.) No equipment will operate in primary stream channel, minimizing impacts to the extent possible within the project area.*
- *Development Process:*
 - *Using a backhoe, a 20' long 12" diameter culvert will be installed*
 - *Culvert sits on a massive limestone ledge 4"-8" under the stream bed*
 - *A diversion screen will be placed under the down stream side of the culvert to accept water*
 - *1' to 1.5' rocks will be place on the inflow and near outflow side of the culvert.*
 - *Dirt on top and ends of culvert will be seeded with local natural grass*
 - *A buried 3" HDPE (and/or PVC) pipeline will be directed NNE next to a logging road to the powerhouse constructed within ~150' of the cabin (primary use site)*
 - *Minimal to no ecological impact*
 - *A buried 3" HDPE pipe will run from the power house to return 100% of the water to Snodgrass Creek.*

Bar None LLC Snodgrass Creek Project

- *LIST of Permits Continued*
- *Amended State of Idaho Water Diversion*
 - *S29 20075 Permit –Date Applied: 5/31/2013*
- *Amended Army Corp of Eng. Water Diversion*
 - *NWW 2012-646-102 Date Applied: 5/31/2013*
- *Amended Application to Permit to appropriate Waters of State of Id*
 - *Pending Law implementation: 7/31/2013 Applied 5/31/2013*

Original Penstock Map



Diversion Point

- Spring 1, 2, 3
- Penstock
- Buried Reservoir



Powerhouse/Cabin

Point of Use

Lat: 42.530109, -Long: 112.019223

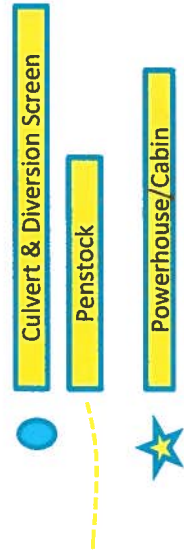
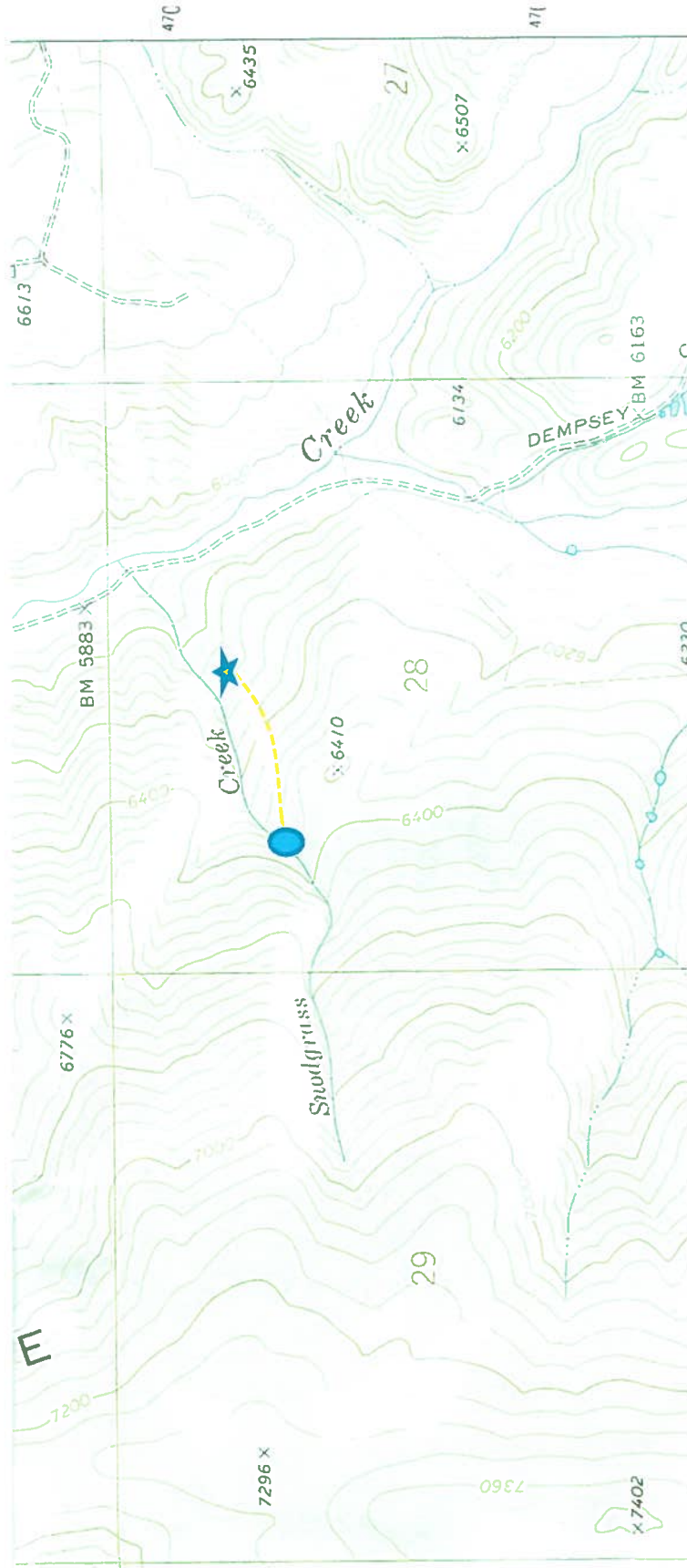
Diversion Point

