LEWIS RIVER TERRESTRIAL COORDINATION COMMITTEE

Facilitator: KENDEL EMMERSON
503-813-6040; CELL 509-774-8102

Location: Merwin Hydro Control Center & Field Tour
105 Merwin Village Court Ariel, WA 98603

Date: Wednesday August 10, 2022

Time: 9:00 AM –1:00 PM

Agenda Items

9:00 a.m.	Welcome, Review and Accept Agenda and 7/13/2022 Meeting Notes
9:10 a.m.	Public Comment Period
9:15 a.m.	10.8.4 Habitat Evaluation Procedures and 10.8.4.2 Review of Effectiveness of WHMPs
9:45 a.m.	Speelyai Park Expansion Mitigation
10:15 a.m.	Project Updates - Moss Cave Appraisal - Logging updates - 600C2 culvert update
10:30 a.m.	Safety orientation for Field Tour and Depart for Field Tour
10:45 a.m.	Meet at Island Boat Ramp for WDFW tour of Eagle Island Restoration
1:00 p.m.	Next Meeting's Agenda Note: all meeting notes and the meeting schedule can be located at: https://www.pacificorp.com/energy/hydro/lewis-river/acc-tcc.html Leave from Island Boat Ramp

Please bring lunch, rain gear, and sturdy walking shoes for hiking in the forest. No hard hats needed for this tour. We will travel to Island Boat Ramp in our own personal vehicles.

Microsoft Teams meeting

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DRAFT Meeting Notes
Lewis River License Implementation
Terrestrial Coordination Committee (TCC) Meeting
August 10, 2022
Merwin Hydro Control Center & Field Visit

TCC Representatives Present: (7)
Kendel Emmerson, PacifiCorp
Summer Peterman, PacifiCorp
Peggy Miller, WDFW
Eric Holman, WDFW
Amanda Froberg, Cowlitz PUD
Erik White, Cowlitz Tribe

Guests: (5)
Sarah Montgomery, Anchor QEA (note-taker for PacifiCorp)
Daren Hauswald, WDFW (field visit only)
Casey Risley, WDFW (field visit only)
Monique Ferris, WDFW (field visit only)
Mike Schabo, Wildlife Habitat Management Inc. (field visit only)

Calendar:

August 10, 2022	TCC Meeting	Teams Call and Field Visit

Assignments for August 10, 2022	**Status**
Emmerson: Make a folder for HEP materials on the TCC website.	**In progress**
Emmerson: Check whether public access will be closed during the Speelyai Park expansion project; consider providing a separate access point to hunters.	**In progress**

Assignments for July 13, 2022	**Status**
Emmerson and Peterman: Clarify the definition of old growth connectivity in the cover:forage model because it could affect how raptor data are reported.	**In progress**

Assignments for May 11, 2022	**Status**
Emmerson: Make a tracking sheet for 10.3.3 funding disbursements and include it in the 2022 TCC Annual Report.	**In progress**

Assignments for April 13, 2022	**Status**
Emmerson: Consider seeding the timber harvest area in Unit 35 with woody shrubs seed mix for a comparison study.	**In progress**
Emmerson, Peterman, and Holman: Coordinate on raptor data sharing.	**In progress**

Assignments for December 8, 2021	Status
Emmerson: Discuss potential WHMP disturbance impacts with permitting staff for the Cougar Creek highway project.	**In progress (project deferred to 2023)**

Assignments for January 13, 2021	Status
Emmerson: Provide a list of past timber harvest areas that have been within the WHMP buffer, associated TCC meeting notes, and reference to the WHMP language.	**In progress**

Kendel Emmerson (PacifiCorp) called the meeting to order at 9:05 am. No additions to the agenda were requested. Emmerson reviewed the meeting notes from July 13, 2022. The meeting notes were approved at 9:07 am with minor revisions.

