

	A	B	C	D	E	F	G	H
1	RTT priorities for reaches and actions for implementing habitat actions (13 March 2009)							
2		Watershed or Reach	Watershed Category ¹	Priority Action Type or Specific Action ²	Tier Level ³	Priority level ⁴		Comments
3	Subbasin					Restoration	Protection	
4	Wenatchee	Nason	2	Restore natural channel processes	1	1		Sidechannel and/or offchannel connection or other actions that address causal mechanisms for limiting factors and maintain processes that promote the retention and recruitment of large woody debris. Feasibility of implementing priority actions is very low in the first 3 years. Need to focus initial effort on making progress with DOT and the Railroad and putting together a restoration plan. Instream structures should not be implemented until progress is made with restoring natural processes and addressing the causes of limiting factors.
5	Wenatchee	Upper Wenatchee (Lake to Tumwater Canyon)	1	Increase LWD retention and recruitment to increase complexity in a manner that is consistent with natural channel structure and function.	1	2		Need an assessment and implementation plan to determine appropriate locations and prescriptions. Preference for actions that enhance natural accumulations of LWD.
6	Wenatchee	Icicle Creek	2	Assess passage at boulder field, reconfigure Icicle/City of Leavenworth diversions	NR-1	3		If the boulder field is currently inhibiting passage due to anthropogenic effects, then take measures to improve upstream adult passage over the boulder field. <i>(EDT and ICTRT intrinsic potential model predict very large increases in capacity for steelhead with access to the upper Icicle).</i>
7	Wenatchee	Peshastin	2	Geomorphic assessment / Instream flow / Channel complexity	1	4		The geomorphic assessment needs to include the entire area impacted by the highway (at least to Tronson Ck confluence). After the assessment is completed, then develop a restoration plan that includes restoration of natural processes where possible, normative flow levels, migration corridors, and holding and rearing habitat in lower Peshastin Creek.
8	Wenatchee	Lower Mainstem (Mouth to Tumwater Canyon)	2	Restore natural channel processes	1	5		Sidechannel and/or offchannel connection or other actions that address causal mechanisms for limiting factors. Some priority areas include Cashmere Ponds, above Sleepy Hollow Bridge, Monitor Flats; need to re-evaluate potential benefits of other CMZ sites in the Lower Wenatchee.
9	Wenatchee	Wenatchee Subbasin Wide	NA	Nutrient Enhancement	2	6		Develop a nutrient enhancement plan in coordination with the WHSC, WQSC, and ISEMP, then implement a nutrient enhancement project in appropriate areas using hatchery carcasses and / or carcass analogs.
10	Wenatchee	Nason	2	Land Protection, Acquisition or Lease	1		1	May need 1-2 yr to assess and prioritize risks and opportunities. Combine USBR assessment information with lower 4.6 miles and determine priority areas for protection based on biological function and risk of development.
11	Wenatchee	White River	1	Land Protection, Acquisition or Lease	1		1	At risk areas are in the lower reach where there is no spawning and very limited rearing. The majority of primary spawning and rearing areas are already protected.
12	Wenatchee	Upper Wenatchee	1	Land Protection, Acquisition or Lease	1		1	Select opportunities that protect or allow for sidechannel reconnection would be higher priority.
13	Wenatchee	Chiwawa	1	Land Protection, Acquisition or Lease	1		1	Chikamin Flats, the majority of other private ownership is in the lower 4 miles that is primarily a migration corridor and not as high a priority. There could be select areas of high priority, but without an assessment we are not aware of those opportunities.
14	Wenatchee	Lower Mainstem	2	Land Protection, Acquisition or Lease	1		5	Select opportunities that protect or allow for sidechannel reconnection would be higher priority.
15	Wenatchee	Peshastin	2	Land Protection, Acquisition or Lease	1		6	Select opportunities that protect or allow for sidechannel reconnection would be higher priority.
16	Wenatchee	Wenatchee Subbasin wide	NA	Instream Flow	1 or 2	NR	NR	Strategic acquisition of water for instream benefits. Priority level depends on quantity and location.
