

## RECEIVED

MAR 12 2010

WATER RESOURCES DEPT SALEM, OREGON

# Application for a Permit to StoreWater in a Reservoir

(Standard Review)

Standard Review Process (ORS 537): You must use this form for any reservoir storing more than 9.2 acre-feet *and* with a dam more than 10 feet high.

Use a separate form for each reservoir. However, to obtain authorization for multiple reservoirs, multiple forms may be combined into one application if filed at the same time.

Please type or print in dark ink. If your application is found to be incomplete or inaccurate, we will return it to you. A summary of review criteria and procedures that are generally applicable to these applications is available at www.wrd.state.or.us/OWRD/PUBS/forms.shtml

# 1. APPLICANT INFORMATION: Mailing Address: 700 N. FVIIIA \*Email Address: Bryan B @ OFPC. COM I(We) make application for a permit to construct a reservoir and store the following described waters of the State of Oregon. The name of the reservoir is Is the proposed use an enlargement of an existing dam/reservoir? If the reservoir is not in channel of a stream, state how it is to be filled: Reservoir is filled by suffer water For Department Use Permit No. Date

Last updated: 12/23/2009

3. DAM HEIGHT AND COMPOSITION  The maximum height of the structure will be centerline of the crest of the dam.  feet above streambed or ground surface at the centerline of the crest of the dam.
Note: If your dam height is greater than or equal to $10.0'$ above land surface $\textbf{AND}$ your reservoir will store equal to or greater than $9.2$ acre-feet, engineered plans and specifications must be approved prior to storage of water.
The dam will be (check one): Earthfill C Concrete C Flash board C Other
If "other" give description:
MAR 1.2 2010 WATER RESOURCES DEPT SALEM, OREGON
4. PRIMARY OUTLET WORKS  Describe the location and the dimensions of the outlet conduit through the dam:
8" drain located next to the dam.
NOTE: Most dams across a natural stream channel will need an outlet conduit having a minimum diameter of 8 inches or greater.
5. EMERGENCY SPILLWAY Describe the location and the dimensions of the spillway channel:
Spilluan is located on the NW Corner of the dam
6. THE USE(s) of the impounded water will be:
mult use including recreation, five suppression apply, willife & irrigation. 30

7. THE AMOUNT OF WATER to be stored is: 29	acre-feet.
The area submerged by the reservoir, when filled, will be 3.5	acres.
8. PROJECT SCHEDULE (List Month and Year)	
Proposed date construction will begin:	
Proposed date construction will be completed:	
Proposed date beneficial water use will begin:	
Is this project fully or partially funded by the American Recovery and Reinvestment Act? (Fed dollars) (Yes No	eral stimulus
9. PROPERTY OWNERSHIP	
Do you own all the land where you propose to divert, transport, and use water?	RECEIVED
Yes (Please check appropriate box below then skip to section 10)	MAR 12 2010
☐ There are no encumbrances	WATER RESOURCES DEPT
This land is encumbered by easements, rights of way, roads or other encumbrances (please provide a copy of the recorded deed(s))	SALEM, OREGON
C No (Please check the appropriate box below)	
☐ I have a recorded easement or written authorization permitting access.	
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	
Written authorization or an easement is not necessary, because the only affected lands I do not own are state-owned submersible lands, and this application is for irrigated and/or domestic use only (ORS 274.040).	
You must provide the legal description of: (1) the property from which the water is to be property crossed by the proposed ditch, canal or other work, and (3) any property on who be used as depicted on the map.	
List the names and mailing addresses of all affected landowners*	
Dan Dail 830 H. Firvilla Rd Dallas, OR 97 Ken Brown 700 N. Firvilla Rd Dallas, OR 97	7338 7338

10. MAP REQUIREMENTS The Department cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the township, range, section and quarter/quarter section of the proposed reservoir location and place of use. The map must provide tax lot numbers. See the map guidelines sheet for detailed map specifications.

<sup>\*</sup> Attach additional sheet(s) if necessary.

#### 11. SIGNATURE

By my signature below I confirm that I understand:

- I am asking to use water specifically as described in this application.
- Evaluation of this application will be based on information provided in the application packet.
- I cannot legally use water until the Water Resources Department issues a permit to me.
- If I get a permit, I must not waste water.
- If development of the water use is not according to the terms of the permit, the permit can be canceled.
- The water use must be compatible with local comprehensive land use plans.
- Even if the Department issues a permit, I may have to stop using water to allow senior water right holders to get water to which they are entitled.

I certify that the information I have provided in this application is an accurate representation of the proposed water use and is true and correct to the best of my knowledge:

Applicant:

Signature (If mo

nore than one applicant

cant, all must sign.)

Date

Before you submit your application be sure to:

- Answer each question completely.
- Attach a legible map that includes township, range, section, quarter/quarter and tax lot.
- Include a Land Use Information Form or receipt stub signed by a local official.
- Include the legal description of all the property involved with this application. You may include a copy of your deed land sales contract or title insurance policy to meet this requirement.
- Include a check payable to the Oregon Water Resources Department for the appropriate amount.
  The Department's fee schedule can be found at www.wrd.state.or.us or call (503) 986-0900.

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WATER RESOURCES DEPT SALEM, OREGON



# Water Resources Department MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-3066

File No. R-60382

## RECEIVED

July 25, 1980

MAR 12 2010

WATER RESOURCES DEPT SALEM, OREGON

Ken Brown & Bill Harland 850 Fir Villa Rd. Dallas, Oregon, 97338

Dear Mr. Brown and Mr. Harland:

Your application for a permit to construct the Brown-Harland Reservoir and to store therein 28.0 acre feet of water from an unnamed tributary of Basket Slough for irrigation has been filed and for reference numbered R-60382. The sepia and print of the plans along with fees in the amount of \$30.00 were also received. Our receipt No. 19550 was handed to Barry Boatwright.

Your reservoir application must be accompanied by an application for a permit to provide for the use of the stored water. I am enclosing the proper application form together with instructions.

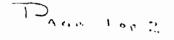
Sincerely,

Wayne J. Overcash Water Rights Engineer

WJO/jw

cc: M. G. Boatwright and Associates

## OREGON STATE HIGHWAY DIVISION Materials Section



Laboratory Report

m·14938

Project Brown-Harland	d Dam				Prei	ix No. Wat	er R	esource	s Dept
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x Gary Oberholtzer				7	Pm "	ميمكنا في م		The second	
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8P\*66056-734

from App R-60380/pmt R-8031

#### QUALIFICATIONS OF IVAN E. THOMAS

; J

- 20 years experience materials testing, construction inspection and construction supervising.
- Bureau of Public Roads Materials Testing School 1959 Lab and field work with this agency. (8 years)
- City of Salem Chief of Inspection & established lab & field testing for this agency. (10 years)
- Salem Road & Driveway Estimator & Project Supervisor (2 years)
- Boatwright Engineering Field Inspections & materials testing. (1 year)

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WATER RESOURCES DEPT SALEM, OREGON

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APR **3 1981** 

WATER RESOURCES DEPT SALEM, OREGON



Conservation Service

124 SW Walnut Dallas, OR 97338

January 22, 1981

Martin Boatwright 2613 12th St SE Salem, OR 97302

Dear Martin;

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JAN 2 3 1981 WATER RESOURCES DEPT UNLIM. OREGON

I have reviewed your letter to this office dated January 22, concerning the Harland/Brown project. Your statements of "substantial compliance with the approved plans and specifications" does not meet our criteria, and in view of the problems encountered during and after construction, it does not address the situation. You must certify that "the job was installed in accordance with plans and specifications approve by the Soil Conservation Service."

We also need your inspection report of the dam, especially the examination of the core trench and compaction records.

My real concern is with the core and foundation excavation. If the large tile, at a depth of 4', was not ruptured and left intact during the core excavation, this would indicate that the core was not excavated to the proper depth. The 10" tile in question was clay tile and this size would not take much impact from either excavating or compaction equipment to collapse it.

There also may be piping or seeping along the tile, which frequently occurs. If unsuitable material was left under the dam, it could allow subsurface seepage under much of the structure. The only way to resolve this would be to core drill the dam and ascertain for sure how deep the core and compacted areas are.

Before our approval can be given, the issues I have mentioned must be resolved.

Sincerely.

