

### APPLICANT / ORGANIZATION

Applicant Signature		Official Contact	Walla Walla Water Alliance & Walla Wall County Watershed Planning WRIA32		
Organization	P.E. Engineering Consultant in Cooperation w/US Corps Engr, US Forest Service, Fisheries (State, National, Tribes)				
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Project Name	Sub-Basin Control Reservoirs for Aquifer & Fountain Head Storage Promoting Fish-Passage & Habitat				
Project Location	S.E. Mt Areas adjacent to Walla Walla, WA	County	Walla Walla		
Sub-Watershed/Stream Names	City of Walla Walla Watershed Upland Areas & Mill Creek, Klicker Mountain, Blurcreek, Blacksnake Ridge, etc.				

### SUMMARY of PROJECT

#### DESCRIPTION

This project proposes to accomplish engineering analyses and preliminary designs to demonstrate the feasibility for facilities which will allow storage reservoirs in upland elevations sufficient to charge fountainheads and deep basalts of the Walla Walla basin aquifers.

#### BENEFITS (what issues will this funding address)

1. Protect these water sheds from fire and provide a water supply for firefighters close to the potential areas where such fires may start.
2. Provide realistic storage for recharging the fountainheads and deep basalts of these regions.
3. Control and minimize silt silt deposition in down stream aareas.
4. Monitor, meter and control water flows and flooding in upstream as well as down stream reaches.
5. Provide an adequate supply of upper reach water for enhancing fish returns for spawning and redd deposition in protected areas of our watershes in conjunction with each reservoir spread along the reach of selected upland and lower streams.

**STATUS** (is the proposal currently underway, have any agreements, approvals or preliminary measures been completed?)  
 Segments of the proposal have already commenced and collaborative discussions and groundwork for porposed design models are noted and on file. Favorable interests have been expressed by the Public Works Department of the City of Walla Walla. Several discussions have been held with engineers from the U.S. Corps of Engineers, Walla Walla Division, over the last two years.

**CONTEXT** (Explain the relevancy of this project to the Watershed Plan and if applicable the Walla Walla Subbasin plan or the Snake River Salmon Recovery plan)

A. The five benefits listed above have been in the to-do listof idea generations for a long time by many of the "partners" of this valley. A patent-pending idea for creating a model of a scaled facility which will fulfill all five concept benefits listed above, is inclusive of the goal for this project. Eventually we are hoping to see a full sized set of reservoirs constructed in the uplands of the Blue Mountains. That will be for another grant proposal in the not too distant future!!

B. Given the scope of this project it will be necessary to enlist active participation by: a) Federal Agencies: U.S. Corps of Engineers, U.S. Forest Service, U.S. Fish and Wildlife, b) State Dept. of Ecology and c) Local Agencies: W.W. County, Water Alliance, City of Walla Walla and the Native Tribes.

C. Presently we have preliminary, verbal agreement for mapping and idea generation with the Director of Public Works, Hal Thomas, representing as landowner of the Walla Walla Watershed.

D. These issues of course are dependent on the fulfillment of this proposal.

E. It is anticipated that senior engineering students from the Walla Walla College, School of Engineering will be recruitable to assist with this project.

Additional partners: agencies, landowners, volunteers? Answered above.

Please list affected landowner(s): Federal, Local, Private, State, or Tribal: above.

For each landowner explain the agreement that is in place (agreements must be in place for project consideration)? This list may expand later, as full scale designs are established.

When known and as necessary, identify the staff, consultants, and subcontractors that will be designing and implementing the project, including their names, qualifications, roles and responsibilities. If not yet known, describe the selection process. (to be established.) I would like to include Dr. Jon Cole also from WWC, but the funding scope at present does not allow for this very helpful visionary.