Public Comment Period
None

10.8.4 Habitat Evaluation Procedures (HEP) and 10.8.4.2 Review of Effectiveness of WHMPs
Emmerson shared the Lewis River Settlement Agreement (section 10.8.4) which requires a HEP update at year 17. The Settlement Agreement specifies what actions should be taken when new lands are added. Overall, the matrix of habitat types in the HEP model is comprehensive; however, it does not include a habitat type for lava flows. A potential update to the model could include unique areas like lava flows. Currently, lodgepole pine is used for areas where lava flows are present; however, some lava flows have Douglas fir stands, so this is not entirely accurate.

The Settlement Agreement specifies that the HEP should be repeated for all managed lands, and the current densities are compared to the baseline densities. If the HEP objectives are not met, the WHMP needs to be updated. The HEP update is due in June 2025, and after the HEP is completed, the TCC would update the WHMP. This allows two field seasons (2023 and 2024) to collect any data needed to update the HEP. The original HEP was completed in two field seasons, so the expectation is that there is sufficient time to complete the needed work.

Emmerson said there are many historical documents and references available that supported the development of the HEP, including old TCC meeting notes. Emmerson is working to put together these resources in a HEP folder on the TCC website.

Emmerson asked whether HEP should be completed on Eagle Island, which is not within the WHMP boundaries. Holman said the HEP should only be applied to WHMP lands. Emmerson said she is also working through what values would be applied to recently purchased land, which would likely not come out to a high habitat value. These new areas could lower the overall HEP values. Miller said she does not think that should affect the results as the new areas should be evaluated separately from the original acres. The new areas should be evaluated for baselines to establish goals to aim for in the future under the WHMP. Maybe they have low habitat values now but would show increases over time.

Emmerson clarified the Settlement Agreement only specifies that the HEP be re-run in year 17. There is not another iteration after year 17.

Emmerson reviewed the HEP species that were reported on initially and the prior sampling plan. Holman noted that approximately 30% more land is incorporated into the WHMP now, but there are not more vegetation types. The sampling frequency may or may not need to change accordingly to the protocols.

Emmerson noted her intent to hire a consultant to take on the data analysis and sampling. She and Peterman will do some ground-truthing and level of effort estimates, as well, to help inform the scope for the consultant. She noted that the wetland work could start as early as March 2023 but could be dependent on whether 2023 is drought year.

The TCC discussed the elk evaluation areas and potential models that could be used or updated the evaluation. Emmerson noted that the Settlement Agreement allows for updates to be made to species models. In updating the elk model, however, it is important to scale to the model to the right level (e.g., the USFS model is at the watershed level, which is not granular enough), and not introduce bias in the selection of the model.

The TCC discussed potential consultants that could assist with the project and the importance of data management and close attention to the models and previous materials. Holman noted there are two lists of species. Emmerson clarified there are HEP species (elk, mink, etc.), for which models are run, and there are additional species ubiquitous on the landscape that are in the consideration list. The models used for the species are generally USFWS models, except elk and pond-breeding amphibians (WDFW models are used for these).

Miller asked if the Woodland Ponds release site and Johnson Creek areas should be added to the HEP too. Emmerson said those areas will have WHMP principles applied to them but are not included in the models as they are not WHMP lands. The WHMP is a unique management scenario for a hydropower dam. Emmerson noted many hydro-electric facilities do not necessarily have a wildlife management plan or wildlife areas close to the scale of PacifiCorp's in the Lewis River.

Speelyai Park Expansion Mitigation

Emmerson shared a revised figure showing the footprint of the new parking lot at Speelyai Park. The total new area of pollution generating impervious surface will not exceed one acre due to stormwater management requirements. Emmerson showed how the area is overlaid with vegetation cover types and noted the area overlaps with a previous clearcut. Much of the area is in the early seral stage. Emmerson shared a table of vegetation types that will be affected, totaling 0.88 acres. Some of the impacted area is road, and some of the impacted area is already excluded from the WHMP. The calculations for mitigation include the price per acre that were used in the Saddle Dam mitigation effort and also include the budget loss from removing WHMP lands. Temporary impacts have not yet been calculated. Emmerson asked for the TCC's input on the updated mitigation calculations.

