**Walla Walla Basin Integrated Flow Enhancement Study**

Project criteria to guide selection of potential project components and alternatives

**BACKGROUND** - The Walla Walla Basin Integrated Flow Study (or Bi-State Flow Study) has been ongoing since 2014. A Steering Committee (SC) comprised of various stakeholders adopted the following mission statement and instream flow targets:

**Purpose and Outcome** (from Ground Rules) **-** The purpose of the Walla Walla Basin Integrated Flow Enhancement Study is to determine the best package of options for increasing streamflow in the Walla Walla Basin for native fish, while maintaining the long term viability and water availability for irrigated agriculture, residential, and urban use. The primary outcome is intended to be a water management plan, based on the results of the feasibility study, with broad support for implementation to improve and protect stream flows across the Walla Walla Basin.

**Stream flow targets in the Walla Walla River from Cemetery Bridge to the mouth.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Time Period** | **Short –Term Target** | **Long Term Target** | **Hybrid Flow Target** |
| Apr 1 – Jun 30 | 100 cfs | 150 cfs | 150/100 cfs |
| Jul 1 – Nov 30 | 65 cfs | 100 cfs | 65 cfs |

**Technical Assistance**  - Much progress has been made by the Steering Committee (SC) and various Technical Work Groups (TWG’s) to identify and characterize potential flow enhancement projects that may be included in a recommended package for funding. To inform the Steering Committee’s project/package selection, the following evaluation criteria was developed. Criteria were applied on one-page summary forms for each potential project package alternative.

**CRITERIA (see attached descriptions for rating criteria)**

**1. Flow Improvement is Reliable and Manageable -** There is certainty in instream flow quantity improvement, timing and location for each project. Outputs can be managed or adjusted on a real-time basis to achieve instream target flows.

**2. Flow Improvement is Detectable and Protectable -** Instream flow quantity, location and timing produced by project can be quantified . Resultant measurable flow output can be identified for instream regulation and protection.

**3. Flow Magnitude/Flow Improvement is Necessary to Meet Target Flow -** Instream flow produced by project is required in order to achieve target flows. Alternative will not meet target flows if project is not included in package, considering escalators that increase the value or makes more certain the flow outputs from other projects.

**4. Water Source Reliability -** Annual/seasonal assurance that project source water would be available in order to reliably provide instream flow benefits.

**5. Secondary Project Benefits -** Identify secondary benefits such as: Groundwater recharge (GWR); Agriculture efficiency/flexibility (AG); Major recreation increase from improved water/fish (REC); Reduction of water litigation risk (RLR); Energy efficiency/conservation (EE).

**6. Cost -** Estimate cost of total construction, per unit (cost per cfs or AF, etc.), and annual O&M.

**7. Flow Targets Met -** Does project or combination of projects meet target instream goals.

**a.** long-term target 150/100

**b.** long/short-term hybrid target 150/100/65

|  |  |
| --- | --- |
| **CRITERIA** | **RATING/SCORING DESCRIPTIONS\*** |
| **Primary (criteria 1-3)** |
| 1. Flow reliable/ manageable | No/0: Flow outputs cannot be managed real-time to meet target instream flows |
| L/1 : Completion of significant data gathering and measurement improvements required before flow output certainty could be achieved; real-time management of flow output currently not possible |
| M/2 Improved data gathering and measurement improvements nearly complete so flow outputs can be reliable; real-time management of flow output possible in near term |
| H/3 : Real-time management of flow output quantity/timing to meet target flows |
| 2. Flow detectable/protectable | No/0: Flow outputs cannot be quantified for regulation and protection instream |
| L/1 : Completion of significant data gathering and measurement improvements required before flow outputs could be detectable for protection |
| M/2 : Improved data gathering and measurement improvements nearly complete; flow output detectability and protection expected in near term |
| H/3 : Flow output amount/location/timing can be identified and quantified for protection instream |
| 3. Flow magnitude/escalator | No/0: No direct instream flow or indirect escalator benefits |
| L/1 : Direct flow output or indirect (escalator) benefit to other projects 1 to 10cfs  |
| M/2 : Direct flow output or indirect (escalator) benefit to other projects 11 to 50cfs  |
| H/3 : Direct flow output or indirect (escalator) benefit to other projects above 50cfs  |
| 4. Water Source Reliability | No/0: Project source water needs met < than 50% of the time  |
| L/1 : Project source water needs met 50% - 75% of the time  |
| M/2 : Project source water needs met 75% - 90% of the time  |
| H/3 : Project source water needs met >90% of the time  |
| **Secondary (criteria 4)** |
| Groundwater recharge (GWR) | No/0: No anticipated benefit  |
| L/1 : Up to 10% anticipated increase in annual groundwater elevations |
| M/2 : Up to 50% anticipated increase in annual groundwater elevations |
| H/3 : Up to 100% anticipated increase in annual groundwater elevations |
| Agricultural (AG) | No/0: No anticipated benefit |
| L/1 : Up to 10% anticipated increase in agricultural values or operation efficiencies |
| M/2 : Up to 50% anticipated increase in agricultural values or operation efficiencies |
| H/3 : Up to 100% anticipated increase in agricultural values or operation efficiencies |
| Recreation (REC) | No/0: No anticipated benefit |
| L/1 : Up to 10% anticipated increase in river/reservoir recreation opportunities |
| M/2 : Up to 50% anticipated increase in river/reservoir recreation opportunities |
| H/3 : Up to 100% anticipated increase in river/reservoir recreation opportunities |
| Reduce litigation risk (RLR) | No/0: No anticipated benefit  |
| L/1 : Minor anticipated reduction of risk to future water litigation |
| M/2 : Some anticipated reduction of risk to future water litigation |
| H/3 : Major anticipated reduction of risk to future water litigation |
| Energy efficiency/conservation (EE) | No/0: No anticipated benefit |
| L/1 : Up to 10% project O&M savings due to power production or dual fish/ag use |
| M/2 : Up to 50% project O&M savings due to power production or dual fish/ag use |
| H/3 : Up to 100% project O&M savings due to power production or dual fish/ag use |

\* Note: If pairing team is unable to estimate benefits using the “10-50-100 categories”, projects could be rated relative to one another.