Lat: 42.528749, Long:-112.025402

Distance from Diversion Pt. to Pt. of Use: ~1380'

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Revised Penstock Map: Diversion point ~350' lower



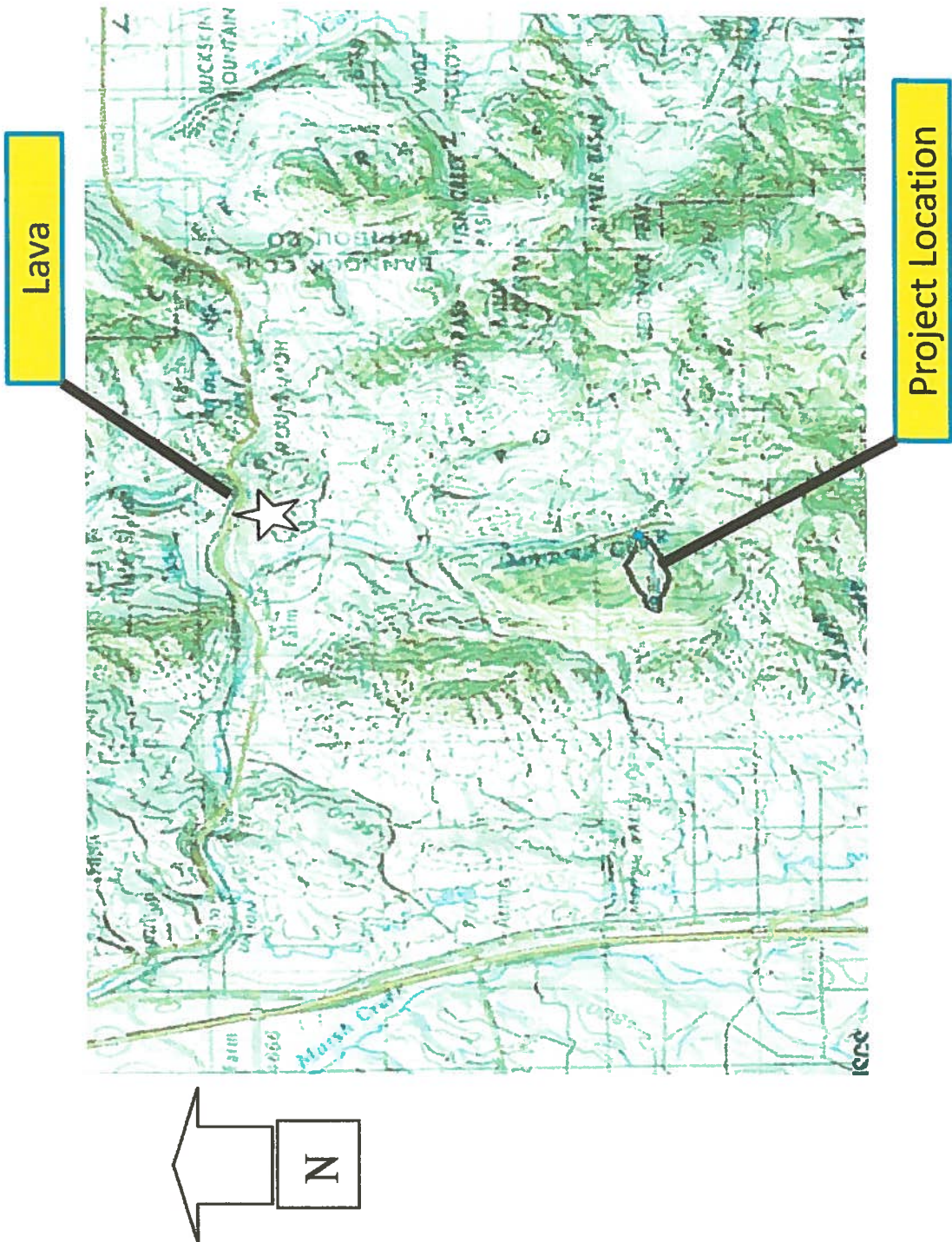
Point of Use	Lat: 42° 31M 50.02484 Sec Long: 112° 01M 9.249398 Sec
Diversion Point	Lat: 42° 31M 44.72018 Sec Long: 112° 01M 27.66262 Sec

