Checklist for Claims of Beneficial Use Received at CSG Counter

Application #	:R-87364	WRD Revie	wer:Dante Luongo	
Transfer #:	-			
Date Receive	ed:1-30-2023			
CWRE Name	:Will McGill			
Priority Date	(s):12-12-2008			
Fees Required:				
☑ YES NO□	A fee of \$230 must accompany to 1987, or later.	his form for <u>permi</u>	its with priority dates of	July 9,
□YES NO□	A fee of \$230 must accompany to with a priority date of July 9, 198 Example – A transfer involves has a priority date of July 9, 198	37, or later. 55 rights and one of	of the rights	Fill in App or Transfer
Map Review:				Number
✓ Application & perm ✓ Disclaimer (OAR 6) ✓ North arrow (OAR ✓ CWRE stamp and s ✓ Appropriate scale (1) of the count)) size scale	THAT THEATURY 200 THEAT DRIVEN ACCT	S S S S S S S S S S S S S S S S S S S
Report Review:			WATER ROOTS CONTROL S BACK CROUND HATER S BACK CROUND HATER S BACK CROUND HATER S	MACCAD PRO
✓ Application & perm ✓ Ownership informat ✓ Date of survey (OA ✓ Person interviewed ✓ County (OAR 690-0 ✓ CWRE stamp and signals)	R 690-014) (OAR 690-014)	· .	BEAL OPERATOR SOME SOME PARTY OF THE PARTY O	200,00
	ired (Priority Date prior to December 20 (Priority Date on or after December 20,		de pump test flyer w/acknow	ledgment letter

CLAIM OF BENEFICIAL USE for Reservoir Permits by CWRE's (not self-certified)



OREGON Oregon Water Resources Department 725 Summer Street NE, Suite A Salem, Oregon 97301-1266 (503) 986-0900

www.oregon.gov/OWRD

A fee of \$230 must accompany this form for permits with priority dates of July 9, 1987, or later.

Claims received without the correct fee of \$200 will be returned.

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. Begin each new claim by checking for a new version of this form at: https://www.oregon.gov/OWRD/Forms/Pages/default.aspx

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. Every item must have a response. If any requested information does not apply to the claim, insert "NA." Do not delete or alter any section of this form unless directed by the form. The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

If you have questions regarding the completion of this form, please call 503-979-9103.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see:

https://www.oregon.gov/OWRD/programs/WaterRights/RA/Pages/default.aspx

SECTION 1 GENERAL INFORMATION

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1. File Information

APPLICATION #	PERMIT # (IF APPLICABLE)	PERMIT AMENDMENT # (IF APPLICABLE)
R-87364	R-14794	

2.	Property	Owner	(current	owner	in	formation
	rioperty	CAALICI	(cuil elli	OMILE		Ulliation

APPLICANT/BUSINESS NAME Kenny Unger		PHONE NO (818) 371	-	Additional Contact No.
Address				
30223 Hawkset St.				
CITY	STATE	ZIP	E-MAIL	
Castaic	CA	91384	kenyonla	and@msn.com

If the current property owner is not the permit holder of record, it is recommended that an assignment be filed with the Department. <u>Each</u> permit holder of record must sign this form.

3. Permit holder of record (this may, or may not, be the current property owner)

PERMIT HOLDER OF RECOR	D		
Kenny Unger			
ADDRESS			
30223 Hawkset St.			
CITY	STATE	ZIP	
Castaic	CA	91384	

ADDITIONAL PERMIT HOLI	DER OF RECORD		
Address			
Сіту	STATE	ZIP	

4. Date of Site Inspection:

12-15-2022

5. Person(s) interviewed and description of their association with the project:

Name	DATE	ASSOCIATION WITH THE PROJECT
Mariano Alvares Sotelo	12-15-22	Farm Manager
Kenny Unger	12-19-22	Owner

6. County

Yamhill

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7. If any property described in the place of use of the permit final order is excluded from this report, identify the owner of record for that property (ORS 537.230(5)):

OWNER OF RECORD		
Address		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME William E. McGill		PHONE NO (503) 510		CT No.
ADDRESS 15333 Pletzer Rd. SE				
CITY	STATE	ZIP	E-MAIL	
Turner	OR	97392	willmcgill.surveying@gmail.co	om

Permit Holder's of Record Signature or Acknowledgement

Each permit or transfer holder of record must sign this form in the space provided below.

