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Duwamish Gardens Habitat Project

City of Tukwila

Preliminary Design Report

August 16, 2013

Introduction

This Preliminary Design Report represents a record of the technical decisions made in the development of the Duwamish Gardens project design to a 60% design level. The purpose of the Duwamish Gardens project is to create shallow water and marsh habitat in an area of the Duwamish Transition Zone that is severely lacking in shallow water habitat.

The design project involves design and permitting services for the construction of estuarine fish habitat on a 2.34 acre site called Duwamish Gardens. The project site is made up of 2.16 acres owned by the City of Tukwila and 0.18 acres owned by Washington State DNR. A conceptual site plan was developed by the Washington Department of Fish and Wildlife in 2010 and used as a conceptual design during the initial phase of the project and to seek final design funding. The City of Tukwila has furthered the design and proposes the creation of approximately 0.89 acre of shallow water habitat, as well as riparian and upland terrestrial habitat. A park and pedestrian trail will be developed in the upland portion of the site and a river trail will be developed along the edge of the restored intertidal area to provide a direct access to the river. The project requires that approximately 30,000 cubic yards of material be excavated to create the intertidal acreage, which will be graded, the soil amended and planted to create shallow water mudflat and high and low marsh habitat. The trail will include a few overlooks to view the river and restoration site. Interpretive information will be displayed throughout the park and along the trail.

The design process incorporated extensive community and stakeholder input including two public meetings and two City Council meetings. Two meetings were also held on site with agency staff to assess regulatory constraints and discuss ideas to reduce impacts and concepts to mitigate unavoidable impacts.

During schematic design, alternative designs were prepared and the options were narrowed down with public and stakeholder input. The alternative designs included three overall park alternatives and four marina alternatives. The alternatives are included in the appendix.

A. Existing Conditions - Site Description

Site History

The site is known as Duwamish Gardens and has been owned by the City of Tukwila since 2008. The site was purchased for the purposes of converting the property to salmon recovery, conservation, and outdoor recreation. This is explicit in a 2008 agreement, "Deed of Right to Use Land for Public Aquatic Lands Access and Salmon Recovery" between the City and the State of Washington. For many years prior to this purchase, the property was known as the Carosino property and was used by the Carosino family as a farm. In 2005, the Central Puget Sound Transit Authority (aka Sound Transit) gained an easement along a portion of the eastern portion of the site to construct and elevated guideway and associated utilities, namely power lines and vaults. An elevated section of Sound Transit's Central Link light rail, which currently connects downtown Seattle with SeaTac airport, runs through the Duwamish Gardens site, and was completed in 2009.

In 2010, the Washington Department of Fish and Wildlife issued the "Duwamish Gardens Estuarine Restoration Project Conceptual Design Report", which explored a variety of alternative concepts. Specific site data was limited at the time of study, but the report created the framework for the City of Tukwila's Duwamish Gardens Habitat project, which has been in design since 2012.

Existing Site Conditions

The total Duwamish Gardens site is approximately 2.34 acres with approximately 500 lineal feet of shoreline along the Duwamish River, to the south. The site is currently unused and fenced. The site can be accessed from East Marginal Way S. to the east. The property to the north is owned by Amalfi Investments, and is leased by United Parcel Service. The Amalfi site is paved and actively used for trucking purposes. The property to the west is also owned by Amalfi Investments and a portion is paved and actively used, but the portion adjacent to the river is not used. The site slopes towards the river and is covered with Himalayan blackberry.

The river is approximately 250' wide adjacent to the property. On the opposite bank is the regional, paved Green River trail. The shoreline adjacent to the trail is steep, but has been recently restored with some marsh, riparian and upland vegetation. The 19.6 mile trail currently runs from the junction of West Marginal Way S. and S. 102nd St, approximately one mile downstream, south along the Green River, into the City of Kent. An office building and parking lot are at the junction of the Green River Trail with East Marginal Way S.

The nearest public trailhead parking is located at Duwamish Hill Preserve, a City of Tukwila-owned park and preserve located on S. 115th Street. The parking area for the preserve is located about 800-feet east of East Marginal Way. S. Duwamish Hill Preserve is one of several publicly-owned park and open spaces in the vicinity, and is rich with cultural history. Elevated above the Duwamish River, the Hill-aka Grandmother's Hill-is a glacial remnant, that offers a vantage point from which Native Americans could see approaching enemies, and communicate with tribe members. The Hill is associated with the southern Puget Sound Salish oral tradition as the key location in the stories collectively known as the "Epic of the Winds."