Distance from Diversion Pt. to Pt. of Use: ~1500'

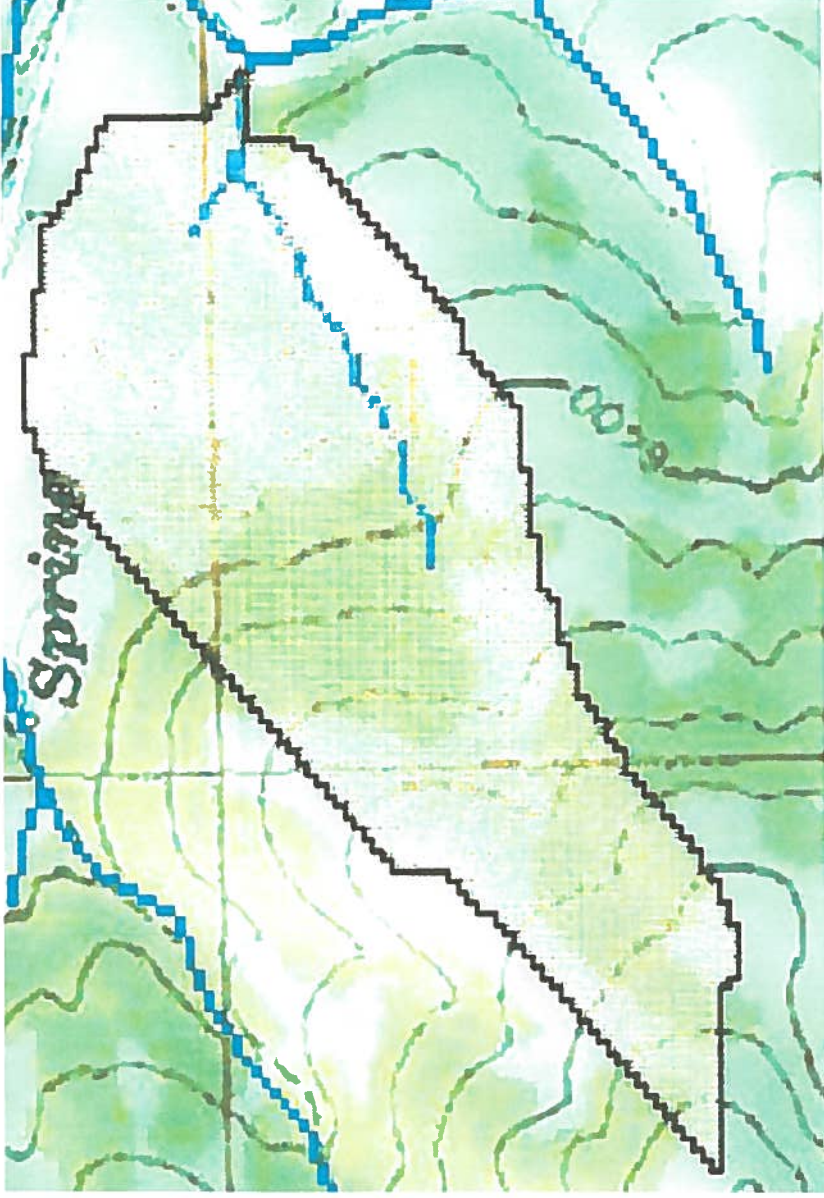
Ownership

- All adjacent land for both the Springs and Snodgrass Creek is owned by Roland Evans, Bar None Ranch, LLC, and Storch Family Trust.
- **Address:**
Bar None Ranch, LLC, Roland Evans, Storch Family Trust
1200 Bay Laurel
Menlo Park, CA 94025
- **Approvals**
All family members offer no objection to this project.

