

**Lewis River Hydroelectric Projects Settlement Agreement
Aquatic Coordination Committee (ACC)
Meeting Agenda**

Date & Time: Thursday, March 9, 2017
9:00 a.m. – 12:00 p.m.

Place: Merwin Hydro Control Center & Lewis River Hatchery
105 Merwin Village Court
Ariel, WA 98603

Contacts: Frank Shrier: (503) 320-7423

Time	Discussion Item
9:00 a.m.	Welcome <ul style="list-style-type: none">➤ Review Agenda and ACC 2/9/17 Meeting Notes➤ Comment & Accept Agenda and 2/9/17 Meeting Notes
9:10 a.m.	Public Comment Opportunity
9:20 a.m.	2016/2017 Aquatic Fund Project Review; DECISION MEETING
10:15 a.m.	Break
10:30 a.m.	Study/Work Product Updates <ul style="list-style-type: none">○ M&E Plan Update○ H&S Plan Update○ In Lieu Workgroup Update○ Woodland Release Ponds/Permit - Status○ Acclimation Ponds – Status/set up time to revisit sites○ Merwin Upstream Passage – Status○ Swift Floating Surface Collector – Status
11:00 a.m.	Lewis River Hatchery Tour <ul style="list-style-type: none">➤ Discuss operations and how long NOR fish are being held in Lewis River Hatchery before being processed
11:45 a.m.	<ul style="list-style-type: none">➤ Next Meeting's Agenda➤ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro/hl/lr.html#
12:00 p.m.	Adjourn

Join by Phone

+1 (503) 813-5252 [Portland, Ore.]
+1 (855) 499-5252 [Toll Free]

Conference ID: 2506249

DRAFT Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
March 9, 2017
Merwin Hydro Control Center & Lewis River Hatchery Tour
Ariel, WA

ACC Participants Present (13)

Frank Shrier, PacifiCorp
Kim McCune, PacifiCorp
Chris Karchesky, PacifiCorp
Amanda Froberg, Cowlitz PUD
Eli Asher, Cowlitz Indian Tribe
Peggy Miller, WDFW (via phone)
Pat Frazier, WDFW
Aaron Roberts, WDFW
Ruth Tracy, USDA Forest Service
Bryce Michaelis, USDA Forest Service
Michelle Day, NMFS
Steve Manlow, LCFRB
Amelia Johnson, LCFRB

Guests (2)

Al Thomas, Columbian
Greg Robertson, USDA Forest Service

Calendar:

April 13, 2017	ACC Meeting	Merwin Hydro
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Assignments from March 9, 2017	Status
Shrier: Reply to Michelle Day (NMFS) regarding M&E Objective 22 comments.	Complete – 3/10/17

Assignments from February 9, 2017	Status
Robertson: Provide electronic copy of Aquatic Fund PowerPoint presentation to McCune.	Complete – 2/17/17
Frazier: Write up his list of requested monitoring needs for the 30,000 acclimation fish that will be put upstream.	Complete – 2/14/17

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp) called the meeting to order at 9:15 a.m. and reviewed the agenda. No additions to the agenda were requested.

Shrier also reviewed the February 9, 2017 meeting notes and assignments. The meeting notes were approved at 9:20 a.m. without changes.

Public Comment

None

2016/2017 Aquatic Fund Project Review; DECISION MEETING

The ACC provided written comments as more fully detailed in the attached 2016/2017 LR Aquatics Fund Evaluation Matrix, March 9, 2017 ([Attachment A](#)).

Considerable discussion took place regarding structural integrity and likelihood of project failure of the proposed mainstem project, as fully detailed in the Cowlitz Indian Tribe (CIT) comments and recommendations. While the CIT and NMFS did not approve funding the two Forest Service Aquatic Fund projects, they both stated they will not stand in the way of these projects going forward with funding. Following that there was considerable discussion about modifying the aquatic funding process in subsequent years to possibly include the following:

- What should project designs look like for future projects?
- Should 30% design level be expected at the full proposal stage?
- Should a hydraulic analysis be provided?
- Engineering stamp?
- Should project sponsors use Manual 18 guidelines?

These questions will be addressed at a future ACC meeting and will be considered for incorporation into the requirements for future proposed instream structures.

Consensus was reached at today's ACC meeting to proceed with the final Resource Project list as follows:

Project No.	Applicant	Project Title	Funding Requested	Decision
1	USDA Forest Service	Lewis River 21 – Phase 1	\$175,000 (Resource Funds)	YES
2	USDA Forest Service	Spencer Creek Alluvial Fan and Channel Rehabilitation	\$93,750 (Resource Funds)	YES

To accommodate those ACC participants not in attendance today, the Utilities are providing an additional 7-day comment period. Kim McCune (PacifiCorp) will email the decisions to all ACC members for their review as quickly as possible in order to meet the April 15, 2017 FERC filing deadline.

Study/Work Product Updates

M&E Plan Update

The M&E revised plan was submitted to the FERC February 28, 2017. Michelle Day (NMFS) indicated that her December 2016 comments to Objective 22 were not incorporated into the final. PacifiCorp apologized for the oversight and Shrier said he will investigate the matter and report back to Day.

H&S Plan Update

Future meetings have been scheduled and the subgroup is progressing toward a final 2017 Plan.

In Lieu Workgroup Update

The next scheduled meeting is March 17, 2017.

Woodland Release Ponds/Permit Status

The City of Woodland wants a sidewalk. PacifiCorp agreed to build a sidewalk when the other landowners build theirs. The City approved.

PacifiCorp remains hopeful for a 2017 summer construction schedule. DNR has yet to sign the agreement.

Acclimation Pond Update (Muddy)

USFS is working with Briana Weatherly (PacifiCorp) on the removal plan for the Muddy River site.

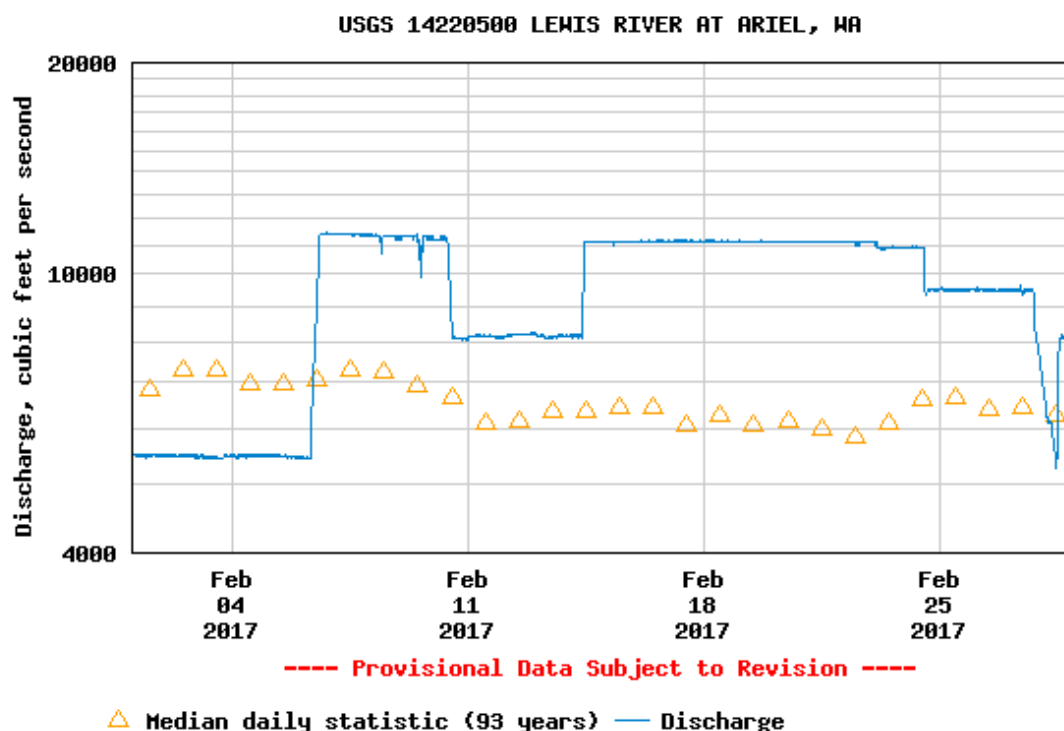
Merwin Fish Collection Facility and General Operations ([Attachment B](#))

