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DEC 31 2009

DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

Permit No. 63-12537

1. Owner: Osprey Property Owners Assn. Inc. Phone No.: 208-375-5389

Current Address: 104 Falcon Dr., Boise, ID 83716

2. Accompanied by: Glenn Bennett EXAM DATE: 10/7/2009

Address: _____ Phone No. 208-888-4312

Relationship to Permit Holder: Water System Manager and Resident

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-32945, 63-5332, 63-5334

2. Other water rights with the same point of diversion: 63-32945

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

[illegible]

2. Place(s) of Use:

Indicate Method of Determination Exam, Plat Map, GIS

[illegible]

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe id as applicable. See Attachment D

Scale: 1" = _____

☒ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

☒ Aerial Photo Attached (required for irrigation of 10+ acres)

☒ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well 2		5	Submersible	Meyers	4-inch pump, 1.5-inch discharge
Well 3		5	Submersible	Meyers	4-inch pump, 1.5-inch discharge

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flow Meter	Turbine	Neptune			2-inch	

Measurements: Pump information from developer that purchased the pumps at the time of system development.

Well 1 Pump (Drilled in 2001)

- Well 2 tested at 33 gpm 8.6 ft drawdown after 57 hours (3.8 gpm/ft); tested 11/04/01
- Static 189 feet below ground surface
- 32 gpm pump capacity = at 425 feet TDH per pump curve
- PWL = 198 ft per pump test
- Elevation gain to lower storage tanks = 207 ft
- Friction loss estimated at 20 ft
- TDH is 189 ft + 207 ft + 20 ft = 416 feet

Well 2 Pump (Drilled in 2005)

- Well 3 tested at 32 gpm with 8 feet drawdown after 22 hours (4 gpm/ft); tested 8/16,17/05
- Static 202 feet below ground surface
- 31 gpm pump capacity = at 440 feet TDH per pump curve
- PWL = 210 ft per pump test
- Elevation gain to lower storage tanks = 207 ft
- Friction loss estimated at 20 ft.
- Discharge pressure is 210 ft + 207 ft + 20 ft = 437 feet

System capacity with both pumps operating is 32 gpm + 31 gpm = 63 gpm = 0.14 cfs

E. NARRATIVE/REMARKS/COMMENTS

Two 6-inch wells located on lot 3, block 2, Osprey Subdivision No. 1, each equipped with a 5 hp submersible pump, supply domestic water to sixty-seven (67) residential lots within Osprey Subdivision; 60 under this permit and 7 under permit 63-32945. The 60 lots developed under this permit include lots 1-3, 6, block 1; lots 4-7, 9, block 2; lots 1-9, 21-26, block 3; lots 1-9, block 4, Osprey Subdivision No. 1, lots 15-19, block 2; lots 10-12, 14, 16-20, block 3; lots 10-12, 14-17, block 4; lots 1-3, block 5; lots 1-3 block 6, Osprey Subdivision No. 2. See Attachment D.

The water system includes two sets of underground storage tanks located on the hillside in the SESW and SWSE, Section 35. Water is pumped from the wells to the lower set of storage tanks used to gravity feed water to the lower pressure zone distribution network. A booster pump in one of the lower tanks pumps some of the stored water up to another set of storage tanks used to gravity feed water to the upper pressure zone distribution network. Lots 2, 3 and 4, Block 1, Osprey Subdivision No. 3 are located outside the upper and lower distribution networks and receive water from the upper tanks via a booster pump station. The mainline system consists of 3 and 4-inch PVC lines that are primarily contained within the subdivision's roadway network. Each lot is served with 1-inch service lines. As required, the wells provide domestic water for internal potable uses only. A separate non-potable pressurized water system has been installed to supply irrigation water from the Mores Creek under water right 63-5332 & 63-5334.

The well drilled in 2001 is also known as Well No. 2 and the well drilled in 2005 is also known as Well No. 3. The well referred to as Well No. 1 has been abandoned due to water quality problems.

The permit lists a water-bearing zone of 100 to 400 feet. Water-bearing zone developed was 221 to 238 feet.

Have conditions of permit approval been met? X yes ___ no

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached
(Pump Curve)

Measured Method: Pump Curve

Well 1: 32 gpm

Well 2: 31 gpm

Total : 63 gpm or 0.14 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$

2. Volume Calculations for Other Uses:

Required: 60 residential lots x 0.6 afa (internal domestic use only) = 36.0 afa

Potential: 0.14 cfs x 365 days x 1.9835 = 101.4 afa

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Domestic	1/1	12/31	0.14 cfs	36.0 afa

2. Recommended Amendments

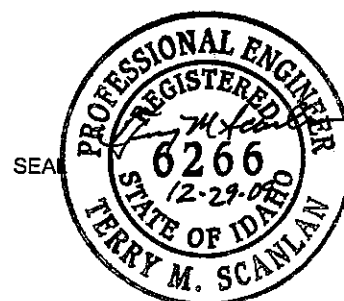
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner 10-129 Date 12/29/09

Field Examiner's Signature 

Reviewer  Date 1/27/10



ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

[Close](#)IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

12/9/2009

WATER RIGHT NO. 63-12537

Owner Type	Name and Address
Current Owner	OSPREY PROPERTY OWNERS ASSN INC 104 FALCON DR BOISE, ID 83716 (208) 375-5389
Original Owner	CHAPMAN RANCH LLC ATTN: SANDY SIMS 25 ADAMS RANCH RD BOISE, ID 83716 (208)343-9912

Priority Date: 07/07/1999

Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
DOMESTIC	01/01	12/31	0.93 CFS	
Total Diversion			0.93 CFS	

Location of Point(s) of Diversion:

GROUND WATER	NWNE Lt 2	Sec. 02	Township 04N	Range 04E	BOISE County
GROUND WATER	SWNE	Sec. 02	Township 04N	Range 04E	BOISE County
GROUND WATER	SWNE	Sec. 02	Township 04N	Range 04E	BOISE County

DOMESTIC Use:

Number of homes: 60

Place(s) of use:

Place of Use Legal Description: DOMESTIC BOISE County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
04N	04E	2	1	NENE		2	NWNE			SWNE			SENE	
			3	NENW										
05N		35		NWSW			SWSW			SESW				
				SWSE										

Conditions of Approval:

1.26A	Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.
2.046	Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code.
3.01M	After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.

4. |WBS| Domestic use is for 60 homes and does not include lawn, garden, landscape, or other types of irrigation.
5. | Water bearing zone to be appropriated is 100 to 400 feet.

Dates:

Proof Due Date: 06/01/2006

Proof Made Date: 06/01/2006

Approved Date: 06/15/2001

Moratorium Expiration Date:

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Application Received Date: 07/07/1999

Protest Deadline Date:

Number of Protests: 0

Field Exam Date::

Date Sent to State Off:

Date Received at State Off:

Other Information:

State or Federal:

Owner Name Connector:

Water District Number:

Generic Max Rate per Acre:

Generic Max Volume per Acre:

Swan Falls Trust or Nontrust:

Swan Falls Dismissed:

DLE Act Number:

Cary Act Number:

Mitigation Plan: False

Close

FOR OFFICE USE ONLY

Amt. of Fee \$: 50.00
Receipt No. C081382
Receipt By: KAW
Date Received: 06/01/06

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner.

1. Permit No. 63-12537 Telephone No. 208-343-9912
2. Name of Permit Holder(s): Chapman Ranch, LLC
3. Mailing Address: 25 Adams Ranch Road
City Boise State Idaho Zip 83716
4. Source of Water: Groundwater If GROUNDWATER (well), Date Drilled: mo. October / yr. 2001
Date Drilled: mo. April / yr. 2005
Well Driller: Coonse Well Drilling Drilling Permit Number: 0-0-1-9349 and 0-0-3-9000
Use(s) (as authorized by the water right permit):
Domestic (No. of households): 60 Stockwater (No. and type of stock): _____
Irrigation (No. of acres): _____ Other: _____
6. Total rate of diversion and/or volume for which proof is submitted: 0.16 cfs cfs OR _____ acre-feet
7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)
(This question is not optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)
Measuring Device: Is a measuring device required? Yes _____ or No X _____
Has the measuring device been installed? Yes X or No _____
8. Fee Enclosed: \$: 50.00 (See Fee Schedule on back of the instructions for filing proof of beneficial use)
9. Person to contact to accompany the Department representative during field examination of the water system.
Name: Sandy Sims Telephone Number: 208-343-9912
Address: 25 Adams Ranch Road, Boise, ID 83716

10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted. I agree to relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder: Chapman Ranch LLC
By Barry Mancus Date: 5/25/06
(include your title, if on behalf of company or organization)
Managing Member



ATTACHMENT B
WELL LOGS AND PUMP CURVE

Office Use Only
 Inspected by _____
 Twp _____ Rge _____ Sec _____
 _____ 1/4 _____ 1/4 _____ 1/4
 Lat: : : Long: : :

N

I. # 2 Blk. 1 Sub. Name OSPREY

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	75	49Sacks	Dry Pour

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+2	226	280	Steel	☒	☐	☒	☐
4"	223	228	250	Steel	☒	☐	☒	☐
4"	238	240	250	Steel	☒	☐	☒	☐

☒ Screens Screen Type johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
228	238	.020	—	4"	SS	☐	☒
						☐	☐
						☐	☐

devices:

Water

[illegible]

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~~JUN 09 2005~~

WATER RESOURCES WESTERN REGION

Completed Depth: 240 (Measurable)