Val Oben Daryl Otjen, District Conservationist Dallas Field Office

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WATER RESOURCES DEPT SALEM, OREGON

cc: ASCS County Committee

Al Petska Bill Harland Norm Wheeler Ken Brown



Service stated to the owner his observations were similar to those of mine.

#### Summation:

The construction work I observed after being assigned the inspection of this project was done in a conscientious and experienced manner. I therefore would not have reason to believe the work done prior was not done in the same manner and would question the need and expense of core testing.

Very truly yours;

Jun From

Ivan E. Thomas

IET/kv

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APR 9 1981

WATER RESOURCES DEPT SALEM, OREGON

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MAR 12 2010

April 8, 1981

WATER RESOURCES DEL'S SALEM, OREGON RECEIVED

APR 9 1981

WATER RESOURCES DEPT SALEM. OREGON

Boatwright Engineering, Inc. 2613 12th Street S.E. Salem, Oregon

RE: CONSTRUCTION INSPECTION OF BROWN/HARLAND DAM, 1980, IN RESPONSE TO SOIL CONSERVATION SERVICE LETTER, DARYL OTJEN, DATED 1/22/81

Dear Martin:

Having reviewed Mr. Otjens letter, I can understand his concern, particularily when a problem occurs on a project he probably has not personally observed during construction.

I hope this summary of my field inspection will alleviate some of his concern.

1. Stripping:

Work had progressed to the laying of the culvert and forming cut-off collars at the time of my first inspection.

Stripping waste material was apparent and shown in pictures of the site.

2. Keyway:

This work obviously had also been completed. My past experience with this particular contractor gives me no reason to doubt the keyway was cut to a satisfactory depth in his opinion.

3. Compaction:

Six compaction tests were ran during the course of construction indicating densities to be between 130 and 140% of optimum as reported by laboratory tests supplied. These results were obviously higher than densities being obtained and cause me to be of the opinion that the lab tests are in error or not representative of the actual soils utilized as was previously discussed by the design engineer and engineer for the Water Resources Department. My observation of the sheeps foot roller in use and the construction equipment causing minimal deflection gives me no doubt density requirements were met or exceeded. I dug down by hand and had areas exposed by machinery to observe the compaction below the surface on several occasions. They all appeared very satisfactory.

A representative of the Soil Conservation

from APR. 60382

allow placement of the materials and compacted with a 20 foot section of PVC pipe with a plug. After each roding water was poured down the pipe to set up the premix. At the completion of plugging of the pipe a concrete cap was placed over the end of the pipe and the walls of the excavated pit were cut back to about a 1 to 1 slope and backfilled with the excavated materials in 6" to 8" lifts with compative effort being applied with a jumping jack type plate compactor. This corrective work has solved the leak through the farm tile as the pond is full and shows no sign of leaking in any fashion.

The majority of the embankment was placed under the supervision of Mr. Gene Thomas who we engaged to act as our representative on the balance of this project. I have enclosed a brief summary of his experiences and education as I feel it clearly shows he is well qualified to inspect and control the placement of embankment materials. I also made 3 to 4 inspections during this period and observed the contractor utilizing good construction equipment and practices to complete the work.

In conclusion we hereby certify the dam has been built in accordance with the approved plans and specifications. A core trench was provided but the actual depth is not personally known however, the contractor has certified to this depth on the "As Constructed" drawings. The only unusual construction outside the approved plans and specifications was to plug the farm tile discovered after construction was completed in a fashion that is acceptable and certainly not unique.

I see know reason why this structure should not provide a safe long term dependable storage facility for the foreseeable future.

If you have any questions please contact me at your earliest convenience.

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MAR 12 LONG WATER RESOURCES DEPT WATER RESOURCES DEPT SALEM, OREGON Yours truly;

Martin G. Boatwright,

Enclosure: As Constructed Drawings

Photos during Construction Inspectors Qualifications

Inspectors Report

CC: Bill Harland

Ken Brown Jim Fowler

Darrell Otjen, Dallas Soil Conservation Office

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APR 9 1981

WATER RESOURCES DEPT

April 6, 1981

Oregon State Water Resources 555 13th N.E. Salem, Oregon 97301

ATTENTION: Al Petska

Boa

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WATER RESOURCES DEPT SALEM, OREGON

Boatwright Engineering Inc.

2613 12th ST SE, SALEM, OREGON 97302 civil engineers • land surveyors

(503) 363-9225

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APR 9 1981

WATER RESOURCES DEPT SALEM. OREGON

RE: AS CONSTRUCTED AND ENGINEERING CERTIFICATION

BROWN-HARLAND DAM

Dear Al:

Attached is the "As Constructed Plans" on the Brown-Harland Dam, SW2 Section 23, Township 7 South, Range 5 West, Polk County, Oregon.

The stripping and 1st 3 to 4 feet of fill were placed in the bottom of the draw, necessary to allow for the piping to be installed in a cut section, under my inspection. I have enclosed a series of photographs taken on two separate visits to the job site during this period. They clearly show the extent and depth of the stripping the moisture and degree of compaction being achieved by the cat with a sheeps-foot roller and by dog-tracking the pneumatic tires on the self propelled paddle wheel scrapers working in the background. (See photo #1). This photo also shows the backfilled core trench as evidence by the color and lumpy clay surface at the center of the photo in the foreground.

There is some question about the depth of the core trench in the bottom portion of the draw, which I personally did not see prior to backfilling. The contractor assured me that they had dug to the depths shown on the plans and as affirmed by their signature. I can attest that the visual evidence as revealed by gray clayey soils on the ground surface along the centerline of the dam at the time of my inspection (when photo was taken) a core trench had been cut and backfilled.

A 10" clay farm tile was found under the dam at the completion of construction. The field superintendent indicated he cut a 10" tile. This land has only been owned by Harland for the last 15 years when the majority of the tiling was installed. He has no knowledge of any other tile in the area. To plug the 10" clay tile the upstream face of the dam was excavated with a backhoe to a depth of cover over the clay pipes of 11 to 12 feet at which point the clay pipe was plugged by inserting premix (a mixture of cement and sand in burlap bags back into the pipe some 20 feet with a 20 foot section of 4" PVC pipe at which time the balance of the upstream pipe was plugged with loose premix placed with a 20 foot section of 6" PVC pipe whose top was cut out as a scoop to

from MR. 60382

APPL. NO.: K	own-Harlon -60382	DA	ECKED BY: TE: VIEWED:	Dagge TT 9-4-80	
ITEM	CONCURRE	NCE OF APPLICATION A	CORREC	TIONS MADE PLANS	REMARKS
Location	/	NESW SCC Z3			
Max Dam Height	20	205			
Top Length					
Bottom Length					
Crest Width	/	12'		RECEIV	<u> </u>
Front and Rear Slopes		3; 1 3: \		MAR 12 2	l .
Height of Dam above W. S. when full	~	3		WATER RESOURCE SALEM, ORE	es dept Gon
Wasteway		]			
Surface Area	~	3.5 ac			
Capacity	/	2,9			
Conduit		8 " 12 " X		•	

PEMARKS Engineer advised of poor emb. material -agreed to try and find alternative borrow site. H)

17

16

Max Depth

Mean Depth

from App R-60382

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MAR 12 2010

WATER RESOURCES DEPT SALEM, OREGON

THEU 4 CHIMEIT	Area	&	Capac	4	y
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from R-60382

	Application No. R. 60382	
R	ECEIVED STATE OF OREGO	N WAT
	JUL 2 2 1980	

Permit No. R 8231

# JUL 2 2 1980 WATER RESOURCES DE Application for a Permit to Construct a Reservoir

SALEM, OREGON I Ken Brown & Bill Harland 830 Fir Villa Road Dallas (Mailing Address) (Zip Code) 6 623-4224 State of Oregon do hereby make application for a permit to construct the Brown-Harland reservoir and to store the unappropriated waters of the State of Oregon, subject to existing rights. 1. The name of the stream from which the reservoir is to be filled is unnamed tributary .....tributary to Basket Slough 2. If not in channel of a stream, state how it is to be filled..... 3. The dam will be located in the 4 of the SW 4 of Section 23 4. The maximum height will be .....20. 5..... feet above stream bed or ground surface at the slope of downstream face ......3:1...., and height of dam above water line when full ..... feet. 5. The dam will be (check one) .... X.. earthfill, ...... concrete, ...... flashboard, ...... other. If "other", give description: RECEIVED 6. Give the location, description, and dimensions of the outlet conduit: 8" drain (corrugated steel pipe, 15" trickel tube and 12" drain and emergency spillway,

(All dams across natural stream channels must be provided with an outlet conduit, of such capacity and location to pass the normal flow of the stream at any time) Form 690-2-0-1-77

\$30.00

Application No. 2 - 60382 Permit No.	R 8231
7. The impounded water will be used forirrigation	
8. The amount of water to be stored is29	acre fee
9. The area submerged by the reservoir, when full, will be	
and the maximum depth of water will be17	feet.
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(Su	te whether over or around dam)
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Dam Crest	
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Permit No.					1	Г	b		(	8	Y	ς	H	J	١.