During the month of February, a total 144 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were winter steelhead (139 - 97%) of both hatchery and wild (NOR and Blank Wire Tag) origin. All hatchery fish were given to Washington Department of Fish and Wildlife. Two (2) coastal cutthroat greater than 13-inches were captured this month. The first Lewis River spring Chinook arrived at the Merwin Trap February 23rd.

The Merwin Dam adult fish trap ran continuously through the month of February except during the scheduled outage to install equipment related to the adult trap efficiency (ATE) evaluation (February 8th through February 13th, 2017). During periods when the trap was operational, the Auxiliary Water Supply (AWS) system (which can boost attraction flow up to 400 cfs), and ladder flow remained on.

River flow below Merwin Dam fluctuated between 11,400 and cfs throughout the month of February.

Discharge, cubic feet per second



Upstream Transport ([Attachment B](#))

A total of thirty eight (38) Blank Wire Tag (BWT) winter steelhead were transported upstream above Swift Dam in February 2017. These fish combined with an additional eighteen (18) BWTs transported earlier this winter (November – December 2016) and six (6) in January 2017, accounts for a total of 62 BWTs transported for the 2017 run year. Ten (10) BWTs have been radio tagged and released back downstream so far as part of the Merwin Adult Trap Efficiency (ATE) Evaluation, which began February 20th, 2017. The two (2) coastal cutthroat trout captured in February were transported upstream.

2017 Late-Winter Steelhead (BWTs) (thru February 2017)

Male	Female	Total
38	24	62

Swift Floating Surface Collector ([Attachment B](#))

Operation of the Swift FSC was suspended periodically in February on account of severe weather conditions, ice and snow build-up, debris loading, emergency repairs, poor road conditions, as well as allow for gear deployment and installation associated with the 2017 Collection Efficiency Evaluation. During the month of February, 803 fish were collected with the majority of these fish being coho fry (75%; n = 602). Except for bull trout and planted rainbows, all fishes (and life-stages) were transported downstream.

Depart for Lewis River Hatchery Tour – 11:00am

Aaron Roberts (WDFW) conducted a tour for the ACC to address Michelle Day's following question.

- As numbers of adult Coho returning to the hatchery increase, Michelle Day wants to revisit how long fish are being held in Lewis River Hatchery before being processed.

Day indicated that her question(s) had been addressed. Roberts will follow up with Day to provide the fish numbers by season that were referenced during the tour.

Meeting adjourned 12:15pm

Agenda items for April 13, 2017

- March 9, 2017 Meeting Notes
- Study/Work Product Updates
- Discuss plan for updating the Aquatic Fund criteria to include additional engineering in future proposals

Next Scheduled Meeting:

April 13, 2017
Merwin Hydro Control Center & Lewis River Hatchery Tour
Ariel, WA
9:00 a.m. - 3:00 p.m.

Meeting Handouts & Attachments:

- Meeting Notes from 2/9/17
- Agenda from 3/9/17
- Handout: 2016/2017 Aquatic Fund Project Comments
- **Attachment A** - 2016/2017 LR Aquatics Fund Evaluation Matrix, March 9, 2017
- **Attachment B** - Lewis River Fish Passage Report (February 2017)