Date: Started 4-18-05 Completed 4-23-05

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

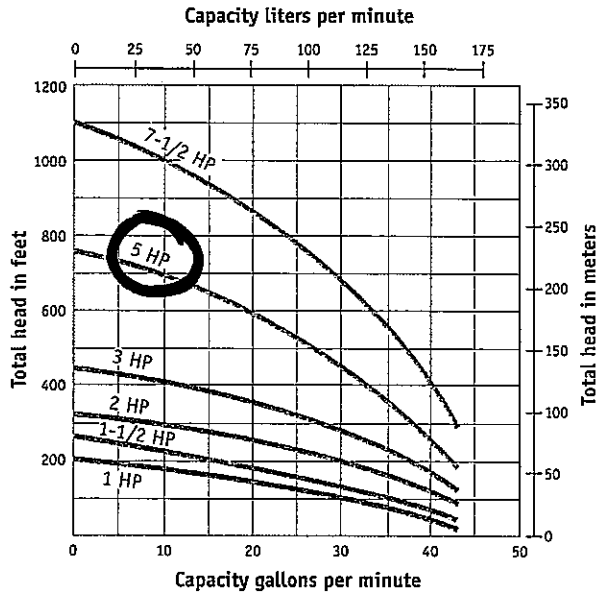
Firm Name Coonse Well Drilling Firm No. 409

