



**Oregon Water Resources Department**  
 725 Summer Street NE, Suite A  
 Salem Oregon 97301  
 (503) 986-0900  
 www.wrd.state.or.us

**Application for a Permit to  
 Store Water  
 in a Reservoir  
 (Alternate Review)**

Alternate Review Process (ORS 537.409): You may use this form for any reservoir storing less than 9.2 acre-feet or with a dam less than 10 feet high.

**Use a separate form for each reservoir**

*Please type or print in dark ink. If your application is found to be incomplete or inaccurate, we will return it to you. If any requested information does not apply, insert "n/a". 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](http://www.wrd.state.or.us/OWRD/PUBS/forms.shtml).*

**1. APPLICANT INFORMATION**

Applicant: Oregon Parks & Recreation  
First Last  
 Mailing Address: 725 Summer Street NE Suite C  
 Salem Oregon 97301-1266  
City State Zip  
 Phone: \_\_\_\_\_  
Home Work Other  
 Fax: 503-986-0792 E-Mail Address\*: alice.beals@oregon.gov

\* By providing an e-mail address, consent is given to receive all correspondence from the department electronically. (paper copies of the final order documents will also be mailed.)

**2. AGENT INFORMATION**

**The agent is authorized to represent the applicant in all matters relating to this application.**

Agent: William Baierski  
First Last  
 Mailing Address: 725 Summer Street NE Suite C  
 Salem Oregon 97301-1266  
City State Zip  
 Phone: \_\_\_\_\_  
Home Work Other  
 Fax: 503-986-0792 E-Mail Address\*: bill.baierski@oregon.gov

\* By providing an e-mail address, consent is given to receive all correspondence from the department electronically. (paper copies of the final order documents will also be mailed.)

**3. LOCATION AND SOURCE**

**A. Reservoir Name:** Thompson's Mill Race

**B. Source:** Provide the name of the water body or other source from which water will be diverted, and the name of the stream or lake it flows into. Indicate if source is run-off, seepage, or an unnamed stream or spring.  
 Source: Calapooia River Tributary to: Willamette River

**C. County in which diversion occurs:** Linn

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<b>For Department Use</b>		
App. No. <u>R-88085</u>	Permit No. _____	Date _____

**D. Reservoir Location**

Township (N or S)	Range (E or W)	Section	quarter/quarter	tax lot number
13S	3W	8	NE/NW	202,300,602

**E. Dam:** Maximum height of dam: 6.5 feet. If excavated, write "zero feet".

**F. Quantity:** Amount of water to be stored in the reservoir at maximum capacity. List volume in acre-feet: 10.3

Is this project fully or partially funded by the American Recovery and Reinvestment Act? (Federal stimulus dollars)  Yes  No

**4. WATER USE**

Indicate the proposed use(s) of the stored water. **NOTE: You may wish to consider filing for "Multipurpose use" for your reservoir. Multipurpose use does not limit the types of future uses for the stored water. Multipurpose covers all uses including: stockwater, fish and wildlife, aesthetics, domestic, irrigation, agriculture, fire protection and pollution abatement.** If any use will be out of reservoir use, regardless of the type of storage listed, a secondary application must be filed to appropriate the stored water.

Multipurpose

**5. PROPERTY OWNERSHIP**

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Please provide a copy of the recorded deed(s).

Do you own all the land where you propose to divert, transport, and use water?

**Yes** (please check appropriate box below then skip to section 5)

There are no encumbrances

This land is encumbered by easements, right of way, roads of way, roads or other encumbrances

**No** (Please check the appropriate box below)

I have a recorded easement or written authorization permitting access.

I do not currently have written authorization or easement 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). (Do not check this box if you described your use as "Multipurpose" in #3 above.)

List the names and mailing addresses of all affected landowners:

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R-88085

**6. ENVIRONMENTAL IMPACT**

- A. **Channel:** Is the reservoir:  in-stream or  off channel?
- B. **Wetland:** Is the project in a wetland?  Yes  No  Don't know
- C. **Existing:** Is this an existing reservoir?  Yes  No  
If yes, how long has it been in place? 124 years.
- D. **Fish Habitat:** Is there fish habitat upstream of the proposed structure?  Yes  No  Don't know  
If yes, how much? 1/4 miles.
- E. **Partnerships:** Have you been working with other agencies?  Yes  No  
Indicate agency, staff and phone numbers of those involved. Also indicate any agencies that are cost sharing in this project.

The OREGON DEPARTMENT OF FISH & WILDLIFE  
The OREGON WATER RESOURCES DEPARTMENT

**7. WITHIN A DISTRICT**

Check here if the point of diversion or place of use are located within or served by an irrigation or other water district.

Irrigation District Name	Address	
City	State	Zip

**8. DESCRIPTION**

Provide a description of the design and operation of the proposed diversion, including a description of how live flow will be passed outside the authorized storage season. Use this space for narrative. You may also provide narrative and sketches on separate pages.