Downriver approximately ½ mile are Cecil Moses Park and North winds Weir, which are two intertidal restoration sites. Both sites offer modest upland park access provisions. Two other noteworthy intertidal restoration sites along the Duwamish are Codiga Farms, located approximately two miles upstream in Tukwila, and Herring's House Park, downstream in Seattle. Together these restoration projects function to help restore habitat function along the Duwamish River.

Cultural Resources

A cultural site (45-KI-703) is located along the southeastern edge of this property, and it extends into the Duwamish Gardens project site. The exact limits of this cultural resource were not delineated and the project design included an initial cultural resources investigation using auger probes. This initial investigation was inconclusive and the City under consultation with the US Army Corps of Engineers was directed to do develop a more extensive investigation plan. This plan, developed by ESA Paragon and approved by the Corps of Engineers, involved the excavation of 17 trenches at various locations throughout the site.

The following excerpt is taken from the abstract from ESA Paragon's report, " Duwamish Gardens Project, City of Tukwila, King County, Washington, Archaeological Site Delineation at 45-KI-703" (April 2013):

ESA Paragon monitored geotechnical geoprobing, and conducted site delineation trenching and test excavations to delineate and characterize previously unrecorded portions of a cultural site (45-KI-703) identified during the Sound Transit elevated guideway and utility construction project. ESA Paragon monitored a total of 20 two-inch geoprobes, and excavated 17 delineation trenches and seven test excavation units within the Permit Area. ESA Paragon encountered definitive precontact artifacts – five pieces of lithic debitage – only within a single trench nearest to the previously recorded portion of 45-KI-703. ESA Paragon also recorded four concentrations of charcoal, oxidized soil, and ash (with or without fire modified rock and/or sparse shell/bone), interpreted as anthropogenic fire features; all were in relative proximity to the previously recorded portion of 45-KI-703. Ephemeral pockets of highly crushed shell or bone (indeterminate) were neither identifiable to taxon, nor definitive human origin. ESA Paragon also noted the widespread presence of at least two buried palesols with associated diffuse charcoal, but devoid of precontact artifacts or features.

ESA Paragon interprets the results of this investigation to indicate that precontact human occupation and land use was substantially less frequent and intensive in the delineation area, compared with previously recorded portions of 45-KI-703.

ESA Paragon recommends revising 45-KI-703 boundaries to extend an additional 150 feet (45 meters) west of their current mapped location. However, ESA Paragon recommends that theDuwamish Gardens project will result in No Adverse Effect on 45-KI-703, because further archaeological work is unlikely to result in new information that qualitatively differs from, or quantitatively exceeds, information collected previously during data recovery mitigation. Artifacts and ecological samples collected as part of the delineation are being curated at the Burke Museum of Natural History and Culture, in Seattle, Washington.

Environmental Characterization

The following are excerpts taken from ESA Paragon's report, "Limited Environmental Characterization Report, Duwamish Gardens, Tukwila, Washington" (June 28, 2012):

Data was collected to pre-designate potentially contaminated soil at the site, and characterize groundwater in the areas where excavation dewatering may be necessary such that a contractor can design treatment systems (if needed) and obtain discharge permits for dewatering activities.

The top 2 feet of soil across the site was generally found to contain detectable levels of Polynuclear aromatic hydrocarbons (PAHs), with some exceptions. Although the detected concentrations were often

lower than established regulatory cleanup criteria, some soil samples contained contamination in excess of MTCA Method A cleanup criteria.

Soil in the top 2 to 4 feet to be excavated during construction will fall into three waste categories: Clean, Class II Waste, and Problem Waste.

Groundwater at the western end of the site was not found to be contaminated with HVOCs asdetected during a previous investigation. Water removed during excavation dewatering in thisarea will likely not require treatment to remove contaminants prior to discharge. However,treatment for conventional water quality parameters (i.e., pH, turbidity, etc.) will likely berequired depending on the discharge point and applicable permit.

The limits of areas containing soil in excess of MTCA Method A cleanup criteria have been surveyed and included in the project base map.

Estuarine Analysis

The following are excerpts taken from "Duwamish Gardens Estuarine Ecology Memo," (Bill Taylor, CardnoTEC, 2012).