	A	B	C	D	E	2016/2017 LR Aquatic Fund Evaluation Matrix	G	H	I
1									
2	ACC								
3	Decision for full proposal		Applicant	Project Title	WDFW	Fish First	LCFRB	Yakama Nation	USFS
4	NO	1	Cowlitz Tribe	Colvin Dam Removal Preliminary Design	Pre-proposal includes sediment modeling only downstream to Cedar Creek. Sediment modeling needs to be conducted downstream of Cedar Creek to the lower end of Eagle Island to show the benefit of this project. It is unclear if estimated sediment input is a one-time occurrence or a continual input of material into the mainstem Lewis. If it is a continual input of material into the mainstem Lewis what amount of sediment will be continually input into the mainstem Lewis? Benefit from tributary habitat is very minimal because allows access to only 0.5 miles to a Tier 4 reach. WDFW is concerned that project provides little to no benefit to re-introduction efforts. WDFW does not recommend moving this project forward for a full proposal because of its lack of benefit to re-introduction efforts focused upstream of Merwin Dam, which is not consistent with the objectives and priorities of the Aquatic Fund. Specifically fund objective 2 which state "Support the Re-introduction of anadromous fish throughout the Basin (Spring Chinook, Winter Steelhead, Coho and Sea-run Cutthroat)". Project will not benefit outmigrating juvenile fish from reintroduction efforts because fish will be collect at upstream dams and transported the town of Woodland for release in to the mainstem Lewis River, thereby not utilizing this reach of river. Does not support but will not block going forward.		It appears that WDFW is not providing matching funds. What is WDFW's legal obligation for supporting passage at this site? Habitat in Colvin Creek identified for restoration is an EDT tier 3 reach, and passage would be restored to EDT tier 4 reaches, suggesting limited benefits for population recovery in the NF Lewis (Recovery Plan, LCFRB 2010). Benefits to downstream mainstem receiving reaches (e.g., Lewis 7a) are uncertain until assessment of substrate composition is completed. If substrate would be suitable for spawning, it is uncertain whether benefits would be short-term vs long-term. The duration of benefits should be evaluated. It is also uncertain whether lack of spawning substrate in the downstream Lewis 7a reach is a key biological bottleneck. Sediment deposition at the upstream end of Eagle Island has been cited by WDFW as a primary concern for loss of Chinook rearing habitat the north Eagle Island channel. Overall project benefits would accrue primarily in Colvin Creek, which would support coho and steelhead, which are considered contributing populations to regional recovery (LCFRB 2010). No apparent benefits to spring Chinook recovery. This is especially true in terms of downstream migration, because the project site is located between spring Chinook capture and release locations. Application references project is contingent upon receiving \$62,500 in SFRB funds. Project was reviewed by the LCFRB in 2016 and ranked "high" for certainty of success, and "medium" for benefits to fish and cost, and was in the lowest grouping of eligible projects - future funding is uncertain. We recommend the design project move forward to final proposal submittal. However, future support for implementation will depend upon results sediment suitability analysis, contribution of match from WDFW, and assessment of downstream benefits/impacts.		The Forest Service has reviewed all the Pre-Proposals and believe they all meet Section A. Consistency with Fund Objectives and Priorities of the evaluation criteria. Warrants look in the future - however won't stand in the way of going forward or not
5	YES	2	USDA Forest Service	Lewis River 21 - Phase I	Project occurs in a Tier 2 reach and is listed is included in the Aquatic Fund Priority Reach list. The Recovery Plan identifies this as a Tier 2 reach (see SalmonPort) while Roni evaluation lists as a Tier 1 based on EDT. Should use Recovery Plan tier rankings. Is the project part of a larger vision for actions to be proposed for this reach? If so, larger vision should be presented. Additionally, need to show how this project will function without additional actions in case funding for other actions is not acquired. Need to show how this addresses the limiting factors identified in the Recovery Plan. How will side channel be designed to ensure that water is present when fish will be using this habitat? This reach is a very volatile reach; need to show how structures will function for an extended period of time (e.g. 10 years). WDFW recommends moving this project forward for a full proposal.		This project targets a high priority reach (EDT tier 2, NF Lewis 21) for regional recovery, with high potential for winter steelhead, medium priority for coho, and low priority for spring Chinook population performance improvements (LCFRB 2010). High priority factors identified in the Recovery Plan for this reach likely to be addressed through this proposal include stream channel habitat structure & bank stability and off channel & side channel habitat. NF Lewis 21 is also identified on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report, and would address prioritess for spring Chinook spawning and rearing. More details regarding seasonality of side channel connection are required to determine full rearing and spawning benefits of the project. Before and after biological monitoring at the project site could be a benefit to future work in the NF Lewis and analogous systems in the Lower Columbia. Project aligns well with Aquatic Fund priorities, including support for reintroduction species. We recommend the project move forward to final.		The Forest Service has reviewed all the Pre-Proposals and believe they all meet Section A. Consistency with Fund Objectives and Priorities of the evaluation criteria. Yes, proceed to full proposal.
6	YES	3	USDA Forest Service	Spencer Creek Alluvial Fan and Channel Rehabilitation	Project impacts Spencer Creek, Lewis 23 and Lewis 24 which are all Tier 2 reaches. Spencer Creek included in the Aquatic Fund Priority Reach list, but Lewis 23 and Lewis 24 are not. Need to show how this project addresses the limiting factors in the Recovery Plan. Pre-proposal talks about how this project would increase quality rearing habitat, spawning habitat, and capacity and productivity. Need to quantify the amount of habitat increases that would occur as a result of this project. Need to show how this project will be designed to ensure that water is present when fish will be using the habitat. WDFW recommends moving this project forward for a full proposal.		This project targets a high priority reach (EDT tier 2, Spencer Creek) for regional recovery, with high potential for winter steelhead and low priority for coho population performance improvements (LCFRB 2010). Medium priority factors identified in the Recovery Plan for this reach likely to be addressed through this proposal include floodplain function and channel migration processes, instream flows, and stream channel habitat structure and bank stability. Spencer Creek is also identified on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report, and would address priorities for coho and steelhead spanwing, rearing and migration. Increased complexity at the confluence of Spencer Creek and the NF Lewis could also provide important habitat for spring Chinook and other species, in part addressing high priority floodplain function and channel migration process needs in EDT tier 2 reaches Lewis 23 and 24. Project aligns well with Aquatic Fund priorities, including support for reintroduction species. We recommend the project move forward to final.		The Forest Service has reviewed all the Pre-Proposals and believe they all meet Section A. Consistency with Fund Objectives and Priorities of the evaluation criteria. Yes, proceed to full proposal.
7	NO	4	LCFEG	Haapa Side Channel Habitat Restoration - Phase II	Project would occur in a Tier 1 reach, but this reach is not included on the Aquatic Fund Priority Reach list. Provide a list of benefits from this project, but need to quantify the amount of benefit that will be provided. Since this is part of a larger project need to clearly delineate which benefits and how much benefit is directly a result of this project vs benefits that are provided in the previous phase of this project. Need to show that project will address limiting factors for this reach identified in the Recovery Plan. If SRFB funds are not received with Aquatic Funds be returned to PacifiCorp? WDFW does not recommend moving this project forward for a full proposal because of its lack of benefit to re-introduction efforts focused upstream of Merwin Dam, which is not consistent with the objectives and priorities of the Aquatic Fund. Specifically fund objective 2 which state "Support the Re-introduction of anadromous fish throughout the Basin (Spring Chinook, Winter Steelhead, Coho and Sea-run Cutthroat)". Project will not benefit outmigrating juvenile fish from reintroduction efforts because fish will be collect at upstream dams and transported the town of Woodland for release in to the mainstem Lewis River, thereby not utilizing this reach of river. Does not support but will not block going forward.		This project targets a high priority reach for regional recovery (EDT tier 1, Lewis 5), with high potential of chum and coho habitat, medium potential for fall Chinook, and low priority for winter steelhead population performance improvements. High priority limiting factors identified in the Recovery Plan for this EDT reach include floodplain function & channel migration processes and off channel & side channel habitat, two factors this project proposes to address. However, Lewis Reach 5 is not identified on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report. LCFRB TAC reviewed the Phase 2 side channel portion of this project in 2016, and were concerned that: 1) the side-channel inlet may require long-term maintenance and may not provide full side-channel functionality; 2) that side-channel enhancement could reduce fall Chinook spawning habitat area in the main channel of Lewis; and, 3) that WDFW had not yet approved land use. Project does not align well with Aquatic Fund priority for support of spring Chinook reintroduction efforts. This is especially true in terms of downstream migration, because the project site is located between spring Chinook capture and release locations. We recommend the project move forward to final but will not stand in the way of a no decision.		The Forest Service has reviewed all the Pre-Proposals and believe they all meet Section A. Consistency with Fund Objectives and Priorities of the evaluation criteria. Yes, proceed to full proposal but will not stand in the way of a no decision.