- SEE:  
 ATTACHMENT 1 - SUMMARY OF DESIGN PROJECT - 1 PAGE  
 ATTACHMENT 1A - DESIGN CONCEPT - 6 PAGES  
 ATTACHMENT 1B - DESIGN DETAILS - 2 PAGES

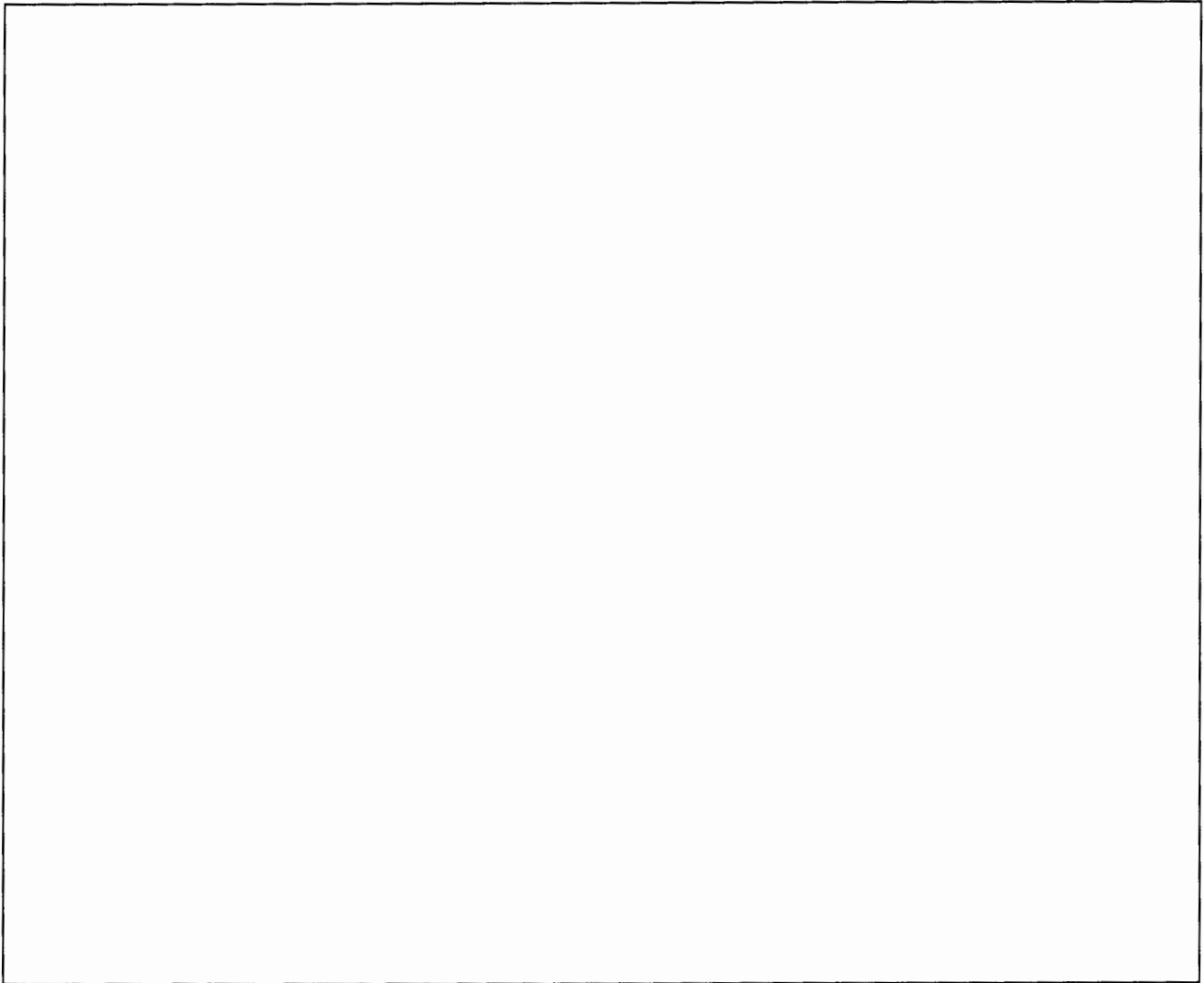
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*R-00085*

If the diversion involves a dam, use this space for sketches of the diversion (e.g. cross-section of the dam with its dimensions, dimension and placement of outlet pipe, means of passing live flow outside of the authorized storage season, and means for providing fish passage).



**9. SIGNATURE**

I swear that all statements made and information provided in this application are true and correct to the best of my knowledge.

William L. Bairst  
Landowner Signature

3/17/2015  
Date

**Before you submit your application be sure you have:**

- Answered each question completely.
- Included a legible map that includes Township, Range, Section, quarter-quarter and tax lot number.
- The map must meet map requirements to be accepted.
- Included a land use form or receipt stub signed by a local planning official.
- Included a check payable to Oregon Water Resources Department for the appropriate amount.

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R-88085

# WATERMASTER ALTERNATE RESERVOIR APPLICATION REVIEW SHEET

Recommendations for Water Right Applications under the Alternate Reservoir review process (ORS 537.409)

In lieu of the water right application process set forth in ORS 537.140 to 537.211, an owner of a reservoir may submit an alternate reservoir application for a reservoir that has a storage capacity less than 9.2 acre-feet or a dam or impoundment structure less than 10 feet in height. ORS 537.409 describes the criteria used to evaluate alternate reservoir applications.