Firm Official Mr. G. L. Brown Date 6/8/05

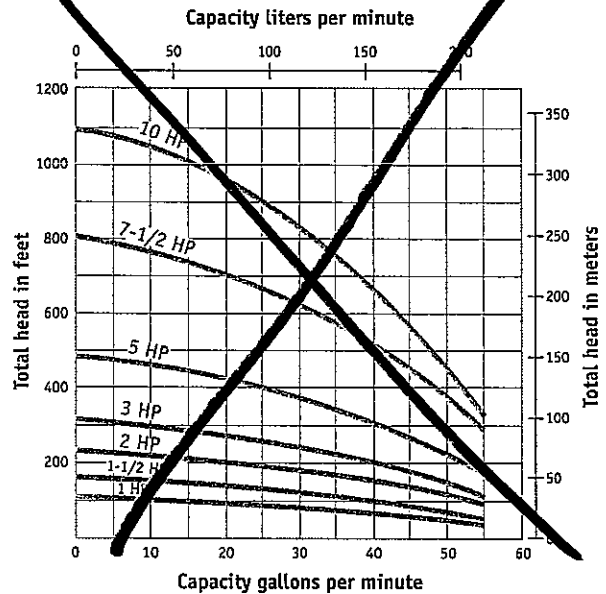
Supervisor or Operator U Date _____

Date: 6/7/2005 Time:3:08:57 PM

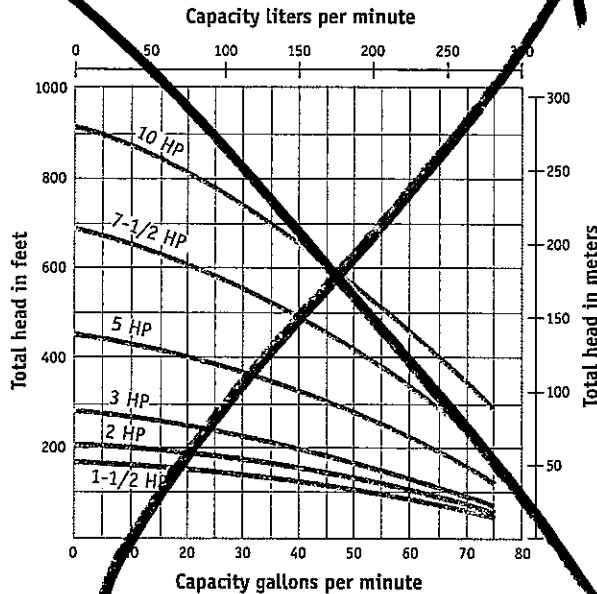
PUMP PERFORMANCE - 25 GPM



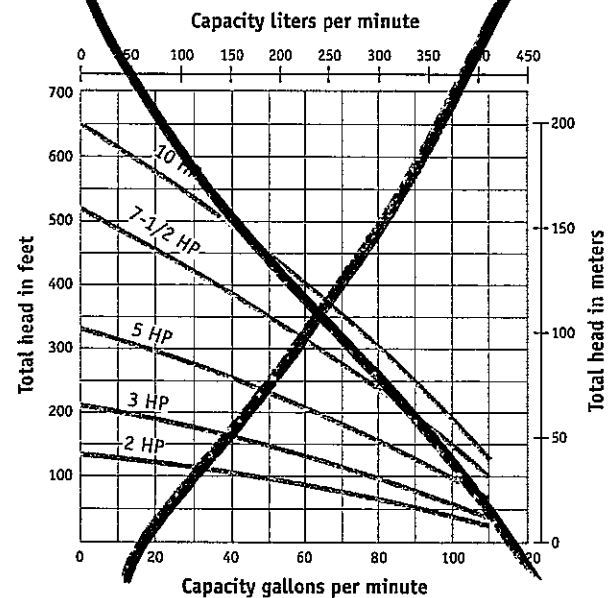
PUMP PERFORMANCE - 35 GPM



PUMP PERFORMANCE - 50 GPM

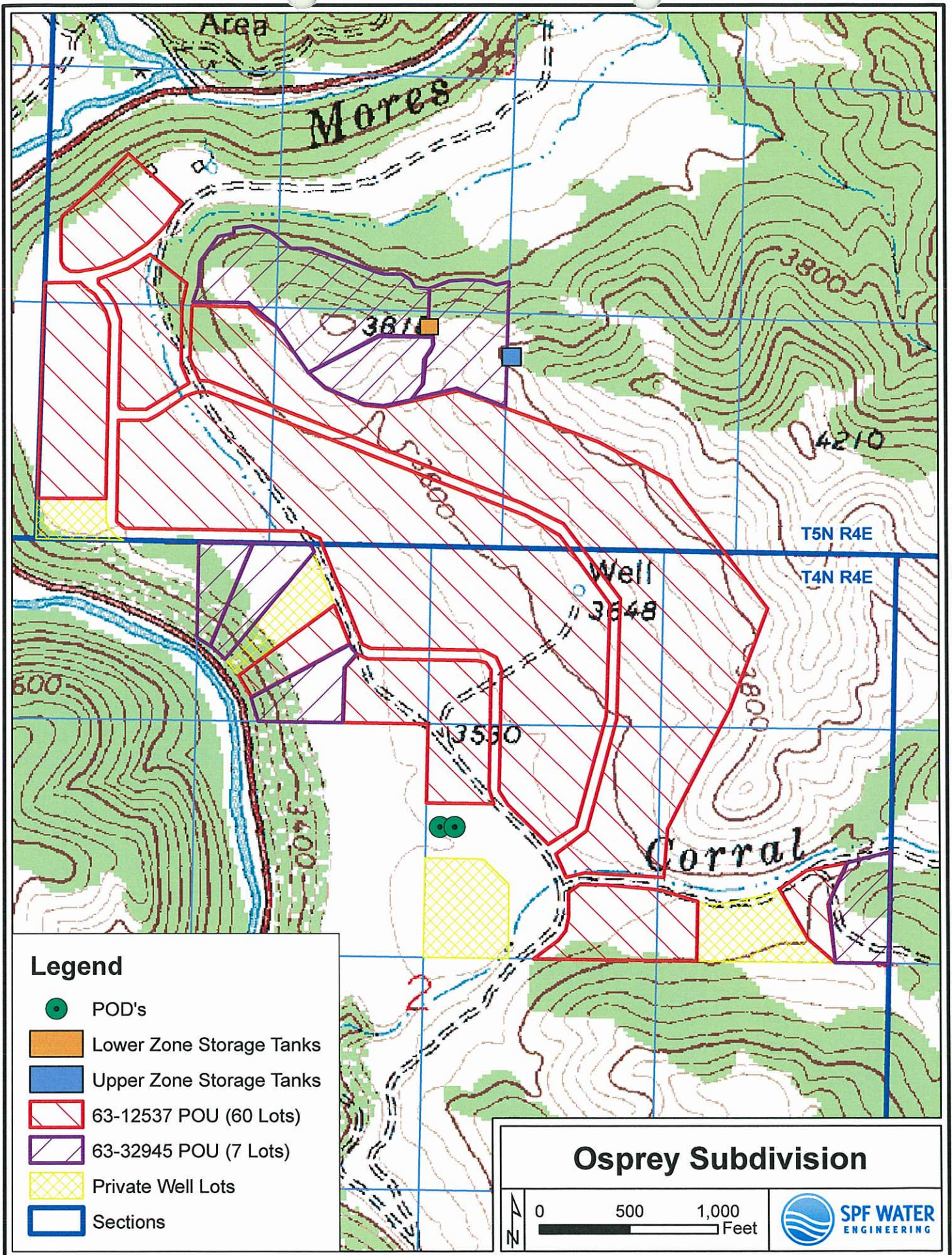


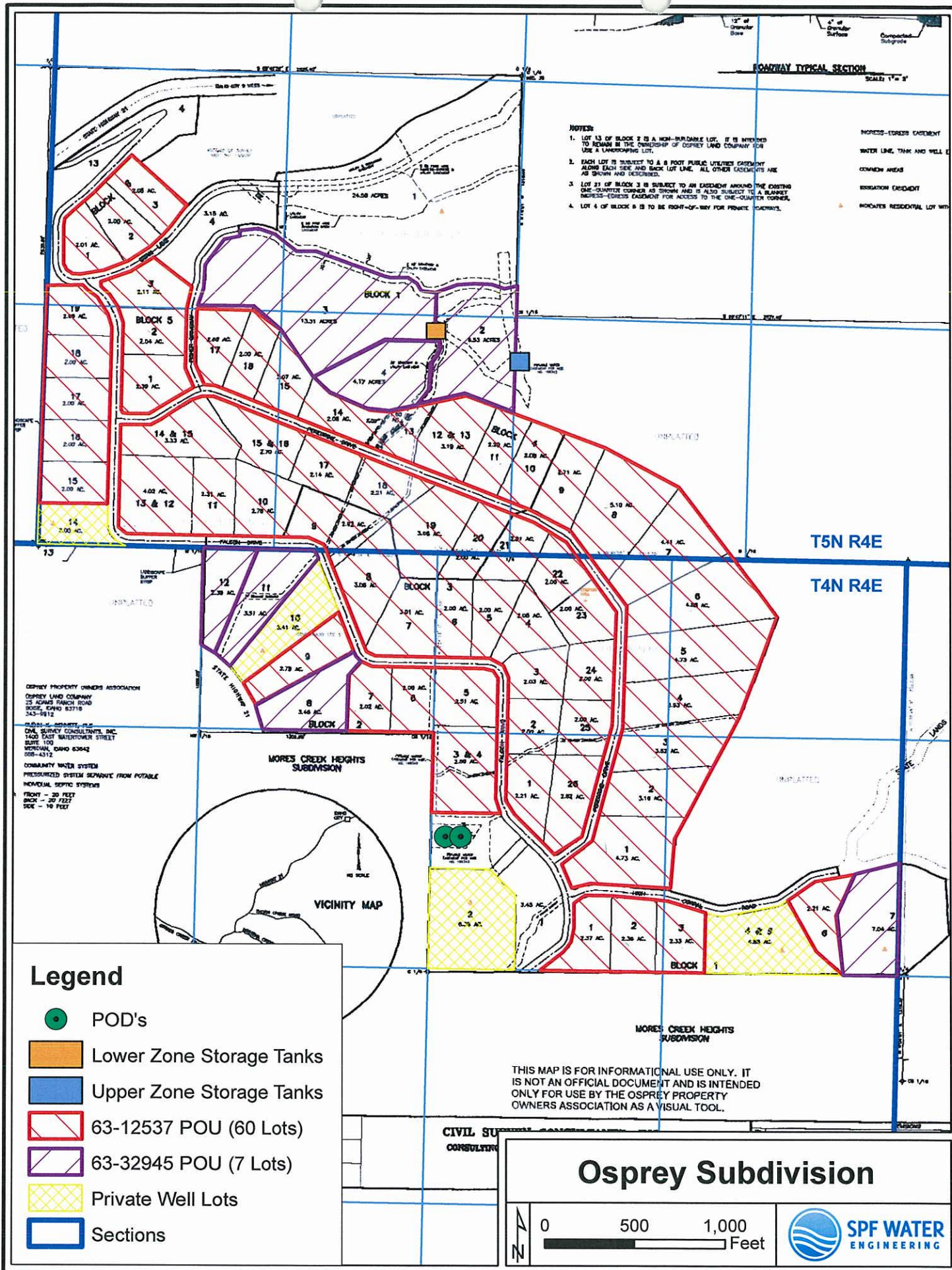
PUMP PERFORMANCE - 80 GPM

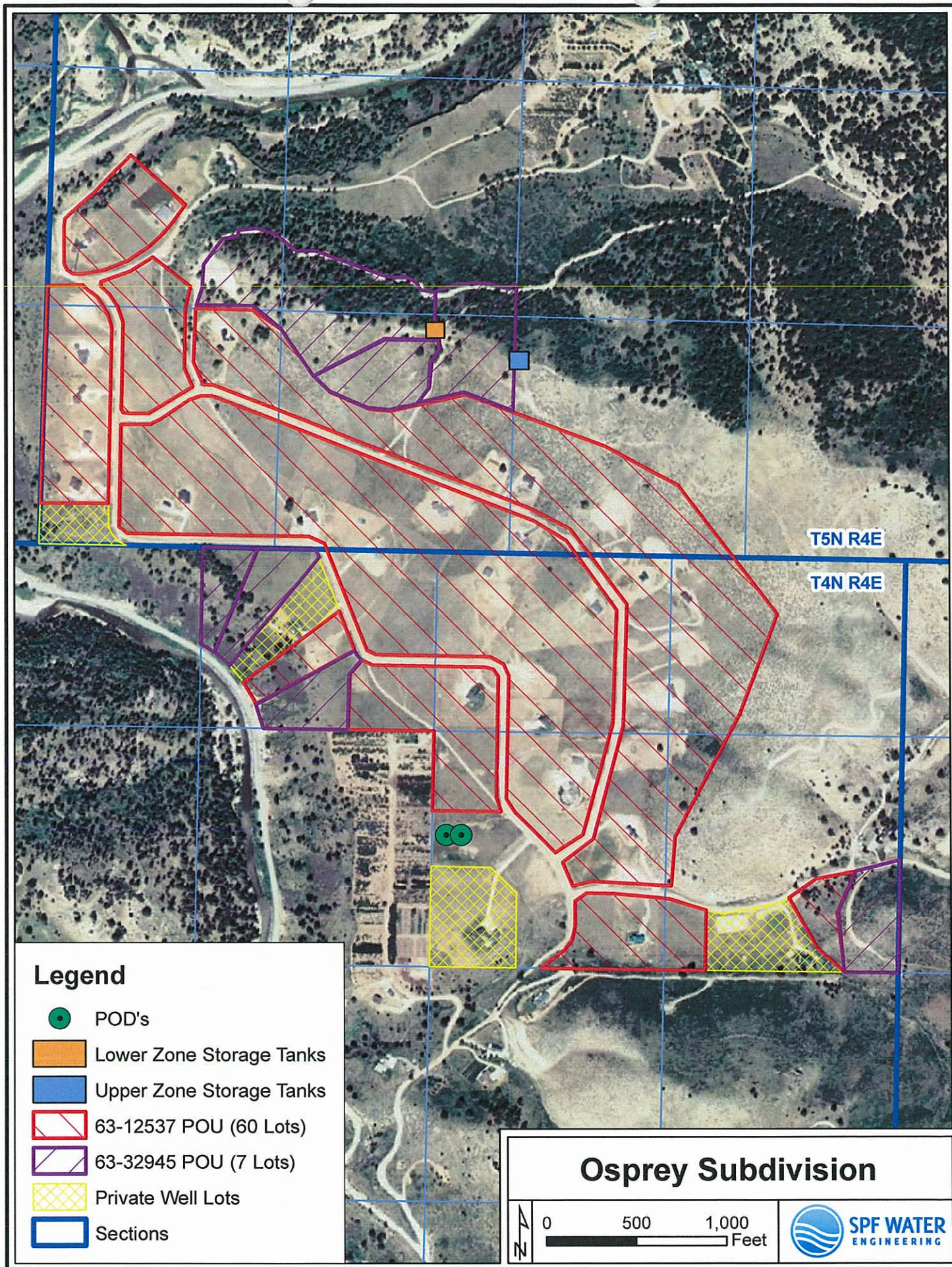


ATTACHMENT C

TOPO MAP, PLAT MAP AND 2006 AERIAL PHOTOS







ATTACHMENT D
SYSTEM DIAGRAM

GENERAL NOTES

- ALL LOT DIMENSIONS AND EASEMENTS ARE TO BE TAKEN FROM THE PLAT OF OSPREY SUBDIVISION.
- ALL CONTRACTORS WORKING WITHIN THE PROJECT ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
- ALL MATERIALS FURNISHED ON OR FOR THE PROJECT SHALL MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCIES OR AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE.
- WORK SUBJECT TO APPROVAL BY ANY POLITICAL SUBDIVISION OR AGENCY MUST BE APPROVED PRIOR TO (A) BACKFILLING TRENCHES FOR PIPE; (B) PLACING OF AGGREGATE BASES; (C) PLACING OF CONCRETE; (D) PLACING OF ASPHALT PAVING. WORK DONE WITHOUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING SUCH WORK IN AN ACCEPTABLE MANNER.
- RETAIN AND PROTECT EXISTING IRRIGATION AND DRAINAGE PIPE CROSSINGS, EXCEPT WHERE NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND BOISE COUNTY FOR THE INSPECTION OF ANY EXPOSED IRRIGATION AND/OR DRAINAGE PIPE CROSSINGS. THE PIPE WILL BE REPLACED AS NECESSARY BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE CLEAN WATER ACT AS IT RELATES TO STORM WATER RUNOFF FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PREPARE AND FILE ALL NOIS AS REQUIRED FOR THE PROJECT. CONTACT THE EPA AT (208)334-9489 FOR THE REQUIRED INFORMATION.
- THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES WHICH ARE THE RESULT OF HIS FAILURE TO LOCATE AND PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHALL CALL ONE LINE AT 342-1555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LOCATIONS.
- CIVIL SURVEY CONSULTANTS WILL PROVIDE ONE SET OF CONSTRUCTION STAKES FOR THE WATER SYSTEM. ALL CONSTRUCTION STAKES MUST BE REQUESTED A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO PLANNED USE.

