1. Title: Irrigation Efficiency-Practices
Flood Irrigation to Pivot conversion

2. Proposal Preparer(s):
Renee Hadley with Walla Walla County Conservation District

3. Project Status: Identify whether the proposed project is a past, ongoing or new project and briefly explain the status of the project, including the requested role of the Flow Study in further consideration of the project. If past project, some of the questions below may not be applicable.
- □ a. NEW PROJECT
- □ b. ON-GOING PROJECT
- □ c. PAST PROJECT
Flood irrigation projects have been completed, are on-going, and more need to be converted.

4. General Description of Proposal: Identify the category(s) and briefly explain the proposed project (e.g. location, infrastructure requirements, maintenance requirements, connection to other new, ongoing or past projects, other stakeholders, various sizing or phasing, etc.).
- □ a. Water Conservation & Infrastructure
- □ b. Aquifer Recharge & Aquifer Storage and Recovery
- □ c. Surface – Groundwater Source Switch
- □ d. Surface Water Storage
- □ e. Pump Exchange
- □ f. Water Right Transactions
- □ g. Point of Diversion Transfers
- □ h. Other
Numerous flood irrigation projects exist across the basin. Most involve converting to pivot sprinklers as determined on a case by case basis.

5. Source of Produced Water: Mark all applicable and identify (water right number, shallow or deep basalt aquifer, stream name).
- □ a. Existing Water Right
- □ b. Groundwater
- □ c. Surface Water
- □ d. Other Varies

6. Quantity/Timing/Location of Produced Water Instream: Estimate average amount of water, when and where. Can project be considered at various sizes(flow outputs) and/or considered in phases?
- a. Acre-feet and/or Cubic-feet-per-second: Flood Irrigation is approximately 45% efficient (range of 25 to 60%). Pivot irrigation is about 65% efficient (range 60-85%). CFS savings could be assumed to be 20% of current use.
- b. Timeframe(s): Year-round
- c. Stream Reach Location(s): Varies (Walla Walla River, Mill Creek, others)
- □ d. UNKNOWN - YES, Need more work (engineering/design/modeling, etc.) to estimate potential instream flow outputs of project. Work can be completed within one year once funded.
7. Ability to Protect Produced Water Instream: Briefly explain how the produced water will be quantified, monitored and protected instream or why it is not currently protectable.

- a. YES - Pivot pipe projects will have metered inflow to quantify use.
- b. NO or
- c. UNKNOWN –

8. Cost Estimates: Provide known and estimated costs to develop and implement the project.

a. Project Development and Design:

b. Project Construction: Varies ~$1,000/acre

c. Construction cost per AF and/or CFS: Varies~$100,000/cfs

d. Project Annual O&M:

- c. UNKNOWN - Need engineering/design work to estimate costs

9. Secured Costs: Has any funding been secured in the past or currently and what is source?

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10. Other Potential Project Advantages: In addition to helping address flow targets and basin-wide flow issues (Endangered Species Act, Tribal Water Rights, Clean Water Act, etc.), briefly explain other potential benefits (e.g. reduced O&M costs, restores/mimics ecological processes, cropping flexibility,)

Reduced labor costs, erosion, flushing of contaminants downgradient, oversaturation of adjacent lands, waste/runoff. Current flood irrigators struggle to have sufficient water and yields are not optimal. Efficiency improvements will improve water allocation, yields and could extend the growing season.

11. Other Potential Project Disadvantages: Briefly explain potential drawbacks of the proposal (e.g. reduced GW supply - recharge mitigation need, increased O&M costs, legal implications)

Most flood irrigators do not have funds to cost share these projects.

12. Estimated Time Frame to Implement Project?

1-2 months for small (<100 acres) up to 6 months for larger scale projects (<2,000 acres).