### Analysis of Strategies by DFC

The tables below show which strategy meet each of the Desired Future Conditions (DFCs).

#### DFC: Achieve healthy, natural floodplain function.

<table>
<thead>
<tr>
<th>TIER</th>
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</table>
| 1    | - Water rights acquisitions (short-term, long-term, and split season) to restore streamflows.  
- Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
- Expand managed aquifer recharge (MAR)  
- Increase coordination and enforcement of floodplain and riparian regulations and management between Counties and State water management entities  
- Floodplain reconnection and restore channel complexity Basin-wide to reduce flood risk and improve habitat  
- Protect fish passage at Nursery Bridge and implement levee setback projects upstream and downstream of Milton Freewater  
- Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 2    | - Decrease municipal surface water diversion or substitute for basalt wells during low flow periods  
- Conduct education and outreach related to local flood response plans with specific guidance for emergency response procedures to better protect floodplain function and riparian health  
- Update channel migration zone mapping & update Flood Inundation Maps  
- Invest in outreach to community members, elected officials, planning departments and the real estate community related to stream and riparian health  
- Restore and protect riparian habitat along tributaries, small stream and the Walla Walla River Basin wide |
| 3    | - Restore flushing flows to Yellowhawk  
- Implement Mill Creek GI action related to threshold of diversion to Bennington Lake  
- Conduct targeted outreach to urban and suburban landowners located on small streams related to stream and riparian health  
- Conduct outreach related to levee setback projects through Dayton and Waitsburg |

#### DFC: Increase access to quality habitat by addressing human-caused fish passage barriers.

<table>
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</table>
| 1    | - Floodplain reconnection and restore channel complexity Basin-wide to reduce flood risk and improve habitat  
- Protect fish passage at Nursery Bridge and implement levee setback projects upstream and downstream of Milton Freewater  
- Improve fish passage at Bennington Diversion Dam  
- Improve fish passage at Gose Street long term  
- Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 2    | - Conduct fish status, trends and distribution monitoring |
### DFC: Increase access to quality habitat by addressing human-caused fish passage barriers.

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</table>
| 3    | • Provide access to cabins on private land in the South Fork Walla Walla with minimal impact to the river  
      • Improve flow and timing of fish passage through the Hofer Dam fishway. |

### DFC: Increase Riparian Cover

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| 1    | • Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
      • Floodplain reconnection and restore channel complexity Basin-wide to reduce flood risk and improve habitat |
| 2    | • Invest in outreach to community members, elected officials, planning departments and the real estate community related to stream and riparian health  
      • Restore and protect riparian habitat along tributaries, small stream and the Walla Walla River Basin wide |
| 3    | • Continue to support and enforce existing rules and regulations under Stormwater Management Plan and Critical Areas Ordinance  
      • Conduct targeted outreach to urban and suburban landowners located on small streams related to stream and riparian health |

### DFC: Increase river channel complexity and naturalize channelized streams

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| 1    | • Water rights acquisitions (short-term, long-term, and split season) to restore streamflows.  
      • Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
      • Floodplain reconnection and restore channel complexity Basin-wide to reduce flood risk and improve habitat  
      • Protect fish passage at Nursery Bridge and implement levee setback projects upstream and downstream of Milton Freewater  
      • Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 3    | • Provide access to cabins on private land in the South Fork Walla Walla with minimal impact to the river. |

### DFC: Reduced flood risk for people and cities

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</table>
| 1    | • Expand managed aquifer recharge (MAR)  
      • Increase coordination and enforcement of floodplain and riparian regulations and management between Counties and State water management entities  
      • Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat |
| 2    | • Improve forecasting system for high-flow and flood events to help water managers make real-time and fast decisions  
      • Conduct education and outreach related to local flood response plans with specific guidance for emergency response procedures to better protect floodplain function and riparian health  
      • Update channel migration zone mapping & update Flood Inundation Maps  
      • Invest in outreach to community members, elected officials, planning departments and the real estate community related to stream and riparian health  
      • Restore and protect riparian habitat along tributaries, small stream and the Walla Walla River Basin wide |
### DFC: Restore a natural sediment transport regime

<table>
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| 1    | • Implement conservation tillage and soil erosion BMPs to decrease nonpoint source pollution  
• Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
• Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat  
• Protect fish passage at Nursery Bridge and implement levee setback projects upstream and downstream of Milton Freewater  
• Improve fish passage at Gose Street long term  
• Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 3    | • Implement erosion control on roadside cut banks  
• Restore flushing flows to Yellowhawk  
• Basin-wide assessment of sediment and bedload management build-up  
• Improve flow and timing of fish passage through the Hofer Dam fishway. |