WATER LINE NOTES

- THE WATER SYSTEM SHALL BE CONSTRUCTED TO CONFORM WITH THE STANDARDS SET FORTH IN THE "IDAHO REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS". ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (I.S.P.W.C.), AND STATE AND LOCAL LAWS AND ORDINANCES, AND THESE SPECIFICATIONS.
- WATER DISTRIBUTION MAINS SHALL BE CONSTRUCTED WITH GASKETED, CLASS 200, SDR 21, POLYVINYL-CHLORIDE (PVC) PIPE, CONFORMING TO ASTM D2241 SPECIFICATIONS. THE PIPE SHALL BE INSTALLED IN WORKMANLIKE MANNER BY PERSONS QUALIFIED TO PERFORM SAID WORK AND SHALL BE IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER. ALL WORK AND MATERIALS SHALL CONFORM TO CURRENT REQUIREMENTS OF THE I.S.P.W.C. AND THE ASTM AND SHALL BE INS APPROVED.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF FOUR (4) FEET OF COVER. AFTER INSTALLATION OF THE WATER MAINS, THE TRENCHES WITHIN THE RIGHT-OF-WAY SHALL BE COMPACTED TO NINETY-TWO (92) PERCENT OF MAXIMUM DENSITY TO PREVENT FURTHER SETTLEMENT. TRENCHES LOCATED OUTSIDE THE RIGHT-OF-WAY SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
- THE HORIZONTAL SEPARATION BETWEEN WATER LINES AND NON-POTABLE LINES (INCLUDING SEWER, STORM DRAINS, AND IRRIGATION) SHALL BE 10 FEET. WHERE IT IS NECESSARY FOR SEWER, STORM DRAIN, OR IRRIGATION LINES TO CROSS WATER LINES, AND THE SEWER LINE IS LESS THAN EIGHTEEN (18) INCHES BELOW OR ABOVE WATER MAIN, THE SEWER LINE SHALL BE CONSTRUCTED OF WATER CLASS PIPE WITH FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF WATER LINE IN ACCORDANCE WITH SECTION 1-8305.05 OF THE IDAHO REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS. THE FULL LENGTH OF BOTH WATER AND SEWER LINES SHALL BE COVERED AT THE CROSSING POINT SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE. IN LIEU OF CONSTRUCTING OR RECONSTRUCTING THE SEWER TO CONFORM TO WATER MAIN STANDARDS, THE SEWER LINE OR THE WATER LINE MAY BE SLEEVED WATER CLASS PIPE, OR ENCASED IN 4-INCHES OF CONCRETE, FOR A DISTANCE OF TEN (10) FEET ON BOTH SIDES OF THE CROSSING.
- ALL GATE VALVES SHALL BE RESILIENT SEATED VALVES CONFORMING TO ANMA C509 WITH FLANGED AND/OR MECHANICAL JOINTS. GATE VALVES SHALL BE FURNISHED WITH A TWO PIECE CAST IRON VALVE COVER. ALL VALVES SHALL BE ANCHORED IN CONFORMANCE WITH DIVISION 400 OF THE ISPC.
- ALL TEES, PLUGS, CAPS, BENDS, AND OTHER LOCATIONS WHERE UNBALANCED FORCES EXIST SHALL BE SECURED AND ANCHORED BY SUITABLE THRUST BLOCKING IN CONFORMANCE WITH DIVISION 400 OF THE ISPC.
- NO. 12 DIRECT BURIAL WIRE SHALL BE PLACED ALONG THE NORTH AND EAST SIDE OF ALL WATER MAINS AND SERVICE LINES IN CONFORMANCE WITH DIVISION 400 OF THE ISPC. THE TRUCK WIRE SHALL BE ACCESSIBLE AT ALL GATE VALVE BOXES AND WATER SERVICE BOXES.
- INDIVIDUAL WATER SERVICES SHALL BE INSTALLED TO EACH LOT AS SHOWN ON THE PLANS. SERVICES SHALL CONSIST OF A 1" PIPE SHADER, 1" CORPORATION STOP, 1" CLASS 200, SDR 21 POLYETHYLENE PIPE CONFORMING TO ANMA C901, 1" CURB STOP, 18-INCH TALL 5/8"X3/4" COPPER METER SETTER WITH LOCKABLE SHUTOFF AND INTEGRAL CHECK VALVE, 5/8"X3/4" NEPTUNE T-10 WATER METER, 18-INCH DIAMETER BY 30-INCH TALL INSULATED METER BOX AS MANUFACTURED BY "MID-STATES PLASTICS, INC." OR APPROVED EQUAL, AND A STANDARD CAST IRON FRAME AND COVER. THE 1-INCH WATER SERVICE PIPE SHALL EXTEND A MINIMUM OF 10 FEET ON THE HOUSE SIDE OF THE METER AND SHALL BE EQUIPPED WITH A LOCKABLE CAP OR AS DIRECT BURIAL WIRE SHALL BE LOOPEL FROM THE MAIN ALONG THE 1-INCH SERVICE PIPE TO THE METER BOX AND BACK TO THE MAIN. THE CONTRACTOR SHALL FURNISH TWO EXTRA METER SETTERS AND TWO EXTRA METER METERS.
- ALL WATER SYSTEM COMPONENTS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH DIVISION 400 OF THE ISPC.
 - THE DISTRIBUTION SYSTEM SHALL BE PRESSURE TESTED TO 200 P.S.I. TO THE SATISFACTION OF THE ENGINEER.
 - PRIOR TO USE, ALL WATER SYSTEM COMPONENTS SHALL BE DISINFECTED AND THEN FLUSHED. AFTER DISINFECTION AND FINAL FLUSHING, THE SYSTEM SHALL BE TESTED BY THE ENGINEER TO DETERMINE IF THE APPROPRIATE MINIMUM CHLORINE (CL2) RESIDUALS HAVE BEEN ATTAINED. AFTER FLUSHING AND AN ACCEPTABLE PRESSURE TEST, SAMPLES WILL BE TESTED FOR THE PRESENCE OF COLIFORM BACTERIA. THE ENGINEER SHALL WITNESS THE DRAWING OF SAMPLES. ONLY ONE LABORATORY SHALL BE USED DURING THE ENTIRE TESTING PROCEDURE. ONLY RESULTS FROM THE ORIGINALLY ESTABLISHED LABORATORY SHALL BE ACCEPTED.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER TWO (2) WORKING DAYS BEFORE INITIAL CONSTRUCTION BEGINS AND SHALL ALSO REQUEST INSPECTION OF WATER LINES AND APPURTENANCES TWENTY-FOUR (24) HOURS IN ADVANCE OF BACKFILLING.
- THE CONTRACTOR SHALL FIELD VERIFY ALL VALVE BOX LID ELEVATIONS TO ASSURE THE LID ELEVATIONS MATCH FINAL STREET GRADE, AND THAT ALL METER LID ELEVATIONS MATCH THE ADJACENT GROUND.
- UPON COMPLETION OF THE INSTALLATION OF ALL PIPING AND APPURTENANCES THE CONTRACTOR SHALL PERFORM A FINAL PRESSURE TEST WITH ENGINEER IN ATTENDANCE. THE CONTRACTOR SHALL FURNISH ALL PERSONNEL AND EQUIPMENT NECESSARY TO CONDUCT THE TEST.
- UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT A SET OF RED LINED DRAWINGS TO THE ENGINEER. THE RED LINED DRAWINGS SHALL INDICATE ALL CHANGES FROM THE ORIGINAL DESIGN MADE DURING CONSTRUCTION.