**PROJECT FUNDING/BUDGET**

*(Other state funds will not be acceptable as match)*

2006 Project Implementation Funding requested in this application: \$ 30,600.00

Total sponsor match/in-kind cost share contribution (10% required): \$ 3,400.00

Total cost of project (match & project implementation funding requested): \$34,000.00

BUDGET BY ELEMENT	Requested	Match	Total
1. FISCAL ADMINISTRATOIN	\$ <u>2,500</u>	\$ <u>600</u>	\$ <u>3,100</u>
2. PRE-IMPLEMENTATION COSTS	\$ <u>700</u>	\$ <u>700</u>	\$ <u>1,400</u>
3. PERSONNEL (wages, benefits)	\$ <u>7,200</u>	\$ <u>1,000</u>	\$ <u>8,200</u>
4. TRAVEL	\$ <u>260</u>	\$ _____	\$ <u>260</u>
5. CONTRACTED SERVICES	\$ <u>14,240</u>	\$ <u>1,100</u>	\$ <u>15,340</u>
6. ENV. COMPLIANCE/PERMITS	\$ <u>1,000</u>	\$ _____	\$ <u>1,000</u>
7. MONITORING	\$ <u>2,000</u>	\$ _____	\$ <u>2,000</u>
8. SUPPLIES/MONITORING	\$ <u>2,200</u>	\$ _____	\$ <u>2,200</u>
9. MISCELLANEOUS EXPENSE	\$ <u>500</u>	\$ _____	\$ <u>500</u>
 TOTAL BUDGET BY ELEMENT	 \$ <u>30,600</u>	 \$ <u>3,400</u>	 \$ <u>34,000</u>

TOTAL REQUEST FOR FISCAL YEAR (06) \$30,600

**PARTNERSHIPS: COST SHARE and LANDOWNERSHIP**

Matching Funds or In-Kind Contributions					
Individual/ Organization	Description	Cash cost share or In- Kind	Secured or pending	If pending, until when?	\$ Amount/Value
Dr Fred R Bennett, P.E	Proj Manager	Cost Share/ In Kind	S/P	Apr 06/ Dec 06	700/1100
WWC School Engineering	Students	In Kind	P	May 31, 06	1000
Hal Thomas, P.E.	Dir Pub Wks				0
US Corps Engers	Advisors				
Foscal Adm	Bk Keeper	In Kind	P	Nov 06	600
Estimated Project Cost share (must be 10% of total project cost):					3,400

## SCOPE OF WORK

### PROJECT TITLE:

**Preliminary Engineering Feasibility Study  
for  
Upland Reaches of the Wall Walla Watershed  
with  
Model Displays**

**PROJECT GOAL: Protect the Watershed from Fires  
Provide Storage and Recharge of Water  
Minimize Silt Deposition Down-Stream  
Monitor & Meter Flood Control  
Enhance Upper Reach Fish Habitats**

**PROJECT PURPOSE/NEED: Protect Our Upland Resources  
In Order to  
Replenish Our Lowland Aquifers**

### TASKS

#### **Task 1. Analyze the Valleys of the Blue Mountains**

**ACTIONS:** Select Convenient Sizes for Up-Stream Reservoirs

Using Contour Mapping of The Walla Walla Watershed

- Pool Size = 100'w x 15'dp x 100'lg or 250'w x 25'dp x 500' lg

**DELIVERABLES:** Range = 1.3 acre-ft to 16.6 acre-ft per pool, 15 pools/ valley

- @ 10 valleys = 150 pools = 2,490 acre-ft

**COMPENSATION:** \$ 2,400 student portion = approx \$1.00 / acre-ft for engrg and map detailing

- Project Engineer: \$3068

#### **Task 2. Preliminary Feasibility Studies for Roller-Compacted Soil-Cement Embankments**

**ACTIONS:** Work with Corps of Engrs for Design Specs Suitable for Water-Tight Embankments

- Establish working guidelines for pre-lim designs for same.

**DELIVERABLES:** Designs to incl. valves for sluice gates for silting and o-gee spillways

- fgs for base concrete and incl rebars. Use students for work sheets and leader checks

**COMPENSATION:** \$4,500 for Engr. \$2,400 Students. (inc.w/ pre-lim plans)

- Project Engineer: \$4,602

#### **Task 3. Construct a Working Model of a Typical Reservoir**

**ACTIONS:** Model to demonstrate all five benefits afore mentioned including how the actions of

- seepage through fountainhead to aquifer takes place and how this new design will strongly
- support fish migration to upper habitats. In addition, the ability to monitor, measure,
- and control stream flow with "floating" inlets and outlets must be demonstrated.
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**DELIVERABLES:** Models will be in three "D" and actually use water to accomplish above cited

- deliverables. Full and Complete report from Project Engineer.

**COMPENSATION:** ....\$3,400 Students, \$ 2,200 materials

- Project Engineer: \$7,670.