Holman said previous discussions about temporary impacts included the introduction of potential edge effects, but the project's impacts are to an area that would already be considered edge and is

along a busy road, so this is less of a concern now. Emmerson noted that construction should be completed within a few months of starting, as it is not a huge project. Miller said there could be edge effects introduced with some of the larger trees at the outer areas of impact. Emmerson noted there is also a topographic break between the clear cut area and the larger trees, and the clear cut was completed due to disease issues and potential hazard trees in Unit 6. Miller asked if leave trees from the previous logging will also be removed. Emmerson confirmed. Miller asked if the logs could be moved into the adjacent area to provide habitat. Holman recalled that the TCC provided input on the impact areas initially, with a preference to keep people closer to existing infrastructure and away from better habitat areas that are closed to access. Emmerson confirmed that the budget loss from 2023 to 2058 was calculated using average inflation from prior years. Holman asked whether the area will be closed to access when the project is constructed and suggested considering another access point for the public to avoid user conflicts between the public and construction activities.

In total, the mitigation will provide approximately $17,000 to the fund, which can be used for acquisitions. There were no concerns with this approach.

Project Updates
Moss Cave Appraisal - CONFIDENTIAL

Logging Updates
Emmerson said logging was completed in Unit 35 and scarification started this week. She inspected the work on the second day of logging and will visit the site again tomorrow.

Logging in the unit near Dubois Road, which has root rot, is also starting tomorrow. The bridge has been built to access the site.

Other logging has been postponed due to eagle activity.

600C2 Culvert Update
Emmerson said FERC provided the approval that was needed for work within the project limits. Work will start soon on this culvert replacement project. Overall, the culvert will be raised, which will bring the water level up. It will be armored to handle high flows, and a ponded, shallow area will be available for amphibians. WHMP funds will be used to install wood, remove sediment, and seed the area with a wetland seed mix this fall. Reed canary grass will also be treated this fall (spraying will be done before construction begins).

IP Trail
Peggy Miller asked for an update on the trail project that Emmerson was coordinating with the Department of Natural Resources (DNR). Emmerson said the initial plan was to get an easement across DNR lands so that PacifiCorp can make trail modifications on WHMP lands in Unit 17. The trail would need to be improved by constructing some switchbacks and potentially moving it up or down slope. This is not a huge impact to WHMP lands, and DNR was open to the concept of helping recreationalists without using tax dollars. Jessica Kimmick is the project lead and Emmerson and Peterman will provide support as needed to advance this project.

Field Visit: Eagle Island Restoration Project

The TCC met at the Eagle Island Boat Ramp for a field tour of the Eagle Island Restoration Project led by Daren Hauswald (WDFW).

The 250-acre island is approximately half forested with mixed conifer and deciduous species, and half shrub/grass dominant.

The TCC visited four areas of Eagle Island, as follows:

- A forested area
    - This area is dominated by cottonwoods, Bigleaf maple, Western red cedar, and Douglas fir. The road in this area has been improved over time to provide access to other areas of the island. Restoration work in these forested areas are limited to treating holly and English ivy.
    - Risley described a new cartridge that WDFW has been using to treat holly, which works better than the previous method of "hack and squirt". A large tree would need approximately eight to nine treatments with the cartridge mechanism, and can be completed any time of year by a certified pesticide applicator.
    - Equipment access to the island is allowed from August 1 to August 15 per the Hydraulic Project Approval. Foot and boat access is available year-round if water conditions allow.
    - The TCC discussed some of the history of the island, and how historical scour could have affected the growing conditions. It is likely that the current largest trees on the island started growing shortly after the dams were built.
    - The TCC observed the new brush-head excavator in operation, for which the TCC supplied partial funding.