SUPPLY WELL NOTES

- THE WATER SYSTEM SUPPLY CONSISTS OF TWO EXISTING 8" WELLS EQUIPPED WITH 2-INCH PILESS ADAPTERS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW SUBMERSIBLE PUMP, DISCHARGE COLUMN, AND ELECTRICAL CONTROL IN EACH WELL. THE PUMPS SHALL BE 4" SUBMERSIBLE PUMPS CONFORMING TO ANMA E101. THE REQUIRED OPERATING POINT FOR EACH PUMP IS 34 GALLONS PER MINUTE AT 450 FEET OF TOTAL DYNAMIC HEAD AND 80% MINIMUM EFFICIENCY. THE PUMPS SHALL BE FURNISHED WITH ENCLOSED IMPELLERS. THE PUMPS SHALL BE A STA-RITE SIGNATURE 2000 DESIGN, SERIES 30, 5 HORSEPOWER PUMP, OR APPROVED EQUAL. THE DISCHARGE COLUMN SHALL BE SCHEDULE 40 GALVANIZED IRON PIPE AND SHALL BE EQUIPPED WITH A CHECK VALVE LOCATED AT THE TOP OF THE BOWL ASSEMBLY. EACH PUMP SHALL BE HORSEPOWER THREE HORSEPOWER SUBMERSIBLE MOTOR. EACH PUMP MOTOR SHALL BE FURNISHED WITH A STANDARD CAPACITOR TYPE CONTROL PANEL FOR STARTING AND STOPPING THE PUMP. EACH PUMP SHALL ALSO BE FURNISHED WITH A "PUMPED PLUS" PUMP PROTECTION PANEL, PHASE FAILURE PROTECTION, AND LIGHTNING ARRESTOR. THE CONTRACTOR SHALL FURNISH ONE COMPLETE SPARE PUMP AND MOTOR.
- THE WELL PUMPS SHALL BE CONTROLLED BY THREE FLOATS OR ELECTRODES INSTALLED IN THE LOW ZONE WATER STORAGE RESERVOIR (PUMP ON AND PUMP OFF). A THIRD FLOAT OR ELECTRODE SHALL BE PROVIDED FOR A LOW WATER ALARM. THE WATER SYSTEM CONTROL PANELS SHALL BE INSTALLED IN THE PUMP BUILDING LOCATED AT THE WELL SITE. THE CONTRACTOR SHALL FURNISH AND INSTALL A 1-1/2" CONDUIT FROM THE WELL BUILDING TO THE LOW ZONE WATER TANK. THE CONDUIT SHALL BE LAID IN THE SAME TRANCH AS THE WATER SUPPLY LINE TO THE TANK. THE CONDUIT SHALL HAVE JUNCTION BOXES LOCATED AT ALL ANGLE POINTS AND AT 400 FOOT ON CENTER. THE CONTRACTOR SHALL FURNISH AND INSTALL CONDUCTORS AS REQUIRED FOR EACH FLOAT OR ELECTRODE, AND SHALL FURNISH AND INSTALL A SPARE PAIR OF CONDUCTORS (8 CONDUCTORS).
- THE CONTRACTOR SHALL FURNISH AND INSTALL A SEPARATE CONTROL PANEL FOR WATER SYSTEM OPERATION. THE CONTROL PANEL SHALL INCLUDE A HAND-OFF-AUTO SWITCH FOR EACH PUMP, AND HOUR METER FOR EACH PUMP, AND ALTERNATOR SWITCH. THE SYSTEM SHALL ACT AS A SIMPLE PUMP-UP SYSTEM. WHEN WATER IN THE LOW ZONE RESERVOIR REACHES THE PUMP OFF FLOAT WHICH SHALL TURN OFF THE OPERATING PUMP. THE ALTERNATOR SHALL THEN SWITCH TO THE SECOND PUMP DURING THE NEXT OPERATING CYCLE. WHEN WATER IN THE LOW ZONE RESERVOIR REACHES THE SECOND PUMP ON FLOAT THE SECOND PUMP SHALL START (BOTH PUMPS RUNNING) AND CONTINUE TO RUN UNTIL THE PUMP OFF FLOAT IS REACHED. THE PUMP OFF FLOAT SHALL BE A LOW WATER ALARM WHICH SHALL ACTIVATE A RED FLASHING ALARM LIGHT TO BE MOUNTED ON THE EXTERIOR OF THE PUMP BUILDING. CONTROL PANEL SHALL INCLUDE A SILENCE BUTTON FOR THE ALARM LIGHT.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A PULSATRON SERIES E PLUS ELECTRONIC METERING PUMP FOR THE ADDITION OF HYPOCHLORITE SOLUTION INTO THE WELL. WATER WILL BE USED TO DILUTE THE SOLUTION. THE PUMP SHALL BE A HOERBIGER LPM4A-100-300 PUMP, INSTALLED FOR 21 GPH AND 150 PSI WORKING PRESSURE. POWER SUPPLY SHALL BE 115 VAC, 50/60 HZ, 0.8 AMPS, SINGLE PHASE. THE PUMP SHALL BE EQUIPPED WITH AN OPTIONAL DEAGGREGATION HEAD. THE CHLORINE SOLUTION TUBING BETWEEN THE PUMP AND DISCHARGE PIPING SHALL BE 3/8" DIAMETER POLYPROPYLENE. THE DISCHARGE PIPING SHALL BE INSTALLED IN A MANHOLE LOCATED AWAY FROM THE PUMP HOUSE AS SHOWN ON THE PLANS. A 1" CONDUIT SHALL BE RUN FROM THE PUMP HOUSE TO THE MANHOLE AND THE 3/8" SOLUTION TUBING RUN INSIDE THE CONDUIT. THE PUMP SHALL BE CONTROLLED BY A 115 VAC OUTLET THAT IS ENERGIZED WHEN EITHER PUMP IS OPERATING, AND DE-ENERGIZED AT ALL OTHER TIMES. THE PUMP SHALL BE MOUNTED ON A SHELF CONSTRUCTED IN THE PUMP HOUSE OVER THE SOLUTION TANK. THE CONTRACTOR SHALL FURNISH AND INSTALL A PORTABLE/WALL MOUNT 15 MINUTE/15 GALLON SELF CONTAINED EMERGENCY EYESHAW STATION THAT MEETS OSHA AND ANSI Z36.1 REQUIREMENTS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A PREMANUFACTURED 6'X8' GABLE ROOF STYLE WOODEN BUILDING FOR HOUSING THE PUMP CONTROLS AND CHLORINATION EQUIPMENT. THE BUILDING SHALL BE INSTALLED ON A CONCRETE FLOOR SLAB WITH CONTAMINANT WALL AS DETAIL IN THE PLANS. THE BUILDING SHALL BE FURNISHED WITH A 4-FOOT WIDE METAL ROLL-UP DOOR, TEMPERATURE CONTROLLED 1,000 CFM VENTILATION FAN AND STANDARD 4-FOOT BASEBOARD ELECTRIC HEATER.
- THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PUMPING EQUIPMENT, CONTROL EQUIPMENT, PUMP BUILDING AND APPURTENANCES TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING THE EQUIPMENT.

OSPREY SUBDIVISION WATER SYSTEM CONSTRUCTION PLANS

APRIL 2002

A DEVELOPMENT BY

OSPREY LAND COMPANY

RECORD DRAWINGS

These RECORD DRAWINGS have been prepared, in part, on the basis of information compiled and furnished by others. The Engineer will not be responsible for any errors or omissions which have been incorporated into this document as a result.

Date: 01/15/03

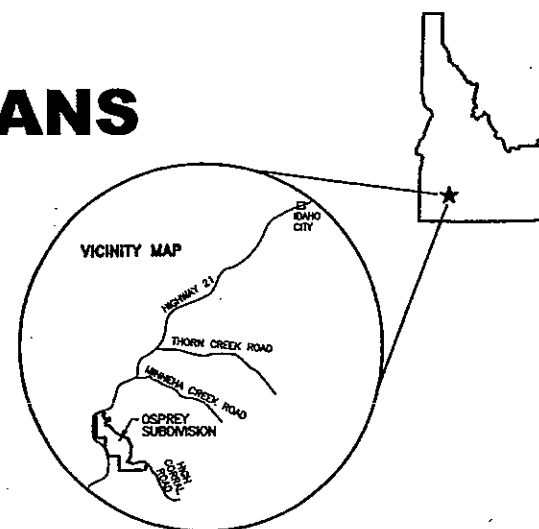
CIVIL SURVEY CONSULTANTS, INC.

DEVELOPER

OSPREY LAND COMPANY
25 ADAMS RANCH ROAD
BOISE, IDAHO 83716
(208) 343-9912

LEGEND

- SUBDIVISION BOUNDARY LINE
- ST — CENTERLINE
- LOT LINE
- NEW WATER LINE
- WM — NEW SINGLE WATER SERVICE
- PRV — NEW WATER SERVICE
WM — PRV REQUIRED AT HOUSE
- △ — NEW AIR RELEASE VALVE
- NEW WATER VALVE
- NEW BLOWOFF
- EXISTING FENCE
- BM — BENCHMARK
- WM — NEW DOUBLE WATER SERVICE



LOCATION MAP

SHEET INDEX

- TITLE SHEET
- WATER SYSTEM DISTRIBUTION PIPING — SWAN LAKE / FALCON DRIVE BEGINS TO STA. 44+05.40
- WATER SYSTEM DISTRIBUTION PIPING — FALCON DRIVE STA. 44+05.40 TO STA. 71+06.39
- WATER SYSTEM DISTRIBUTION PIPING — FALCON DRIVE STA. 71+06.39 TO END
- WATER SYSTEM DISTRIBUTION PIPING — PEREGRINE DRIVE BEGINS TO STA. 121+50
- WATER SYSTEM DISTRIBUTION PIPING — PEREGRINE DRIVE 121+50 TO END / HIGH CORRAL RD.
- WATER SYSTEM DISTRIBUTION PIPING — WELL TO STORAGE TANKS
- WATER SYSTEM DETAILS — WELL PUMPS AND CONTROLS
- WATER SYSTEM DETAILS — LOWER STORAGE TANKS
- WATER SYSTEM DETAILS — UPPER STORAGE TANKS
- WATER SYSTEM DETAILS — MISCELLANEOUS PIPING DETAILS

BENCHMARKS

- TBM 1 — TOP OF 5/8" DIAMETER IRON PIN SOUTHEAST CORNER OF LOT 6, BLOCK 2
ELEV. = 5533.21
- TBM 2 — TOP OF BRASS CAP MARKING THE ONE-QUARTER CORNER LOCATED IN CENTER OF LOT 21, BLOCK 3
ELEV. = 3620.00
- TBM 3 — TOP OF BRASS CAP MONUMENT AT THE SOUTHWEST CORNER OF LOT 2, BLOCK 2
ELEV. = 3530.80
- TBM 4 — TOP OF BRASS CAP MARKING THE ONE-QUARTER CORNER LOCATED AT SOUTHERLY ANGLE POINT OF LOT 7, BLOCK 1
ELEV. = 3677.73