H WEST

# Permit to Construct a Reservoir and Store for Beneficial Use the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same subject to
the following limitations and conditions. The right herein granted is limited to the construction ofBrown-
Harland Reservoir and storage of water from an unnamed tributary to Baskett Slough
to be appropriated under Application 60579, Permit 45511 , for irrigation, provided
that no water from the natural flow of the stream shall be stored during the period
of June 1 to October 31 of each year, and during such period the outflow from the
reservoir shall be not less than the inflow, and the dam shall be constructed under
the supervision of a registered professional engineer.
The right hereunder shall be limited to the storage of
The priority date of this permit is July 22, 1980 for 28.0 acre-feet  March 3, 1982 for 1.0 acre-foot
1787 Manch 24, 1982
Actual construction work shall begin on or beforeMarch_24, 1982 and
shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1,
1982
WITNESS my hand this 24th day of
aking I whoele Deputy On

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MAR 12 2010

WATER RESOURCES DEPT SALEM, OREGON

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	SALEM, OREGON
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This is to certify that I have examined th	he foregoing application, together with the accompanying maps
and death and death and the second	
nd data, and return the same for	ection and completion
In order to retain its priority, this appli	ication must be returned to the Water Resources Director with
prections on or before	April 17, 1981 , 19.80
WITNESS my hand this da	y of
17	February 19881
James E. Sexson Wa	star Recourage Director
	net Hesources Director
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<del>,</del> .	
SEP 41980  TER RESOURCES DEPT  MARO 3 1981  R RESOURCES DEPT  ALEM, OREGON	Wayne J. Overcash
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SEP 419 WATER RESOURCE REALEM, OREGOI	
This instrument was first received in the	office of the Water Resources Director at Salem, Oregon, on the
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// , , , , , , , , , , , , , , , , , ,	
day of	19.80 at/0:57 o'clock A.M.
oplication No. L-60382	

Application No
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	R-87591	
Permit No		

# STATE OF OREGON WATER RESOURCES DEPARTMENT Application for a Permit to Construct a Reservoir

I, Ken Brown & Bill Harland	Name of Applicant)	
of830 Fir Villa Road		Dallas
(Mailing Address)  State of Oregon		
do hereby make application for a permit to construct th		
and to store the unappropriated waters of the State	e of Oregon, subject to	existing rights.
1. The name of the stream from which the reser	voir is to be filled is	unnamed tributary
tributary to Basket		
2. If not in channel of a stream, state how it is t	o be filled	
	•	
3. The dam will be located in theNE		4 of Section 23
Township	•	, ,
4. The maximum height will be20	·	
centerline. The top width will be12	feet, slope of upstre	am face3:1
slope of downstream face3::1	, and height of d	lam above water line when full
3 feet.		
5. The dam will be (check one) X earth;	ill, concrete,	flashboard, other.
If "other", give description:		
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		WATER RESOURCES DEPT
		Constitution of the second
6. Give the location, description, and dimension	s of the outlet conduit:	8" drain (corrugated
steel pipe, 15" trickel tube and 1		
(All dams across natural stream channels must be provided with an outlet condu	it, of such capacity and location to p	pass the normal flow of the stream at any time)
Form 600.2.0.1.77	***************************************	

App R-60382 (previously cancelled)

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7. The impounded water will be used forirrigation	
8. The amount of water to be stored is28	acre feet.
9. The area submerged by the reservoir, when full, will be	acres,
and the maximum depth of water will be	feet.
10. Give the location and dimensions of the spillway Arc	ound ate whether over or around dam)
Dam Crest D B	
The bottom width of the spillway, B, will be	feet.
The top width of the spillway, T, will be	
The distance between the crest of the dam and the crest of the spillway, D, wi	
	······································
11. Construction work will begin on or before. September 15	, 1980
12. Construction work will be completed and the reservoir filled by	
Remarks:	
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	Welledisse I Applicant
This is to certify that I have examined the forego	oing application, together with the accompanying maps
and data, and return the same for	
In order to retain its priority this application	must be returned to the Water Resources Director with
	, 19
WITNESS my hand this day of	, 19
•	Ву
	<b></b>
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	·
This instrument was first received in the office of	of the Water Resources Director at Salem, Oregon, on the
day of	, 19
Application No	Permit No



## Oregon Water Resources Department <u>Land Use Information Form</u>

THIS FORM IS NOT REQUIRED IF: 1) water is to be diverted, conveyed, and/or used only on federal lands; or 2) the application is for a water-right transfer, allocation of conserved water, exchange, permit amendment, or ground water registration modification, and all of the following apply: a) only the place of use is proposed for change, b) there are no structural changes, c) the use of water is for irrigation, and d) the use is located in an irrigation district or exclusive farm-use zone.

	on, and d) i cant Nam		located in	i an irri; -ev	gation district	or exclus	ive farm-use zo -	one.			
• •	ng Addres	_	700		N F	111	IA R	-)			
City:	$\mathcal{D}_{\mathcal{L}}$	alla	5		State:	DE.	Zip: <u>9733</u>	<u>B</u> D	ay Phone: <u>5</u>	RECE	23 453 IVED
<u>. La</u>	nd and L	<u>ocatior</u>	<u>1</u>							MAR 1	. 2 2010
trans	ported), or	used. A	pplicants	for m	unicipal use,	or irriga	ere water wil tion uses with equested below	in irrigatio	tea (taken ti	ous vits=eb	OURCES DEPT USALGENIVEYO tute existing ar
	Township	Range	Section	1/4 1/4	Tax Lot#	Plan Des Rural Re	ignation (e.g. sidential/RR-5)		Water to be:		Proposed Land Use:
	75	4W	23		400/600	EFU	لم	Diverte		d <b>X</b> Used	
								Diverte			
				ļ				☐ Diverte			
Туре	Permit  Alloca	tion to b to Use o	e filed wi or Store V Conserved	ith the Vater I Water		ater-Righ	t Transfer ater Use Licen	_	change of W	ater	
Sour	ce of water	r: Reser	voir/Pond	i [	☐ Ground V	Vater	Surface '	Water (nar	ne)		
Estir	nated quan	itity of w	ater need	led:	<u> 28</u> _	□ cub	ic feet per sec	ond $\square$ ga	illons per mir	nute Xa	cre-feet
Inter	ided use of		□ Irrigati □ Munici		□ Commerc □ Quasi-mu		☐ Industria	\ _	omestic for _	hou F, 43	sehold(s)
Brie	fly describ	e:									
		_			•		not be complet application fi	-	-		local governm

Receipt for Request for Land Use Information

State of Oregon Water Resources Department 725 Summer Street NE, Suite A Salem, OR 97301-1266



Water Resources Department

North Mall Office Building 725 Summer Street NE, Suite A Salem, OR 97301-1266 503-986-0900 FAX 503-986-0904

### NOTE TO APPLICANTS

In order for your application to be processed by the Water Resources Department (WRD), this Land Use Information Form must be completed by a local government planning official in the jurisdictions where your water right will be used and developed. The planning official may choose to complete the form while you wait, or return the receipt stub to you. Applications received by WRD without the Land Use Form or the receipt stub will be returned to you.