Chinook, chum, coho, and pink salmon, steelhead and cutthroat trout, and likely bull trout all migrate downstream as juveniles here. Chinook salmon are the major fish of interest, and these juveniles migrate in two pulses: one in late February and March, the other in May and early June. Habitat needs for all these fish include off-channel inundated areas where they can periodically rest and feed while swimming downstream.
Site substrate and vegetation will both provide prey or quiescent conditions for juvenile fish. Overall site development, especially riparian vegetation will develop habitat attributes for more than just fish use.

Hydrologic Condition

The following are excerpts taken from "Duwamish Gardens Estuarine Ecology Memo" (Bill Taylor, CardnoTEC , 2012).

Flows are almost exclusively freshwater, but tidally influenced at times none-the-less. Lower flows in the summer show saline tidal excursion during high tides. There is site salinity occurrence during high tides (always below 650 cfs, never over 1000 cfs).

CardnoTEC delineated the Ordinary High Water Mark (OHWM) at the site on April 9, 2012. The line is at approximately elevation 10.1, NAVD 88. The determination of the OHWM was based on the following visual indicators:

1. An abrupt vegetation and soil composition change, where river and tidal influences created mudflat bank conditions compared to aerated upland soils and riparian vegetation
2. A natural line impression and shelving (undercut loose soil) along both banks
3. Leaf litter and organic matter washed away below the determined mark
4. Water staining on bridge pilings and abutments

Shannon & Wilson's memo, "Duwamish Gardens Riverine Tidal Hydrology", June 21, 2012, analyzed site hydrologic conditions by interpolating National Oceanic and Atmospheric Administration (NOAA)

and U.S. Geological Survey (USGS) data at the project site for spring flow conditions in 2012. Also, the report analyzed HEC-RAS modeling at project site for spring flow conditions in 2012.

Geotechnical Investigation

The following are excerpts taken from Shannon & Wilson's memo, "Duwamish Gardens Preliminary Geotechngical Data Memorandum" (July, 2012):

Four geologic units were recognized at this site. Bedrock was not encountered in any of the borings on this site. The uppermost unit is fill that is about 6 feet thick. Natural estuarine or tide flats deposits form a relatively uniform layer over the site. The bottom of this deposit ranges from about elevation 5 to 8 feet. It consists of very loose to loose, fine sandy silt with a trace of fine gravel. The estuarine sediments are underlain by coarse alluvium, which consists of loose to medium dense, trace to slightly silty, fine to medium sand; wet, and trace of coarse sand. This sand is likely to be exposed in the bottom 2 to 4 feet of the proposed excavation for the embayment. A layer of very soft, clayey silt is found at 45 to 47 feet deep.

Groundwater was found at a similar elevation in the three borings taken. Vibrating wire piezometers installed and monitored by Shannon & Wilson indicate that the groundwater levels on the site area tidally influenced. Groundwater levels fluctuate diurnally. Over the one-month period of monitoring, the water level has fluctuated between approximately elevation 6.8 and 5.5 feet (NAVD88) in boring B-1 and 6.7 and 5.7 feet (NAVD88) in boring B-2. Water flow, as expected, is from north to south, toward the river.

Sound Transit Facilities and Easement and Seattle City Light interests

Sound Transit owns and operates an elevated guideway on the Duwamish Gardens site for its Central Link Light Rail line. In addition, there is a below ground duct bank with power lines running parallel to the guideway and accompanying in-ground electrical vaults that serve Sound Transit's operations. The easement for the guideway and duct bank belong to Sound Transit, with a potential for transfer of the duct bank to Seattle City Light, based on conversations with John Bresnahan, Seattle City Light (SCL), and Steve Sawyer and Tom Wilson of Sound Transit.

The easements and presence of the above mentioned facilities impact the project design. The project must comply with language in the easement agreement with Sound Transit, but it is advisable to have design concurrence with SCL, in the event that they become owners of the underground utilities easement.

Following are excerpts of the easement as taken from the "Title Officer's Review of the Title Report" by the King County Office of Open Space, June 7, 2006.

