

SPAC Discussion Guide: Habitat for Critical Species

The intention of today's discussion is to review critical habitat issues and identify strategies the SPAC may want to recommend. Many habitat issues and strategies have been mentioned in previous SPAC discussions, as they overlap with floodplains, water quantity, water quality and many other issues. Today we want to focus on some habitat issues that may not be addressed through other issues, and that have diverse perspectives from SPAC members.

The key habitat issues that have been identified for further discussion include the following:

- Fish passage through Mill Creek-
- Fish passage at Nursery Bridge Dam
- Providing sufficient flow below Milton Freewater in the mainstem and in the Touchet Basin
- Floodplain reconnection below Milton-Freewater on the mainstem and in the Touchet Basin
- Finding a remedy to the SF WW cabin access road problem
- Little Walla Walla River flow issues

The intention of today's discussion is for the SPAC to have an open discussion about each issue with the goal to identify, refine, and eventually agree to a recommended strategy or suite of strategies for each issue.

Discussion Questions:

- Do SPAC members have additional challenges, desired outcomes, or potential strategies to add?
- Are the recommended outcomes and strategies to get there accurately described?
- Which strategies do you prefer, short-term or long-term, or a mix of both?
 - Does opting for your preferred strategies change or preclude other strategies listed?

1. Fish Passage through Mill Creek

Background & Challenges

Bennington Diversion Dam

- Diversions from Mill Creek to Bennington Lake greater than 30cfs are unscreened and fish get into the lake.
- The current Bennington diversion dam needs an updated fish ladder and screen to be fish friendly.
 - Updating the fish screen and diversion dam is expensive.
- WDFW is currently diverting flow to Bennington Lake to support fishable rainbow trout population and there is concern by NOAA that this may have a negative impact on critical species in Mill Creek.
- The current impoundment structure blocks bedload and sediment deposit, contributing to channelization and undercutting.

Engineered Channel Section of Mill Creek

- There are additional passage issues in Mill Creek through the weired and concrete channel portions of the stream
- CTUIR, SRSRB, WDFW, and the TSS have regular design meetings for current and planned fish passage work utilizing state SRFB and FBRB funding (Mill Creek is the regional priority FBRB watershed with commitments there to continue work), CTUIR accord funding and WDFW state BPA funding
- Passage at Gose Street is still a problem for fish.
 - A passage project was completed in the 2000's and is now an emergency fix to be addressed since the 2020 flooding.
 - A short-term fix is planned for early 2021.

- A longer-term fix would include wider bridge replacement (wider) and floodplain connection above and below to decrease stream power and incision.

Recommended Outcomes

- Unimpeded access past Bennington Diversion Dam, Mill Creek Diversion Dam, and Gose Street Bridge at all flow levels for all critical species.

Strategies

- Improve fish passage at Bennington Diversion Dam.
 - Complete Bennington diversion dam or ladder passage improvements.
 - Note that improvement is in the design stage now.
- Implement Mill Creek General Investigation Study action related to threshold of diversion to Bennington Lake.
 - Alter threshold for diversions to Bennington Lake and raise levee to accommodate up to 3,700 cfs.
- Consider recreational flow diversions to Bennington Lake and their impact on critical fish species.
- Develop an operational strategy for Bennington Lake releases that benefits instream flow.
- Complete low flow channel designs for wiered and concrete sections of Mill Creek.
- Permanent fix for Gose Street.

Roadblocks

- ACOE policies
- Funding

2. Fish Passage at Nursery Bridge Dam

Background & Challenges

- Nursery Bridge is the biggest dam on the Walla Walla River.
 - Dam results in downstream channelization.
 - There are previous failed efforts to improve fish passage at the Dam.
 - The dam and hydraulically controlled channel conditions directly impact channel degradation and incision, water temperature, and loss of stream flow (extreme seepage).
- The 2020 floods caused further damage to fish passage structure.
- Lack of progress in addressing the conditions in the flood control project reach is creating an increasing “fish restoration bottleneck” for critical species.

Recommended Outcomes

- Unimpeded access past Nursery Bridge at all flow levels for all critical species.

Strategies

- Organize stakeholders and arrange formal agreement (memorandum of understanding) to construct fish passage rectification at the Nursery Bridge drop structure.
- Complete designs to ensure reliable fish passage at the Nursery Bridge drop structure.
- Obtain regulatory clearance and funding to rectify fish passage.
- Construct fish passage rectification design at Nursery Bridge.

Roadblocks

- ACOE policies

- Funding

3. Providing Sufficient Flow in the mainstem (below Milton-Freewater) and Touchet River

Background & Challenges

- CTUIR’s flow targets from **Stillwater report** are the minimum required for species recovery.