	A	B	C	D	E	2016/2017 LR Aquatic Fund Evaluation Matrix	G	H	I
2	ACC								
3	Decision for full proposal		Applicant	Project Title	WDFW	Fish First	LCFRB	Yakama Nation	USFS
8	NO	5	LCFEG	NF Lewis 13.5 River Braiding Project	Project would occur in a Tier 1 reach, but this reach is not included on the Aquatic Fund Priority Reach list. Provide a list of benefits from this project, but need to quantify the amount of benefit that will be provided. Since this is part of a larger project need to clearly delineate which benefits and how much benefit is directly a result of this project vs benefits that are provided in the previous phase of this project. Need to show that project will address limiting factors for this reach identified in the Recovery Plan. WDFW does not recommend moving this project forward for a full proposal because of its lack of benefit to re-introduction efforts focused upstream of Merwin Dam, which is not consistent with the objectives and priorities of the Aquatic Fund. Specifically fund objective 2 which state “Support the Re-introduction of anadromous fish throughout the Basin (Spring Chinook, Winter Steelhead, Coho and Sea-run Cutthroat)”. Project will not benefit outmigrating juvenile fish from reintroduction efforts because fish will be collect at upstream dams and transported the town of Woodland for release in to the mainstem Lewis River, thereby not utilizing this reach of river. Does not support but will not block going forward.		This project targets a high priority reach for regional recovery (EDT tier 1, Lewis 5), with high potential of chum and coho habitat, medium potential for fall Chinook, and low priority for winter steelhead population performance improvements. High priority limiting factors identified in the Recovery Plan for this EDT reach include floodplain function & channel migration processes, off channel & side channel habitat, and stream channel habitat structure & bank stability, three factors this project proposes to address. However, Lewis Reach 5 is not identified on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report. It is not clear what the seasonality of the side channel connectivity will be, so it is difficult to determine rearing and spawning habitat benefits. Project does not align well with Aquatic Fund priority for support of spring Chinook reintroduction efforts. This is especially true in terms of downstream migration, because the project site is located between spring Chinook capture and release locations. We recommend the project move forward to final. If this projet does no align well with Spring Chinook they will not stand in the way of a no decision.		The Forest Service has reviewed all the Pre-Proposals and believe they all meet Section A. Consistency with Fund Objectives and Priorities of the evaluation criteria. Yes, proceed to full proposal but will not stand in the way of a no decision.
9	NO	6	WDFW	Bald Mt. Creek Fish Barrier Correction	Project would occur on a Tier 4 reach that is not listed on the Aquatic Fund Priority Reach list. Additionally, this reach shows only low reach potential for coho and winter steelhead and no reach potential for other species. Benefit from tributary habitat is very minimal because allows access to only 1.36 miles of habitat and cost appears to be high for the limited amount of additional habitat opened up for access. Need to provide data that indicates that fish are utilizing stream section just downstream of crossing, and would therefore likely migrate upstream to access habitat made available by this project. Crossing is located on a small stream in the upper watershed of a tributary to Lewis River; therefore, it will have minimal benefit to ESA listed species and no benefit to reintroduced species. WDFW does not recommend moving this project forward for a full proposal because of its lack of benefit to re-introduction efforts focused upstream of Merwin Dam, which is not consistent with the objectives and priorities of the Aquatic Fund. Specifically fund objective 2 which state “Support the Re-introduction of anadromous fish throughout the Basin (Spring Chinook, Winter Steelhead, Coho and Sea-run Cutthroat). Project will not benefit outmigrating juvenile fish from reintroduction efforts because fish will be collect at upstream dams and transported the town of Woodland for release in to the mainstem Lewis River, thereby not utilizing this reach of river. Additionally, it location in the basin would suggest that the project would have minimal benefit to ESA species in general, which is also not consistent with the objectives and priorities of the Aquatic Fund. Specifically fund objective 1 which states “Benefit fish recovery throughout the North Fork Lewis River, priority to federal ESA-listed species (Bull Trout, Chinook, Steelhead and Chum)”. Does not recommend going forward.		This project targets a low priority reach for regional recovery (EDT tier 4, Cedar Creek LB Trib 2B), with low potential for both winter steelhead and coho population performance improvements (LCFRB 2010). Although restoration needs identified in this project will likely increase access to habitat for salmonids, there are limited multi-species benefits from working in this habitat, and restoration funds may more effectively address recovery in higher priority reaches in the NF Lewis. Project does not align well with Aquatic Fund priority for support of reintroduction efforts. Lack of information on documented fish use in the affected streams. We recommend that the project not move forward to final.		Project does not support reintroduction efforts. No, do not proceed to full proposal.

	J	K	L 2016/2017 LR Aquatics Fund Evaluation	Matrix M	N
1					
2					
3	Cowlitz Indian Tribe	USFWS	Utilities	NMFS	Next Step
4	<p>The project is located on Colvin Creek at the reach break between Colvin 1 and 2, Tier 3 and 4, respectively. Providing fish passage would directly benefit coho and winter steelhead, and releasing impounded gravels and restoring sediment transport processes would provide downstream benefits for multiple species. The proposal appears thoroughly researched and appropriately scoped for what is likely to be a technically challenging project to design and implement. The lead engineer has ample experience with dam removal projects, increasing likelihood of success. The resulting project is likely to be very expensive for the benefit, but is one of a very few opportunities to restore watershed process in the highly modified lower river. Mainstem incision and simplification is a continuing and serious concern; increasing coarse sediments should provide some relief from that trend. Removal of the dam would increase pressure on WSDOT to address the highway barrier upstream, potentially opening much more habitat. Recommended for full proposal: Yes, but will not stand in the way of a no decision.</p>	Neutral	<p>This project is contingent upon securing \$62,500 SRFB funds in 2017. Support Task 1: sediment analysis. If composition is primarily silt/sand we do not need to evaluate further. If composition core samples are deemed beneficial than I support moving forward with the project. Would like to know if further talks have happened with DAHP & if will be removed from the registry? If mitigation is warranted will Cowlitz Tribe fund? In favor of going to full proposal. This reach is not on the priority list but it is a good project. Need more detail on how the hatchery intake will be protected. Will not stand in the way of a no decision.</p>	<p>Does not support reintroduction efforts into North Fork. Does not meet criteria or emphasis on Spring Chinook . No, do not proceed to full proposal.</p>	
5	<p>The project appears to be proposed in Lewis 21, a Tier 2 reach (not Tier 1, as identified in the proposal narrative) of the Lewis River, but is one of the highest priority reaches in the most recent ACC guidance. The proposed project would likely benefit multiple species. The proposed approach is not clearly articulated; the final proposal should clearly show the proposed treatment areas, describe the treatments, and explain the rationale for the approach. Conceptual design drawings, at a minimum, will be essential to determine likely long-term benefits. This is a high-energy, mainstem reach of the Lewis River. Stability of wood placements and nature (size, species) of material proposed should be fully explained. The project description seems to suggest that the project would directly interact with material delivered by Rush Creek, but the project area is located upstream of the confluence with Rush Creek. The project scope is fairly small, and requires substantial mobilization investments. The proposal title indicates future phase(s), but plans for future work are not described. A more comprehensive design and permitting/environmental compliance phase followed by one or more implementation phases may be a more efficient, effective approach in this relatively unconstrained reach. Recommend full proposal: Yes.</p>	Neutral	<p>Do not believe that LWD placement in the mainstem has as much value as focusing funds on tributary streams or side channel habitat that do not have a high probability of "washing away" LWD structures. How can we be assured the wood will continue to function as intended? There are better location options available such as tributaries. Priority Reach - in favor of going to full proposal. There needs to be a budget sheet that defines tasks and associated dollars. Other than the monitoring, it is not clear who is performing what task. LWD placed in the upper mainstem has an extremely low likelihood of staying in place given the frequency and severity of recent high water events.</p>	<p>Agree to move forward to full proposal</p>	
6	<p>The project is proposed in Spencer Creek and Lewis 24, both Tier 2. Spencer Creek is a highly rated opportunity for restoration in the latest ACC guidance. The proposed project would likely benefit multiple species. The proposed approach is not clearly articulated; the final proposal should clearly show the proposed treatment areas, describe the treatments, and explain the rationale for the approach. Conceptual design drawings would be helpful, as would a description of the proposed design process. Photos showing boulder/cobble bed material in Spencer Creek seem to indicate a fairly high-energy reach. A discussion of the watershed processes that led to Spencer Creek’s degraded condition would be helpful in evaluating the appropriateness of proposed treatments. Stability of wood placements and nature (size, species) of material proposed should be fully explained. Recommend full proposal: Yes.</p>	Neutral	<p>Spencer Creek would benefit from wood placement and gravel retention. Priority Reach/Key Habitat - in favor of going to full proposal. There needs to be a budget sheet that defines tasks and associated dollars. Other than the monitoring, it is not clear who is performing what task. Spencer Creek rehab. work would benefit that stream basin and should go to full proposal.</p>	<p>Yes, proceed to full proposal.</p>	
7	<p>Project is proposed in a Tier 1 reach of the lower North Fork Lewis and would likely benefit multiple species. It is not located in a highly rated reach per the most recent ACC guidance, but the sponsor explains the reach parallels. Sidechannel and off-channel habitat enhancement are important multi-species actions for the reach. The Summary of Project section, however, apparently includes all benefits of previously funded, proposed, and other components, not just the benefits of the proposed work. Benefits of this project as described elsewhere in the pre-proposal are largely contingent upon receiving SRFB funds to connect the backwater channel to a new sidechannel upstream. The sponsor notes that proximity of this project with the 13.5 River Braiding Project reduces construction costs, but does not quantify the reduction, or explain how costs would be covered if only one project were funded. The sponsor secured funding for the first phase of construction of the Haapa project from SRFB in 2014, but according to the billings available on PRISM, has completed very little work to date.</p> <p>If this project proceeds to full proposal, the sponsor should either commit to securing additional funds to complete work necessary to fully implement the project, or remove descriptions of benefits that would not be accrued through backwater enhancement alone. The backwater channel work proposed relies on 3,815CY of streambed material borrowed from the channel upstream. If the upstream channel is not funded, this design element will need substantial revision, and costs will change markedly. The request of nearly \$300,000 is expensive compared with the benefit of adding complexity to backwater habitat that could probably be substantially improved with a lower-intensity effort. The level of treatment appears much more appropriate for a flow-through channel. Recommend final proposal: Yes (with reservations), but will not stand in the way of a no decision.</p>	Neutral	<p>Expect to see a land use agreement submitted with the full proposal. The proposal states that ACC funds will be used entirely for backwater pool enhancement with LWD. Presently, there is an existing pool with substantial vegetation cover. I realize this amount will be matched according to the proposal which is the only reason I would support moving forward. Without the match, the project can not be justified in my opinion. Increases habitat quantity and diversity - in favor of going to full proposal, but will not stand in the way of a no decision. This reach is not on the priority list. Proponent has not always been timely with obtaining permitting and consequently completing projects. What happens if SRFB funding is not awarded?</p>	<p>Do not proceed to full proposal.</p>	