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	TITLE	DATE
Zing R. Voge	KENNY R. Ungan	OWNER	1-17-22
		RECE	IVED
		JAN 3	2023
		OW	RD

CLAIM DESCRIPTION

1. Reservoir source and, if from surface water, the tributary:

RESERVOIR NAME OR NUMBER	Source	TRIBUTARY	
Unger Reservoir #1	Hutchcroft Creek	N. Yamhill River	

2. Developed use(s), period of use, and acre foot (af) for each use:

RESERVOIR NAME OR NUMBER	USES	SEASON OR MONTHS WHEN WATER WAS APPROPRIATED FOR STORAGE	VOLUME STORED (AF)
Unger Reservoir #1	Multiple Purpose	Nov. 15-End of Feb.	50
Total Quantity of Water Stor	50		

3. Provide a general narrative description of the distribution works. This description must trace the water system from each point of diversion to the reservoir:

Water is taken in through a fish screened inlet at the POD 4 and delivered downstream through a gravity flow pipe to a steel tank bulge equipped with a 20 HP submersible pump. From the bulge tank, water is pumped uphill to the reservoir through 5" buried PVC pipe.

Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).

4. Variations:

Was the use developed differently from what was authorized by the permit, permit amendment final order, or extension final order? If yes, describe below.

(e.g. "The permit allowed the development of three reservoirs. The permit holder only developed one of the reservoirs." or "The permit allowed for the storage of 9 acre feet of water. The reservoir was developed to hold 5.2 acre feet.")

5. Claim Summary:

RESERVOIR NAME OR #	MAXIMUM STORAGE AUTHORIZED BY PERMIT (AF)	MAXIMUM STORAGE DEVELOPED (AF)
Unger Reservoir #1	50	50

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SYSTEM DESCRIPTION

Are there multiple reservoirs?

YES



If "YES" you will need to copy and complete Sections A through E for each reservoir.

Reservoir Name or Number this section describes (only needed if there is more than one):

Unger Res	ervo	r #1
------------------	------	------

A. Reservoir Location

1. Is the reservoir on-channel?

YES



2. Provide dam outlet location and/or point of diversion(s).

TWP	RNG	Mer	SEC	QQ	GLOT	DLC	MEASURED DISTANCES
25	5W	WM	36	NWSW		37	1590' N and 215' E from SW corner,
							section 36

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).

B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport the water from the point(s) of diversion to the reservoir.

1. Is a pump used?

YES

NO

If "NO" items 2 through item 5 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	Type (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)
Franklin	VN6FP2005D		Submersible

3. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *IF A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
20	100	0	243'	0.28

4.	Pr	OV	ide	pump	ca	cu	at	ions:
----	----	----	-----	------	----	----	----	-------

Q = (20*7.04)	(254+0+243)	= 0.28 cfs
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5. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME	TOTAL PUMP OUTPUT
		OBSERVED	(IN CFS)

Reminder: For pump calculations use the reference information at the end of this document.

6. Additional notes or comments related to the system:

The water is delivered from the fish screened inlet to the bulge tank through 6" PVC, 5" PVC, and 4" steel pipe by gravity flow. The bulge tank is a 10' diameter x 13' high corrugated steel tank. The bulge tank has an overflow pipe that puts unused water back into the creek.

C. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES NO

If "NO", items 2 through 4 relating to this section may be deleted.

2. Complete the table:

PIPE SIZE	PIPE TYPE	"C" FACTOR	AMOUNT OF FALL	LENGTH OF PIPE	SLOPE	COMPUTED RATE OF WATER FLOW (IN CFS)
6"	PVC	150	1.2'	18'	0.0659 ft./ft.	2.41
5"	PVC	150	24.5'	372'	0.0659 ft./ft.	1.49
4"	Steel	130	3.3'	50'	0.0659 ft./ft.	0.72

3. Provide calculations:

6" PVC: $V = (1.318)(150)(0.1250)^{0.63}(0.0659)^{0.54} = 12.2787$ ft./sec. Q = (0.1963)(12.2787) = 2.41 cfs

5" PVC: $V = (1.318)(150)(0.1042)^{0.63}(0.0659)^{0.54} = 10.9498$ ft./sec. Q = (0.1363)(10.9498) = 1.49 cfs

4" Steel: $V = (1.318)(130)(0.0833)^{0.63}(0.0659)^{0.54} = 8.2395$ ft./sec. Q = (0.0872)(8.2395) = .72cfs

4. If an actual measurement was taken, provide the following:

DATE OF MEASUREMENT	WHO MADE THE	MEASUREMENT METHOD	MEASURED QUANTITY OF WATER
	MEASUREMENT		(IN CFS)

Attach measurement notes.

D. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES NO

E. Reservoir

1. Does the reservoir require the submittal of as-built plans and specifications?

YES NO

If "YES", answer item 2; items 3 through 8 relating to this section may be deleted. If "NO", skip items 2; answer items 3 through 8.

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2. Complete the table:

HAVE THE DOCUMENTS BEEN SUBMITTED?	WHEN WERE THE DOCUMENTS SUBMITTED?	HAVE THEY BEEN APPROVED BY THE DEPARTMENT?	NUMBER OF ACRE FEET STORED
YES OR NO			

3. If the reservoir stores less than 9.2 acre-feet of water or if the dam is less than 10 feet in height, and asbuilt plans and specifications are not required, complete the table and items 4 through 8.

MAXIMUM DEPTH	AVERAGE DEPTH	SURFACE AREA (IN ACRES)	VOLUME (IN ACRE FEET)
24'	14'	3.6	50.4

4. Provide reservoir volume calculations:

14(3.6) = 50.4

5. Provide the following information concerning the physical characteristics of the dam:

CREST WIDTH (W)	DAM HEIGHT AT CENTERLINE (H)	DISTANCE FROM DOWNSTREAM TOP OF DAM TO DOWNSTREAM TOE (L)	DISTANCE FROM UPSTREAM TOP OF DAM TO UPSTREAM TOE (U)	WATER LEVEL AT INSPECTION	DOWN-STREAM SLOPE	UP-STREAM SLOPE
11'	25.5'	104.5'	77′	5.5' below crest of dam	0.33 ft./ft/	0.29 ft./ft.

6. Provide a drawing showing the cross section of the dam at the maximum section indicating details and dimensions. The drawing should be drawn at a standard even scale.

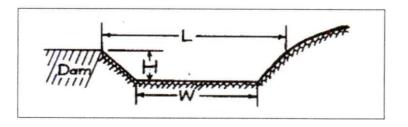
See attached drawing.

7. Describe the outlet works (size and type of the outlet conduit and location):

The reservoir evacuation system is a PTO pump connected to an 8" suction line powered by an 81 HP Kubota tractor. This system is located at the NE corner of the reservoir.

8. Describe the emergency spillway (dimensions and location):

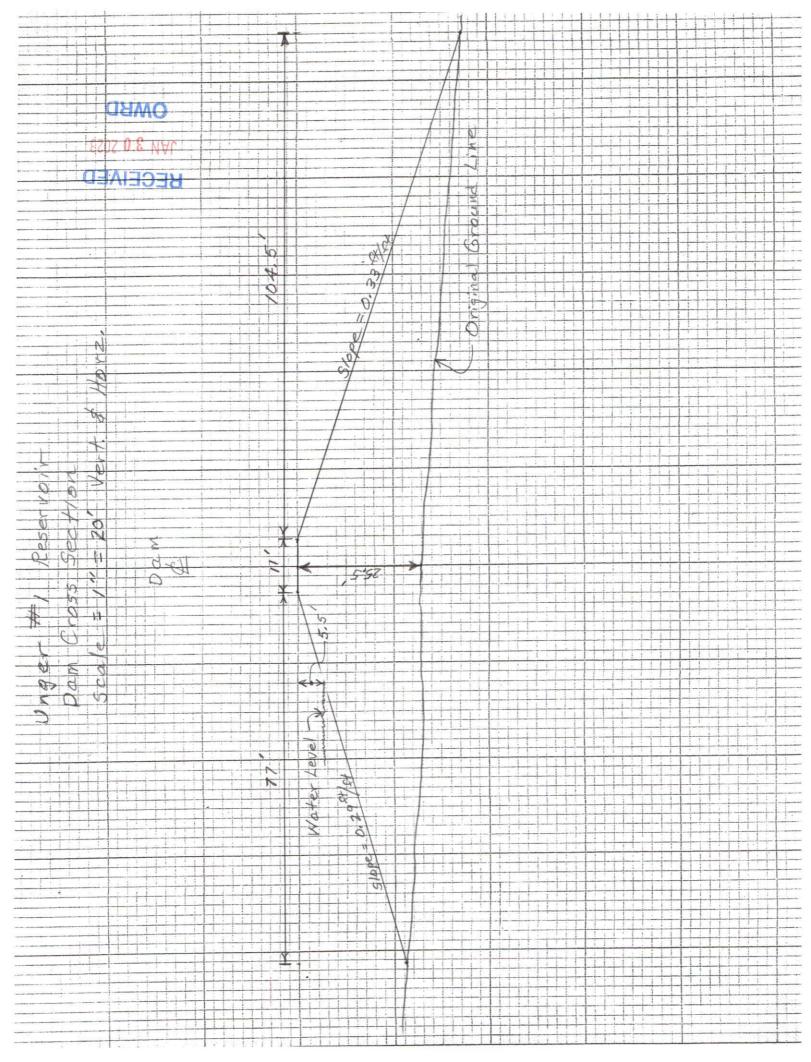
BOTTOM WIDTH (W)	TOP WIDTH (L)	SPILLWAY DEPTH (H)	
6'	20'	3'	