17	Wenatchee	Subbasin wide	NA	Riparian Habitat	1 or 2	NR	NR	In general it needs to be done in association with other primary projects, need to be sure it is done in areas where other processes are functioning and restoration has a high likelihood of success. Priority level of stand alone projects depends on the quantity and location.

	A	B	C	D	E	F	G	H
1	RTT priorities for reaches and actions for implementing habitat actions (13 March 2009)							
2		Watershed or Reach	Watershed Category ¹	Priority Action Type or Specific Action ²	Tier Level ³	Priority level ⁴		Comments
3	Subbasin					Restoration	Protection	
18	Entiat	Stillwater Reach (16-25)	1	Restore natural channel processes	1	1		Restoration of channel migration processes such as sidechannel and offchannel connection or other actions that address causal mechanisms for limiting factors and maintain natural processes and promote the retention and recruitment of large woody debris.
19	Entiat	Lower Entiat (0-10)	2	Restore natural channel processes	1	2		Restoration of channel migration processes such as sidechannel and offchannel connection or other actions that address causal mechanisms for limiting factors and maintain natural processes and promote the retention and recruitment of large woody debris.
20	Entiat	Entiat Subbasin wide	NA	Treat or relocate roads.	1	3		The objective is to reduce artificially high rates of sediment input and restore other upland watershed processes such as runoff patterns and LWD recruitment.
21	Entiat	Stillwater Reach (16-25)	1	Increase LWD retention and recruitment to increase complexity in a manor that is consistent with natural channel structure and function.	1	4		Should be appropriately sited and scaled and numerically consistent with the Entiat watershed DIP and the ISEMP monitoring design.
22	Entiat	Lower Entiat (0-10)	2	Instream structures designed to form and maintain large pools, such as appropriately sited channel spanning cross vanes.	1	5		Large pools are defined in Hillman (2006) and should be numerically consistent with the Entiat watershed DIP and the ISEMP monitoring design. Other structures, such as large ELJs, could address the limiting factor (lack of primary pool habitat) but may have considerably higher risk of failure due to ice flows, etc. in the lower 16 miles and may not be appropriate in many locations along the main channel.
23	Entiat	Lower Entiat (0-10)	2	Large woody debris, log structure or log jam, rootwads	NR-2	6		Moderate sized structures would need to be strategically placed in lower energy areas such as sidechannels. Small wood structures along the margin of the main channel would not be a priority, particularly when existing riparian vegetation would need to be cleared in order to install them.
24	Entiat	Entiat Subbasin wide	NA	Nutrient Enhancement	2	7		Develop a nutrient enhancement plan in coordination with the EHSC, WDOE, ISEMP, and others then implement a nutrient enhancement project using hatchery carcasses and / or carcass analogs.
25	Entiat	Lower Entiat (10-16)	2	None	NR	NR	NR	In general, reserve for a reference reach for the ISEMP project. Certain actions that contribute to habitat restoration or species survival may be appropriate, if they don't interfere with the ISEMP study design.
26	Entiat	Stillwater Reach (16-25)	1	Land Protection, Acquisition or Lease	1		1	Large pristine areas would be the highest priority but also areas that have some degradation and an opportunity to conduct restoration activities.
27	Entiat	Lower Entiat (0-16)	2	Land Protection, Acquisition or Lease	1		2	Select opportunities that protect large intact riparian areas or allow for sidechannel reconnection would be a priority.
28	Entiat	Entiat Subbasin wide	NA	Instream Flow	1 or 2	NR	NR	Strategic acquisition of water for instream benefits. Priority level depends on quantity and location.
29	Entiat	Entiat Subbasin wide	NA	Riparian Habitat	1 or 2	NR	NR	In general it needs to be done in association with other primary projects, need to be sure it is done in areas where other processes are functioning and restoration has a high likelihood of success. Priority level of stand alone projects depends on the quantity and location. The Entiat River Watershed Riparian Areas Prioritization Project (GeoEngineers 2007) offers a useful guide for areas that are likely to be a priority.