	J	K	L 2016/2017 LR Aquatics Fund Evaluation	Matrix M	N
2					
3	Cowlitz Indian Tribe	USFWS	Utilities	NMFS	Next Step
8	<p>Project is proposed in a Tier 1 reach of the lower North Fork Lewis and would likely benefit multiple species. It is not located in a highly rated reach per the most recent ACC guidance, but the sponsor explains the reach parallels. The treatments proposed align with reach priorities and species’ needs. A similar proposal was previously funded by the ACC, but funds were returned when the sponsor failed to secure SRFB funding in back-to-back years to fulfill match obligations. The sponsor claims that this was a result of a reduction in regional funding of SRFB, but the regional allocation was stable through the two years that the project was selected as an alternate; the regional allocation was reduced in 2016. The reason that the SRFB did not fund the project in back-to-back grant rounds was that it did not score highly in the regional LCFRB process. Leveraging Aquatic Fund dollars for additional Lewis River work was one of the attractive features of that proposal, a benefit not offered by this approach.</p> <p>The sponsor claims that this is a second phase of a previously designed and completed project, but this “phase” does not appear in the original design or design report provided to SRFB, and appears to have been sketched by Inter-Fluve in support of a grant application, rather than carefully designed and vetted as claimed in the pre-proposal. The main-stem treatments shown on the provided conceptual design appear to be superimposed on existing work—no rationale is provided for this action, but it is unclear from the proposal narrative whether the main-stem treatments are actually being proposed, or are an artifact from previous proposals. The side channel proposed for enhancement appears to be currently functional as high-flow refuge habitat, with stranding as an issue. The value of deepening and adding wood to the channel should be weighed against cost and other potential treatments such as comprehensive planting efforts. The proposed timeline is quite long at 4 years. Recommend final proposal: No.</p>	Neutral	<p>Is aquatic lease needed from DNR? This project continues the previous work at 13.5 which improved spawning and juvenile rearing habitat. When is the side channel flooded? Is it accessible by juvenile salmonids at the appropriate time of year? Expand on how this project meshes with previous work. Creates side channel habitat, increasing diversity - in favor of going to full proposal, but will not stand in the way of a no decision. This reach is not on the priority list. Proponent has not always been timely with obtaining permitting and consequently completing projects. What happens if SRFB funding is not awarded?</p>	Do not proceed to full proposal.	
9	<p>The project is proposed in a small tributary to Cedar Creek, a Tier 4 (lowest priority anadromous) reach. The tributary is not identified on the most recent ACC guidance. The project proposes to improve passage by replacing two culvert crossings with bridges and conducting modest in-stream and riparian work associated with the bridge installations. Fish passage is generally a high-certainty action to improve abundance and resilience of fish populations, especially when adult upstream passage has been blocked. This project would benefit coho and potentially steelhead (both Contributing populations per the Recovery Plan), primarily by improving upstream juvenile passage. The project will not benefit Chinook or Chum, the Primary populations in the subbasin. The project does not support reintroduction. The request is extremely high relative to the value to fish; most project value appears to accrue to landowners, who are proposing no substantial contribution. The argument that Aquatic Fund monies should be used to bring private landowners into compliance with RCWs is not compelling, especially given the Settlement Agreement language in Article 7.5.3.1(b), which states that Aquatics Fund should not be spent on projects that other entities are legally mandated to complete (unless agreed by the ACC). The pre-proposal narrative suggests that this project would provide off-channel rearing benefits to Cedar Creek, which is extremely dubious given the project site's distance from Cedar Creek proper. Recommend for full proposal: No.</p>	Neutral	<p>Is any other landowner access agreements needed for access to site?? Not supportive of using ACC funds for culvert removal on private land unless there is a documented benefit. While coho juveniles and cutthroat have been observed in the project area no steelhead or Chinook have been observed. There just doesn't seem to be enough documented use downstream of the culverts to justify the costs of this proposal. Why did they not apply through their department's Fish Barrier Removal Board? And if they did why was project denied? Benefits to Spring Chinook? Pictures? This amount of money could benefit a larger number of fish in the priority reaches? Not in favor of going to full proposal.This reach is not on the priority list and is actually a Tier 4 reach on Cedar Creek that does not directly benefit spring Chinook.</p>	Do not proceed to full proposal.	