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CONDITIONS

All conditions contained in the permit, permit amendment, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit or extension final order:

	DATE FROM PERMIT	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	11-30-2009		
BEGIN CONSTRUCTION (A)	N/A	N/A	N/A
COMPLETE CONSTRUCTION (B)	11-30-2014	Nov. 2013	Completed reservoir construction and installation of tank bulge, pump and pipe to fill reservoir.
COMPLETE APPLICATION OF WATER (C)	11-30-2014	Jan. 2014	Filled reservoir.

^{*} must be within period between permit or any extension final order issuance and the date to completely apply water

Is there an extension final order	ler(s	order(s	der(s	5)?
---	-------	---------	-------	-----

YES



3. Measurement Conditions:

a. Does the permit, permit amendment, or any extension final order require the installation of a meter or approved measuring device?

If "NO", items b through f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion or appropriation.

b. Has a meter been installed?

YES

NO

c. Meter Information

POD/POA	MANUFACTURER	SERIAL#	CONDITION	CURRENT METER	DATE INSTALLED
NAME OR #			(WORKING OR NOT)	READING	
POD 4	Netafim	13-10003451	Working	044556	Aug. 2014

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4. Recording and reporting conditions

a. Is the water user required to report the water use to the Department?

5. Outlet Pipe

a. Is the water user required to install a minimum 8"outlet pipe/conduit?

If "NO", items b through c relating to this section may be deleted.

b. Has the outlet pipe been installed?

If "YES", items c relating to this section may be deleted.

c. Does the water user have other means to evacuate the reservoir?

DESCRIBE HOW THE WATER USER PLANS TO EVACUATE THE RESERVOIR		BEEN APPROVED PARTMENT?	By Whom?
PTO pump with 8" suction line powered by 81 HP Kubota tractor	YES	NO	

6. Fish Screening

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion?

If "NO", items b through e relating to this section may be deleted.

Reminder: If fish screening devices were required, the COBU map must indicate their location in relation to the point of diversion.

b. Has the fish screening been installed?

YES NO

c. When was the fish screening installed?

DATE	Ву Wном
September 2010	Kenny Unger

Reminder: If the permit or transfer final order was issued <u>on or after February 1, 2011</u>, the fish screen is required to be approved by the Oregon Department of Fish and Wildlife regardless of the rate of diversion.

d. If the diversion **involves a pump** <u>and</u> the **total** diversion rate of all rights at the point of diversion is less than 225 gpm (0.5 cfs):

Has the self-certification form previously been submitted to the Department? NA YES NO

If not, go to https://www.oregon.gov/OWRD/Forms/Pages/default.aspx (search for ODFW Small Pump Screen Self Certification), complete and attach a copy of the self-certification form to this claim, and send a copy of it to the Oregon Department of Fish and Wildlife (ODFW).

Reminder: Failure to submit evidence of a timely installed fish screen may result in an unfavorable determination. The ODFW self certification form needs to have been previously submitted or be attached to this form.

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- e. If the diversion does **not involve a pump \underline{or}** the **total** diversion rate of all rights at the point of diversion is 225 gpm (0.5 cfs) or greater:
 - Has the ODFW approval been previously submitted?

NA

YES



 If not, contact and work with ODFW to ensure compliance. To demonstrate compliance, provide signed documentation from ODFW. A form is available at https://www.oregon.gov/OWRD/Forms/Pages/default.aspx

Reminder: Failure to submit evidence of a timely installed fish screen may result in an unfavorable determination. In order to receive a favorable approval, the ODFW/WRD "Fish Screen Inspection" form needs to have been previously submitted or be attached to this form.

