



# Port of Tacoma Mitigation Bank Upper Clear Creek

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# Upper Clear Creek Mitigation Site





# Why a Mitigation Bank?



- Provide mitigation for previous wetland impacts. Required per CWA violation (12.59ac)
- Develop additional mitigation for future use (27.41ac)
- Maximize wetland and salmon habitat restoration/efficiency/scale

# Advantages of Mitigation Banking

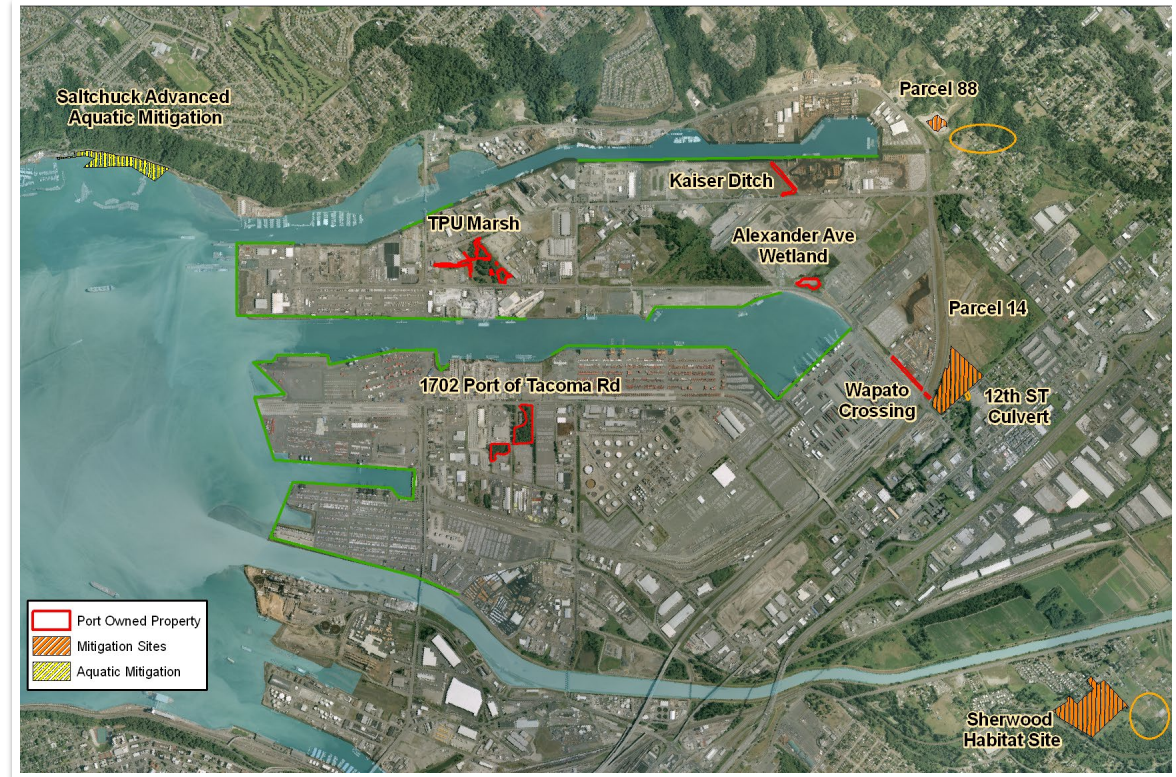


- ✓ Greater ecological benefits
- ✓ Scale efficiencies
- ✓ Reduce temporal loss
- ✓ Cost/time/liability benefits for other permittees
- ✓ Reduced costs
- ✓ Easier to manage
- ✓ Higher degree of success
- ✓ Mitigation credits



# Umbrella Bank Idea

- A Mitigation bank was suggested (vs. Advance Mitigation Site)
- Umbrella sites have been successful in other parts of the nation
- Allows for flexibility and additional sites for future planning