## NOTE TO LOCAL GOVERNMENTS

The person presenting the attached Land Use Information Form is applying for a water right. The Water Resources Department (WRD) requires its applicants to obtain land-use information to be sure the water rights do not result in land uses that are incompatible with your comprehensive plan. Please complete the form or detach the receipt stub and return it to the applicant for inclusion in their water right application. You will receive notice once the applicant formally submits his or her request to the WRD. The notice will give more information about WRD's water rights process and provide additional comment opportunities. You will have 30 days from the date of the notice to complete the land-use form and return it to the WRD. If no land-use information is received from you within that 30-day period, the WRD may presume the land use associated with the proposed water right is compatible with your comprehensive plan. Your attention to this request for information is greatly appreciated by the Water Resources Department. If you have any questions concerning this form, please contact the WRD's Customer Service Group at 503-986-0801.

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### For Local Government Use Only

The following section must be completed by a planning official from each county and city listed unless the project will be located entirely within the city limits. In that case, only the city planning agency must complete this form. This deals only with the local land-use plan. Do not include approval for activities such as building or grading permits.

#### Please check the appropriate box below and provide the requested information

1

Land uses to be served by proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s): 136.030 (A).

Land uses to be served by proposed water uses (including proposed construction) involve discretionary land-use approvals as listed in the table below. (Please attach documentation of applicable land-use approvals which have already been obtained. Record of Action/land-use decision and accompanying findings are sufficient.)

If approvals have been obtained but all appeal periods have not ended, check "Being pursued".

Type of Land-Use Approval Needed (e.g. plan amendments, rezones, conditional-use permits, etc.)	Cite Most Significant, Applicable Plan Policies & Ordinance Section References	Land-Use Approval:						
		Obtained Being pursued						
		☐ Denied ☐ Not being pursued ☐ Obtained ☐ Being pursued						
		☐ Denied ☐ Not being pursued						
		Obtained Being pursued						
		□ Denied □ Not being pursued □ Obtained □ Being pursued						
		Denied Not being pursued						
		☐ Obtained ☐ Being pursued						
	<u> </u>	☐ Denied ☐ Not being pursued						
Local governments are invited to express Department regarding this proposed use of Existing pond not increase	of water below, or on a separate sheet.							
		WATER RESOURCES DEPT						
		SALEM, OREGON						
Name: Autumn Hillerand Title: Assistant Planner  Signature: Mulliwat Hillerand Phone: 503-623-9237 Date: 2/26/10  Government Entity: Polk County  Note to local government representative: Please complete this form or sign the receipt below and return it to the applicant If you sign the receipt, you will have 30 days from the Water Resources Department's notice date to return the completed Land Use Information Form or WRD may presume the land use associated with the proposed use of water is compatible with local comprehensive plans.								
Receipt for Request for Land Use Information  Applicant name:								
City or County:	Staff contact:							
Signature:	Phone:	Date:						

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BROWN-HARLAND DAM

Specifications for Earthfill Dam Polk County, Oregon

BOATWRIGHT ENGINEERING, INC. 2613 12th STREET S.E. SALEM, OREGON 97302

CONTRACT DOCUMENTS

#### GENERAL SPECIFICATIONS

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**EARTHWORK** 

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### 1. Clearing:

The areas to be occupied by the dam and appurtenant works and the surface of all borrow pits shall be cleared of all trees, stumps, roots, brush and other objectionable material, and the cleared materials shall be disposed of in a manner satisfactory to the engineer. All materials to be burned shall be piled neatly and when in suitable condition shall be burned by others. Piling for burning shall be done in such manner and in such locations as to cause the least fire risk, when burned.

## 2. Excavating for Foundation of Dam:

The entire areas to be occupied by the dam, or such portions thereof as may be directed by the engineer, shall be excavated to a sufficient depth to remove all materials not suitable for the foundation of the dam embankment as determined by the engineer. The unsuitable materials to be removed shall include all topsoil, rubbish, vegetable matter of every kind, roots, and all other perishable or objectional materials that might interfere with the proper bonding of the embankment with the foundation or with the proper compacting of the materials in the embankment or that may be objectionable. Accurate trimming of the slopes of the excavation for the foundation of the dam will not be required, but the excavation shall conform as closely as practicable to the lines and grades shown on the drawings or established by the engineer.

## 3. Excavation for Keyway or Cutoff Trench:

After the excavation for foundation of dam has been completed, a keyway or cutoff trench, if required, shall be excavated on the location and to the dimensions, slopes and depths shown on the drawings or as directed by the engineer. During the progress of the work, it may be found necessary or desirable, as determined by the engineer to vary the slopes or the dimensions of the excavations from those shown on the drawings or established by the engineer.

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## 4. Excavation for Outlet Works:

Excavation for outlet works includes all excavation required to be made for the outlet gate and tower structure, trenches for outlet pipe, concrete cutoff collars, and channel changes for diversion of flow in creek during construction if required. All excavation shall be made to the lines, grades and dimensions shown on the drawings or established by the engineer. Excavation in stable material shall conform as nearly as practicable to the lines shown on the drawings, so as to eliminate the use of outside forms and secure the required minimum thickness of concrete.

## 5. Excavation for Spillway:

Excavation for spillway includes all required excavation for the spillway including any over excavating of the spillway channel to provide for the placing of dumped or hand placed rock riprap, and of rubble masonry. All excavation shall be made to the lines, grades and dimensions shown on the drawings or established by the engineer.

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#### 6. Excavation in Borrow Pits:

SALEM, OREGON All materials required for the construction of the dam embankment and for backfill, which are not available from other required excavations, shall be taken from borrow pits as directed by the engineer. The location and extent of all borrow pits shall be as directed by the engineer and the engineer reserves the right to change the location of such borrow pits or to locate additional borrow pits as required. Borrow pit areas shall be cleared as provided in paragraph on Clearing. The sites of borrow pits shall be carefully stripped of topsoil, sod, loam, and other objectionable Stripping operations shall be confined to such small area and carried on only so far in advance as will permit the economical excavation in borrow pit, as determined by the engineer, of the material required for the embankment and when excavation in borrow pit is discontinued for a day or longer, the surface of the borrow pit where excavation is in progress shall be disced or mulched. all for the purpose of conserving to the fullest extent the natural mositure in the material to have the optimum moisture content as provided in subparagraph 2 (d) under "Embankment" of these specifications. The disposal of all materials wasted by stripping shall be subjected to the approval of the engineer. Borrow pits shall be operated so as not to mar the usefulness or appearance of any part of the work or of any other property of the owner, and borrow pits and the surfaces of wasted material shall be left in a reasonably smooth and even condition satisfactory to the engineer. In order to avoid the formation of pools in borrow pits during the excavation operations, or, for borrow pits outside of the reservoir area, after excavation operations are completed, drainage ditches

from borrow pits to the nearest outlets shall be constructed where, in the opinion of the engineer, such drainage ditches are necessary. If materials unsuitable or not required for embankment or backfill purposes are found in borrow pits, such materials shall be left in place or excavated and wasted, as directed by the engineer.

## 7. <u>Disposal of Excavated Materials</u>:

Insofar as practicable, as determined by the engineer, all suitable materials from all required excavations shall be used in the construction of the dam embankment or for backfill. Excavated materials that are unsuitable or are not required for the above described purposes and all unsuitable materials removed in stripping operations shall be wasted. The disposal of all excavated materials that are wasted shall be subject to the approval of the engineer. All waste piles shall be located where, in the opinion of the engineer, they will not interfere harmfully with natural flow of the river or creek, with the operation of the reservoir, or with the discharge of water to or from the spillway or outlet works, and where they will not detract from the appearance of the completed structures or interfere with the accessability of the structures When required by the engineer, wastepiles shall be for operation. leveled and trimmed to reasonably regular lines.

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#### EMBANKMENT

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#### 1. Embankment Construction, General:

For the purpose of these specifications, the term "Embankment" includes the earth fill portion of the dam, the rock fill on the downstream slope of the dam, and the riprap on the upstream face of the dam. The embankment shall be constructed to the lines and grades established by the engineer, which, in general, will be the lines and grades shown on the drawings, increased by such heights and widths as may be determined by the engineer to be necessary to allow for settlement. No brush, roots, sod, or other perishable or unsuitable materials, as determined by the engineer, shall be placed in the embankment. The suitability of each part of the foundation for placing embankment materials thereon and of all materials for use in embankment construction will be determined by the engineer. No material shall be placed in the embankment when either the material or the foundation or embankment on which it would be placed is frozen. Each portion of the embankment shall be constructed in accordance with the specifications therefore, including the provisions of this paragraph. Each load of the material placed in the embankment, whether from excavation for other parts of the work or from borrow pits, shall be placed in the location designated by the engineer, regardless of the classification of the excavation.