The review shall be limited to issues pertaining to: a) water availability, b) potential detrimental impact to existing fishery resources; and c) potential injury to existing water rights. (ORS 537.409 (6))

Within 60 days after the department provides public notice...any person may submit detailed, legally obtained information in writing, requesting the department to deny the application for a permit on the basis that the reservoir: (a) Would result in injury to an existing water right; or (b) Would pose a significant detrimental impact to existing fishery resources. (ORS 537.409 (5))

**The review of alternate reservoirs is limited to these criteria only.**

Application #: R-

Applicant's Name: *OR State Parks - Thompson's Mills - Mill Pond*

1) Does the proposed reservoir have the potential to injure existing water rights?  NO  YES

Explain:

2) Can conditions be applied to mitigate the potential injury to existing water rights?  NO  YES

If YES, which conditions are recommended: *if necessary*

3) Did you meet with staff from another agency to discuss this application?  NO  YES

Who: Agency: Date:

Who: Agency: Date:

Watermaster signature: *Michael J. Mettink* Date: *April 8, 2015*

WRD Contact: Caseworker: Water Rights Division, 503-986-0900 / Fax 503-986-0901

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**NOTE: This completed form must be returned to the applicant**

*R-80005*

# ODFW Alternate Reservoir Application Review Sheet

**This portion to be completed by the applicant.**

Applicant Name/Address/Phone/Email: William Baierski c/o Oregon Parks & Recreation, 725 Summer St NE,

Suite C, Salem, OR 97301-1266, 503-986-0773, bill.baierski@oregon.gov

Reservoir Name: Thompson's Mill Race Source: Calapooia River Volume (AF): 10.31

Twp Rng Sec QQ: T13S, R3W, S6, NE/NW Basin Name: Willamette  on-channel  
 off-channel

Note: It is unlikely that ODFW will be able to complete this form while you wait, nevertheless we recommend making an appointment to submit the form so as to provide any necessary clarifications. See pg. 6 of Instructions for contact information.

**This portion to be completed by Oregon Department of Fish and Wildlife (ODFW) District staff.**

- 1) Is the proposed project and AO<sup>1</sup> off channel? .....  YES  NO  
 (if yes then proceed to #4; if no then proceed to #2)
- 2) Is the proposed project or AO located where NMF<sup>2</sup> are or were historically present?.....  YES  NO  
 (if yes then proceed to #3; if no then proceed to #4)
- 3) If NMF are or were historically present:
- a. Is there an ODFW-approved fish-passage plan?.....  YES  NO
- b. Is there an ODFW-approved fish-passage waiver or exemption?.....  YES  NO

**If fish passage is required under ORS 509.580 through .910, then either 3(a) or 3(b) must be "Yes" to move forward with the application. If responses to 3(a) and 3(b) are "No", then the proposed reservoir does not meet the requirements of Oregon Fish Passage Law and shall not be constructed as proposed.**

- 4) Would the proposed project pose any other significant detrimental impact to an existing fishery resource locally or downstream?.....  YES  NO  
 Explain below (for example, list STE species or other existing fishery resources that would be impacted negatively.)

- Any diversion or appropriation of water for storage during the period \_\_\_\_\_ through \_\_\_\_\_ poses a significant detrimental impact to existing fishery resources. (For example, if diversion of water for storage during a certain time period would cause a significant detrimental impact to an existing fishery resource, then ODFW should recommend conditions or limitations.) If NMF fish are present at the project site or point of water diversion then the applicant should be advised that a fish screen consistent with screening criteria will be required.
- This proposed pond or reservoir contemplates impounding water in the Columbia Basin above Bonneville Dam. ODFW has determined that additional diversions of water in this area pose a significant detrimental impact to existing fishery resources during the period April 15 through September 30.

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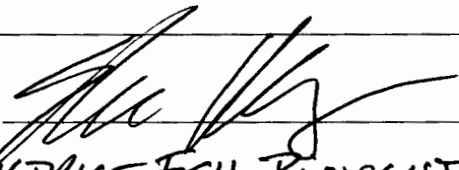
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<sup>1</sup> AO = **Artificial Obstruction** means any dam, diversion, culvert or other human-made device placed in waters of this state that precludes or prevents the migration of native migratory fish. ORS 509.580 (1)

<sup>2</sup> NMF = **Native Migratory Fish Species** in Oregon as defined by OAR 635 - 412 - 0005 (32)

*R-80005*

If YES, can conditions be applied to mitigate the significant detrimental impact to an existing fishery resource?  
 NO (explain)       YES (select from Menu of Conditions on next page)

ODFW Signature: 

Print Name: ELISE KELLEY

ODFW Title: DISTRICT FISH BIOLOGIST

Date: 5/7/15

**NOTE: This completed form must be returned to the applicant.**

Revised 10/4/12

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Use this menu to identify appropriate conditions to be included in the permit, and indicate the abbreviations on the review form:

**fishpass:** As required by ORS 509.585, a person owning or operating an artificial obstruction (AO) may not construct or maintain any AO across any waters of this state that are inhabited, or historically inhabited, by native migratory fish (NMF) without providing passage for NMF. A person owning or operating an AO shall, prior to construction, fundamental change in permit status or abandonment of the AO in any waters of this state, obtain a determination from ODFW as to whether NMF are or historically have been present in the waters. If ODFW determines that NMF are or historically have been present in the waters, the person owning or operating the AO shall either submit a proposal for fish passage to ODFW or apply for a waiver or exemption. Approval of the proposed fish-passage facility, waiver, or exemption must be obtained from the department prior to construction, permit modification or abandonment of the AO. Approved fish-passage plans, waivers, and exemptions shall maintain adequate passage of NMF at all times (ORS 509.601) as per the approved plan, waiver or exemption.

**fishself:** The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional prior to diversion of any water. Permittee shall obtain written approval from ODFW that the installation of the required screen and by-pass devices meets the state's criteria or the permittee shall submit documentation that ODFW has determined screens and/or by-pass devices are not necessary.

