

May 3, 2017

Pioneer Park Hatchery Preliminary Mitigation Plan

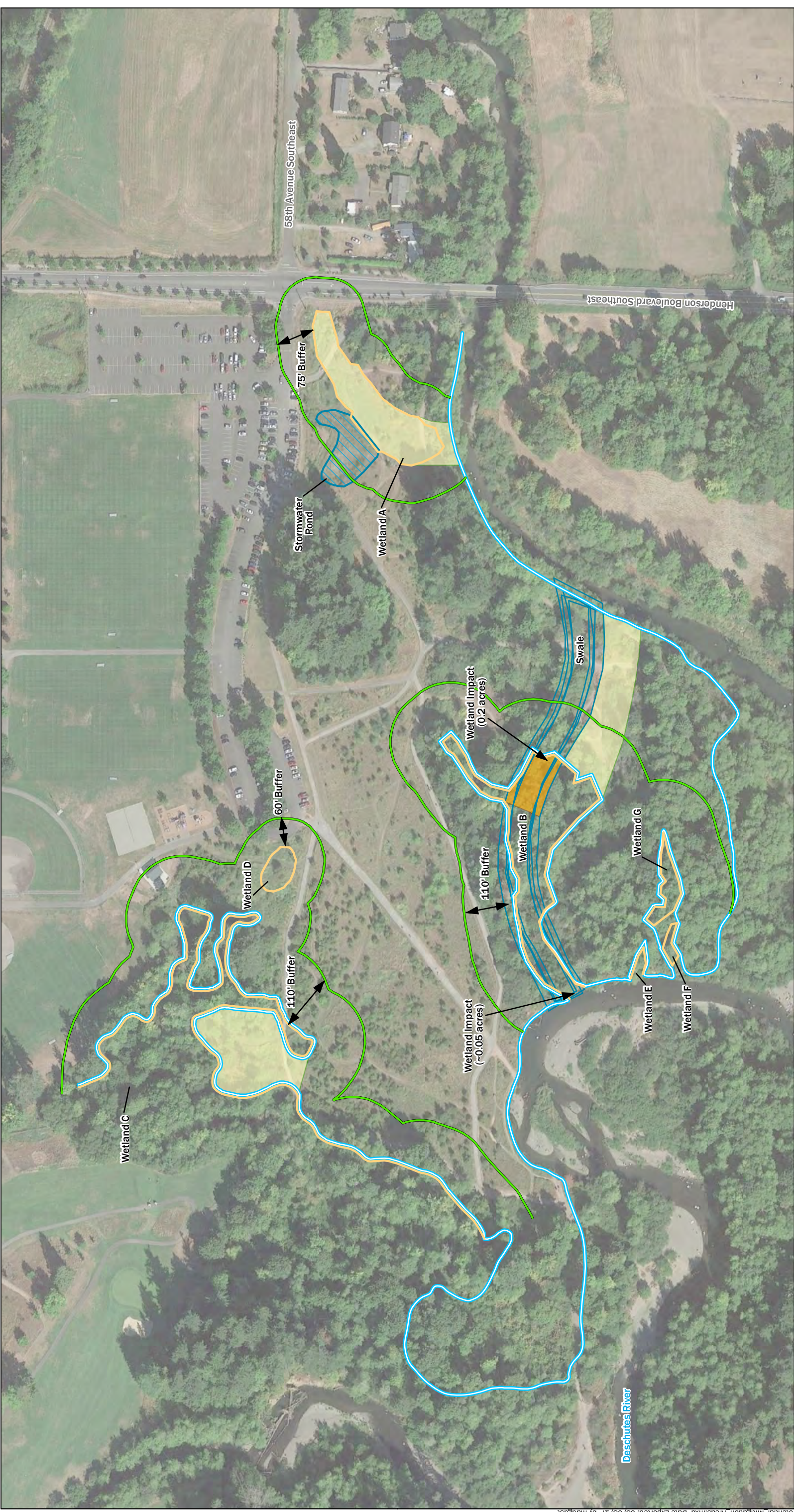
This brief narrative and the attached map show the refined alignment of the proposed conveyance for flood water, and to note a reduction in adverse impacts since the publishing of the SEPA Checklist for public comment. The Department of Ecology (DOE) had also asked to review our determination of OHW. WDFW, DOE, and a representative of the Squaxin Island Tribe met as soon as calendars would permit on May 1.

The project design including its potential adverse impact and potential mitigation opportunities was assessed by WDFW staff with the local jurisdiction, the City of Tumwater. Per the City's Permit Manager the project's identified adverse impacts to wetlands could be appropriately mitigated for with in-kind mitigation opportunities in relatively close proximity to the project. The City did inform WDFW that a variance would be needed.

As part of the investigation into a solution for the project to produce zero rise to the 100-year flood elevation, WDFW designed a swale into the channel migration zone that would allow for the conveyance of flood water through the proposed hatchery site. Through additional analysis WDFW recently reduced the ground disturbing work that may be needed in Wetland B to an area of approximately 0.25 acres. This change achieves flood conveyance, with less construction disturbance to the wetland by conforming the conveyance to more closely align with an existing side channel location. Compensatory mitigation for permanent impacts is proposed for the areas outside of the swale so the hydrological conditions are essentially independent of one another. Temporal impacts may be able to be mitigated for within the area southeast of the swale.

WDFW has spoken with the City of Tumwater regarding their critical areas ordinances and Shoreline Master Program to confirm that the preliminary assessment of potential adverse impacts is accurate and the corresponding mitigation is achievable per their Municipal Code (TMC). The proposed mitigation areas are shown on the attached map.

The final draft of the Wetland and Aquatic Report will take some months to complete as the swale is proposed to be in the floodplain, shoreline zone, channel migration zone, and riparian habitat zone. The project will require further documentation in order to fully address City of Tumwater, Department of Ecology, and Corps of Engineer regulations.

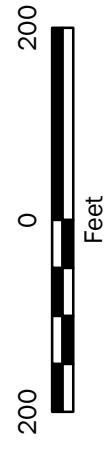


Notes:

- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Wetlands A, B, D, E, F, and G as surveyed by WDFW Survey Crew in April, 2015, and Wetlands C as field approximations from GeoEngineers. LIDAR FEMA June/July 2011. Google Earth 2016.
 Projection: NAD 1983 StatePlane Washington South FIPS 4602 Feet

- Legend**
- Wetland Buffer
 - Wetland Boundary
 - Ordinary High Water Mark (OHWM)
 - Potential Mitigation Areas
 - Wetland Impact



Potential Mitigation Areas

WDFW Pioneer Park Hatchery
Tumwater, Washington

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