STORAGE TANK NOTES

- THE CONTRACTOR SHALL FURNISH AND INSTALL FOUR 12,000 GALLON UNDERGROUND FIBERGLASS STORAGE TANKS COMPLETE WITH ALL PIPE CONNECTIONS, MANHOLES AND ACCESSORIES AS DETAIL ON THE PLANS. THE TANKS SHALL BE SINGLE WALL, DESIGNED TO CONTAIN POTABLE WATER AND SHALL BE ANMA AND FDA APPROVED. THE FIBERGLASS RESINS IN THE TANKS SHALL MEET NSF61 STANDARDS. THE TANKS SHALL BE AS MANUFACTURED BY CONTAMINANT SOLUTIONS INC., 5150 JEFFERSON CHEMICAL ROAD, CONROE, TX 77301-0834, (800)537-4730, OR APPROVED EQUAL.
- PRIOR TO USE, ALL STORAGE TANKS AND COMPONENTS SHALL BE DISINFECTED AND FLUSHED IN ACCORDANCE WITH ANMA C822. AFTER DISINFECTION AND FINAL FLUSHING, THE SYSTEM SHALL BE TESTED BY THE ENGINEER TO DETERMINE IF THE APPROPRIATE MINIMUM CHLORINE (CL2) RESIDUALS HAVE BEEN ATTAINED. AFTER FLUSHING SAMPLES WILL BE TESTED FOR THE PRESENCE OF COLIFORM BACTERIA. THE ENGINEER SHALL WITNESS THE DRAWING OF SAMPLES. ONLY ONE LABORATORY SHALL BE USED DURING THE ENTIRE TESTING PROCEDURE. ONLY RESULTS FROM THE ORIGINALLY ESTABLISHED LABORATORY SHALL BE ACCEPTED.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW SUBMERSIBLE PUMP, DISCHARGE COLUMN, AND ELECTRICAL CONTROL IN ONE LOW ZONE TANK AS SHOWN ON THE PLANS. THE PUMP SHALL BE 4" SUBMERSIBLE PUMP CONFORMING TO ANMA E101. THE REQUIRED OPERATING POINT FOR THIS PUMP IS 15 GALLONS PER MINUTE AT 120 FEET OF TOTAL DYNAMIC HEAD AND 80% MINIMUM EFFICIENCY. THE PUMPS SHALL BE FURNISHED WITH ENCLOSED IMPELLERS. THE PUMPS SHALL BE A STA-RITE SIGNATURE 2000 DESIGN, SERIES 10, 1/2 HORSEPOWER PUMP, OR APPROVED EQUAL. THE DISCHARGE COLUMN SHALL BE SCHEDULE 40 GALVANIZED IRON PIPE AND SHALL BE EQUIPPED WITH A CHECK VALVE LOCATED AT THE TOP OF THE BOWL ASSEMBLY. THE PUMP SHALL BE FURNISHED WITH A NSF APPROVED PILESS ADAPTER. THE PUMP SHALL BE FURNISHED WITH 1/2 HORSEPOWER SINGLE PHASE SUBMERSIBLE MOTOR. THE PUMP MOTOR SHALL BE FURNISHED WITH A STANDARD CAPACITOR TYPE CONTROL PANEL FOR STARTING AND STOPPING THE PUMP. THE CONTROL PANEL SHALL BE MOUNTED IN A WEATHER PROOF ENCLOSURE. THE PUMP SHALL ALSO BE FURNISHED WITH A "PUMPED PLUS" PUMP PROTECTION PANEL, PHASE FAILURE PROTECTION, AND LIGHTNING ARRESTOR. THE CONTRACTOR SHALL FURNISH ONE COMPLETE SPARE PUMP AND MOTOR.
- THE HIGH ZONE PUMP SHALL BE CONTROLLED BY TWO FLOATS OR ELECTRODES INSTALLED IN THE HIGH ZONE WATER STORAGE RESERVOIR (PUMP ON AND PUMP OFF). A THIRD FLOAT OR ELECTRODE SHALL BE PROVIDED FOR A LOW WATER ALARM. THE WATER SYSTEM CONTROLS SHALL BE INSTALLED IN THE PUMP CONTROL PANEL LOCATED AT THE LOW ZONE RESERVOIR SITE. THE CONTRACTOR SHALL FURNISH AND INSTALL A 1-1/2" CONDUIT FROM THE CONTROL PANEL TO THE HIGH ZONE WATER TANK. THE CONDUIT SHALL BE LAID IN THE SAME TRANCH AS THE WATER SUPPLY LINE TO THE TANK. THE CONDUIT SHALL HAVE JUNCTION BOXES LOCATED AT ALL ANGLE POINTS AND AT 400 FOOT ON CENTER. THE CONTRACTOR SHALL FURNISH AND INSTALL CONDUCTORS AS REQUIRED FOR EACH FLOAT OR ELECTRODE, AND SHALL FURNISH AND INSTALL A SPARE PAIR OF CONDUCTORS (8 CONDUCTORS).
- THE HIGH ZONE PUMP SHALL ALSO OPERATE AS A SIMPLE PUMP-UP SYSTEM. WHEN WATER IN THE HIGH ZONE RESERVOIR REACHES THE PUMP OFF FLOAT WHICH SHALL TURN OFF THE PUMP. THE THIRD FLOAT SHALL BE A LOW WATER ALARM WHICH SHALL ACTIVATE A RED FLASHING ALARM LIGHT TO BE MOUNTED AT THE PUMP CONTROL PANEL. THE CONTROL PANEL SHALL INCLUDE A SILENCE BUTTON FOR THE ALARM LIGHT.

SHEET LAYOUT



NO.	REVISIONS	DATE	BY	CHKD	APPD
1.	Revisions per DEC review comments	4/11/02	JRM		
2.	Revisions per DEC review comments	5/9/02	JRM		

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OSPREY SUBDIVISION
WATER SYSTEM PLANS
TITLE SHEET

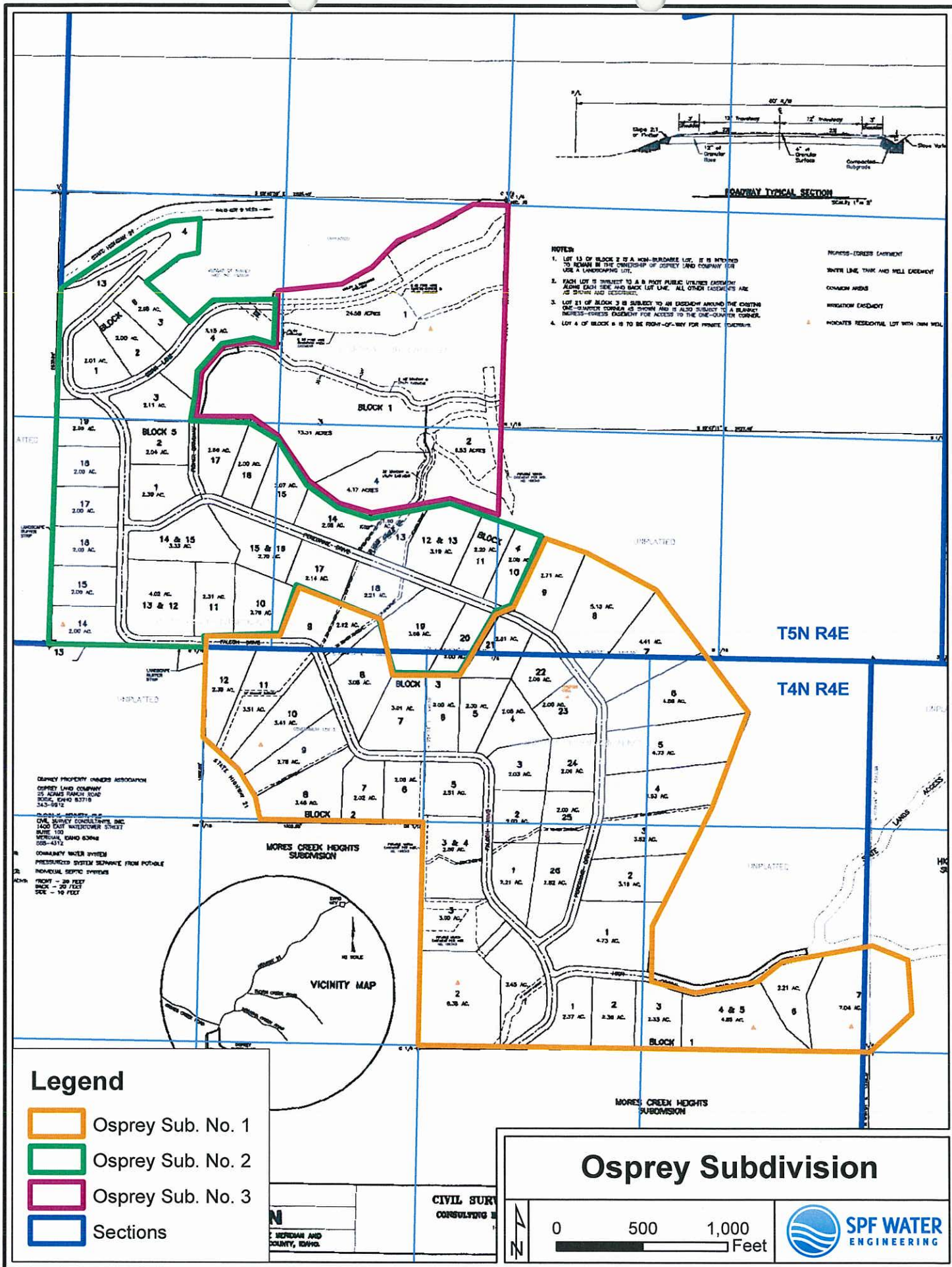
DATE: 1/15/03
DRAWING: Water-plans.dwg
JOB NO: 99032/0301
SHEET 1 OF 11