**fishapprove:** The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional, and approved in writing by ODFW prior to diversion of any water. The permittee may submit evidence in writing that ODFW has determined screens and/or by-pass devices are not necessary.

**fishdiv33:** If the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR 635-415, shall be followed.

The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.

The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional, and approved in writing by ODFW prior to diversion of any water. The permittee may submit evidence in writing that ODFW has determined screens and/or by-pass devices are not necessary.

**fishmay:** Notwithstanding that ODFW has made a determination that fish screens and/or by-pass devices are not necessary at the time of permit issuance, the permittee may be required in the future to install, maintain, and operate fish screening and by-pass devices to prevent fish from entering the proposed diversion and to provide adequate upstream and downstream passage for fish.

**b52** Water may be diverted only when Department of Environmental Quality sediment standards are being met.

**b5** The water user shall install and maintain adequate treatment facilities meeting current DEQ requirements to remove sediment before returning the water to the stream.

**b51a** The period of use has been limited to \_\_\_\_\_ through \_\_\_\_\_.

**b57** Before water use may begin under this permit, a totalizing flow meter must be installed at each diversion point.

**b58** Before water use may begin under this permit, a staff gage that measures the entire range and stage between full reservoir level and dead-pool storage must be installed in the reservoir. The staff gage shall be United States Geological Survey style porcelain enamel iron staff gage style A, C, E or I.

**futile call:** The use of water allowed herein may be made only at times when waters from the (NAME OF SURFACE WATER) would not otherwise flow into a tributary of the \_\_\_\_\_ River or sufficient water is available to satisfy all prior rights, including rights for maintaining instream flows.

**riparian:** If the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR 635-415, shall be followed.

**wq:** The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.

**fence:** The stream and its adjacent riparian area shall be fenced to exclude livestock.

**blv:** Water must be diverted to a trough or tank through an enclosed water delivery system. The delivery system must be equipped with an automatic shutoff or limiting flow control mechanism or include a means for returning water to the stream source through an enclosed delivery system. The use of water shall not exceed 0.10 cubic feet per second per 1000 head of livestock.

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SALEM, OREGON

R-88085



# Land Use Information Form



Oregon Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301-1266  
(503) 986-0900  
www.wrd.state.or.us

## 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 jurisdiction(s) 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. Please be aware that your application will not be approved without land use approval.

**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) The existing and proposed water use is located entirely within lands zoned for exclusive farm-use or within an irrigation district;
  - b) The application involves a change in place of use only;
  - c) The change does not involve the placement or modification of structures, including but not limited to water diversion, impoundment, distribution facilities, water wells and well houses; and
  - d) The application involves irrigation water uses only.

## NOTE TO LOCAL GOVERNMENTS

The person presenting the attached Land Use Information Form is applying for or modifying 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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WATER RESOURCES DEPT  
SALEM, OREGON

# Land Use Information Form



**Oregon Water Resources Department**  
 725 Summer Street NE, Suite A  
 Salem, Oregon 97301-1266  
 (503) 986-0900  
 www.wrd.state.or.us

Applicant: William Baierski C/O Oregon Parks & Recreation - Thompson's Mills  
First Last

Mailing Address: 725 Summer Street NE Suite C

Salem OR 97301-1266 Daytime Phone: 503-986-0773  
City State Zip

## A. Land and Location

Please include the following information for all tax lots where water will be diverted (taken from its source), conveyed (transported), and/or used or developed. Applicants for municipal use, or irrigation uses within irrigation districts may substitute existing and proposed service-area boundaries for the tax-lot information requested below.

Township	Range	Section	¼ ¼	Tax Lot #	Plan Designation (e.g., Rural Residential/RR-5)	Water to be:			Proposed Land Use:
13S	3W	8	NE/NW	202	AB - Agribusiness	<input checked="" type="checkbox"/> Diverted	<input checked="" type="checkbox"/> Conveyed	<input checked="" type="checkbox"/> Used	Mill Race
13S	3W	8	NE/NW	300	EFU	<input type="checkbox"/> Diverted	<input type="checkbox"/> Conveyed	<input checked="" type="checkbox"/> Used	Mill Race
13S	3W	8	NE/NW	603	EFU	<input type="checkbox"/> Diverted	<input type="checkbox"/> Conveyed	<input checked="" type="checkbox"/> Used	Mill Race
						<input type="checkbox"/> Diverted	<input type="checkbox"/> Conveyed	<input type="checkbox"/> Used	

List all counties and cities where water is proposed to be diverted, conveyed, and/or used or developed:

Linn County

## B. Description of Proposed Use

Type of application to be filed with the Water Resources Department:

- Permit to Use or Store Water  
  Water Right Transfer  
  Permit Amendment or Ground Water Registration Modification  
 Limited Water Use License  
  Allocation of Conserved Water  
  Exchange of Water

Source of water:  Reservoir/Pond  
 Ground Water  
 Surface Water (name) Calapooia River

Estimated quantity of water needed: 1.8 cfs  
 cubic feet per second  
 gallons per minute  
 acre-feet

Intended use of water:  Irrigation  
 Commercial  
 Industrial  
 Domestic for \_\_\_\_\_ household(s)  
 Municipal  
 Quasi-Municipal  
 Instream  
 Other Aesthetics

Briefly describe:

The concept is to have the ability to store water during the periods when Calapooia River flows are insufficient to provide minimum flows required for fire protect. The stored water will also provide park aesthetics and non-power production for demonstrating milling operations. This temporary reservoir will consist of approximately 800 feet of the mill race between the existing Mill's head gates and an inflatable bladder dam and be supplied by a pump at the Mill.