## 2. <u>Earth Fill in Embankment</u>:

The earth fill portions of the dam embankment, shall be

constructed to the lines and grades shown on the drawings or established by the engineer. All portions of test pits within the area to be covered by the dam embankment and below the required excavation lines for the embankment foundation shall be filled with compacted material as herein specified for the earth fill and shall be considered as part of the earth fill.

- (a) Preparation of Foundations The foundation, except rock surfaces, for the earth fill shall be prepared by leveling and rolling, so that the surface materials of the foundation will be as compact and well-bonded with the first layer of the fill as herein specified for the subsequent layers of the earth fill. Rock surfaces upon or against which material for the impervious section of the dam is to be placed be cleaned by hand work, sluicing and/or other effective means, satisfactory to the engineer, or all loose rock fragments, sand, gravel, and other objectionable materials. The surface of each portion of the rock foundation, immediately prior to receiving any material for the impervious fill, shall have all water removed from depressions and shall be properly moistened and sufficiently clean, as determined by the engineer, to obtain a suitable bond with the embankment.
- (b) Materials The earth fill portion of the dam embankment shall consist of a mixture of the clay, sand, and gravel available from excavations required for other parts of the work or from borrow pits in the vicinity of the work. Operations in the excavation of the materials for the earth fill shall be such as will result in an acceptable gradation of the materials when compacted in the fill. The engineer will designate the

depths of cut in all parts of the borrow pits or other excavation to be used in the earth fill necessary for obtaining the desired gradation of material, and the cuts shall be made to such designated depth. Each load of earth fill materials delivered on the විට සුළුarth fill shall be the equivalent of a mixture of materials ±ãobtained from an approximately uniform strip or cutting from the full height of the face of the excavation.

Placing - The distribution and gradation of the materials throughout the earth fill shall be as shown on the drawings or as directed by the engineer and shall be such that the fill will be free from lenses, pockets, streaks, or layers of material differing materially in texture or gradation from the surrounding material. The combined excavation and placing operations shall be such that the materials when compacted in the earth fill will be blended sufficiently to secure the best practicable degree of compaction, impermeability, and stability. Successive loads of material shall be dumped on the earth fill so as to produce the best practicable distrubtion of the material, subject to the approval of the engineer, and for this purpose, the engineer may designate the locations in the earth fill where the individual loads shall be deposited, to the end that the most impervious materials shall be placed in the central upstream portion of the earth fill and the more pervious materials shall be placed so that the permeability of the fill will gradually be increased toward the upstream and downstream slopes of the earth No stones having maximum dimensions of more than 5 inches shall be placed in the earth fill. Should stones of such size be found in otherwise approved earth fill materials, they shall

WATER RESOURCES DEPT SALEM, OREGON be removed either at the site of excavation or after being transported to the earth fill, but before the materials in the earth fill or riprap portions of embankment as approved by the engineer. The mixture of clay, sand, and gravel shall be placed in the earth fill in continuous, approximately horizontal layers not more than 6 inches in thickness after being rolled as herein specified. If, in the opinion of the engineer, the surface of the prepared foundation of the rolled surface of any layer of earth fill is too dry or smooth to bond properly with the layer of material to be placed thereon, it shall be moistened and/or scarified to the satisfaction of the engineer before the next succeeding layer of earth fill material is placed. The earth fill on each side of the concrete cutoff walls where constructed shall be kept at approximately the same level as the placing of the earth fill progresses, and the walls shall be protected carefully against displacement or other damage. The upstream slope of the earth fill portion of the dam embankment shall be compacted thoroughly, shall be reasonably true to line and grade, and all projections of more than 6 inches outside of the neat lines of the earth fill shall be removed before the riprap is placed.

(d) Moisture Control - Prior to and during the compacting operations, the material in each layer of the earth fill shall have the optimum practicable moisture content required for compaction purposes, as determined by the engineer, and the moisture content shall be uniform throughout the layer. Insofar as practicable, as determined by the engineer, the application of water to the material for this purpose shall be done at the site of excavation and shall be supplemented, as required, by

sprinkling on the earth fill if necessary. Harrowing or other working of the material may be required to produce the required uniformity of water content.

(e) Compaction - When each layer of material has been conditioned to have the optimum practicable moisture content required for compaction purposes, as provided in subparagraph (d), it shall be compacted by means of a tamping roller or, if in the opinion of the engineer the required compaction as hereinafter described can thereby be secured by the travel over it of the material hauling and placing equipment. A compaction of the material to a density of not less than ninety-five percent of the maximum density obtained when tested by the Standard Laboratory Method of Test Compaction and Density of Soil, American Association of State Highway Officials, AASHTO T99-74 Method A, shall be secured. The thickness of the layer of material before compaction and the number of times passes over by the compacting equipment will be determined by the engineer on the basis of securing the degree of compaction described above. If the moisture content is less than the optimum for compaction, the rolling shall not proceed except with the specific approval of the engineer, and in that event, additional rolling shall be done, as directed by the engineer, to obtain the required compaction. If the moisture content is greater than the optimum for compaction, the rolling shall be delayed until such time as the material has dried until it contains only the optimum moisture content. When material placing equipment is used to secure compaction, care shall be taken to so route and spread the travel of the equipment to and over the surface of the dam being compacted that uniform and maximum compaction will be secured. Consecutive travel of the equipment over the same route so as to form ruts in the surface of the embankment will not be permitted.

(f) Tamping or Puddling - Portions of the earth fill on rough rock surfaces, in excavations for fault and seam cutoffs, at steep or irregular abutment contacts, adjoining the cutoff wall, around the outlet pipe and cutoff collars, and other concrete structures, and elsewhere, which, in the opinion of the engineer, cannot be compacted properly by the use of rolling equipment, shall be compacted thoroughly by the use of hand tampers. The degree of compaction for such portions of the earth fill shall be equivalent to the required for other portions of the earth fill for which compaction by rolling is specified. No puddling will be permitted unless ordered by the engineer. Where the abutment material is of such character that puddling is requried by the engineer to obtain a proper bond with the embankment, the material shall be deposited in water in a prepared trench along the abutment. The trench shall be maintained as narrow as practicable and the puddling and adjacent rolling work shall be done in such manner as approved by the engineer for obtaining the desired bond and the best practicable compaction of the puddled material. Puddling against vertical RECEIVED or overhanging surfaces will not be permitted.

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## 3. Rock Rill on Downstream Slope of Embankment:

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The downstream rock fill portion of the dam embankment when required shall be constructed to the line and grades shown on the

drawings or established by the engineer. The rock fill shall consist of a suitable free-draining mixture of rock fragments, boulders, and cobbles from required excavation for other parts of the work or from borrow pits. The largest rock in the fill shall not be more than one cubic yard in volume. The inclusion of gravel or rock spalls in the mass in an amount not in excess of that required to fill the voids in the coarses material, as determined by the engineer, will be permissible. Successive loads of material shall be dumped as as to secure the best practicable distribution of the materials as determined by the engineer. The larger boulders and rock fragments shall be placed on the outer slope and the smaller cobbles and fragments shall be placed next to the earth fill. The rock fill shall be placed in approximately horizontal layers not exceeding 3 feet in thickness. The materials in the rock fill need not be hand placed or especially compacted, but shall be dumped and roughly leveled, in a manner satisfactory to the engineer, so as to maintain a reasonably uniform surface and insure that the completed fill will be stable and that there will be no large unfilled spaces within the RECEIVED fill.

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## 4. <u>Riprap on Upstream Slope of Embankment and in SPALFNWRREGCHannel:</u>

When required, the upstream slope of the dam, and bottom and side slopes of the spillway channel shall be covered with a layer of rock riprap not less than one foot in thickness. Where the gradation of the materials in the borrow pits or from other required excavation for the dam has been such that a pervious free draining material has not been available for placement on

the surface of the upstream slope of the embankment a layer of pit run gravel not less than 3 inches thick shall be placed on the impervious fill as part of the rock riprap to serve as a filter and as a cushion for the placement of the large rock of the riprop. The rock riprop shall consist of the layer of gravel where required and of boulders and fragments of the most durable rock from required excavation for other parts of the work where such rock is suitable, as determined by the engineer, and additional rock, if required, obtained from borrow pits as directed by the engineer. The inclusion of objectionable quantities, as determined by the engineer, of loose dirt, sand, and rock dust will not be permitted. The rock riprop need not be compacted but shall be dumped and graded off in such a manner as to insure that fragments and spalls serve to fill the spaces between the larger rock and in such a manner as will result in a reasonably smooth surface and a uniform layer of riprap of the thickness specified. Hand placing will be required only to the extent necessary to secure the results above specified.