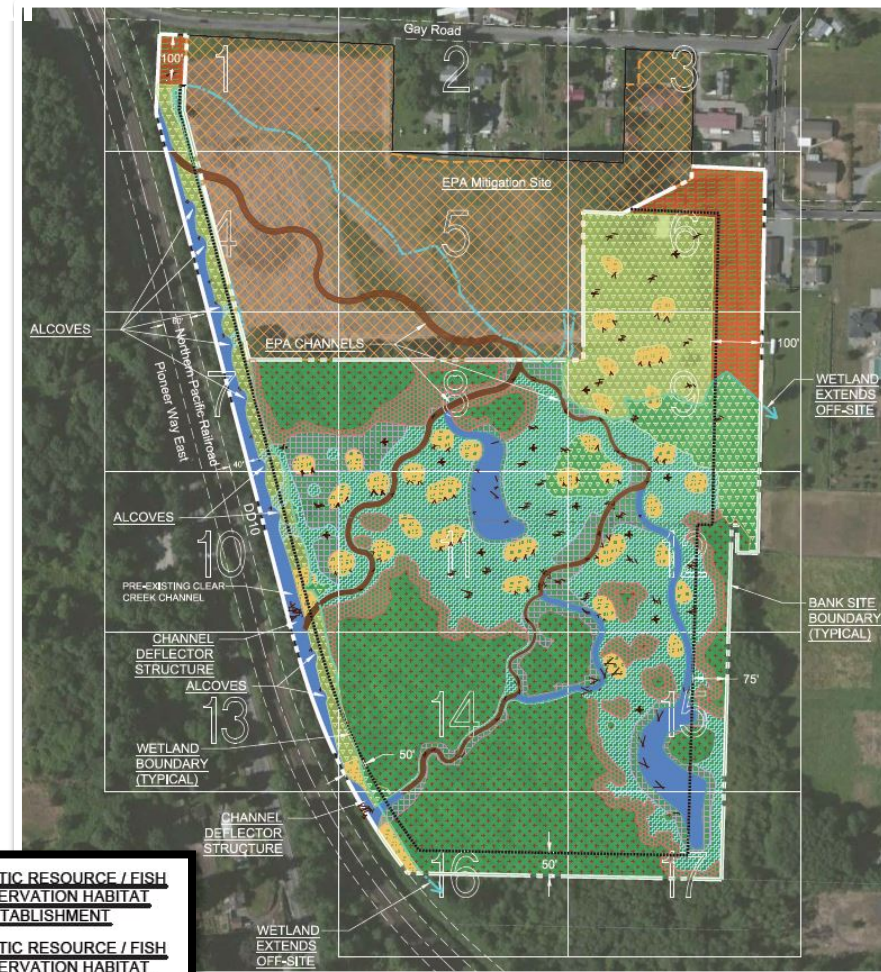


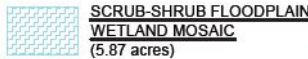
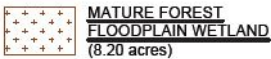
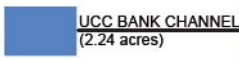


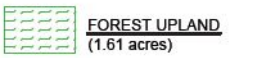
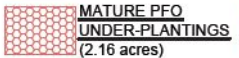


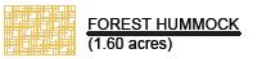
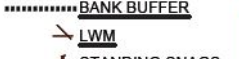



- 2013 initially applied as advance mitigation then switched to umbrella bank
- 2014 public notice
- 2017 removed umbrella to help facilitate a timely certification
- 2019 pending final Corp review



# Proposed Plan and Goal

- Remove human caused disturbances (levee, tiles, ditches)
- Restore fish and wetland habitats
- Rehabilitate and reestablish approx. 28 acres of floodplain habitat
- Reconnect Clear Creek channel and create channels with floodplain
- Create multiple new, meandering channels and off-channel habitat



	<b>SCRUB-SHRUB FLOODPLAIN WETLAND MOSAIC</b> (5.87 acres)		<b>MATURE FOREST FLOODPLAIN WETLAND</b> (8.20 acres)		<b>UCC BANK CHANNEL</b> (2.24 acres)		<b>AQUATIC RESOURCE / FISH CONSERVATION HABITAT RE-ESTABLISHMENT</b>
	<b>EMERGENT FLOODPLAIN WETLAND MOSAIC</b> (1.94 acres)		<b>FOREST UPLAND</b> (1.61 acres)		<b>MATURE PFO UNDER-PLANTINGS</b> (2.16 acres)		<b>AQUATIC RESOURCE / FISH CONSERVATION HABITAT REHABILITATION</b>
	<b>FOREST FLOODPLAIN WETLAND MOSAIC</b> (5.02 acres)		<b>FOREST HUMMOCK</b> (1.60 acres)		<b>BANK BUFFER</b>		<b>FORESTED UPLAND ENHANCEMENT</b>
					<b>LWM</b>		
					<b>STANDING SNAGS</b>		



# Fish Conservation Service Area



- Increased off-channel rearing, foraging, and refuge habitats in the Lower Puyallup River
- Includes salmonid migratory paths from Puyallup River to main Puget Sound
- Includes Commencement Bay
- Dual ecological benefit
- Improved tide gate
- Additional credits available





# Process Issues



- Umbrella aspect removed to expedite approval process to ensure settlement deadline was met
- Washington state lacks umbrella guidance and process framework
- Documentation changes and submittal process required multiple lengthy review cycles with final review still pending
- Actual construction of total space was addressed at the same time due to floodway and habitat creation which did not match well with the paper process
- Floodway construction over a two year period is difficult and careful planning is necessary
- Hydrology, wetland design, fish removal, floods
- Fish conservation credits



# Construction





# Outcome and Results

- Highly functioning ecosystem
  - Significant Salmon/Floodplain benefits
- Mitigation bank with a dual ledger of 12.56 wetland credits and 273.16 DSAYs (fish credits)
- Currently awaiting review by the Corps legal
- Final Corp legal approval is possible in 2020 for total 40 acres





# Fish Use of Clear Creek – Salmon Habitat Development



- To date, the Port has built or participated in 21 sites creating over 213 acres of habitat and preserved another 40 acres of open space
- Wild Chinook returning in record numbers
- Continued progress toward a complete healthy migration system

- Chinook (*listed*)
- Steelhead (*listed*)
- Bull trout (*listed*)
- Coho
- Pink
- Chum
- Cutthroat





# May 2016





An aerial photograph of a coastal town, likely Port of Tacoma, with a large mountain in the background. The town is built on a peninsula, with a large body of water in the foreground. The mountain in the background is snow-capped and has a prominent peak. The sky is blue with some light clouds.

# Questions?

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