### DFC: Meet TMDL targets

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</table>
| 1    | • Implement conservation tillage and soil erosion BMPs to decrease nonpoint source pollution  
• Increase infiltration of stormwater rather than discharge to surface water bodies and improve coordination and management.  
• Upgrade Dayton wastewater treatment plant to meet Ecology requirements and watershed community environmental goals.  
• Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
• Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat  
• Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 2    | • Incentivize hook up to City sewer systems in lieu of septic systems where feasible.  
• Conduct outreach to agricultural entities and other landowners to provide tools around livestock BMPs, pesticide use BMPs.  
• Encourage Low Impact Development (LID) and urban lawn BMPs in urban areas and small towns.  
• Decrease municipal surface water diversion or substitute for basalt wells during low flow periods  
• Implement on-farm BMPs for water retention and efficiency  
• Conduct systematic surface water quality monitoring to provide baseline data and inform management  
• Restore and protect riparian habitat along tributaries, small stream and the Walla Walla River Basin wide |
## DFC: Create climate resilience

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</table>
| 1    | - Water rights acquisitions (short-term, long-term, and split season) to restore streamflows.  
- Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
- Expand managed aquifer recharge (MAR)  
- Expand and support municipal ASR to maintain groundwater quality and capacity  
- Expand and fund streamflow gauges throughout the Basin  
- Develop an overarching monitoring strategy and adaptive management plan for comprehensive, fish, habitat and water to inform actions and evaluate effectiveness  
- Increase coordination and enforcement of floodplain and riparian regulations and management between Counties and State water management entities  
- Address legal implications of Bi-State surface water management and protection instream flow across the state border  
- Improve coordination and response to drought management Basin-wide  
- Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat |
| 2    | - Manage forested portion of the Walla Walla watershed to maximize snow/water retention and inundation  
- Substitute small scale off-channel stored water for surface water diversions where possible  
- Decrease municipal surface water diversion or substitute for basalt wells during low flow periods  
- Strategic piping of irrigation ditches  
- Implement municipal water conservation strategies such as detecting and repairing leaks and implementing tiered water rates, cash for grass, toilet rebates, decreasing irrigated landscapes and planting native species.  
- Develop detailed forest management plan for water supply in the upper Mill Creek Watershed  
- Improve forecasting system for high-flow and flood events to help water managers make real-time and fast decisions  
- Conduct education and outreach related to local flood response plans with specific guidance for emergency response procedures to better protect floodplain function and riparian health  
- Update channel migration zone mapping & update Flood Inundation Maps  
- Invest in outreach to community members, elected officials, planning departments and the real estate community related to stream and riparian health |
| 3    | - Provide incentives and assistance for converting from higher demand water use crops to lower water demand crops.  
- Expand emergency municipal interties to improve reliability.  
- Engage on salmonid recovery related policy as identified in Salmon Recovery Plans and State salmon recovery strategies  
- Conduct targeted outreach to urban and suburban landowners located on small streams related to stream and riparian health |
## DFC: Stabilize aquifer levels to support water resources and water for people and farms.

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| 1    | • Increase infiltration of stormwater rather than discharge to surface water bodies and improve coordination and management.  
     | • Water rights acquisitions (short-term, long-term, and split season) to restore streamflows.  
     | • Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
     | • Expand managed aquifer recharge (MAR)  
     | • Expand and support municipal ASR to maintain groundwater quality and capacity  
     | • Improve coordination and response to drought management Basin-wide  
     | • Additional Bi-State coordination on groundwater regulation  
     | • Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat |
| 2    | • Manage forested portion of the Walla Walla watershed to maximize snow/water retention and inundation  
     | • Strategic piping of irrigation ditches  
     | • Implement on-farm BMPs for water retention and efficiency  
     | • Improve on-farm irrigation application efficiency. |
| 3    | • Implement soil and water quality testing for MAR sites  
     | • Implement incentives to encourage rural developments to annex. |