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#### CONCRETE

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#### 1. Concrete:

All concrete shall be Class "B" (2500 psi at 28 days) required to be placed under these specifications shall consist of cement, sand, broken rock or gravel and water all well mixed and brought to the proper consistency. It is contemplated that the normal mix will be in the proportion of 1 cubic foot (1 sack) of cement, 2 cubic feet of sand and 5 cubic feet of broken rock or gravel. with the use of not more than 6 1/2 gallons of water to each sack of cement, but the exact proportions in which these materials are to be used will be determined by the engineer and will be based upon securing a concrete having suitable workability, density and required strength. The sand and broken rock or gravel used shall be free from injurious amounts of dust, organic matter, loam, mice and other deleterious substances and shall pass through a screen having 3/16 inch square openings and the broken rock shall be retained on a screen having 3/16 inch square openings and shall pass through a screen having openings of a size sufficient to pass the largest maximum size of aggregate it is practical to use and secure satisfactory placing of the resulting concrete as determined by the engineer. Both the sand and the coarse aggregate shall be well graded between the fines and the coarses within the size limitations to provide a minimum of voids and a suitable workability without the use of excessive quantities of cement. The water used in the concrete shall be reasonably clean, and free from objectionable quantities of silt, organic matter, alkali, salts and other impurities. The mixing of each batch

shall continue not less than 1 1/2 minutes after all materials are in the mixer, during which the mixer shall rotate at the speed for which it was designed. The concrete shall be placed in the work before it has stiffened sufficiently to require tempering. Concrete when deposited shall have a temperature of not more then  $90^{\circ}$  or not less than  $50^{\circ}$  F. in freezing weather.

#### 2. Forms:

Forms shall be used, whenever necessary to confine the concrete and hold it to required lines. All exposed surfaces having slopes of 1 to 1 or steeper shall be formed unless otherwise directed or approved by the engineer. The use of forms will not be required where the character of the material cut into is such that it can be trimmed to the prescribed lines and will stand without caving or sloughing until the concrete has been placed. The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the pressure and tamping without deflection from prescribed lines. All dirt, chips, blocks and any other loose materials shall be removed from inside of forms and from other surfaces upon which concrete is to be placed. The surfaces of all forms and all other surfaces to be in contact with the concrete shall be clean, rigid, tight and smooth. In general, forms shall remain in place until their removal is authorized by the engineer and shall then be removed RECEIVED with care so as to avoid injury to the concrete.

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## 3. <u>Placing</u>:

Concrete shall be deposited in all cases as nearly as

practicable directly in its final position and shall not be caused to flow in a manner to cause segregation. Excessive separation of coarse aggregate caused by the concrete falling freely from too great a height or by striking forms or reinforcement bars will not be permitted. All formed concrete shall be placed in continuous approximately horizontal layers the thickness of which generally shall not exceed 12 inches. Each layer of conccrete shall be worked with suitable appliances until the concrete has been consolidated to the maximum practicable density, is free from pockets of coarse aggregates, and closes snugly against all surfaces of forms and embedded materials.

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#### 4. <u>Finishing</u>:

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The surface of concrete finished against forms shall be smooth, free from projections and thoroughly filled with mortar. Immediately upon the removal of forms all holes and voids shall be neatly filled with cement mortar of the same proportions of cement and sand as the mortar in the concrete. All sharp angles or surfaces which will be exposed to view and or other surfaces, where required, shall be pounded, leveled or filled by the use of moulding strips or suitable moulding or finished tools. Exposed surfaces of concrete not finished against forms shall be brought to a uniform surface and at the proper time worked with suitable tools to a smooth steel trowel or wood float finish as directed by the engineer. The use of neat cement or a mixture of cement and sand to serve as a drier or to hasten the time and ease of finishing will not be permitted.

#### 5. Curing and Protection:

Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least three days. All concrete shall be continuously moist for at least ten days after the concrete has been placed. In freezing weather suitable means shall be provided for maintaining the concrete at a temperature of at least  $50^{\circ}$  F. for not less than 72 hours after placing or until the concrete has thoroughly hardened. All concrete shall be protected from freezing for not less than two weeks.

#### 6. Damaged or Defective Concrete:

Concrete damaged by freezing, or from any other cause, and any concrete found defective at any time before completion of the work, shall be removed and replaced by concrete acceptable to the engineer.

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## 7. Reinforcement Bars:

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Steel reinforcement bars shall be placed in the concrete whenever shown on the drawings or when directed by the engineer. The reinforcement bars shall be so secured in position that they will not be displaced during the placing of the concrete and care shall be exercised to prevent any disturbance of reinforcement bars in concrete that has already been placed. Before reinforcement bars are placed, the surface of the bars shall be cleaned of rust, scale, dirt, grease or other foreign substances which in the opinion of the engineer are objectionable.

#### MISCELLANEOUS CONSTRUCTION

#### 1. Outlet Pipe:

The outlet pipe for the release of water from the reservoir shall be assembled, erected and supported firmly and accurately in place in a manner satisfactory to the engineer, to the line and grade shown on the drawing or established by the engineer and to provide for the concrete encasement of the pipe. All outlet pipe shall be encased or bedded in concrete unless the State Engineer shall, after the submission of satisfactory evidence by the owner or the engineer, determine that the use of asphalt coated steel pipe will be permanent. The minimum thickness of the concrete encasement of the outlet pipe shall be 4 inches in diameter; 6 inches around pipe from 6 to 12 inches in diameter and for pipe over 12 inches in diameter the design of the encasement will be shown on the drawings.

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## 2. <u>Miscellaneous Metal Work</u>:

Miscellaneous metal work including the outlet gate, gate guides and hoisting device, trash rack bars, trash rack metal work, gate vent piping, and all other metal work shall be installed as shown on the drawings or as directed by the engineer.

## 3. <u>Erection of Timber Structure</u>:

Timber for the gate tower, trestle and walkway if required and for any other structure required to be erected as part of the dam or appurtenant works may be furnished in either standard stock sizes or in the form of poles in the natural shapes as

obtained from the forest. In the event poles are used all bark shall be removed therefrom, and the poles shall be of a size sufficient to cut therefrom the standard stock size timbers shown on the drawings for which the poles will be substituted. When poles are used they shall be dapped at the points to a depth to provide bearing surfaces equivalent to the surfaces of standard stock timbers had they been used. All timber shall be accurately cut and framed to a close fit and in such a manner that the joints will have even bearing over the contact surfaces. Holes for bolts shall be bored with a bit having the same diameter as the bolt. All nuts shall be tightened securely.

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#### 4. <u>Embankment Drainage (Toe Drains)</u>:

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The toe drains shall be placed in the downstream one-third (1/3) of the embankment. The drains shall be centrally located in a bed of filter material a minimum of 3 feet by 2 feet in area. The filter material shall be pit run gravel or other material approved by the engineer. The drains shall be 6 inch diameter, perforated 16 gauge corrugated coated steel pipe or aluminum. Perforations shall be 7/16 inch maximum and 5/16 inch minimum diameters. The toe drains shall be backfilled with filter material conforming to the enclosed gradation.

## Filter Material Gradation

Percent Passing by Weight
100% 80-100%
60-90% 45-75%
35-58%
19-36% 0-15%
0-8% 0-4%

#### 5. Drain: Valve

Drains shall be 8" Waterman Model C-10 or Approved Equivalent.

#### 6. <u>Dishcarge Tube</u>:

Discharge tube shall be 8" diameter 16 gauge asphalt coated corrugated steel pipe of 2-2/3" x 1/2" corrugations with riveted, spot weld or helical lock seam fabrication. **RECEIVED** 

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#### 7. Drop Tube:

Drop tube shall 15' diameter 16 gauge asphalt coated corrugated steel pipe of 2-2/3"  $\times$  1/2" corrugations with riveted, spot welded or helical lock seam fabrication.