ACC/Utilities							
Decision for Funding							
		Applicant	Project Title	Funding	WDFW	Fish First	LCFRB
	No.	Applicant	Project Title		Comments	Comments	Comments
Yes	1	USDA Forest Service	Lewis River 21 - Phase I	\$175,000	This proposal was reviewed by several members of WDFW Habitat and Fish Program with differing input. The project will benefit Lewis Reach 21, which is a Tier 2 reach. The project does not address sediment, which is a key limiting factor for the incubation life stage for any species. The project does the primary limiting factor of habitat quantity for winter steelhead, spring chinook and coho, which will benefit the age 0 rearing/migration life stage by improving rearing habitat throughout the year, cover, pool depths and gravel sorting function. The project is located near a recent avulsion in Rush Creek. WDFW has some concerns that another avulsion could occur in that location that would limit the future benefits of this project. The project does provide a good opportunity to test habitat restoration in the dynamic mainstem Lewis River and provides much needed structure and LWD to this reach. Project is well located in that several other projects completed recently in this portion of the basin. Project is well designed and sponsor is has good expertise to implement this project. Project has excellent match with sponsor providing 49% of the cost of the project. WDFW recommends funding this project.		This project targets a high priority reach (EDT tier 2, NF Lewis 21) for regional recovery, with high potential for winter steelhead, medium priority for coho, and low priority for spring Chinook population performance improvements (LCFRB 2010). NF Lewis 21 is also identified as a priority for spring Chinook on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report. This project would address summer and winter rearing needs for juvenile salmonids as well as increasing spawning opportunities. Questions raised at the pre-proposal stage were addressed in the final application and presentation. However, we suggest the sponsor consider adding roughness structures in the relict side channel to provide complexity in case the channel initiates a shift back to its original course. Project aligns well with Aquatic Fund priorities, including support for reintroduction species. We recommend that this project receive funding.
Yes	2	USDA Forest Service	Spencer Creek Alluvial Fan and Channel Rehabilitation	\$93,750	This proposal was reviewed by several members of WDFW Habitat and Fish Program with differing input. The project will benefit Spencer Creek and Lewis Reach 23/24, which are all Tier 2 reaches. WDFW questions benefit to summer rearing because is an ephemeral reach. Additionally, concern regarding potential stranding or increased predation for fish using pools for summer rearing. Project does address key life stages and primary limiting factors for winter steelhead and coho in Spencer Creek and for winter steelhead and spring chinook in the mainstem Lewis by providing winter refugia, rearing habitat for age 0 fish and increases spawning habitat. Project is well located in that several other projects completed recently in this portion of the basin. Project is well designed and sponsor is has good expertise to implement this project. Project has excellent match with sponsor providing 52% of the cost of the project. WDFW recommends funding this project.		This project targets a high priority reach (EDT tier 2, Spencer Creek) for regional recovery, with high potential for winter steelhead and low priority for coho population performance improvements (LCFRB 2010). Spencer Creek is also identified on the Aquatics Fund Priority Reaches Table based on the Cramer Fish Sciences report, and would address priorities for coho and steelhead spawning, rearing and migration. Increased complexity at the confluence of Spencer Creek and the NF Lewis could also provide important habitat for spring Chinook and other species, in part addressing high priority floodplain function and channel migration process needs in EDT tier 2 reaches Lewis 23 and 24. Questions raised at the pre-proposal stage were addressed in the final application and presentation. However, it is important to ensure the project incorporates a roughened channel design that allows for continued fish passage if boulders, large wood and substrate shift. The design should not rely too heavily on cross-channel weirs, which may lead to increased jump heights if downstream structures fail. The addition of large woody material would aggrade sediment, and create greater habitat complexity and food web benefits. Project aligns well with Aquatic Fund priorities, including support for reintroduction species. We recommend that this project receive funding.

Yakama Nation		Cowlitz Indian Tribe			
USFS		USFWS			
		Utilities			
		NMFS			
Comments	Comments	Comments	Comments	Comments	Comments
	Yes, proceed with funding.	<p>This project is proposed in a high-priority reach, and if successful, would benefit multiple populations including spring Chinook.</p> <p>The Tribe appreciates the conceptual design typical drawings provided, but the proposed design approach appears to be inadequate to assure structural stability over the long term. The Tribe considers a basic topographic survey, hydrologic analysis, and 1-D hydraulic model minimum first-steps in developing sound designs for high-energy, mainstem reaches. The project proposal includes a lengthy example of wood stability calculations, but the underlying assumptions (e.g., soil cohesiveness, no erosion potential, relatively low stream velocities) do not appear applicable to the site. Similarly, the conceptual design drawings and narrative suggest that pile embedment two feet below maximum probable scour would provide adequate structural stability in a high-energy reach. This is demonstrably false. Additionally, the practice of measuring residual pool depth in the reach to use as a surrogate for maximum probable scour ignores live-bed scour potential and sediment deposition on the receding limb of the hydrograph during flood events. There is a substantial body of engineering knowledge that, when applied, ensures that scour is adequately predicted to ensure structural stability. Embedment beyond 2 times the anticipated scour depth is generally required for structural stability in apex-style jams to counteract calculated scour, sheer, and buoyancy. The low proposed design budget, with the assertion that preliminary designs were developed during a site reconnaissance trip, reinforces the Tribe’s skepticism of the proposed design methodology. Several entities requested details of the other phases that the Forest Service has apparently identified in the reach. The proposal narrative provides little detail in response, instead noting that the other phases are geomorphically independent. This does not adequately address the Tribe’s question and concern with regard to mobilization costs and proper scoping. A properly designed, reach-level approach would save time and money in the end, and would yield a project more likely to achieve and maintain desired habitat outcomes. This would also allow a consolidated NEPA coverage document, rather than the proposed approach, which will presumably cost \$72,000 or more for the three-phase approach conducted separately (based on the current request).</p> <p>While the proposal correctly explains that risk to habitat or infrastructure is low, we see a substantial risk to any investment by the ACC. The likelihood of project failure based on the designs provided is extremely high.</p> <p>We do not recommend funding this proposal.</p>		Yes, proceed with funding.	Do not proceed with funding but will not stand in the way.
	Yes, proceed with funding.	<p>Spencer Creek Alluvial Fan and Channel Rehabilitation</p> <p>This project is proposed in a high-priority reach, and if successful, would benefit multiple populations including spring Chinook. Spencer Creek proper is less likely to benefit adult Spring Chinook than work in the adjoining mainstem Lewis.</p> <p>The Tribe appreciates the conceptual design typical drawings provided, but the proposed design approach appears to be inadequate to assure structural stability over the long term for the proposed mainstem structure. The Tribe considers a basic topographic survey, hydrologic analysis, and 1-D hydraulic model minimum first-steps in developing sound designs for high-energy, mainstem reaches. The project proposal includes a lengthy example of wood stability calculations, but the underlying assumptions (e.g., soil cohesiveness, no erosion potential, relatively low stream velocities) do not appear applicable to the site. Similarly, the conceptual design drawings and narrative suggest that pile embedment two feet below maximum probable scour would provide adequate structural stability in a high-energy reach. This is demonstrably false. Additionally, the practice of measuring residual pool depth in the reach to use as a surrogate for maximum probable scour ignores live-bed scour potential and sediment deposition on the receding limb of the hydrograph during flood events. There is a substantial body of engineering knowledge that, when applied, ensures that scour is adequately predicted to ensure structural stability. Embedment beyond 2 times the anticipated scour depth is generally required for structural stability in apex-style jams to counteract sheer and buoyancy. The low proposed design budget, with the assertion that preliminary designs were developed during a site reconnaissance trip, reinforces the Tribe’s skepticism of the proposed design methodology. The proposed work in Spencer Creek is less concerning because the likelihood of catastrophic failure is lower, and wood movement and reorganization would not render the project a total loss in the case of structural deformation. It is not clear from the proposal, however, if the Spencer Creek structures would provide full functional benefits without the influence of the mainstem structure. The project overall is a fairly high cost endeavor relative to the amount of work on the ground, so eliminating the mainstem structure may render the project less cost effective—the proposal narrative is at odds with the budget template regarding the number of logs used in the project (200 vs. 100 logs, respectively). This may be a result of uncertainty with Swift wood supply, but is not explained.</p> <p>The Tribe does not recommend funding this project, but would entertain discussion of partial funding for work in Spencer Creek.</p>		Yes, proceed with funding.	Do not proceed with funding but will not stand in the way.