CALL DIGLINE
48 HOURS PRIOR TO EXCAVATION
PHONE 1-800-342-1585
TO REQUEST U.C. LOCATIONS

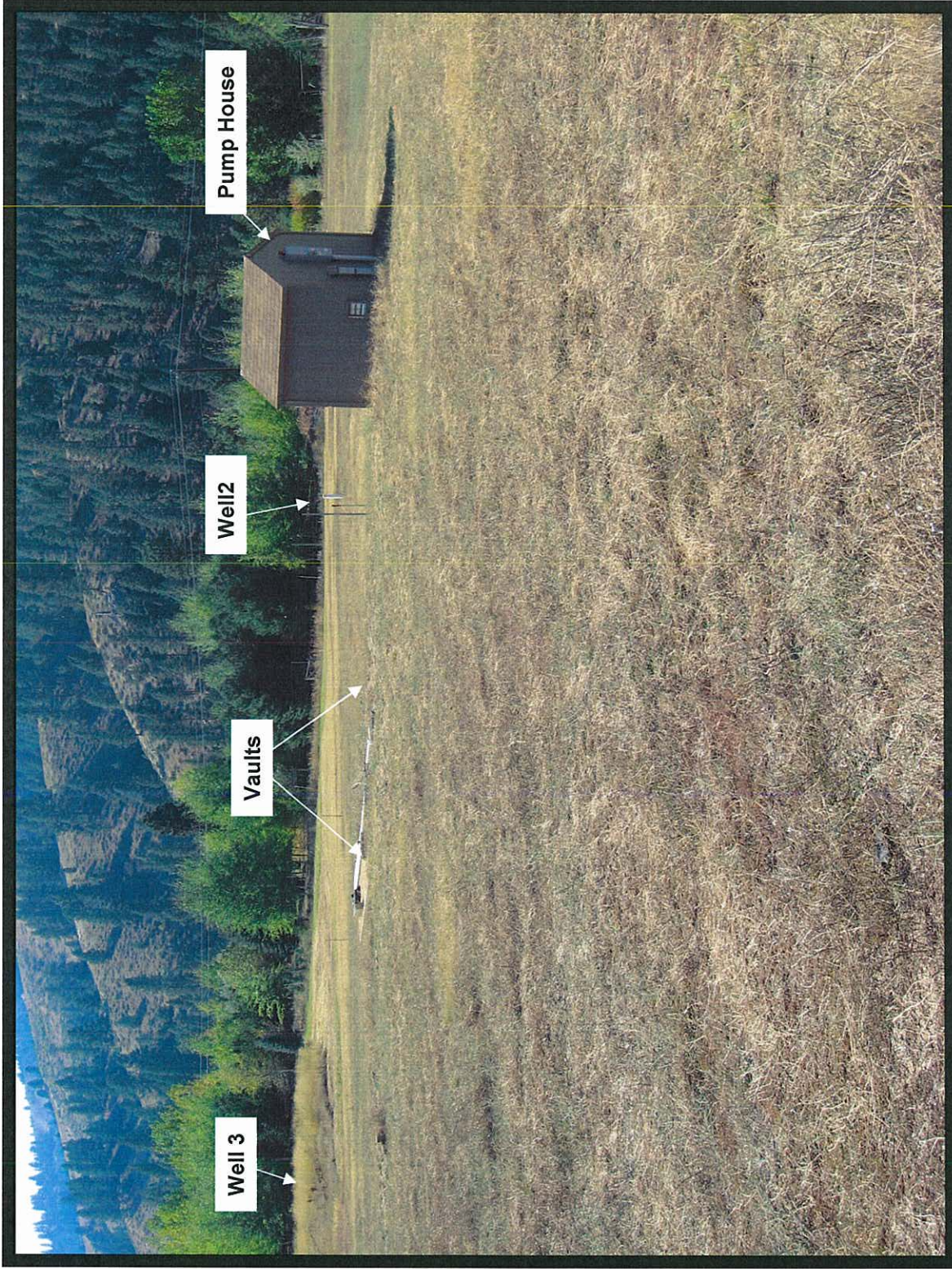
ATTACHMENT E
DOMESTIC LOTS

Osprey Subdivision Potable Water System Connections

[illegible]



ATTACHMENT F
PHOTOS



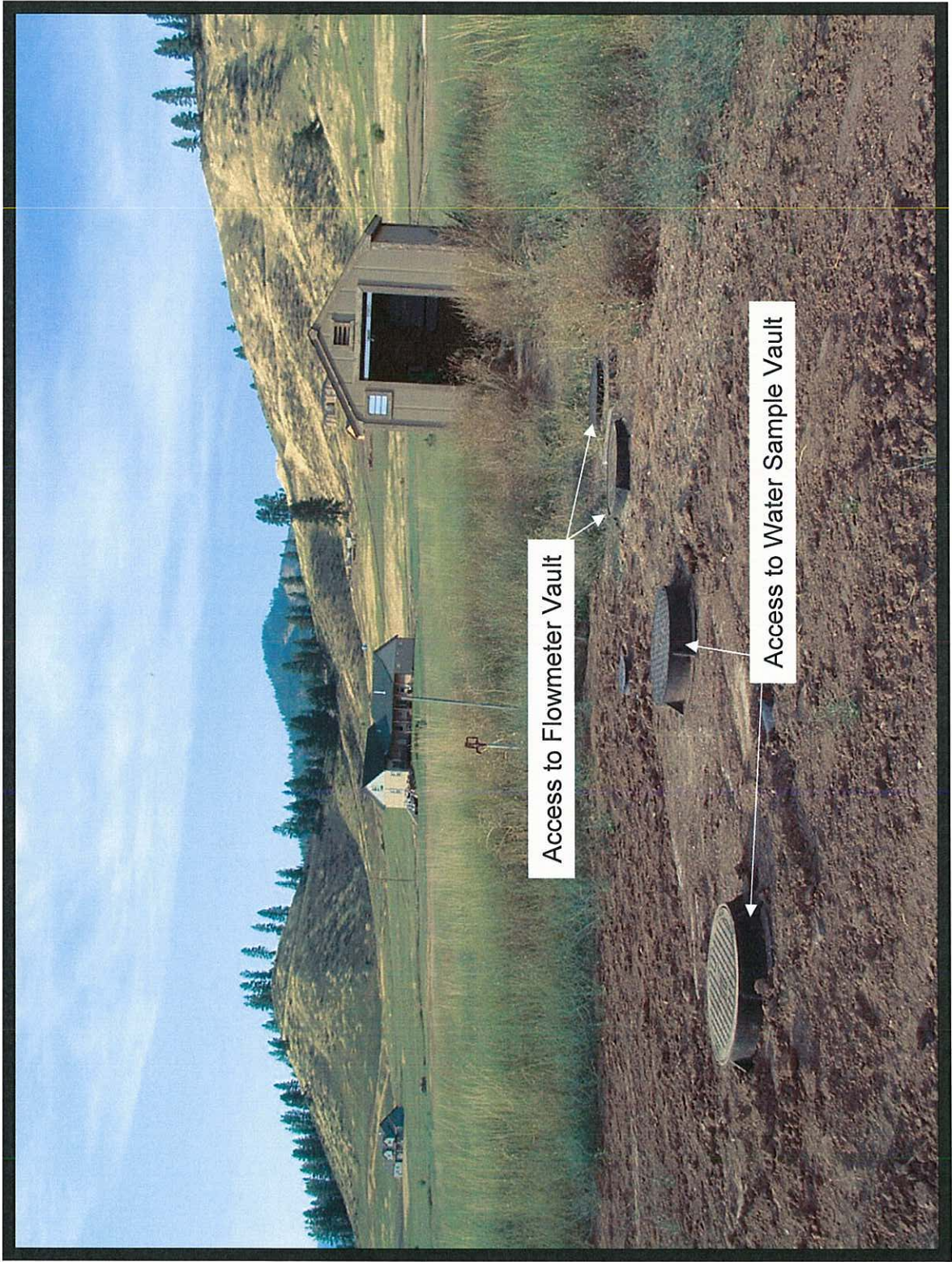
Point of Diversion Overview
Lot 3, Block 2, Osprey Subdivision No. 1