"Easement, Central Puget Sound Regional Transit Authority, guideway underground utilities and temporary construction (Cause No. 04-2-08631, AFN 20050928-000504):
"As to the guideway easements, includes the right to construct, operate, inspect, maintain, replace, improve, remove and use a light rail system including columns, foundations, an aerial guideway an low impact drainage systems. <u>Provides for access for easement purposes and for trimming of trees higher than the top of the rail and within 10 feet of the guideway.</u> Permits removal of structures and impediments and the maintenance of the easement area for its intended use. Prohibits uses of the property by the owners that interferes within the easement rights, permanent structures, flammable, explosive or hazardous materials, obstructions within five feet of the guideway structure, and uses in the area above the guideway or five feet below the bottom of the guideway structure. As to the utility easement...provides access for easement purposes (and) permits removal of brush and trees that endanger

of interfere with the maintenance or operation of the system. Prohibits earth moving activities that disturb or unearth the facilities, and blasting within 50 feet.

Preliminary Design Alternatives

Estuarine Habitat Design and Construction

Excerpt from "Duwamish Gardens Estuarine Restoration Project Conceptual Design Report," Washington Department of Fish and Wildlife, February 16, 2010:

Salmon recovery in the Green/Duwamish watershed depends on improving the quality and quantity of estuarine habitat in the Duwamish estuary. In particular, migrating juvenile Chinook salmon need more and better "transition zone" habitat where they can feed, take shelter, and osmoregulate as they transition from being freshwater fish to saltwater fish.

The Duwamish Gardens site is located at approximately RM 6.75. The WRIA 9 draft "Duwamish Transition Zone Blueprint," January 17, 2006 discusses habitat areas most needed above river mile (RM) 5.5. It says, "shallow-water, off-channel habitats where juvenile salmonids can shelter, hold in low-salinity water, and feed. Where possible, these habitats would feature a relatively shallow grade, a silt/clay to fine sand substrate, and be ringed with emergent vegetation."

"Chinook salmon utilize estuaries to acclimate to marine water and to grow in a relatively food-rich environment where predators are often less abundant. In general, smaller salmon (e.g., fry) are likely to rear in estuaries for longer periods, before moving into marine nearshore areas."

Chinook, chum, coho, and pink salmon, steelhead and cutthroat trout, and likely bull trout all migrate downstream as juveniles here. Chinook salmon are the major fish of interest, and these juveniles migrate in two pulses: one in late February and March, the other in May and early June. Habitat needs for all these fish include off-channel inundated areas where they can periodically rest and feed while swimming downstream.

Multiple site designs were originally developed by WDFW for the existing project site, and one alternative site configuration was thoroughly evaluated, also by WDFW. The alternative site configuration consisted of a longer, skinnier version of approximately the same area. This layout would have depended on sale/exchange of some of the upland portion of the City's property to the adjacent property owner in exchange for the adjacent owner's land immediately downstream (west) of the City property. To evaluate the merits of this alternative layout and of the existing site, the City commissioned the "Duwamish Garden Estuarine Restoration Project Conceptual Design Report" (February 16, 2010) from the Washington Department of Fish and Wildlife. Based on analysis in this report as well as other scientific, legal, policy, cost, and timing considerations, the City decided to develop the design that makes use of the existing property configuration. This evaluation also served as the starting point in the current design process, during which different elements were developed, measured against project goals and requirements, and reduced to two concepts: Sub Option A and Sub Option B (see Appendices). Both sub options were configured to avoid sensitive cultural resources on the east side of the site and to avoid small, shallow areas of contaminated soils. Sub Option A maximized the shallow water habitat area, and had a narrower riparian area, and Sub Option B had a smaller shallow water habitat area and a larger riparian area with a bioretention cell.

Preferred Alternative - Proposed Design

The current design effort began by the design team developing different concept elements for the site. Each of these elements was then measured against the project goals and requirements of the various funding sources to develop two concepts that were further developed into Sub Option A and Sub Option B, as described above (see Appendices). These options were discussed with various stakeholder groups through a series of meetings as noted below. Sub Option A was selected by all participants since it provided the most habitat area within the site and met the goals of the project. Design options for the site are fairly limited and the final design reflects this. In keeping with the purposes of the project, as much shallow water habitat is being created as possible. In addition, the cultural resources investigations outlined a portion of the site that should be avoided if possible. The site also needed gently sloping banks to avoid erosion and a pedestrian trail around the site to meet the stakeholder's groups recommendations and ALEA funding requirements for public access. Parking will be placed under the Sound Transit guideway since this area is not conducive to habitat needs and is adjacent to East Marginal Way South. Pedestrian paths and a gathering area will be placed on fill over the cultural resources area to avoid disturbing them.