Lewis River Aquatic Fund - Utilities' Evaluation of 2016/2017 Project Proposals												
No.	Applicant	Project Title	Project Schedule	Benefit	Bull Trout	Project Partners	Funding	Cost Share?	Consistency with Fund Objectives	Selected for Utilities for Full-Proposal - Y or N	Comments - Utilities	
1	Cowlitz Tribe	Colvin Dam Removal Preliminary Design	2017/2018	Restore natural sediment transport processes and fish passage to benefit salmonid populations in Colvin Creek and downstream reaches of lower North Fork Lewis River.	No	Cowlitz Tribe and WDNR	\$ 62,500.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	This project is contingent upon securing \$62,500 SRFB funds in 2017. Support Task 1: sediment analysis. If composition is primarily silt/sand we do not need to evaluate further. If composition core samples are deemed beneficial than I support moving forward with the project. Would like to know if further talks have happened with DAHP & if will be removed from the registry? If mitigation is warranted will Cowlitz Tribe fund? In favor of going to full proposal. This reach is not on the priority list but it is a good project. Need more detail on how the hatchery intake will be protected.	
2	USDA Forest Service	Lewis River 21 Phase I	2017/2019	Restore approx. 1,000' of LR mainstem habitat 300 ' upstream of Rush Creek (tier 1 reach). Approx. 300 pieces of LWD will be placed along margins in the mainstem to improve rearing habitat.	Yes	Gifford Pinchot National Forest, Mt. St. Helens Institute	\$ 135,000.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y - Contingent upon response to how the LWD will be stabilized.	Do not believe that LWD placement in the mainstem has as much value as focusing funds on tributary streams or side channel habitat that do not have a high probability of "washing away" LWD structures. How can we be assured the wood will continue to function as intended? There are better location options available such as tributaries. Priority Reach - in favor of going to full proposal. There needs to be a budget sheet that defines tasks and associated dollars. Other than the monitoring, it is not clear who is performing what task. LWD placed in the upper mainstem has an extremely low likelihood of staying in place given the frequency and severity of recent high water events.	
3	USDA Forest Service	Spencer Creek Alluvial Fan and Channel Rehabilitation	2017/2019	Restore Spencer Creek from confluence of the NF Lewis upstream approx. 1,000 feet located o the lowest 1,000' of Spencer Creek. Creating approx. 7 complex structures within Spencer Creek to provide quality spawning, rearing and overwintering habitat.	No	Gifford Pinchot National Forest, Mt. St. Helens Institute	\$ 117,000.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	Spencer Creek would benefit from wood placement and gravel retention. Priority Reach/Key Habitat - in favor of going to full proposal. There needs to be a budget sheet that defines tasks and associated dollars. Other than the monitoring, it is not clear who is performing what task. Spencer Creek rehab. work would benefit that stream basin and should go to full proposal.	
4	LCFEG	Haapa Side Channel Habitat Restoration - Phase II	2017/2021	Enhance 1,350' side channel and associated placement of LWD to enhance channel stability; connect backwater channel; construct 200' long groundwater fed alcove chum spawning and rearing channel; install beaver dam analog at confluence of side and backwater channels.	No	LCFEG, WA-DOC, WDFW, DNR, Kysar & Loomis, LCFRB	\$ 286,045.00	Yes	1 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	Expect to see a land use agreement submitted with the full proposal. The proposal states that ACC funds will be used entirely for backwater pool enhancement with LWD. Presently, there is an existing pool with substantial vegetation cover. I realize this amount will be matched according to the proposal which is the only reason I would support moving forward. Without the match, the project can not be justified in my opinion. Increases habitat quantity and diversity - in favor of going to full proposal. This reach is not on the priority list. Proponent has not always been timely with obtaining permitting and consequently completing projects. What happens if SRFB funding is not awarded?	
5	LCFEG	NF Lewis 13.5 River Braiding Project	2017/2020	Project builds on previous work by creating 1,200' of new side channel habitat including LWD complexity structures to increase the quanti and quality of spawning and rearing habitat.	No	Kysar family, WDNR, WA Dept Corrections, Hudson Bay High School, WA-DOC	\$ 152,650.00	Yes	2 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	Y	Is aquatic lease needed from DNR? This project continues the previous work at 13.5 which improved spawning and juvenile rearing habitat. When is the side channel flooded? Is it accessible by juvenile salmonids at the appropriate time of year? Expand on how this project meshes with previous work. Creates side channel habitat, increasing diversity - in favor of going to full proposal. This reach is not on the priority list. Proponent has not always been timely with obtaining permitting and consequently completing projects. What happens if SRFB funding is not awarded?	
6	WDFW	Bald Mt. Creek Fish Barrier Correction	2017/2018	Replacing two barrier crossings to fish passage; located on a left bank trib to Cedar Creek (locally called Bald Mt. Creek); replace existing barrier culvert with 30' bridge; regrading road approaches, downstream channel regrading and reposition existing log controls to direct flow away from the road fill and create resting pools.	No	Clark Conservation; NRCS	\$ 223,000.00	Yes	3 Benefit Recovery Y 2 Support reintro. Y 3 Enhance habitat Y	N - until additional monitoring can document potential use	Is any other landowner access agreements needed for access to site?? Not supportive of using ACC funds for culvert removal on private land unless there is a documented benefit. While coho juveniles and cutthroat have been observed in the project area no steelhead or Chinook have been observed. There just doesn't seem to be enough documented use downstream of the culverts to justify the costs of this proposal. Why did they not apply through their department's Fish Barrier Removal Board? And if they did why was project denied? Benefits to Spring Chinook? Pictures? This amount of money could benefit a larger number of fish in the priority reaches? Not in favor of going to full proposal. This reach is not on the priority list and is actually a Tier 4 reach on Cedar Creek that does not directly benefit spring Chinook.	
							Totals	\$	976,195.00			
							Total non-bull trout Funds	\$	841,195.00			
Fund Objectives:							Bull Trout Funds	\$	135,000.00			
1. Benefit fish recovery throughout the North Fork Lewis River, priority to federal ESA-listed species 2. Support the re-introduction of anadromous fish throughout the basin 3. Enhance fish habitat in the Lewis River Basin, with priority given to North Fork Lewis River												