7. By-pass Devices

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion?

YES



8. Other conditions required by permit, permit amendment final order, or extension final order

a. Was the water user required to restore the riparian area if it was disturbed?

YES

NO

b. Was a fishway required?

YES

NO

c. Was submittal of a letter from an engineer required prior to storage of water?

YES

NO

d. Was submittal of a water management and conservation plan required?

YES

NO

e. Other conditions?

YES

NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

- a. Restore riparian area: at 12-15-22 onsite inspection, no disturbed areas were found.
- c. Engineer submittal of letter prior to storage: received by OWRD Nov. 20, 2009
- e. other conditions:
 - Maximum 5-acre surface area: constructed with 3.6-acre reservoir surface area.
 - Maximum dam height 25': dam constructed to comply.
 - Routine dam maintenance and repairs: at the 12-15-22 onsite inspection, the dam appeared to be well maintained.
 - Engineer to get OWRD approval for any changes: not aware of any changes.
 - All construction under supervision of Oregon licensed engineer: project completed by Stuntzner Engineering & Forestry, LLC
 - Plans and specs prepared by engineer and approved by OWRD before any modifications: not aware of any modifications.

ATTACHMENTS

Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION		
ODFW Letter	Fish screen approval letter.		
Stuntzner Plans (4 pgs.)	OWRD approved plans.		
Stuntzner Letter (3 pgs.)	Project completion report.		
Photos (x18)	Taken at 12-15-22 onsite inspection		

SECTION 7

CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1'' = 1320 feet, 1'' = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

Survey method used was a combination of aerial photo provided by Maxar Technologies, GPS, and sonar. Source date: 4/5/2021



Map Checklist

Please be sure that the map you submit includes ALL the items listed below. (Reminder: Incomplete maps and/or claims may be returned.)

\boxtimes	Map on polyester film.
\boxtimes	Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
\boxtimes	Township, Range, Section, Donation Land Claims, and Government Lots
	If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots Quarter-Quarters
\boxtimes	Locations of fish screens and/or fish by-pass devices in relationship to point of diversion
\boxtimes	Locations of meters and/or measuring devices in relationship to point of diversion
\boxtimes	Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
\boxtimes	Point(s) of diversion or appropriation (illustrated and coordinates)
\boxtimes	Tax lot boundaries and numbers
\boxtimes	Source illustrated if surface water
\boxtimes	Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
\boxtimes	Application and permit number or transfer number
\boxtimes	North arrow
\boxtimes	Legend
\boxtimes	CWRE stamp and signature

JAN 3 0 2023

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Department of Fish and Wildlife The Dalles Screen Shop 3561 Klindt Drive The Dalles, OR 97058 (541) 296-8026 FAX (541) 296-7889 odfw.com

OREGON

January 30,2023

Attn. Kenny Unger 30223 Hakset St Castaic, CA 91384

RE: Permit R-14794

To whom it may concern,

This letter is regarding fish screening and passage requirements set forth by Oregon Water Resources Department for Permit R-14794. This permit allows water use from Hutchcroft Creek, a tributary of North Yamhill River.

The water user has installed a passive Pump-Rite L250 at this point of diversion. This end of pipe screen meets National Marine Fisheries Service screening criteria up to a withdrawal rate of 250 gpm, or 0.66 cfs, while protecting all age classes of anadromous salmonids from entrapment and impingement. Based on information provided by Will Mcgill a CWRE with Will Mcgill Surveying the water flows by gravity at a rate of 0.32 cfs or 121 gpm down to a 7500-gallon bulge tank and then is pumped into Unger 1 reservoir. An onsite photograph of the screen was provided in lieu of an on-site inspection. ODFW concludes that this screen will meet current state and federal fish screening criteria set forth by National Marine Fisheries Service and will satisfy the screening requirements for Permit R-14794.

This approval is contingent on the following: the screen is installed prior to any withdraw of water, the screen is installed so that the effective screen area is submerged during operation, and the screen is regularly inspected and maintained to ensure it remains in working order, including removing debris as necessary, and the screen is annually inspected when it is not in use.

If there are any questions regarding the approval of the screen for permit R-14794, please call me at 541-967-2162.