#### 8. Shop Fabricated Tee:

The shop fabricated tee will be 12" x 15" x 3" 16 gauge asphalt coated corrugated steel pipe of 2 2/3" x 1/2" corrugations with riveted, spot weld or helical lock seam fabrictations. Upon complete construction of tee, tee will be fully coated with asphalt.

## 9. Cut Off Collars:

Cut off collars will be 5'  $\times$  5'  $\times$  8" at 10' intervals with the first to be 5' from downstream side of the shop fabricated tee encasement.

## 10. Sluice Gate Operating Shaft Mounts:

Shall be installed as shown on the drawings.

#### TURFED AREA

All exposed earth surface above the normal water line on the upstream face of the dam, top downstream face and both slopes and the bottom of the spillway shall be planted with a grass mixture of fertilized to minimize future eroision problems.

The areas to be planted shall be prepared by harrowing, discing, and rolling as required to develop an acceptable seed bed. A mixture of 10 pounds common ryegrass and 50 pounds Alta Fescue shall be planted per acre and fertilized at the rate of 60# of actual nitrogen and 20 pounds of phosphorous per acre.

The grass shall be planted between September 15 and October 15 when the moisture conditions will germinate the seed. All planting shall be fenced to restrict grazing by livestock until the grass is well established.

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The contractor shall submit lump sum bid items for the work shown on the plans as follows:

- Site preparation and clearing; remains and trees ----- Lump Sum \$
- Excavation & Embankment; cut sections measure 15,600 2. Cubic Yards -----Lump Sum \$ 10,500.00
- Piping, toe drains, cut off collars, etc. complete 3. Lump Sum \$ 6,700.00
- Seeding & Fertilization 3 acres ----- Lump Sum \$ ===

Bids will be opened & read at the office of Boatwright Engineering at 3:30 P.M. July 22, 1980.

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SALEM, OREGON

Engineer

Date

Date

JAMES W. FOWLER CO., INC.

#### CONTRACT AGREEMENT

MAR 3 1 2010

WATER RESOURCES DEPT SALEM, OREGON

THIS AGREEMENT, made the \_9th\_ day of \_August \_\_\_\_\_ 1980, by and between \_Jim Fowler , hereinafter called the Contractor and \_Ken Brown & Bill Harland , hereinafter called the Owner, WITNESSETH, that the Contractor and the Owner, for the consideration hereinafter named, agree as follows:

- 1. SCOPE: The scope of this project will consist of the furnishing of all materials, labor and equipment necessary to complete the site preparation and clearing, excavation and embankment, piping, toe drains and cut off collars, etc. and seeding and fertilization all as shown on the plans and described in the specifications.
- 2. <u>CONTRACT PRICE</u>: The Owner shall pay the Contractor for the performance of the contract, subject to any additions and deductions as provided in the contract documents, the sum of <u>Seven Heen Housand</u> <u>Seven hundred Dellars J.W. Corls</u> (\$ 17,700 to ).
- 3. <u>PAYMENTS</u>: The Owner shall make monthly payment and final payment to the Contractor as provided in the contract documents.
- 4. <u>TIME OF COMPLETION</u>: The work shall be completed in 45 consecutive calendar days.
- 5. <u>CONTRACT DOCUMENT</u>: The Notice to Contractors, Contractor's Proposal, General Conditions, Special Conditions, Plans and Technical Specifications are hereby made a part of the Contract by actual attachment or, if not attached, by this reference thereto,

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with omissions and additions as follows.

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- 6. MISCELLANEOUS. All construction shall be in accordance with recognized construction standards for the various types of work and crafts involved.
- 7. EXTRA WORK AND CHARGES. Extra work shall be work for which no unit bid was received in the bid schedule and will not be constured to mean work for which unit bids were received but which is in excess of the quantity mentioned in the proposal. Owner, without invalidating the contract, may order extra work or make changes in the work, the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claims for extension of time caused thereby shall be adjusted at the time of ordering such change. In giving instructions, the Engineer shall have the authority to make minor changes in the work not involving extra costs and not inconsistent with the purpose of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless covered by "Change Order", and no claim for an addition to the contract sum shall be valid unless so covered. Before becoming effective, all Change Orders must be signed by all parties indicated. The value of such work or change shall be determined in one or more of the following ways:
  - (a) By estimate and acceptance in a lump sum.
- (b) By unit prices named in the contract subsequently agreed upon.
  - (c) By cost plus a percentage. (See General Conditions).

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In method (c), "cost" shall include all labor, matsattals pegon power, fuel and rental on major items of equipment. The Contractor shall keep and present in such form as the Engineer may direct, a correct account of the several items of cost, together with vouchers. This definition and requirement applies to work done by subcontractors.

The above accounts shall be understood to include all other costs and compensation such as insurance, small tools, superintendence, office and overhead costs and profits. Rental on equipment shall be charged against the estra or changed work only for the actual time the equipment is used specifically therefore.

Changed work shall be adjusted, considering separately the work added and the parts omitted. Amount of adjustment for parts omitted shall be estimated at the time omission of work is authorized and the agreed adjustment will be deducted from the subsequent monthly estimates. The Owner reserves the right to contract with any persons or firm other than the Contractor for any or all extra work. The Contractor's attention is especially called to the fact that he shall be entitled to no claim for damages for anticipated profits on any portion of work that may be omitted.

- 8. The Contractor agrees to correct all defects in materials and workmanship for a period of one year after final inspection.
- 9. The Contractor shall show evidence of liability-property damage insurance in the amount of \$100,000-300,000.
- 10. This project is being funded in part by a soil conservation cost share requiring ASC approval prior to authorization for construction to proceed. This contract is not in force until the ASC grants such approval and the owners authorize the work to proceed

in writing.

IN WITNESS WHEREOF, the parties hereto executed this Agreement the day and year first above written.

(SEAL)

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Attest:

MAR 3 1 2010

WATER RESOURCES DEPT SALEM, OREGON

Secretary

OWNER:

y: <u>K</u>o

CONTRACTOR: The Lower

By: James an Location

Title: Soria

STEVENS NESS LAW PUB.

#### WARRANTY DEED-TENANTS BY ENTIRETY



KNOW ALL MEN BY THESE PRESENTS, That JOHN D. DAWSON and GRACE M. DAWSON, Husband and Wife,

hereinafter called the grantor, for the consideration hereinafter stated to the grantor paid by KENNETH N. BROWN and DORRENE R. BROWN, , husband and wife, hereinafter called the grantees, does

hereby grant, bargain, sell and convey unto the grantees, as tenants by the entirety, the heirs of the survivor and their assigns, that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or ap-

pertaining situated in the County of ... Polk ..... State of Oregon, described as follows, to-wit: Beginning at a point which is South 89 46' East 0.60 of a chain and North 9.92 chains from the Southeast corner of the Ira P. Smith Donation Land Claim, Notification No. 1961, Claim No. 54, in Section 22, in Township 7 South, Range 5 West of the Willamette Meridian in Polk County, Oregon; thence North 17.86 chains; thence East 9.70 chains; thence South 9.28 chains; thence East 11.88 chains to an iron pipe; thence South 00°17' West 8.58 chains to an iron pipe; thence West 21.58 chains to the point of beginning.

SAVE AND EXCEPT: Beginning at a point which is South 89°46' East .60 of a chain and North 18.50 chains from the Southeast corner of the Ira P. Smith Donation Land Claim No. 54, in Township 7 South, Range 5 West of the Willamette Meridian in Polk County, Oregon; thence East 9.70 chains; thence North 9.28 chains; thence West 9.70 chains; thence South 9.28 chains to the place of beginning.

FURTHER SAVE AND EXCEPT that portion of the above described tract of land lying within the boundaries of public roads and highways.-----

SUBJECT TO: As disclosed by the tax roll, the premises herein described have been zoned or classified for farm use. At any time that said land is disqualified for such use, the property will be subject to additional taxes or penalties and interest; Easement and right of way, including the terms and provisions thereof, conveyed to Rickreall Community Water Association, an Oregon Cooperative corporation, by instrument recorded April 11, 1973, in Volume 42, Page 186, Book of Records for Polk County, Oregon; Easement and right of way, including the terms and provisions thereof, conveyed to Rickreall Community Water Association, an Oregon Cooperative corporation, by instrument recorded April 30, 1973, in Volume 42, Page 983, Book of Records for Polk County, Oregon; Easement and right of way, including the terms and provisions thereof, conveyed to Rickreall Community Water Association, an Oregon Cooperative corporation, by instrument recorded August 21, 1973, in Volume 47, Page 655, Book of Records for Polk County, RECEIVED Oregon.