**Note to applicant:** If the Land Use Information Form cannot be completed while you wait, please have a local government representative sign the receipt at the bottom of the next page and include it with the application filed with the Water Resources Department.

See bottom of Page 3. →

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 SALEM, OREGON

R-88008

# 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**

- Land uses to be served by the proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s): LC 928.310(B) & LC 929.020(B).
- Land uses to be served by the 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:	
		<input type="checkbox"/> Obtained <input type="checkbox"/> Denied	<input type="checkbox"/> Being Pursued <input type="checkbox"/> Not Being Pursued
		<input type="checkbox"/> Obtained <input type="checkbox"/> Denied	<input type="checkbox"/> Being Pursued <input type="checkbox"/> Not Being Pursued
		<input type="checkbox"/> Obtained <input type="checkbox"/> Denied	<input type="checkbox"/> Being Pursued <input type="checkbox"/> Not Being Pursued
		<input type="checkbox"/> Obtained <input type="checkbox"/> Denied	<input type="checkbox"/> Being Pursued <input type="checkbox"/> Not Being Pursued
		<input type="checkbox"/> Obtained <input type="checkbox"/> Denied	<input type="checkbox"/> Being Pursued <input type="checkbox"/> Not Being Pursued

Local governments are invited to express special land-use concerns or make recommendations to the Water Resources Department regarding this proposed use of water below, or on a separate sheet.

FD15-0069.  
must obtain any applicable removal bill permits for reservoir

Name: Alyssa Boles Title: Planner  
 Signature: Alyssa Boles Phone: 541-967-3816 Date: 3/17/15  
 Government Entity: Linn 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.

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 SALEM, OREGON

**Receipt for Request for Land Use Information**

Applicant name: \_\_\_\_\_  
 City or County: \_\_\_\_\_ Staff contact: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

R-88085

# Attachment 1

## Summary

The historical Point of Diversion (POD) for water right certificate 10766 has been on the Calapooia River at the Shearer Dam. With the removal of the Shearer and Sodom Dams to regulate the diversion of water for the Mill's use, our plan is to develop a new POD downstream on the Calapooia River at the convergence of the Thompson's Mill race. This POD will consist of a centrifugal pumping system from the Calapooia River into the mill race. Its purpose is to replace the water supply to the mill race when river flows become insufficient for fire protection (mid-spring to early winter) from the historical POD with the dams removed. The new POD will have a rate limit of 2 cfs, some of that being recirculated water. Also additional water usage types have been identified in order to change this mill site to a working museum. Attachments "Design Concept" (1A) and "Proposed Design Details" (1B) are enclosed with this application to provide more detail as to our plan.

## Background

Thompson's Mills State Heritage Site is located outside the town Shedd in Linn County (more particularly situated in Section 8, Township 13 South, Range 3 West, and Willamette Meridian. addressed at 32655 Boston Mill Road, Shedd, Oregon.

In 2003 a Memorandum of Understanding Relating to Future Management of Water Flows – Thompson Mills Waterworks: with the principal parties consisting of : The State of Oregon, acting through; Oregon Department of Fish and Wildlife, Oregon Water Resources Department, Oregon Parks and Recreation Department; and the Calapooia Irrigation District, Calapooia Watershed Council, Boston Mill Society (an Oregon non-profit corporation), and the Oregon Water Trust (an Oregon non-profit corporation); and finally with the advice and support of the following "Signatory Concurring Organizations": United States Bureau of Reclamation, the National Marine Fisheries Service and the United States Fish and Wildlife Service was enacted.

In 2004 OPRD purchased the Thompson Mill property and the Mill's water rights and has operated the mill as a working museum ever since.

As part of the "PLAN" to manage water flows at Thompson Mill and the Calapooia River, both the Shearer and Sodom dams on the Calapooia River have been removed to enhance fishery habitat. Now without the dams redirecting the water flows during low flow durations the mill is facing insufficient water to operate the mill for demonstration purposes. Also, there is a need for addition water character types of use such as Recreation and Fire Protection among others as the site transitions from a mill to a state park working museum.

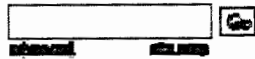
To alleviate the low river flows, an adjustable water control structure will be created approximately 1100 feet up steam from the mill. During low river flow durations this water control structure will be used to prevent the back flow of water through the mill race. The water will be diverted from a point just downstream of the mill head gates at the confluence of the mill race and Calapooia River by way of a 7.5 HP motor pump system. The pumping system will maintain approximately 1.8 acre/ feet of water in the mill race for the uses applied for in this application.

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R-Beccs

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SALEM, OREGON



Water Resources Department

**Permit to Appropriate Surface Water for Storage -  
Alternate Reservoir Application**

For impoundments less than 10 feet in height or storing less than 9.2 acre feet of water.