- An area where scotch broom has been treated, near a previous ACC-funded aquatic restoration project
    - This area of scotch broom was mowed in 2021 with the excavator. It has also been sprayed as recently as last week. Some native shrubs are present in this area, including beaked hazelnut and Pacific crabapple.
    - The TCC viewed the log crib structure installed in the river bank, which was completed by the Cowlitz Tribe with funding from the ACC. Miller noted the Aquatic Fund Report would have additional details on this project.

- Area previously dominated by knotweed in high-flow channel
    - This part of the island is in a low spot where river flows come through. Woody debris has been placed here.
    - Knotweed has been treated in this area for the past six years. The very dense area of knotweed took multiple years to reach the middle of. No large patches remain, but treatment is still ongoing, and is challenged by the constant seed source from river flows.

- Meadow area
    - The TCC discussed pesticide treatment procedures, noting that this entire area was sprayed in 2014 (aerial) and again in 2016 after mowing. Spot spraying was completed again in 2022. Scotch broom was observed decomposing on the ground.
    - This area has natural grasses and was not seeded. Plum trees are also present.
    - The long-term plan for this area was discussed. Hauswald said it likely would not be a good area to plant trees, but could be a potential oak restoration area. It's possible that there are scotch broom chemicals leftover in the soil that prohibit the growth of trees and shrubs.
    - The TCC discussed the potential for this to be an area for Columbia white-tailed deer reintroduction. Holman noted the area is not very large, and the best habitats are in Oregon. Moving deer is also very complicated. He suggested that the East Fork is a better opportunity for reintroduction in the basin.

- White oak restoration area
    - Regeneration of white oak is occurring in this area, and new seedlings were observed.
    - Hauswald noted a strong seed bank for scotch broom in this area; however, he thinks it is starting to be exhausted due to the spraying efforts.
    - This area includes an old homestead, that had an orchard with fruit trees. There are also pilings along the riverbank that were used for landing a ferry or paddleboat.
    - Fir trees in this area are dying out, possibly because it is too dry. However, these will become snags and contribute to habitat conditions.
    - Holman suggested planting some pines in this area. Hauswald agreed and suggested Western white pines or ponderosa pines could do well here.
    - The area is good bird habitat and Hauswald has observed white-breasted nuthatches in the area.
    - Deer grazing limits the ability for more oak regeneration; another possible future project would be to limit deer access to certain areas to increase oak regeneration success.

The TCC thanked Hauswald, his staff, and Mike Schabo for the tour and their work on the island.

Administrative
None.

Agenda items for September 14, 2022
- Review August 10, 2022, Meeting Notes
- Study/Work Product Updates
- HEP Procedures and Models
- Lewis River Conservation Plan
- Moss Cave Update
- Cowlitz PUD Beaver control