Design Considerations and Preliminary Analyses

The preferred alternative was further developed into a 30% level design, and is now near 60% design. The design was developed with the following criteria in mind:

Tidal connectivity and fish access to the site will be through either an open embayment or tidal channel into a mudflat zone. A short mud spit will be extended westward at an approximate elevation of 5.0 feet NAVD88. A tidal channel mouth connection into the marsh is recommended at the western end of the spit. This feature, if excavated to an elevation of 0.0 foot, would be a submerged inlet during the spring juvenile Chinook migration period. Excavation of the tidal channel is recommended to maintain connectivity into the marsh while limiting the potential for bank erosion at the end of the drainage channel. The mud spit would enhance quiescent backwater conditions in the marsh, and facilitate mud flat and marsh sedimentation.

The design will provide a low and high marsh composition with a tidal channel that could provide shallow depths across a range of tidal conditions, cover and food sources. The project proposes to create 0.39 acres of mudflats, 0.50 acres of low and high marsh habitat, 0.15 acres of moist riparian habitat, 1.09 acres of restored upland riparian habitat including vegetated park areas, and 0.21 acres of pavement and trails.

Substrate and Vegetation

Site substrate and vegetation will both provide prey or quiescent conditions for juvenile fish. Overall site development, especially riparian vegetation will develop habitat attributes for more than just fish use. Site submerged or frequently submerged aquatic areas (vegetation free or not) should be fine grained substrate with a high organic content (up to 10%). Riparian and upland areas will be prepared with worked-in compost to facilitate vegetation establishment.

Diverse emergent and riparian vegetation will be important to the habitat function for prey and off-channel resting. Intertidal vegetation elevations can be found from the surrounding vegetation communities, but the lower extent of these communities may not be expressing themselves due to steeper stream bank slopes at the lower extent. Plantings will include trees and shrubs of various sizes and live stakes where appropriate, planted densely to discourage social trails and reduce the chances for invasive species to become established. A diversity of native plantings will encourage diversity in terrestrial

insects, which have been found to be a large component in juvenile Chinook diets (see J. Toft, Olympic Sculpture Park 3-year Monitoring Report, 2011).

Grading

Gradients will be carefully designed for stability when exposed to repeated rising and falling waters. A preliminary slope stability analysis provided by Shannon & Wilson indicates that ground that is often subject to rising and falling waters – below OHW- should be designed with grades no steeper than 5H:1V. For ground above OHW, vegetated slopes graded at a maximum of 3H: 1V would be stable.

Water and Erosion Control

The construction plan proposes to create temporary berm structure, from unexcavated bank, which would be left partially in place as the berm is breached, during the in-water work period, and equipment backed out of the final berm excavation area. The majority of the habitat project excavation-up to 22' deep- would be contained by the inside of the berm. Then, the mouth of the channel would be constructed as an isolated excavation during low water conditions, and not be submerged dredging with in-water disposal.

The temporary berm will be constructed by excavating from the site surface (generally, at elevations 20-22 NAVD 88), down to elevation 12'. The temporary berm will remain in place to protect interior areas until the interior grading is complete. Temporary berm slopes will be constructed at a 2H:1V maximum angle. The interior will be dewatered. Lower –layer excavation will occur outside of the wet season. The temporary slope on the landward side of the temporary berm will be protected with plastic sheeting during any time that it is not being worked for more than one week. A silt curtain will be installed during the in-water work window prior to removing the temporary berm. Finish elevations of the final spit will be achieved and as much of the planting established as possible prior to breaching. The temporary berm will then be removed from the landward side and breaching will occur only during the in-water work window and during low tide.

Duwamish Gardens Park

Outdoor recreation is a required component of the property deed and embedded in the City of Tukwila's Shoreline Master Program (Ordinance 2344), which promotes public access to publicly-owned areas of shorelines and recreational opportunities for the public in the shoreline. Duwamish Gardens will provide passive recreational and interpretive/educational opportunities to park visitors. It also will provide a hand-carry boat access path to the edge of the riparian area/marsh.

The central gathering area for the park will consist of a circular, ornamental gabion wall-lined viewing plaza, with western views into the heart of the restoration site. A bench will be located here, and an interpretive/educational sign may be located here. There has been some discussion of having an art element installed here. There is no art design process or theming that has been established at this time. From this overlook, park visitors can choose three directions of travel: along the trail to the western park boundary, to the water towards the southwest, or south along a curving path to a high point that overlooks the main stem of the Duwamish River, and encircles a sloped gathering lawn. The gathering lawn will be about ½ acre in area in size, and sloped rotationally to the north then to the west with the intention of commanding continuous views towards the restoration area. The lawn may be used for picnicking or informal small-scale recreation, but is limiting in terms of informal recreational activities due to its slope.