## DFC: Increased natural infiltration, acreage, and duration of inundation

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| 1    | • Increase infiltration of stormwater rather than discharge to surface water bodies and improve coordination and management.  
     | • Direct additional winter flow down the Little Walla Walla River to support alluvial aquifer recharge and stream function.  
     | • Expand managed aquifer recharge (MAR)  
     | • Increase coordination and enforcement of floodplain and riparian regulations and management between Counties and State water management entities  
     | • Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat  
     | • Improve fish passage and habitat conditions in weired and concrete channel sections of flood control project in Mill Creek |
| 2    | • Conduct education and outreach related to local flood response plans with specific guidance for emergency response procedures to better protect floodplain function and riparian health  
     | • Restore and protect riparian habitat along tributaries, small stream and the Walla Walla River Basin wide |
- Restore flushing flows to Yellowhawk
- Implement soil and water quality testing for MAR sites
- Conduct outreach related to levee setback projects through Dayton and Waitsburg

### DFC: Enhance instream flows to meet instream flow targets for critical species

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</table>
| 1    | Upgrade Dayton wastewater treatment plant to meet Ecology requirements and watershed community environmental goals.  
      | Water rights acquisitions (short-term, long-term, and split season) to restore streamflows.  
      | Expand managed aquifer recharge (MAR)  
      | Expand and support municipal ASR to maintain groundwater quality and capacity  
      | Improve water use metering and reporting programs in WA and OR by installing telemetry and improving data use by agencies and water users.  
      | Expand and fund streamflow gauges throughout the Basin  
      | Address legal implications of Bi-State surface water management and protection instream flow across the state border  
      | Improve coordination and response to drought management Basin-wide  
      | Floodplain reconnection and restore channel complexity Basin wide to reduce flood risk and improve habitat |
| 2    | Manage forested portion of the Walla Walla watershed to maximize snow/water retention and inundation  
      | Substitute small scale off-channel stored water for surface water diversions where possible  
      | Protect saved water from new and completed Irrigation conveyance efficiency projects instream  
      | Decrease municipal surface water diversion or substitute for basalt wells during low flow periods  
      | Strategic piping of irrigation ditches  
      | Implement municipal water conservation strategies such as detecting and repairing leaks and implementing tiered water rates, cash for grass, toilet rebates, decreasing irrigated landscapes and planting native species.  
      | Implement on-farm BMPs for water retention and efficiency  
      | Improve on-farm irrigation application efficiency.  
      | Conduct fish status, trends and distribution monitoring  
      | Improve water right regulation and enforcement  
      | Enhancement of critical fisheries |
| 3    | Restore flushing flows to Yellowhawk  
      | Review WDFW diversion to Bennington Lake to ensure that streamflow is not impaired.  
      | Strategically plan to supply water to development outside city limits. Keep development small and compact in urban growth areas and develop associated incentives.  
      | Provide incentives and assistance for converting from higher demand water use crops to lower water demand crops.  
      | Engage on salmonid recovery related policy as identified in Salmon Recovery Plans and State salmon recovery strategies |
- Improve flow and timing of fish passage through the Hofer Dam fishway.

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**DFC: Increase monitoring to support better water resource management and adaptive management**

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| **1** | Expand groundwater and Hyporheic zone Monitoring to show seasonal hydraulic connection to adjacent river and creek.  
Improve water use metering and reporting programs in WA and OR- by installing telemetry and improving data use by agencies and water users.  
Expand and fund streamflow gauges throughout the Basin  
Develop an overarching monitoring strategy and adaptive management plan for comprehensive, fish, habitat and water to inform actions and evaluate effectiveness  
Address legal implications of Bi-State surface water management and protection instream flow across the state border  
Additional Bi-State coordination on groundwater regulation |
| **2** | Implement municipal water conservation strategies such as detecting and repairing leaks and implementing tiered water rates, cash for grass, toilet rebates, decreasing irrigated landscapes and planting native species.  
Improve forecasting system for high-flow and flood events to help water managers make real-time and fast decisions  
Conduct systematic surface water quality monitoring to provide baseline data and inform management  
Conduct fish status, trends, and distribution monitoring  
Conduct habitat status and trends monitoring  
Review existing exempt well mitigation program WA; Consider expansion of mitigation program for other uses in WA  
Enhancement of critical fisheries |
| **3** | Strategically plan to supply water to development outside city limits. Keep development small and compact in urban growth areas and develop associated incentives.  
Expand stormwater monitoring  
Implement soil and water quality testing for MAR sites  
Study and analyze feasibility and benefits of flow enhancement in the LWWR  
Improve flow and timing of fish passage through the Hofer Dam fishway. |