Sincerely,

Toby Schuyler

Tohy Shylm 1/30/23 Fish Screens and Passage Coordinator

CC: Will Mcgill - Will Mcgill Surveying LLC

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JAN 30 2023

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LAND SURVEYING PLANNING ENGINEERING WATER

FILE: Unger RCS WATER RIGHTS FORESTRY GPS & GIS



Phone: (503) 357-5717 Fax: (503) 357-5698 Email: billkness@stuntzner.com 2137 19th Avenue Forest Grove, OR 97116

TREES DEPARTMENT

COOS BAY - FOREST GROVE - DALLAS - BROOKINGS

U-12

November 17, 2009

Mr. George Robison, PhD

Water Resources Department, Dam Safety REVIE

725 Summer Street NE, Suite A

Salem, OR 97301

DATE 12/8/

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NOV 2 0 2009

Re: Completion Report for Unger #1 Reservoir

Dear Mr. Robison,

WATER RESOURCES DEPT SALEM, OREGON

As per OAR 690-20-0035 (5) (c), this Completion Report is being submitted to document the construction of *Unger #1 Reservoir*. Kenny Unger has constructed a dam and reservoir at his property located west of Yamhill under water right application #R-87364 and permit #R-14794. The Drawings and Specifications for *Unger Reservoir #1* were prepared by Stuntzner Engineering & Forestry, LLC (SEF), in Forest Grove, Oregon. Construction drawings were numbered 308-2-019 and consisted of four 22"x 34" drawing sheets. These drawings and specifications were approved by Dam Safety prior to construction as required for a dam of this height and storage. This letter certifies that the dam was completed in accordance with the approved drawings and specifications.

SEF provided construction observation services, field moisture/density testing, and construction staking for the project. The topographic survey used to prepare the drawings of record was also completed by SEF. The contractor for the project was Olson Bros. Excavating, Inc., of Portland, Oregon.

Construction staking was completed on August 3, 2009 with layout of the centerline of dam, cut/fill transitions, and embankment toe. The contractor started work on the site on August 10, 2009. On August 21, 2009, Eric Urstadt, Doug Gless (Engineering Geologist with H.G. Schlicker & Associates, Inc.), Dick Verboort, Kaid McKay, and you inspected the cut-off trench which was open to a six foot depth. It was agreed that no significant problems were evident based on field observations. No tiling or unforeseen buried objects were found in the cutoff trench or borrow area. However, removal of roots was noted as needed particularly on the uphill side of the dame. A copy of Doug Gless' engineering geology letter report dated August 25, 2009 is attached.

Dam construction proceeded through September and October. On October 26, 2009, a SEF surveyor completed a record survey to check final slopes and elevations of dam construction.

As of the date of that survey, only the spillways remained to be constructed. On November 10, 2009 SEF checked the construction and elevations of the primary and emergency spillways. The spillways were installed properly with the correct final invert elevations for the primary spillway (2 pipes) of 4962.0' (local datum) and the correct overflow elevation for the emergency spillway of 4962.5'. Seeding and mulching was accomplished in late October and during the first week of November.

The contractor used scrapers, sheeps-foot rollers, dozers, and track hoes for constructing the project. In order to achieve optimum soil moisture content during the initial stages of the project, water was pumped into a water truck and spread primarily in the borrow area after it had been ripped by the dozer. Water was also applied to the construction surface on the dam. Site visits were made as needed by the engineer or as requested by the contractor and landowner to verify construction progress and to test soil moisture and density. Sixty soil moisture/density tests were completed by SEF during construction. Copies of the field computation sheets for these tests are included with this report.

Olson Bros. Excavating did a satisfactory job of keeping the soil at proper moisture content and compacted thoroughly to an appropriate density. In a few instances, soil that was too dry or too moist for optimum moisture content and density was detected. Early in the project when the contractor was placing compacted fill in the cut-off trench at the northeast portion of the dam, the soil was too dry. The area with dry soil was removed by the contractor and replaced with soil with an optimum moisture content. Soil moisture/density tests collected following the re-work verified proper moisture and density. Near the end of the project when borrow soil was being pulled from the base of the reservoir and the southwest curve of the dam was being brought up to final grade, the soil being placed was too wet. The area with the wet soil was removed and then replaced with soil from a new borrow area with optimum moisture content soil. Once again, soil moisture/density tests collected following the re-work verified proper moisture and density.