Sub-Basin	Reach	Minimum flow (cfs) by month											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Walla Walla River	Below Touchet River	190	237	268	320	398	561	735	529	313	183	163	170
Mill Creek	Below City of Walla Walla	46	55	64	74	88	104	149	110	72	52	45	45
Touchet River	Below Coppei Creek	48	64	82	102	152	212	236	157	64	36	26	33

Recommended Outcomes

- Ensure sufficient streamflows that address flow and quality to sustain critical species.
- Ensure that channel formation and maintenance flows are incorporated into the hydrograph goals

Strategies

- Senior Water Right Acquisitions- leases and purchases
- Off-Stream Water Storage
- Managed Aquifer Recharge to Support instream flows
- Water Management: irrigation efficiencies- diversion, conveyance and on farm
- Source Substitution: conjunctive use with GW where appropriate (this is separate from, source switches with pumped Columbia River water or stored water from a large reservoir which are being considered in the bi-state flow study)

4. Floodplain Reconnection in the Mainstem (below Milton-Freewater) and Touchet River

Background & Challenges

- **Basin Wide**
 - Currently at least 75-80% of streams are channelized.
 - Development in floodplain threatens riparian function.
 - CTUIR stated goal: Restore the Walla Walla River channel within the 5-mile Milton-Freewater Levee Project to improve floodplain-riverine processes and stop channel incision, enhance fish passage and rearing habitat, and decrease surface water seepage while having no deleterious impact to flood risk management.
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- **Walla Walla Mainstem below Milton-Freewater**
 - WWBWC has led initial designs and concepts setbacks within 7 miles of municipal levee system.
 - Gravel pit owners are willing to consider levee setback and buyout.
 - There has been a compromised solution to allow vegetation along lower half of levee system.

- In addition to reconnecting floodplains, setting the levees back will also allow establishing riparian vegetation and the development of more diverse, productive fish habitat.
- **Lower Touchet (Downstream of Coppei confluence to mouth)**
 - Low functioning floodplain habitat.

Recommended Outcomes

- Maximize achieving natural ecologically functioning floodplain.
- Naturalize channelized streams as much as possible.
- Protect current undeveloped floodplain from development.
- Discuss and review impacts of invasive species and associated habitat.

Strategies

- Habitat Restoration Projects
 - Levee setback projects through Milton Freewater.
 - Reconnect floodplain below Milton Freewater on the mainstem.
 - Continue CREP leases.
 - Riparian restoration.
 - Eliminate hardening of channels moving forward and remove existing structures
 - Use bioengineering approaches to improve channel complexity, channelization and floodplain connection
 - Identify maximum % for achieving natural floodplain function (e.g. fixing broken reaches, levee setbacks, increasing channel complexities.)
 - E.g. Channelized stream reduction by 25-50%
 - Identify % for achieving healthy/natural floodplain function.
- Policy Changes
 - Protect current undeveloped floodplain from development.
 - ACOE policy changes.
 - Ability to adopt local variances for levy removal and nonstructural remedies.

Roadblocks

- ACOE policies make floodplain reconnection difficult in levied reaches.
- Hazardous materials in leveed reach in Milton Freewater.
- Landowner cooperation.
- Funding.

5. South Fork Walla Walla River Road Cabin Access Challenge

Background & Challenges

- Legacy cabins in upper Walla Walla River accessed by road along the South Fork which routinely washes out in high flow events.
- Private citizens “fixes” to the road include heavy equipment in the Creek (or driving through the stream) which damages fish habitat.

Recommended Outcomes

- An access solution that protects riparian and instream habitat in the SF Walla Walla River

Strategies

- New USFS easement for rerouting the road.
- Educate private property owners on how to lessen/avoid impacts associated with road maintenance.

6. Little Walla Walla River Flow Issues

Background & Challenges

- Little Walla Walla River (LWWR) is a historic distributary of the Walla Walla River.
 - Currently fish are screened out of the LWWR and migrate up the mainstem.
- 2000 Civil Penalty Settlement Agreement required that Walla Walla River Irrigation District (WWRID) and Hudson Bay leave a minimum of 25 CFS of the available summer water in the Tualum Branch which is the preferred upstream route for fish.
 - OWRD regulates for the 25 CFS based on Conserved Water Applications and seasonal regulation; however, there are some challenges with regulation and some senior irrigators (1880s) not being fully satisfied.
 - 25 CFS being left in the Tualum Branch resulted in less water for irrigators.
 - OWRD allows only enough water to be diverted to LWWR to meet the senior demand in the WWRID. Any water in the branches of the Little Walla Walla River beyond WWRID boundaries is considered “spill” and is turned to junior appropriators. This regulation has reduced flows in the LWWR by approximately 40%.
- Decreased flows and irrigation efficiency projects in the rocks district in WWRID have contributed to the significant decline in the shallow alluvial aquifer and spring flows, establishment of invasive plant species as well as inadequate water supply for senior irrigators.

Additional Issues & Considerations:

- WWRID is hopeful that the Walla Walla 2050 planning process will lead to increased awareness of the historical and biological value of the LWWR system and make protecting the resource a priority for stakeholders.
- The WWRID is hopeful that the regulation issues in Milton Freewater will be addressed and resolved by OWRD.
- LWWR Group hopes to:
 - Integrate instream and out of stream floodplain restoration.
 - Increase natural percolation and infiltration.
 - Restore native species and healthy riparian areas.
 - Remove invasive plants like Reed Canary grass.

Recommended Outcomes

- Increased year-round flow in the LWW or increased winter flow in the LWWR
- WWRID is hopeful that implementation of a big water project through the Bi-State Flow Study will result in the portion of the 25 CFS that is currently in the Tualum Branch, and is not protected under a conserved water application, will be returned to the LWWR.

Strategies

- *Specific strategies cannot be developed until there is agreement on the recommended outcomes.*