Today's Date: Monday, May 18, 2015

Base Application Fee for Storage of Surface Water.		\$350.00
Proposed Dam Height in feet.	0	
Proposed Reservoir volume in Acre Feet.	10.3	\$330.00
Permit Recording Fee. ***		\$450.00
*** the Permit Recording Fee is not required when the application is submitted but, must be paid before a permit will be issued. It is fully refundable if a permit is not issued. If the recording fee is not paid prior to issuance of the Final Order, permit issuance will be delayed.	Recalculate	
Estimated cost of Permit Application		\$1,130.00

[Return to Fee Calculator Options page](#)

OWRD Fee Schedule

Fee Calculator Version: B20130709

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Attachment 1A

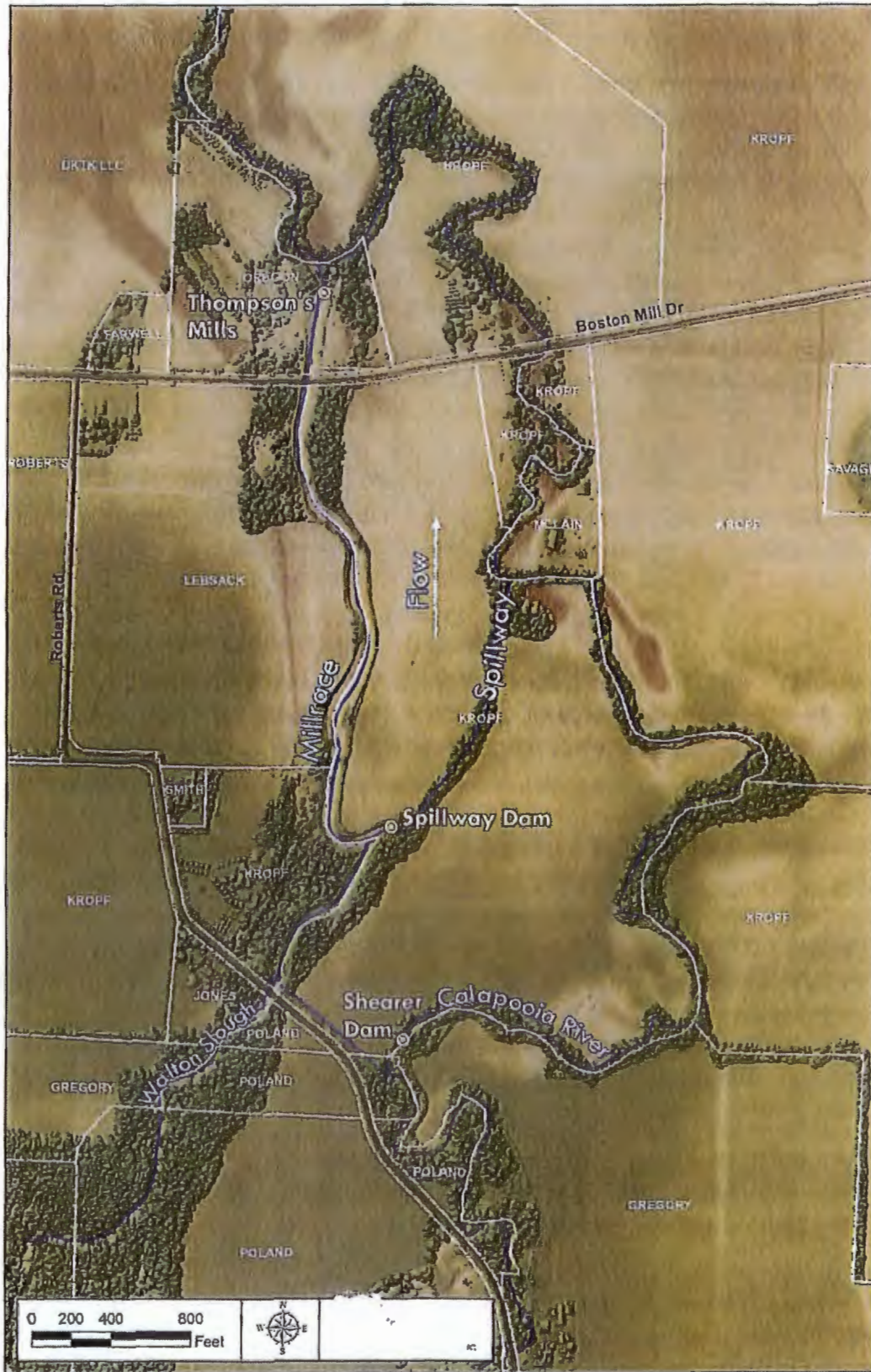


Figure 1. The project reach surface model developed using the integrated LIDAR data set. Landownership layer from Linn County GIS provided by Linn County Assessor.

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### 5 Water Delivery Alternatives

The following section presents three water delivery alternatives that have been discussed with OPRD. The three alternatives have several similar elements and to avoid redundancy, repeated elements for multiple alternatives are summarized after the element is originally presented. Design drawings are included in Appendix A and should be referenced when reviewing the following alternative descriptions. The three alternatives include:

- ~~Alternative 1 – Groundwater Well for Minimum Operations~~  
 Machinery demonstrations would be limited to the November through May period when sufficient inflows to the millpond would allow for machinery operation without depleting millpond storage. A low yield groundwater well would be used to augment millpond storage to offset seepage and evaporation losses from June through October.
- ~~Alternative 2 – Groundwater Wells for Demonstration of Machinery~~  
 Machinery demonstrations could be performed year-round although groundwater pumping would be necessary from June through October to replenish the millpond when outflows through the mill would exceed inflows to the millpond.
- Alternative 3 – Pump from Calapooia River**  
 Machinery demonstrations could be performed year-round although surface water pumping from the Calapooia River would be necessary from June through October to replenish the millpond when outflows through the mill would exceed inflows to the millpond.

In addition to the project constraints identified in Section 1.3 Project Constraints, the following assumptions were made in evaluating the water delivery alternatives.