Borrow material for construction of the dam was removed from within the reservoir area with limited amount of borrow coming from the north side of the reservoir above the normal pool elevation. Borrow area stripping materials were placed in area north and west of the reservoir. The stripping material area was smoothed, seeded, and mulched.

Construction Changes:

The dam was constructed as shown on the drawings and in the specifications with exceptions noted below. Drawings of record have been prepared to show the changes made during construction. These drawings are labeled Sheet 1 through Sheet 4 of file 3082019 DWG OF RECORD.dwg.

On June 5, 2009, the piping supply company let SEF know that the pipe size of 18" x 11" arched culvert CMP specified for the primary spillways is no longer available. SEF contacted you seeking approval to use an alternative standard pipe size of 17" x 13" arched culvert CMP. You granted approval for this minor change and SEF updated the Drawings to reflect this change.

On September 11, 2009, SEF submitted an email to you seeking approval for a minor design change to the emergency spillway regarding the location of the rip-rap area. On September 18th,

you responded with an approval to have the rip-rap section of the emergency spillway start at the location just above the outlets of the two primary spillway pipes. SEF updated the Drawings to reflect this change and the contractor built the spillway in accordance with this change.

On September 15, 2009, SEF noted an area at the working base of the borrow area near the north cut slope that contained weathered rock. On September 17th, Doug Gless visited the site to observe the rock outcropping and dig test pits in the borrow area to determine the extent and depth of the rock. Mr. Gless determined that the amount of rock was minimal and would be suitable to use as embankment material when mixed with other fine-grained borrow. A copy of the engineering geology letter report dated September 22, 2009 is attached.

On October 12, 2009, SEF called you to discuss the possibility of building the dam taller than the design. You concurred that if the design slopes of 3.5:1 on the inside and 2.5:1 on the outside of the embankment were maintained, building the dam higher would be acceptable. You also gave verbal approval to exceed the 25' maximum dam height specified in the water right permit. The final dam height was built one foot higher than in the original design with side slopes matching the design slopes. On October 28, 2009, SEF verified with you that the primary spillway and emergency spillway elevation could be constructed at an elevation one foot higher than in the original design. The amount of freeboard available is still 2.5 feet as in the original design.

Conclusions:

The available storage of record as determined from the final topographic survey on October 26, 2009 is 46.7 acre-feet at the primary spillway elevation. The pool area at this elevation is 3.23 acres. An updated *Stage-Storage Data* table is provided on Sheet 1 of the Drawings of Record.

Thank you for your assistance and prompt responses to our change requests through-out the project. Please let us know if you have any questions or comments.

Sincerely,

William Kness, PE, CWRE

With Kin

Stuntzner Engineering and Forestry, LLC

Enclosures:

Engineering Geologist Letter Reports, Copy of field soil test data, Set of Drawings of Record (4 sheets at 22"x34")

Distribution:

Kenny Unger (Owner)



Unger COBU 12/15/22

> Diversian tank and pump site 13'x10'