Proximity to Lava Hot Springs

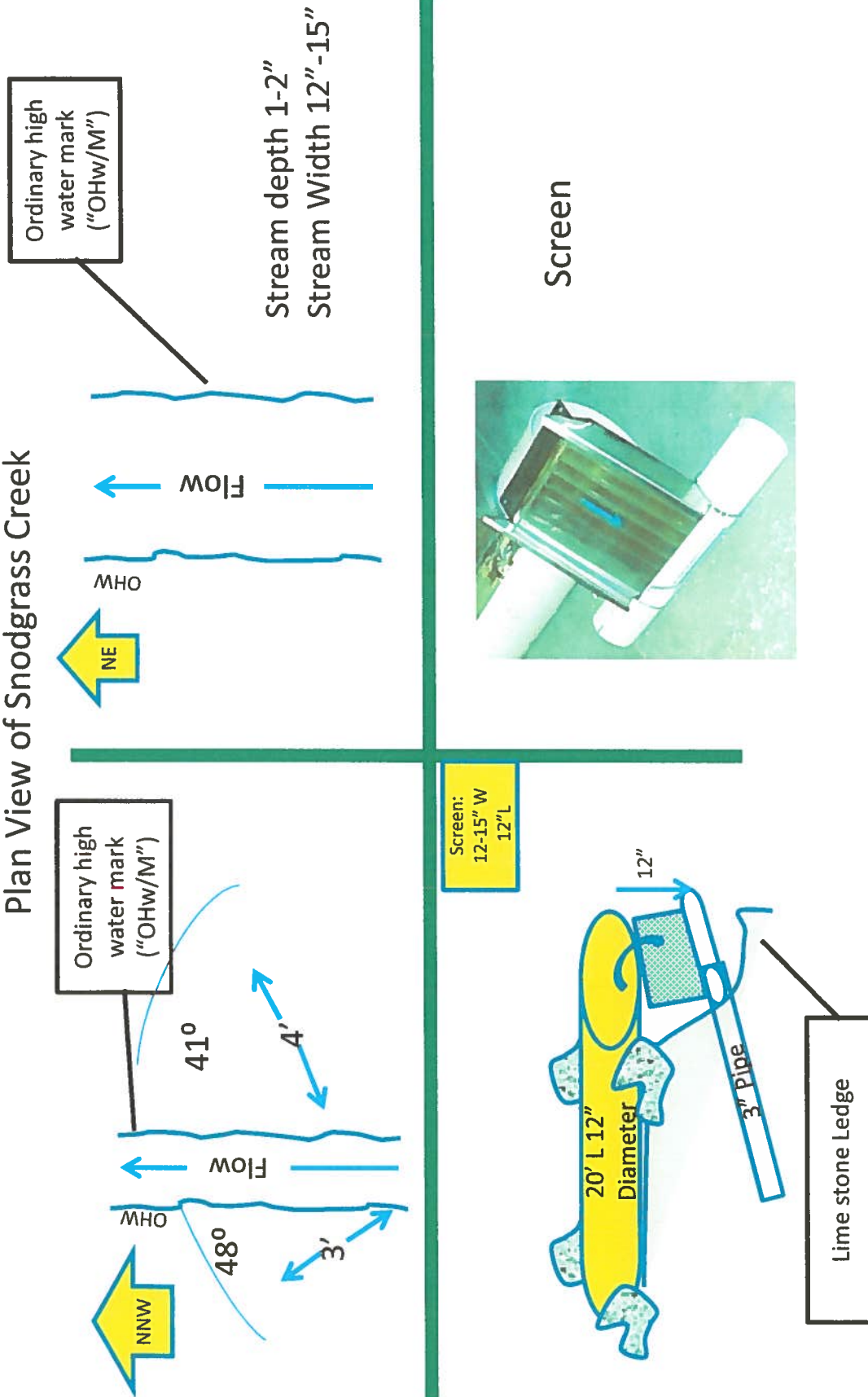


Snodgrass Creek Drainage Area



- Snodgrass Creek flows 90-120 depending on season, snow melt and depth
- Water flows from springs 400 to 900' above diversion point
 - Ample surface water for wild life is available in the immediate area
- Additional springs exist below the diversion point
- No fish are in the stream, and water is returned before it reaches Dempsey Creek

Plan View of Snodgrass Creek



Stream flows ~ 90 -120 GPM, depending on season/snowmelt

Regional Precipitation

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Yrly Avg
2008	1.5	1.7	2.2	5.6	5.4	3.2	3.5	3.1	3.3	0.7	0.5	1	31.7
2009	0.9	3	2.8	5.6	2.7	3.4	5.1	3.5	4.5	2.1	0.8	0.8	35.2
2010	1.5	1.7	1.4	3.1	4.4	1.8	3.9	4.3	5.6	1.3	1	1.7	31.7
2011	1	5.5	7	5	2.6	5	6	5	4.4	1.3	1.2	0.8	44.8
2012	2.6	2.6	2.2	2.5	3.7	3.6	3.4	2.5	2.6	0.7	1.4	1.5	29.3
	5 Yr Average												34.5
	% below 5 year a'												15%

2012 precipitation is 29.3" or ~ 15% below the 5 Year Average

Power Calculations

Pipeline Length	1511
Transmission Loss	1%
Total Stream Flow - GPM	90-120
% of Stream Diverted	66%-50%
Pipeline size	3"
Altitude - Diversion	6289
Altitude - Return	6066
Gross Head	223
Head LOSS	
Net Head	207
PSI Loss	
GPM Diverted	60.0
Efficiency	80%
PSI	82
Watts	982
KWH/Day	24

Power Use

Max Power Use	Occupied	UnOccupied Winter
Home Usage	20	4
Fan Circulation	4	3
Electric Heat		17
Total	24	24

PSI calculation:
PSI X 2.31 = No. of head feet.