	A	B	C	D	E	F	G	H
1	RTT priorities for reaches and actions for implementing habitat actions (13 March 2009)							
2		Watershed or Reach	Watershed Category ¹	Priority Action Type or Specific Action ²	Tier Level ³	Priority level ⁴		Comments
3	Subbasin					Restoration	Protection	
30	Methow	Middle Methow (Weeman to Winthrop)	2	Restore natural channel processes.	1	1		Sidechannel and/or offchannel connection or other actions that address causal mechanisms for limiting factors and maintain processes that promote the retention and recruitment of large woody debris. Implementation of the Big Valley Reach Assessment. Hancock Creek also has enhancement opportunities that are good early implementation options.
31	Methow	Lower Twisp	2	Increase instream flow; restore natural channel processes.	1	2		MVID west efficiencies to increase instream flow. Where possible remove dikes and levees and manage roads to allow for natural channel migration. These actions will likely have additional benefits to other limiting factors such as water temperatures.
32	Methow	Middle Methow (Winthrop to Carlton)	2	Restore natural channel processes.	1	3		Pending the M2 reach assessment and the assessment from Twisp to Carlton. Sidechannel and/or offchannel connection or other actions that address causal mechanisms for limiting factors and maintain processes that promote the retention and recruitment of large woody debris.
33	Methow	Lower Chewuch	2	Instream Flow	1	4		Still may be some opportunities with the Chewuch and Fulton irrigation withdrawals (I.e. maintaining the ongoing agreement with WA Rivers Conservancy). These actions will likely have additional benefits to other limiting factors such as water temperatures.
34	Methow	Lower Chewuch	2	Restore natural channel processes.	1	5		Sidechannel and/or offchannel connection or other actions that address causal mechanisms for limiting factors and maintain processes that promote the retention and recruitment of large woody debris. Need to develop a watershed restoration strategy utilizing the PWI assessment and the USBR geomorphic assessment. These actions will have additional benefits to other limiting factors such as water temperatures.
35	Methow	Methow Subbasin Wide		Treat or relocate roads.	NR-1	6		The objective is to reduce artificially high rates of sediment input and restore other upland watershed processes such as runoff patterns and LWD recruitment.
36	Methow	Beaver	2	Instream Flow	1	7		Now that structural passage barriers are nearly complete, efforts should focus on guaranteed water in the creek and connection with the Methow River. Other protection and restoration measures that contribute to increasing or maintaining instream flow would also be a priority.
37	Methow	Methow Subbasin Wide		Nutrient Enhancement	2	8		Develop a nutrient enhancement plan in coordination with monitoring efforts and the MRC. Then implement in appropriate areas (based on monitoring results) using hatchery carcasses and/or carcass analogs.
38	Methow	Lower Twisp	2	Land Protection, Acquisition or Lease	1		1	Lower 12 miles, 4 reaches were rated the same due to similar potential for loss of important spawning and rearing areas.
39	Methow	Middle Methow (Weeman to Winthrop)	2	Land Protection, Acquisition or Lease	1		1	4 reaches were rated the same due to similar potential for loss of important spawning and rearing areas.
40	Methow	Upper Methow	2	Land Protection, Acquisition or Lease	1		1	4 reaches were rated the same due to similar potential for loss of important spawning and rearing areas.
41	Methow	Lower Chewuch	2	Land Protection, Acquisition or Lease	1		1	4 reaches were rated the same due to similar potential for loss of important spawning and rearing areas.
42	Methow	Middle Methow (Winthrop to Carlton)	2	Land Protection, Acquisition or Lease	1		5	Not rated as high due to less relative fish use. There may still be critical areas within this reach and may be important in conjunction with restoration actions.
43	Methow	Methow Subbasin wide		Riparian Habitat	NR	NR	NR	In general it needs to be done in association with other primary projects, need to be sure it is done in areas where processes are functioning and restoration has a high likelihood of success. Priority level of stand alone projects depends on the quantity and location.
44	Methow	Methow Subbasin wide		Instream Flow	NR	NR	NR	Strategic acquisition of water for instream benefits. Priority level depends on quantity and location.