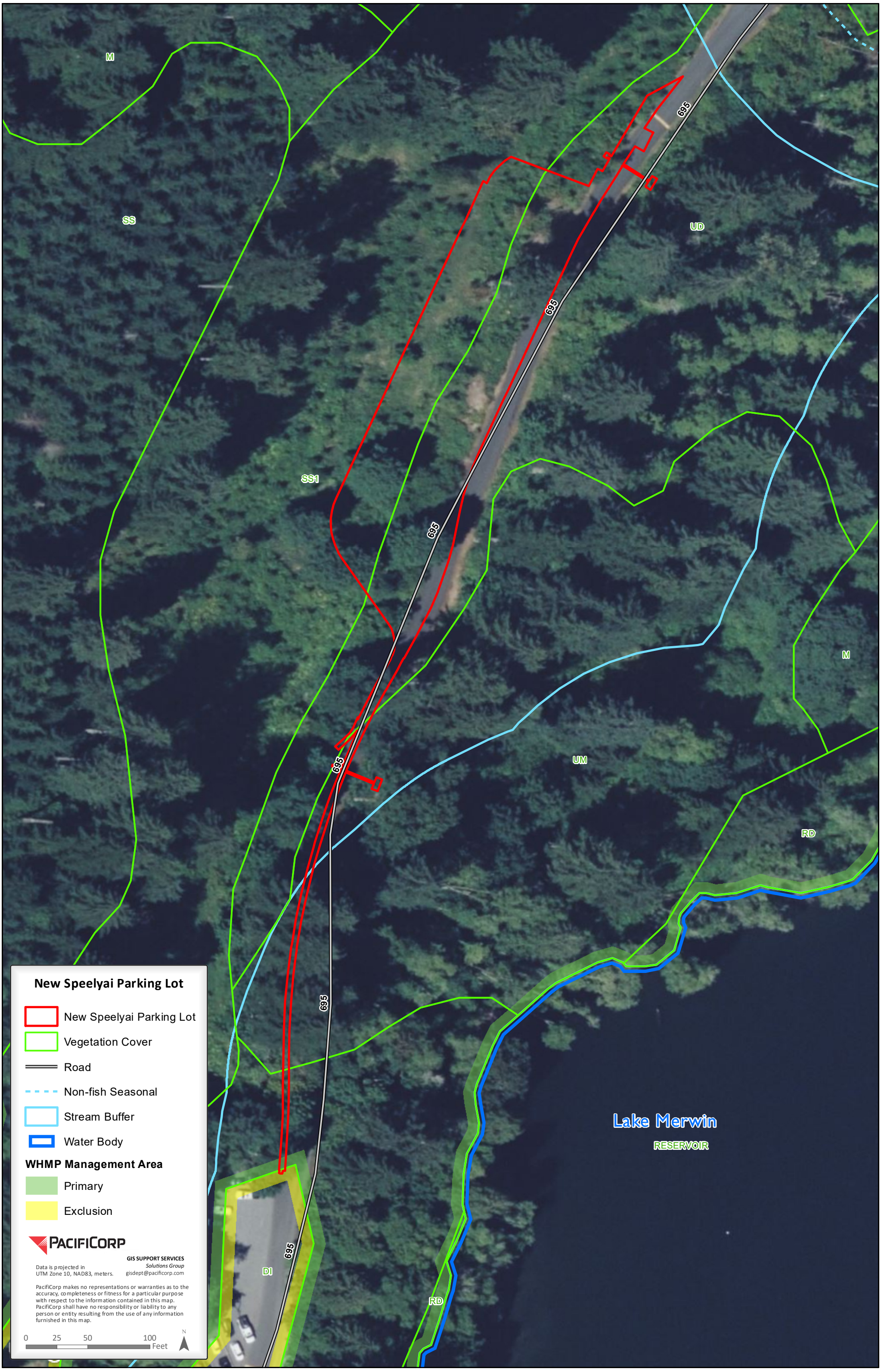
Next Scheduled Meeting

September 14, 2022
Merwin Hydro Control/Teams

Attachments:
- August 10, 2022, Meeting Agenda
- Speelyai Park Mitigation Update
- *[See TCC website for HEP materials discussed]*

Adjourn Conference Call 10:15 a.m.

Field visit conducted 10:30 a.m. to 1:00 p.m.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Lake Merwin
RESERVOIR
New Speelyai Parking Lot
New Speelyai Parking Lot
Vegetation Cover
Road
Non-fish Seasonal
Stream Buffer
Water Body
WHMP Management Area
Primary
Exclusion
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0
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Feet
N

Permanent Impacts from Speelyai Parking Expansion

Vegetation Cover Type	Vegatation Cover Type Code	Acres	Replacement Value	Replacement Habitat Acres	Price Per Acre Per Year	Total Cost for Permanent WHMP loss
Seedling/ Sapling	SS1	0.35	2.00	0.71	$10,457.81	$7,395.89
Upland Decidious	UD	0.49	1.50	0.73	$10,457.81	$7,664.72
Upland Mixed	UM	0.03	1.50	0.05	$10,457.81	$522.93
Total		**0.88**		0.00		**$15,583.54**