JAN 30 2023 OWRD



Unger CoBU
12/15/22

Inside tank @ diversion

B" pipe w/ submersible pump

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JAN 3 0 2023



Unger CoBU
12/15/22

outlet for overflow @ top of diversiontank





Unger CoBU
12/15/22

Alman pipe from creek POD/Fish sween

JAN 3 0 2023 OWRD

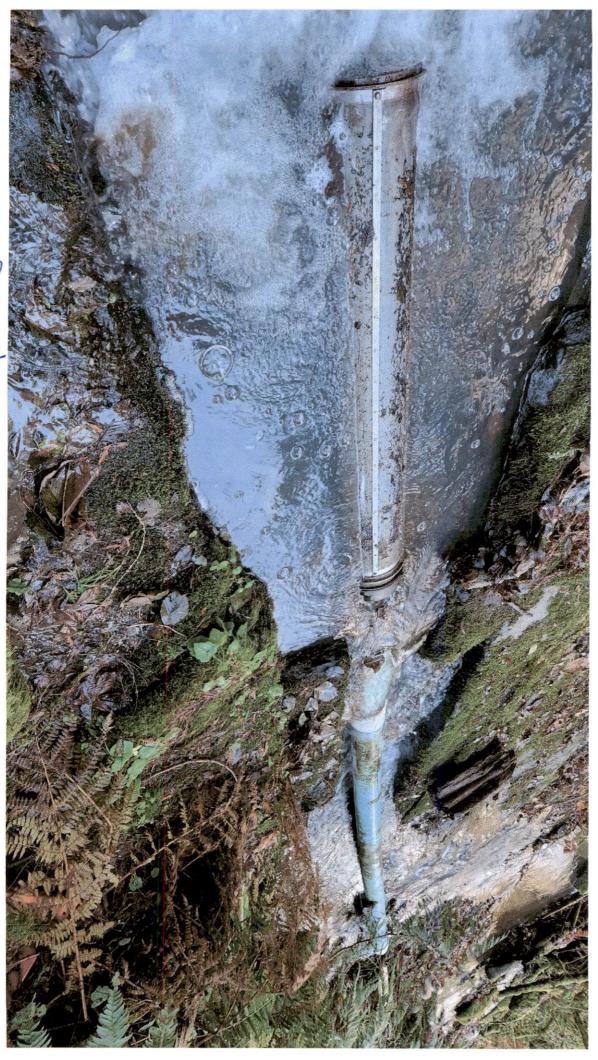


Unger COBU 12/15/22

Pump-Rite Fish sween 5'x1'

JAN 30 2023 OWRD

12/5/21



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Unger COBU 12/15/22

tank werfler back to creek



Netatin Flow meter (s/2)

22/51/21



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Inger Cobu



JAN 3 0 2023 OWRD



Unger Coon 12/15/22

Reservair

2 - 4" outlet pipes to draw pord embankment

Mager 6084



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JAN 3 0 2023



Unger Cobu 12/15/22 ortlet papes (Embankmen+ Drain)



Ungar COBU
12-15-22 WAM

Reservoir emergency Spillway (Looking Easterly)







Unger COBU

12-15-22 WAN

Alternate Pumping System

to Execuate Reservoir.

(BI HP Kubota tractor

with P.T.O., pump)

JAN 30 2023





Unger COBU
12-15-22 WAM
Reservoir emergency Spillway (Looking Westerly)







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JAN 3 0 2023

OWRD

Date Received (Date Stamp Here)

OWRD Over-the-Counter Submission Receipt

Applicant Name(s) & Address: Senny Unger
30223 Hawkset St. Castair (A 913pr)
Transaction Type:
Fees Received: \$ 230.00
□ Cash □ Check; Check No. 2093
Name(s) on Check: Will McGill Surveying
Thank you for your submission. Oregon Water Resources Department (Department) staff will review your submittal as soon as possible.
If your submission is determined to be complete, you will receive a receipt for the fees paid and an acknowledgement letter stating your submittal is complete.
If determined to be incomplete, your submission and the accompanying fees will be returned wit an explanation of deficiencies that must be addressed in order for the submittal to be accepted.
If you have any questions, please feel free to contact the Department's Customer Service staff at 503-986-0801 or 503-986-0810.
Sincerely, OWRD Customer Service Staff
Submission received by:
Instructions for OWRD staff:

- Complete this Submission Receipt and make two (2) copies. Place one copy with the check/cash; and place
 the other copy with the submission (i.e., the application or other document).
- Date-stamp all pages. (NOTE: Do not stamp check.)
- Give this original Submission Receipt to the applicant.
- Record Submission Receipt information on the "RECEIVED OVER THE COUNTER" log sheet.
- Fold and put one copy of the Submission Receipt with check/cash into the Safe slot. Place the other copy of the Submission Receipt with submission (application/other document) in the top drawer of filing cabinet.



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JAN 3 0 2023

OWRD

Date Received (Date Stamp Here)

OWRD Over-the-Counter Submission Receipt

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Transaction Type:	COBU			· ·	··· '		: .
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Thank you for your review your submit	submission. Öi tal as soon as p	regon Water R				•	1 1
If your submission is an acknowledgemen	s determined to nt letter stating	o be complete, gyour submitte	you will a	receive : lete.	a receipt f	or the fe	es paid and
If determined to be an explanation of de	incomplete, yo eficiencies that	our submission must be addre	and the a	accompa rder for	nying fee the subm	s will be i	eturned wit accepted
If you have any que at 503-986-0801 or	stions, please f	eel free to con					
Sincerely, OWRD Customer Se	rvice Staff					` . 	••
Submission receive	d by:	(Name of OW	NONCO RD staff)		·		
Instructions for OW	IDD staff.	 	•			 	

- Complete this Submission Receipt and make two (2) copies. Place one copy with the check/cash; and place the other copy with the submission (i.e., the application or other document).
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