From the viewpoint atop the hill, an informal, narrow path consisting of crushed rock and rock steps aims down the hill towards water access trail below. This creates ease of access between the two places and is intended to provide a fun "natural play" element for children by enabling them to have exposure to relatively easy scrambling, and by creating a circular route, which often appeals to children.

Park Access

Pedestrian access can be gained from a walkway adjoining the sidewalk along East Marginal Way South. There is potential for a crosswalk to be striped across East Marginal S., from the existing ADA ramp across to the intersection with South 112th Street. This may increase pedestrian safety for those walking from nearby Duwamish Hill Preserve to Duwamish Gardens. However, such a crossing is not included in the project design at this time. Bicyclists travelling on East Marginal Way or from the nearby Green River Trail will be able to secure their bicycles to a bike rack, which will be provided. Approximately five parking stalls will be developed along East Marginal Way under the guideway, affording motorists access to the site. This is particularly convenient for those who wish to utilize the hand-carry boat launch or use the site as a bike trailhead. An ADA parking stall that accommodates a van will be provided.

Upland planting will be designed to create be multi-beneficial and balance the needs of fish and wildlife habitat, human use, safety, surveillance and screening. Plants will be used to create a partial-screen between the gathering area and the transportation corridor to the east – the elevated guideway and East Marginal Way S. The attempt is to soften views of the guideway and roadway from the park, but maintain some openness for surveillance purposes. Views will be partially open towards the Green River Trail, across the river as well. To the north, a dense arrangement of mostly evergreen plants will be located to screen views of the tractor trailers on the adjacent site. Planting will also occur within the right-of-way of East Marginal Way South. The neighborhood is primarily industrial, and plants are sparse; here they will be installed to draw the attention of people to the park. Small trees will be located along the roadway with the idea that the canopies will be more than 10 feet away from the guideway. Low shrubs and groundcovers will accompany the trees and permit adequate sight lines for those entering and leaving the park.

Trail System and Water Access

A pedestrian trail will be installed from the park entrance to the western project boundary. It will run approximately 630 feet and dead-end in at a viewpoint. There will be one other viewpoints along this trail, as well. The viewpoints will each have a bench and some or all may have an interpretive/educational sign or functional art piece. The art and messages haven't been developed at this time, but will likely pertain to Native American history is the Duwamish River valley, habitat aspects of the river, and/or industrial history of the Duwamish River valley. There has been discussion about the creation of a designated National Historic Place, which would encompass a section of the Duwamish River and valley, and relate to the Native American history in the region. Some preliminary work had been done during the time of the Sound Transit Project, but ultimately no such designation was applied for.

The trail system also includes a river access trail for the purposes of hand-carry boat access during high water. The trail is approximately 145 feet long from the central overlook. The trail will terminate at OHW at a wave-deflecting spit consisting of rounded gravel and with some rounded boulders, which will provide more structural stability than mud, but won't compromise the habitat qualities of the site. A bench and small resting place will be built just above the OHW line for near-water enjoyment and as a place for hand-carry boat loading and unloading. All trails constructed above OHW will be ADA accessible, per the federal, "Architectural Barriers Act, Accessibility Guidelines for Outdoor Recreation Areas". Trails will be surfaced with compacted, firm and stable crushed rock material with gentle grades, generally not exceeding 8H:1V.

Cultural Resource, Educational and Interpretive Considerations

The cultural site is an oblong area around the old Carosino house along the southeastern part of the site. It is unlikely that the project can be designed to completely avoid 45-KI-703 while still fulfilling the intent of the project. Fortunately, the site corresponds roughly with the spit recommended by Dave Cline of

Shannon & Wilson. It is expected that an archaeologist will need to be present on site during excavation activities within the cultural site.

Mitigation for the disruption of the pre-contact cultural site will likely include sign art and messages that have not yet been developed. Cultural mitigation will likely include art and/or signs that pertain to Native American history is the Duwamish River valley, habitat aspects of the river, and/or the industrial history of the Duwamish River valley. There has been discussion about the creation of a designated National Historic Place, which would encompass a section of the Duwamish River and valley, and relate to the Native American history in the region. Some preliminary work had been done during the time of the Sound Transit Project, but ultimately no such designation was applied for.