* Cost per acre based on Saddle Mt appraisal

Total Mitigation **$17,326.82**

Budget loss from 2023 to 2058 = $1743.28

Year	Rate of Inflation	Change in Value	WHMP acres lost		CPI Inflation Calculator (bls.gov)
2003	$27.00	0	0		
2004	$27.52	$0.52	0		
2005	$28.34	$0.82	0		
2006	$29.47	$1.13	0		
2007	$30.08	$0.61	0		
2008	$31.37	$1.29	0		
2009	$31.37	$0.00	0		
2010	$32.20	$0.83	0		
2011	$32.72	$0.52	0		
2012	$33.68	$0.96	0		
2013	$34.22	$0.54	0		
2014	$34.76	$0.54	0		
2015	$34.73	-$0.03	0		
2016	$35.20	$0.47	0		
2017	$36.09	$0.89	0		
2018	$36.83	$0.74	0		
2019	$37.40	$0.57	0		
2020	$38.33	$0.93	0		
2021	$38.87	$0.54	0		
2022	$41.78	$2.91	0		
2023	$42.56	$0.78	0.88	$37.45	
2024	$43.34	$0.78	0.88	$38.14	
2025	$44.12	$0.78	0.88	$38.83	
2026	$44.90	$0.78	0.88	$39.51	
2027	$45.68	$0.78	0.88	$40.20	
2028	$46.46	$0.78	0.88	$40.88	
2029	$47.24	$0.78	0.88	$41.57	
2030	$48.02	$0.78	0.88	$42.26	
2031	$48.80	$0.78	0.88	$42.94	
2032	$49.58	$0.78	0.88	$43.63	
2033	$50.36	$0.78	0.88	$44.32	
2034	$51.14	$0.78	0.88	$45.00	
2035	$51.92	$0.78	0.88	$45.69	
2036	$52.70	$0.78	0.88	$46.38	
2037	$53.48	$0.78	0.88	$47.06	
2038	$54.26	$0.78	0.88	$47.75	
2039	$55.04	$0.78	0.88	$48.44	
2040	$55.82	$0.78	0.88	$49.12	
2041	$56.60	$0.78	0.88	$49.81	
2042	$57.38	$0.78	0.88	$50.49	
2043	$58.16	$0.78	0.88	$51.18	
2044	$58.94	$0.78	0.88	$51.87	
2045	$59.72	$0.78	0.88	$52.55	
2046	$60.50	$0.78	0.88	$53.24	
2047	$61.28	$0.78	0.88	$53.93	
2048	$62.06	$0.78	0.88	$54.61	
2049	$62.84	$0.78	0.88	$55.30	
2050	$63.62	$0.78	0.88	$55.99	
2051	$64.40	$0.78	0.88	$56.67	
2052	$65.18	$0.78	0.88	$57.36	
2053	$65.96	$0.78	0.88	$58.04	
2054	$66.74	$0.78	0.88	$58.73	
2055	$67.52	$0.78	0.88	$59.42	
2056	$68.30	$0.78	0.88	$60.10	
2057	$69.08	$0.78	0.88	$60.79	
2058	$69.86	$0.78	0.88	$61.48	$1,743.28

Average Rate of Change between 2003 and 2022	$0.78

Veg Type Acres Veg Type by WHMP	Not in Stream Buffer	In Stream Buffer	Grand Total
DI		**0.00**	**0.00**
EXCLUSION		0.00	0.00
SS1	**0.11**	**0.24**	**0.35**
PRIMARY MANAGEMENT AREA	0.11	0.24	0.35
UD	**0.21**	**0.28**	**0.49**
PRIMARY MANAGEMENT AREA	0.21	0.28	0.49
UM		**0.03**	**0.03**
PRIMARY MANAGEMENT AREA		0.03	0.03
Grand Total	**0.32**	**0.55**	**0.88**