- Millpond losses are approximately 0.25 inches per day, including a 0.1 inch/day rate for evaporation and 0.15 inch/day rate for seepage. These are typical loss rates for this area but the selected rates do not reflect specific site conditions. Loss rates also do not include leakage through the Thompson's Mills headgates. The estimated 2-3 cfs that leaks through the headgates will need to be addressed to maximize water retention in the millpond.
- Stream flows in the Calapooia river and Walton Slough provide sufficient inflow to the millrace during high river flows, typically from November through May, for fire protection and milling purposes. Inflows during low stream flows, typically from June through October, would be insufficient to support either fire protection or power for milling purpose.
- An adjustable water control structure on the millrace is necessary to control the size of the millpond. From November through May, the millrace flows towards Thompson's Mills. From June through October, the millrace water level would decrease due to limited inflows. The control structure would be adjustable in order to convey higher flows but would not provide flood control. The structure would allow for controlling the

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millpond stage from June through October. Because Shearer Dam will be removed, the lower elevation of the Calapooia River relative to the millrace would result in less Calapooia River water flowing into the millrace.

~~5.1 Alternative 1 – Groundwater Well for Minimum Operations~~

~~The intent of Alternative 1 – Groundwater Well for Minimum Operations is to maintain existing operations at Thompson's Mills and allow for machinery demonstrations while providing adequate firefighting water from fall through spring when inflows to the millpond would exceed millpond losses. Machinery demonstrations would not be conducted when milling water requirements exceed millpond inflows. An adjustable water control would be installed on the millrace to control millpond storage. A low volume groundwater well and recirculating pump would be installed in the tailrace immediately downstream from the Thompson's Mills' headgates to replenish water in the millpond lost to headgate leakage, and seepage and evaporation from the millpond during summer and early fall. The low volume groundwater well and recirculating pump would not be used from fall through spring when sufficient inflows to the millpond occur for machinery demonstrations.~~

~~Alternative 1 includes the following project elements.~~

- Construct a low head adjustable water control structure in the millrace at approximately STA 35+00.
- Rebuild existing flume gate and head gates.
- Install a low volume groundwater well, plumbing, and appurtenances.
- Install a recirculating pump downstream of the Thompson's Mills headgates to pump water leaked through the headgates back to the millpond.
- Relocate firefighting water supply Pump-Rite intake screen to a lower elevation in the millpond to increase millpond capacity available for demonstration of machinery.
- ~~• Apply bentonite, or similar soil amendment, to millpond to reduce seepage losses.~~

The following information expands on the project elements. Table 1 includes pertinent elevations in the millrace and at the mill. Figure 2 includes an aerial view of the site with the project elements.

**Table 1.** Existing elevations in the millrace.

Feature	Elevation (NAVD88)	Significance
Top of Headgates	263.03	Full pool elevation
Spillway Dam Crest	264.05	Controls outflow to spillway channel
Top of Dry Hydrant Screens	259.03	-
Lowest Operating Water Level <sup>1</sup>	259.03	Minimum elevation for firefighting requirement

<sup>1</sup> Low operating level is 1 foot over top of screens per Thompson's Mills Operations Manual.

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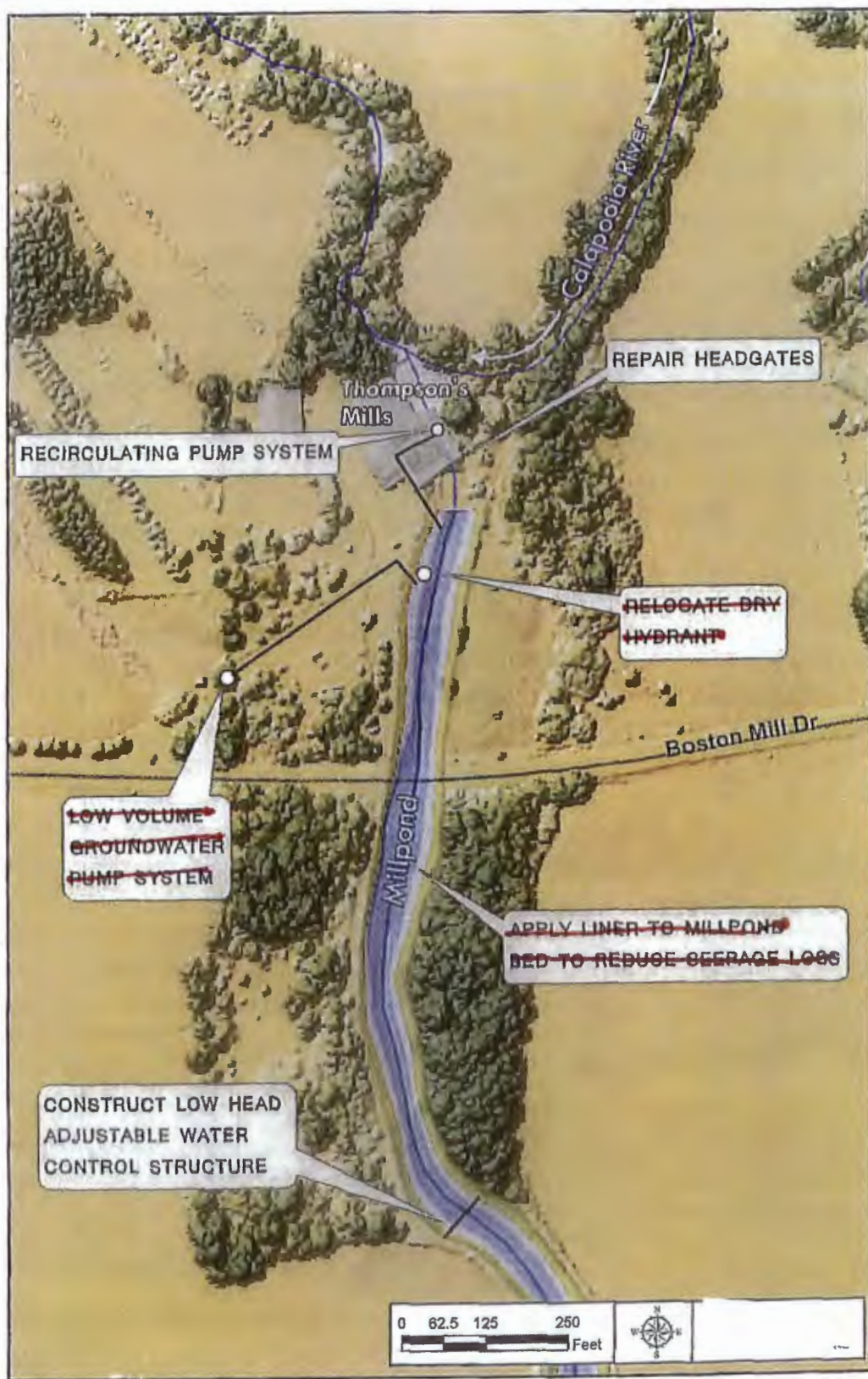