(If executed by a corporation, affix corporate seal)

MAR 12 2010

WATER RESOURCES DEPT SALEM, OREGON

STATE OF OREGON,

Polk County of

Personally appeared the above named John D. Dawson and Grace M. Dawson, Husband and Wife,

and acknowledged the toregoing instrument to be thetr voluntary act and deed.

(OFFICIAL SEAL)

Notaty Jublic for Oregon

My commission expires 1 -/ /- 19

STATE OF OREGON, County of ....

....., 19.....

Personally appeared .....

who, being duly sworn,

each for himself and not one for the other, did say that the former is the

president and that the latter is the

secretary of

. a corporation.

and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Before me:

(OFFICIAL SEAL)

Notary Public for Oregon

My commission expires:

OF SPACE INSUFFICIENT, CONTINUE DESCRIPTION OF FEVERSE SOLI

To Have and to Hold the above described and granted premises unto the said grantees, as tenants by the entirety, their heirs and assigns forever. And grantor hereby covenants to and with grantees and the heirs of the survivor and their assigns, that grantor is lawfully seized in fee simple of the above granted premises, free from all encumbrances. Except as stated above (Land granted for farm use -- Grantees acceptance of this deed is their

agreement that they will pay additional property taxes, penalties and and that interest if use changes, and and that grantor will warrant and forever defend the said premises and every part and parcel thereof against the lawful claims and demands of all persons whomsoever, except those claiming under the above described encumbrances The true and actual consideration paid for this transfer, stated in terms of dollars, is \$ 37,000.00 

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and foundividuals.

In Witness Whereof, the grantor has executed this instrument this 2 day of if a corporate grantor, it has caused its name to be signed and seal affixed by its officers, buly authorized thereto by order of its board of directors

RECEIVED executed by a corporation

MAR 12 2010

WATER RESOURCES DEPT

STATE OF OREGON.

affix corporate seal)

SALEM, OREGON ) SJ.

pluntary act and deed.

Personally appeared the above named John D. Dawson and Grace M. Dawson, Husband and Wife,

and acknowledged the foregoing instru-

(OFFICIAL

ment to be

SEAL)

Notary Jublic for Oregon

My commision expires

STATE OF OREGON, County of

Personally appeared ...

and who, being duly sworn.

each for himself and not one for the other, did say that the former is the president and that the latter is the secretary of

, a corporation. and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Before me:

(OFFICIAL SEAL)

) ss.

Notary Public for Oregon My commission expires:

John D. Dawson

SHANTOR 5 NAME AND ADDRESS

Kenneth N. Brown

GRANTEE S NAME AND ADDRESS

After recording return to

Remielli H. Dionii

Route 3,

Miller Avenue Dallas, Or.

Until a change is requested all tax statemenrs shall be sent to the following address:

STATE OF OREGON,

MICROFILMAN

POLK :

## WARRANTY DEED (INDIVIDUAL)

BOR 211 PAGE 1437

	lyn J. Harland, also known as Carolyn Joann , hereinafter called grantor, convey(s) to
Harland Danny E. Dail and Leadell F	
Polk , State of Oreg	gon, described as:
See Attached Exhibit "A" at	tached hereto and made a part of this document.
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	MAR 12 2010
	WATER RESOURCES DEPT SALEM, OREGON
trument dated September 11, 1972 Reall Community Water Association; A for Pond maintenance and use, Mor 71 in favor of The Federal Land Band covenant(s) that grantor is the owner of the assessed for farm use; rights ty; Such rights and easements for	lying beneath the water of Unnamed pond; An easement created Recorded November 3, 1972 BOR:36 Pgae:353 in favor of Agreement dated May 23, 1985 recorded May 23, 1985 BOR:187 rtgage dated June 22, 1982 recorded June 27, 1983 BOR:171 ank which grantee herein agrees to assume and pay. The above described property free of all encumbrances except property is of the public in and to that portion of the herein described mayigation, fishery, commerce and recreation which may now**
The true and actual consideration for	st all persons who may lawfully claim the same, except as shown above.
The true and actual consideration for	uns uansier is as our cooker.
The dollar amount should include casproperty remains subject or which the property consists of or includes other proper	APPLICABLE ING OR AC GFEE TITLE ATECUTY OR CED USES.  Carolyn J. Harland  ) ss.  1928 personally appeared the above named yn J. Harland and acknowledged the foregoing luntary act and deed.  Before me:  Notary Public for Oregon My commission expires:  Sh plus all encumbrances existing against the property to which the
consideration." (Indicate which)	STATE OF OREGON,
WARRANTY DEED (INDIVIDUAL)	) ss.

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EXHIBIT 'A'

#### PARCEL I:

Title No. 8823P

Beginning at a point 60 links South 89°46' East and North 28.61 chains and East 11.80 chains from the Southeast corner of the Donation Land Claim of Ira P. Smith and wife, Claim No. 54 in Township 7 South, Range 5 West of the Willamette Meridian; and running thence North 23.76 chains; thence North 89°35' East 9.55 chains; thence South 00°17' East 23.83 chains; thence West 9.47 chains to the place of beginning, being Lot 8 of the Partition Suit of Anganetha Quiring, et al, vs. C. L. Crider, et al. Together with the following described tract of land to be used as a perpetual right of way beginning at a point 60 links South 89°46' East and 27.78 chains North from the Southeast corner of the Ira P. Smith Donation Land Claim Claim aforesaid; thence East 9.70 chains; thence North 83 links; thence East 2.10 chains; thence North 30 links; thence West 2.40 chains; thence South 83 links; thence West 9.40 chains; thence South 30 links to the place of beginning.

ALSO: Beginning at a point 60 links South 89°46' East 18.50 chains North and 9.70 chains East from the Southeast corner of the Donation Land Claim of Ira P. Smith and wife, Claim No. 54 in Township 7 South, Range 5 West of the Willamette Meridian; and running thence North 10.11 chains; thence East 11.84 chains; thence South 00°17' East 9.77 chains; thence South 00°17' West 34 links; thence West 11.88 chains to the place of beginning, being Lot 3 in the Partition Suit of Anganetha Quiring, et al, vs. C. L. Crider, et al.

#### PARCEL II:

Beginning at a point 60 links South 89°46' East and 28.08 chains North from the Southeast corner of the Ira P. Smith Donation Land Claim No. 1961, Claim No. 54, Section 22, Township 7 South, Range 5 West of the Willamette Meridian; thence North 7.80 chains to an iron pipe; thence East a distance of 11.80 chains to an iron pipe; thence South a distance of 6.97 chains to an iron pipe; thence West a distance of 2.40 chains to an iron pipe; thence South 83 links to an iron pipe; thence West a distance of 9.40 chains to the place of beginning.

ALSO: Beginning at a point which is South 89°46' East .60 chains and North 18.50 chains from the Southeast corner of the Ira P. Smith Donation Land Claim No. 54 in Township 7 South, Range 5 West of the Willamette Meridian; thence East 9.70 chains; thence North 9.28 chains; thence West 9.70 chains; thence South 9.28 chains to the place of beginning.



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MAR 12 2010

Title No. 8823P

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WATER RESOURCES DEPT SALEM, OREGON

PARCEL III:

PARCEL III:
Beginning at the Southwest corner of the Harrison Brunk Donation
Land Claim No. 61 in Section 23, Township 7 South, Range 5 West of
the Willamette Meridian in Polk County, Oregon, as delineated by
survey for this partitioning, and running thence North 0°17' West
168.48 feet to an iron pipe; thence South 32°30'54" East 349.26
feet to an iron pipe; thence South 44°22'20" West 272.31 feet to
an iron pipe; thence North 0° 37'50" East 320.72 feet to the point
of beginning.



# 319876

STATE OF OREGON

County of Polk

FILED

I hereby certify that the POLK COUNTY CREGON within was received and duly recorded by me in Polk 88 MAR 17 PH 2: 52 County records:

B.O.R. 211 Page 1437

LINDA DAWSON

BY LA DEPUTY