Well No. 2

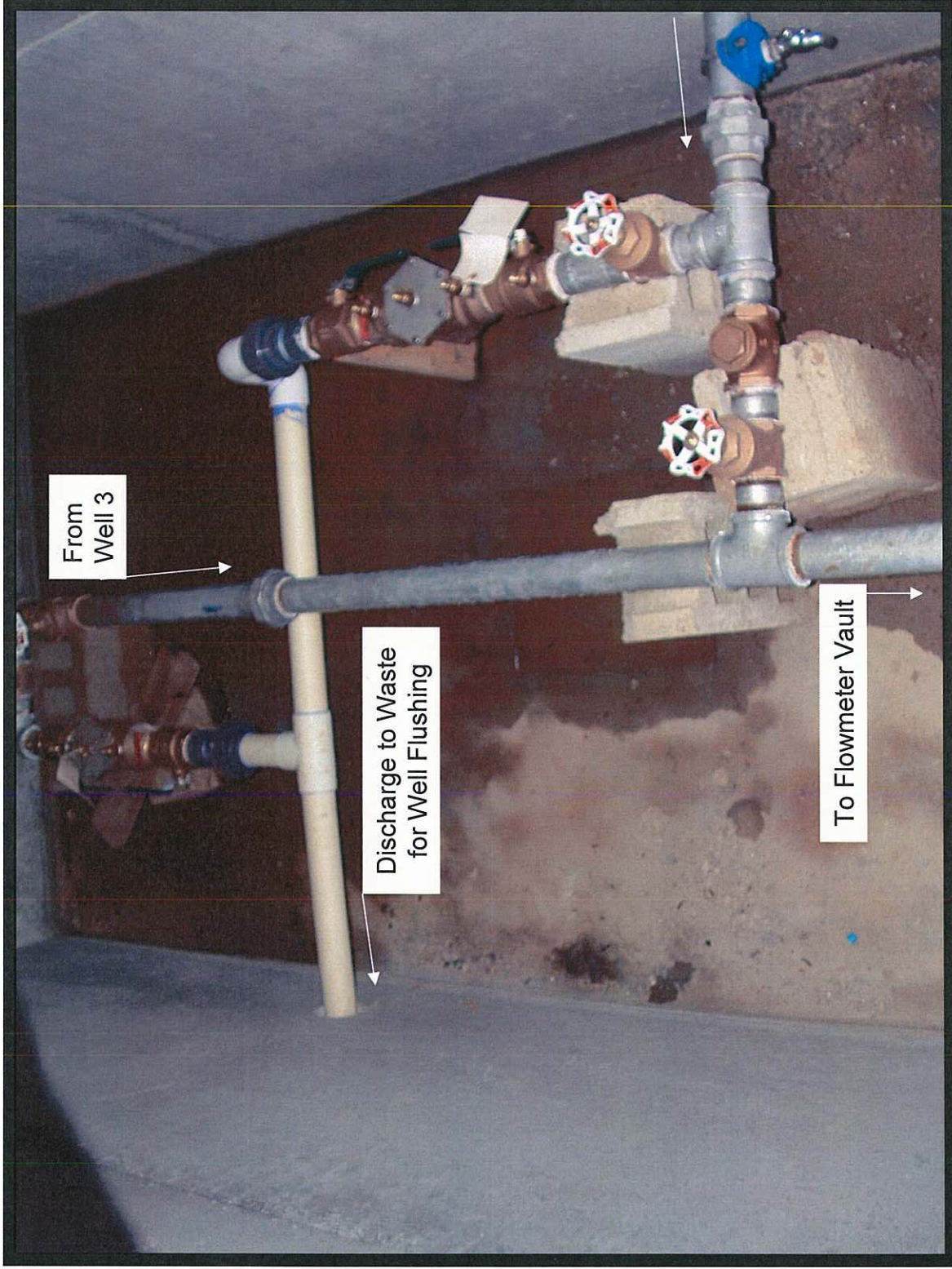


Well No. 3



Access to Flowmeter Vault

Access to Water Sample Vault



From
Well 2

From
Well 3

Discharge to Waste
for Well Flushing

To Flowmeter Vault

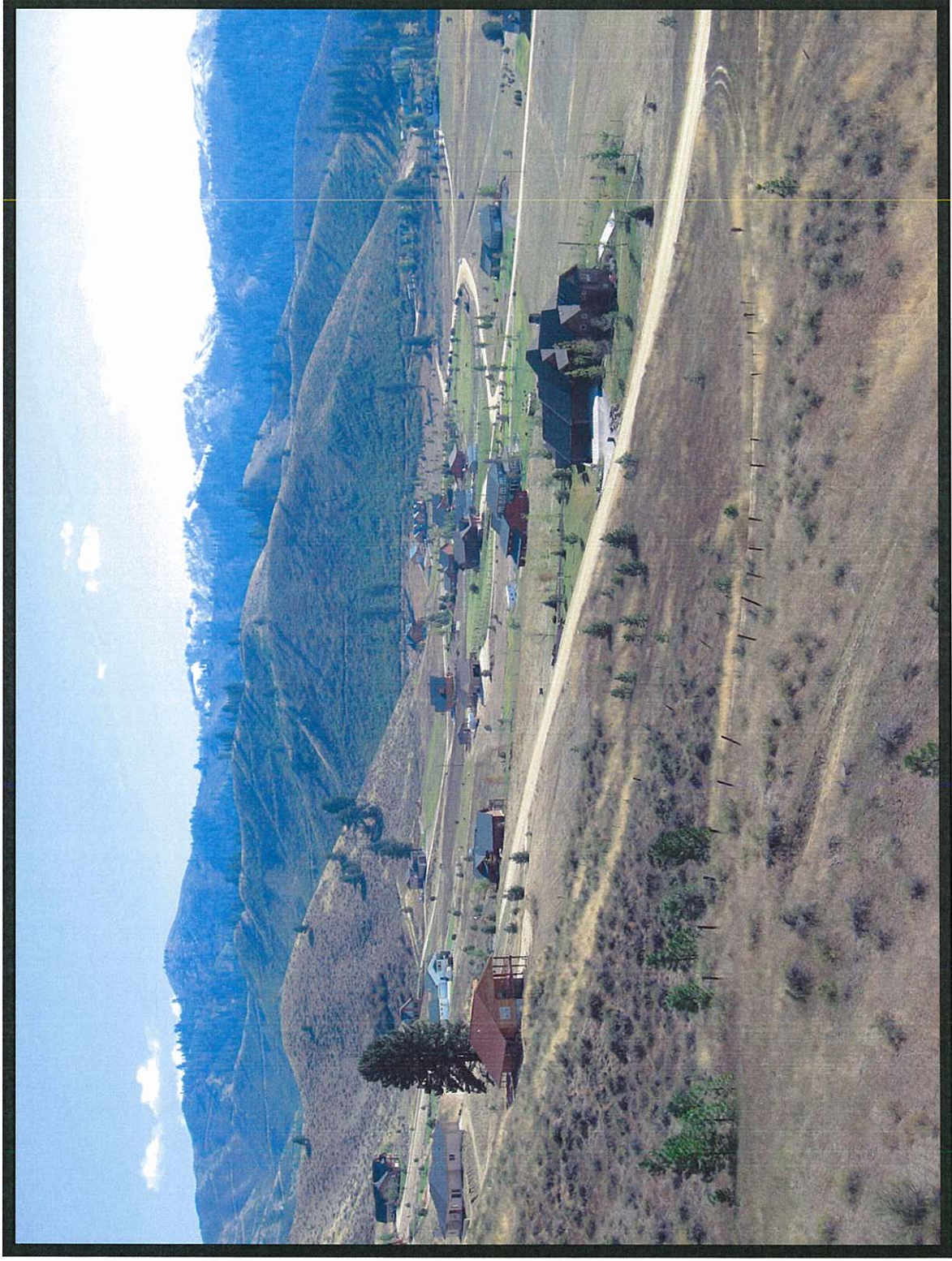
Water Sample Vault



Flowmeter Vault



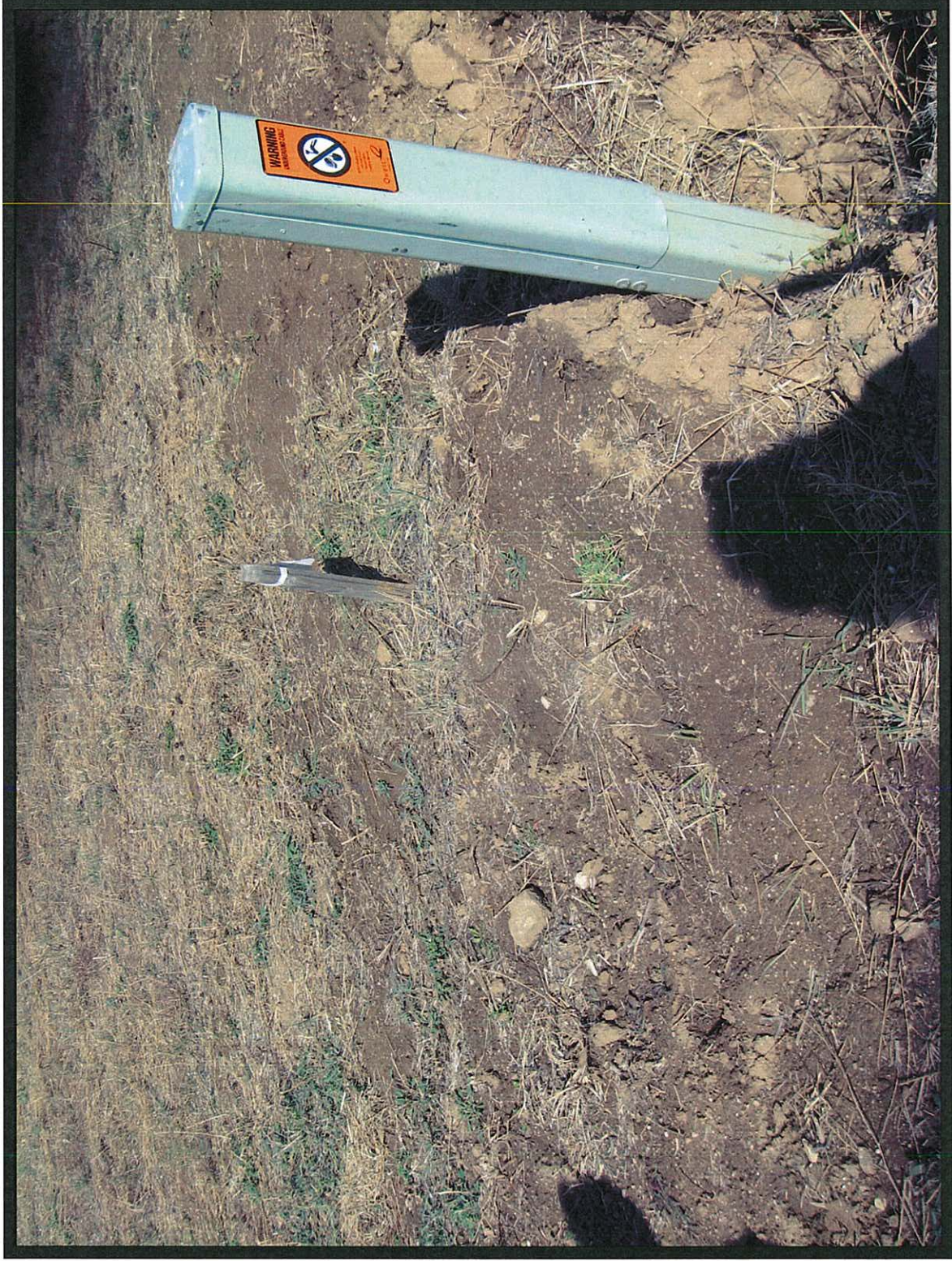
Controlling Works Inside Pump House



Place of Use View from Lower Storage Tanks



Lower Storage Tanks



Buried Service Line Indicator



Separate Irrigation System