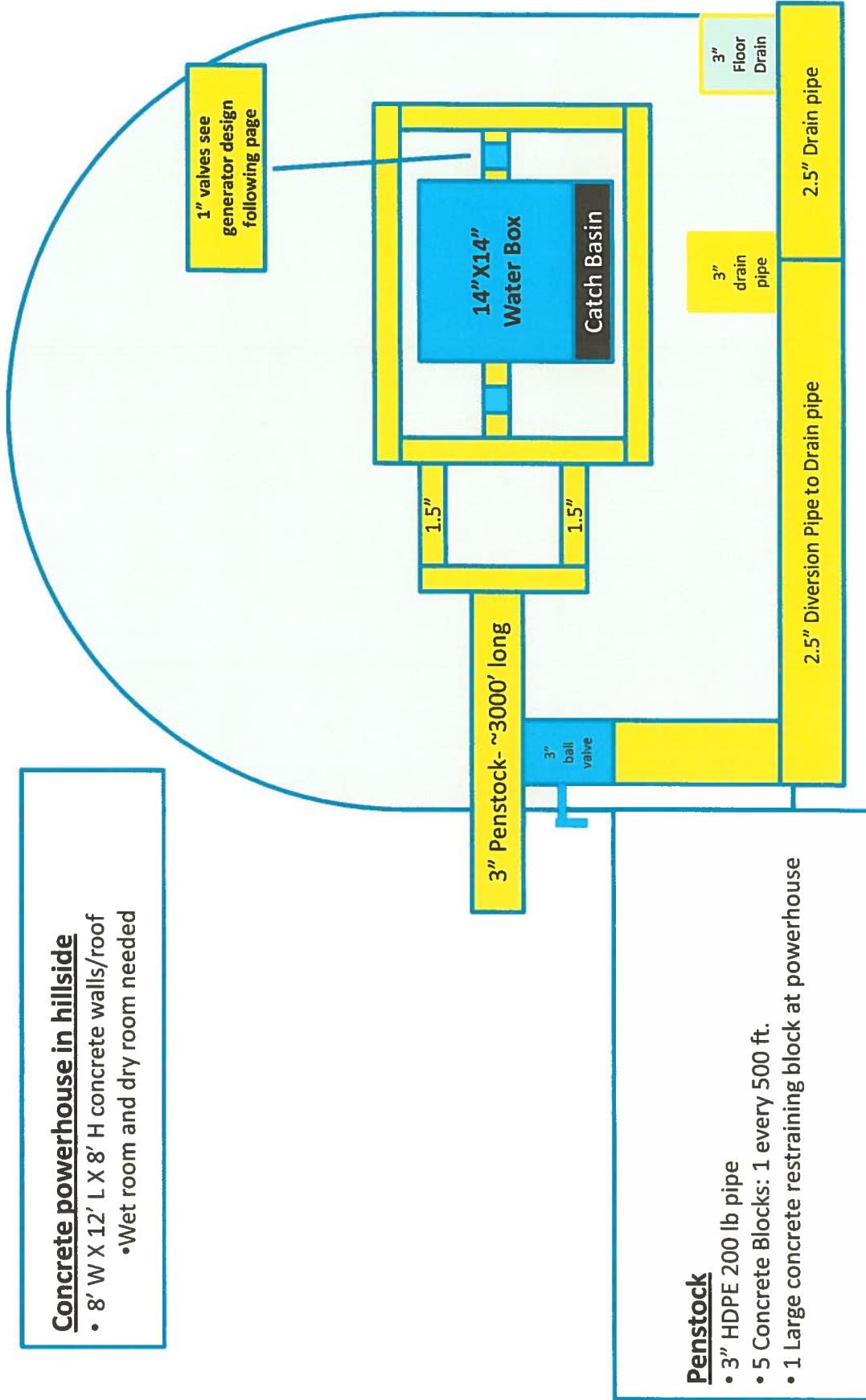
KWH Power calculation:
Head = Altitude at Diversion minus Altitude at Powerhouse
Head less pipe friction loss times GPM divided by 10.

System is flexible allowing for lowering power in summer by diverting less water

Powerhouse

Concrete powerhouse in hillside

- 8' W X 12' L X 8' H concrete walls/roof
- Wet room and dry room needed



Penstock

- 3" HDPE 200 lb pipe
- 5 Concrete Blocks: 1 every 500 ft.
- 1 Large concrete restraining block at powerhouse

Private: Do not copy, do not Publish

Alternative Power and Machine (“APM”) Generator Model 1800