Figure 2.

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**Low Head Adjustable Water Control Structure**

A low head adjustable water control structure is suggested in order to confine the summer time millpond while allowing for winter and spring flow conveyance. The structure would be located at approximately STA 35+00 and create a 1.8 acre millpond at full pool (approximately 263 ft elevation controlled by the Thompson's Mill's headgate). This location would ensure the structure is not visible from either Thompson's Mills or Boston Mill Road and would maintain the historic appearance of the millpond. An inflatable bladder dam or a low head concrete dam that could be adapted with flashboards or stanchions is recommended for the structure. Hydraulic modeling would be completed to ensure sufficient high water conveyance while minimizing flashboard height (if a flashboard option is selected). Flashboards would be installed on the dam once the millrace flows recede but prior to cessation of inflows from Walton Slough. Inflows would overtop the flashboards until the water surface reaches 263 ft which is the controlling elevation at the top of the Thompson's Mill's headgates. The 263 ft elevation is also 1 ft below the Spillway Dam elevation and equivalent to the bed elevation in the Roberts Road connector ditch. The flashboards would maintain the downstream millpond elevation by reducing water loss from the millpond to the spillway channel or Roberts Road connector ditch.

**Millpond Storage**

Installing the water control structure would convert the millrace from a free-flowing channel to a millpond in the summer. Table 2 below includes a stage-storage relationship for the proposed 1.8 acre millpond and Figure 3 provides a graphical depiction of millpond storage by stage. The 254 ft water surface elevation corresponds to the millpond bed elevation at the Mill's headworks. The stage-storage relationship assumes a water control structure would have a top elevation of 263 ft to coincide with the top of the mill's headworks.

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Table 2. Stage-storage relationship for the proposed millpond.

Water Surface Elevation (ft)	Total Millpond Storage (ft <sup>3</sup> )	Incremental Stage-Storage Change (ft <sup>3</sup> )
254	5,130	
		15,066
255	20,196	
		25,110
256	45,306	
		34,398
257	79,704	
		43,254
258	122,958	
		51,921
259	174,879	
		60,021
260	234,900	
		66,582
261	301,482	
		71,388
262	372,870	
		76,410
263	449,280	

<sup>1</sup>The mill's headworks top elevation is 263.05 ft.

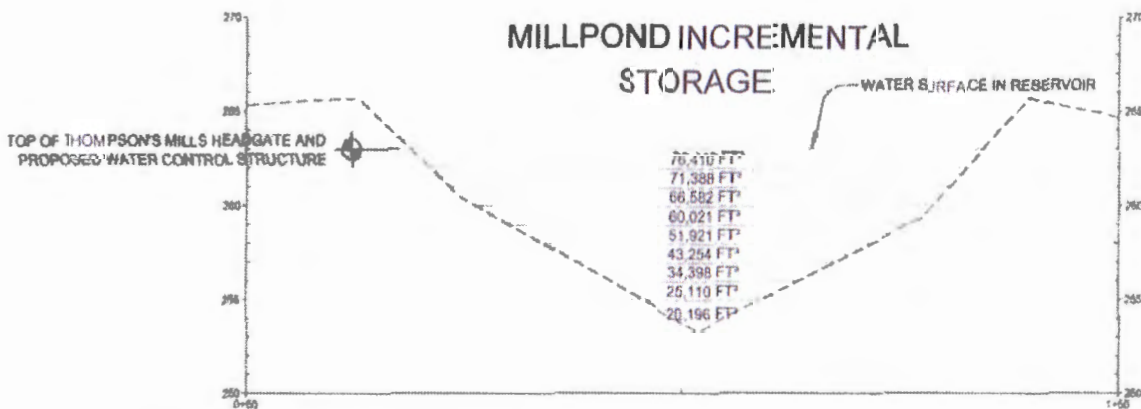


Figure 3. A graphical depiction of incremental storage in the millpond.

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