	A	B	C	D	E	F	G	H
1	RTT priorities for reaches and actions for implementing habitat actions (13 March 2009)							
2		Watershed or Reach	Watershed Category ¹	Priority Action Type or Specific Action ²	Tier Level ³	Priority level ⁴		Comments
3	Subbasin					Restoration	Protection	
45	Okanogan	Omak Creek	2	Passage	1	1		Mission Falls
46	Okanogan	Antoine Creek	3	Instream Flow and habitat access, barrier removals	NR-1	2		Long term water lease, barrier removals,
47	Okanogan	Loup Loup Creek	3	Instream Flow and habitat access, barrier removals	1	3		Change in water diversion, remove barrier culverts
48	Okanogan	Okanogan Subbasin wide		Treat or relocate roads.	NR-2	4		The objective is to reduce artificially high rates of sediment input and restore other upland watershed processes such as runoff patterns and LWD recruitment. Many of the known high priority areas in Omak Creek have been treated. Other problem areas should be addressed as they are discovered.
49	Okanogan	Upper US Okanogan (US Border to Similkameen Confluence)	2	Temperature, side channel habitat	NR-1	5		Develop detailed reach assessment, construct control structures to maintain flows on both side of Driscoll Island, determine conceptual designs to address thermal pollution expelled from Osoyoos Lake.
50	Okanogan	Lower Middle US Okanogan (Siwash Creek to Salmon Creek)	2	Enhancement / development of coldwater refugia and off-channel habitats	2	6		Develop off channel coldwater refugia to take advantage of spawning habitat production.
51	Okanogan	Salmon Creek	2	Land Protection, Acquisition or Lease	NR-1		1	Protection above OID diversion
52	Okanogan	Similkameen River (Enloe Dam To Confluence with Okanogan)	2	Land Protection, Acquisition or Lease	3		2	Lower 3 miles: Conservation easements and acquisitions that are focused on the riparian, floodplain or adjacent to spawning habitats. Although originally rated a tier 3 priority, we believe it was undervalued and should be a priority.
53	Okanogan	Antoine Creek	3	Land Protection, Acquisition or Lease	NR-2		3	Land acquisition and conservation easements, possibility of 9 miles new habitat
54	Okanogan	Aeneas Creek	2	Cold water refugia	2		4	Protect cold water input, channel reconfiguration
55	Okanogan	Bonaparte Creek	4	Instream Flow and habitat access, barrier removals, sediment reduction	2		5	Protect Springs, reduce sediment through instream structures, long term water lease/water rights purchase
56	Okanogan	Lower Middle US Okanogan (Siwash Creek to Salmon Creek)	2	Land Protection, Acquisition or Lease	2		6	Protect lands adjacent to spawning areas.
57	Okanogan	Okanogan Subbasin wide	NA	Instream Flow	1 or 2	NR	NR	Strategic acquisition of water for instream benefits. Priority level depends on quantity and location.
58	Okanogan	Okanogan Subbasin wide	NA	Riparian Habitat	1 or 2	NR	NR	In general it needs to be done in association with other primary projects, need to be sure it is done in areas where other processes are functioning and restoration has a high likelihood of success. Priority level of stand alone projects depends on the quantity and location.
59	¹ Watershed Categories were taken from the RTT <i>Biological Strategy</i> (2008)							
60	² Threats and limiting factors that these Action Types and Specific Actions address can be found in appendix G of the Salmon Recovery Plan (UCSRB 2007), the RTT <i>Biological Strategy</i> (RTT 2008), and other documents such as the Detailed Implementation Plan for the Entiat Water Resource Inventory Area (WRIA) 46.							
61	³ Tier levels for Action Types and/or specific actions were established in the RTT <i>Biological Strategy</i> (2008) based on the actions identified in the Implementation Schedules of the Salmon Recovery Plan (UCSRB 2007). "NR" indicates that the action was not rated for Tier levels using the formal process established in the <i>Biological Strategy</i> (RTT 2008), the number following NR indicates a judgment call by the RTT to estimate the Tier level for this process.							
62	⁴ Priority levels were determined based on the professional judgment of the RTT for this task. It was our intention to be consistent with the general approach outlined in the RTT <i>Biological Strategy</i> , but to provide more specific guidance to Watershed Action Teams. Many other actions and reaches have been identified for habitat improvements and we recognize that those actions could also make important contributions to recovery. However, we believe that the habitat related actions outlined here are the highest priority for maintaining and contributing to the restoration of the viability of listed salmonid populations in the Upper Columbia Region.							