Lewis River Fish Passage Report

February 2017

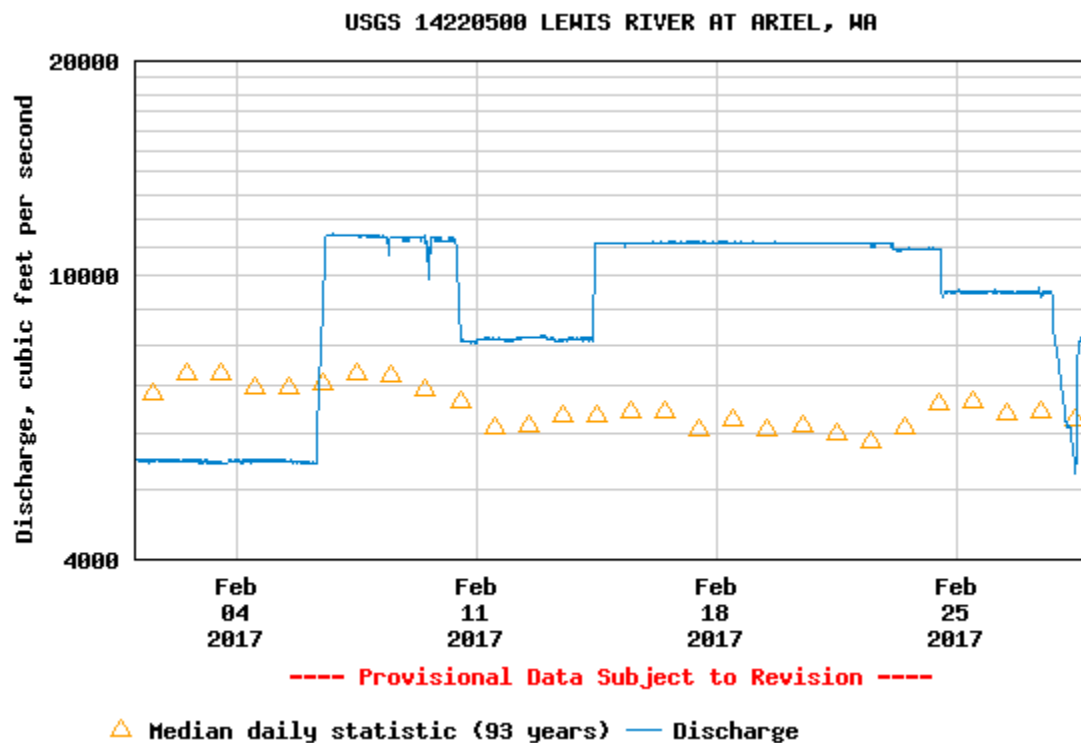
Merwin Fish Collection Facility and General Operations

During the month of February, a total 144 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were winter steelhead (139 - 97%) of both hatchery and wild (NOR and Blank Wire Tag) origin. All hatchery fish were given to Washington Department of Fish and Wildlife. Two (2) coastal cutthroat greater than 13-inches were captured this month. The first Lewis River spring Chinook arrived at the Merwin Trap on February 23rd.

The Merwin Dam adult fish trap ran continuously through the month of February except during the scheduled outage to install equipment related to the adult trap efficiency (ATE) evaluation (February 8th through February 13th, 2017). During periods when the trap was operational, the Auxiliary Water Supply (AWS) system (which can boost attraction flow up to 400 cfs), and ladder flow remained on.

River flow below Merwin Dam fluctuated between 11,400 and cfs throughout the month of February.

Discharge, cubic feet per second



Upstream Transport

At total of thirty eight (38) Blank Wire Tag (BWT) winter steelhead were transported upstream above Swift Dam in February 2016. These fish combined with an additional eighteen (18) BWTs transported earlier this winter (November – December 2016) and six (6) in January 2017, accounts for a total of 62 BWTs transported for the 2017 run year. Ten (10) BTWs have been radio tagged and released back downstream so far as part of the Merwin Adult Trap Efficiency (ATE) Evaluation, which began February 20th, 2017. The two (2) coastal cutthroat trout captured in February were transported upstream.

2017 Late-Winter Steelhead (BWTs) (thru February 2017)

Male	Female	Total
38	24	62

Swift Floating Surface Collector

Operation of the Swift FSC was suspended periodically in February on account of severe weather conditions, ice and snow build-up, debris loading, emergency repairs, poor road conditions, as well as allow for gear deployment and installation associated with the 2017 Collection Efficiency Evaluation. During the month of February, 803 fish were collected with the majority of these fish being coho fry (75%; n = 602). Except for bull trout and planted rainbows, all fishes (and life-stages) were transported downstream.

Fish Facility Report Merwin Adult Trap February 2017

[illegible]

¹ Only hatchery versus wild distinctions are currently being made. All hatchery fish are labeled as "AD-Clip".

²Total counts do not include recaptured salmon.

Fish Facility Report
Swift Floating Surface Collector
February 2017

Day	Coho			Chinook			Steelhead				Cutthroat			Bull Trout	Planted Rainbow	Total
	fry	parr	smolt	fry	parr	smolt	fry	parr	smolt	kelt	fry	< 13 in	> 13 in			
01																
02																
03																
04																
05																
06																
07																
08																
09	25	4	1	0	0	4	0	0	0	0	0	0	0	0	0	34
10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11	20	0	0	0	0	0	0	0	0	0	0	0	0	0	2	22
12	400	1	10	0	0	2	0	0	0	0	0	0	0	0	0	413
13	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
14																
15																
16	39	3	4	0	0	1	0	0	0	0	0	0	0	0	6	53
17	31	6	2	0	0	0	0	0	0	0	0	0	0	0	0	39
18	18	2	29	0	1	0	0	0	0	0	0	0	0	0	8	58
19	16	3	9	0	0	1	0	0	0	0	0	1	0	0	3	33
20	30	6	31	0	0	0	0	0	0	0	0	2	0	1	11	81
21	8	9	29	0	0	0	0	0	1	0	0	1	0	1	4	53
22																
23																
24																
25																
26																
27																
28																
Monthly	602	36	115	0	1	8	0	0	1	0	0	4	0	2	34	803
Annual	649	113	164	0	7	57	0	2	4	0	1	11	0	4	63	1075