Parking and Stormwater

Stormwater treatment will be required for water running off of the proposed parking pavement. A rain garden will be developed to the west of the parking area, and amended with suitable soils for treatment and planted, primarily with shrubs. In addition, the City would like to provide additional benefit to the environment by collecting and treating water from East Marginal Way S. that is currently untreated. An overflow surface channel, pipe and rock-lined outlet will be installed to carry overflow water into the new esturarine restoration area inlet.

Currently, the City is in discussions with the Amalfi Investments, the property owner to the north, to trade or sell an undetermined wedge of the northeastern portion of the property for their use in exchange for the undevelopable riverfront property to the west of Duwamish Gardens. The design shows a driveway in this location, which will be for their use. However, Amalfi has expressed that they no longer want the land for a driveway, but would like it for parking instead. It is unknown how these negotiations will resolve, but it has been expressed that while obtaining the riverfront property to the west is desirable from a restoration point-of-view, any negotiation shouldn't compromise Duwamish Gardens project goals or schedule.

Permitting and Stakeholder Consultation

Various stakeholder coordination and meetings have been held and have influenced the design of this project. A brief summary of these meeting is listed below:

- An onsite meeting was held on 5/23/2012 with Steve Sawyer of Sound Transit. The purpose of this meeting was to determine the limitations for work within the Sound transit Easement. Sound Transit requires unlimited access to the guide way at all times but will allow low growing vegetation, parking, and other improvements. Buried power is located below ground so excavation around the power or near the supports is not permitted.

- A meeting was held on 7/11/12 with the Corps of Engineers regarding cultural resources. Attendees included the City, JA Brannan, and their consultant, Paragon. This meeting concluded that additional cultural resources investigations would need to take place. The proposed plan was to do a series of test trenches and sieve analysis. Paragon would develop a proposed investigation plan for Corps approval.

- A meeting was held on 7/30/12 between JA Brennan and the various sub-consultants, City, and WRIA 9 Habitat Team to develop various project design concepts.

- A meeting was held onsite on 10/29/12 to review the test trenches. The Cultural resources monitoring was underway and this meeting gave the Corps, City, and Tribes a chance to see the

infield work, answer any questions, and get a preliminary report of the findings. See Appendices for meeting minutes.

- A meeting was held on 2/6/2013 with all the stakeholders of the project. The purpose of this meeting was to present the two alternate concepts (Sub Options A and B) and seek direction on which alternative to proceed with. See Appendices for a copy of the meeting notes.

- A meeting was held on 3/4/13 with the Duwamish Gardens Citizens Group. This group is made up of approximately 10 individuals who expressed interest in providing input for this project. Seven citizens attended the meeting and provided comments. The group agreed with the Stakeholders group to further development of the plans that provided the most in water habitat. They also wanted, a trail to the river, interesting features to draw people throughout the site, onsite parking, and a balance between habitat and park uses for the site.

- A meeting was held onsite with representatives of the regulatory and fisheries divisions of the Muckleshoot Tribe to review the project, preferred alternative, methods the projects was proposing to avoid cultural resources, and seek input on potential interpretive elements of the project. See Appendices for a copy of the meeting notes.

- The selected project concept was reviewed at a public meeting with the Tukwila Parks Commission on 3/24/13. The Commission agreed with developing the site as presented.

- The 30% design and project update were presented at a public meeting of the Tukwila Community Affairs and Parks Committee on 7/22/2013. The Committee agreed with the directions of the project.

Preliminary Design Drawings

Preliminary (60%) project drawings showing the following elements are attached to the project application in PRISM.

- Existing site conditions, property boundaries, roads, utilities, and existing structures
- Project site plan view showing proposed project overlaid on existing site plan
- Project profile with relevant water surface elevations
- Project details

Preliminary Construction Cost Estimate

A preliminary cost estimate has been developed for the approximately 60% project design. The total estimated construction costs including Cultural Resources Investigations, Land Exchange Review and Acquisition, Building Demolition, Construction Contract, Consultant Construction Management, and Tax is $2,639,334. A preliminary (60%) project cost estimate is attached to the project application in PRISM.

Permit Applications

A final project JARPA was developed and submitted on July 11. 2013 to the US Army Corps of Engineers, Washington Department of Fish and Wildlife, and Washington State Department of Natural Resources.

The City of Tukwila is currently performing a SEPA review, and a determination is expected in August 2013. A City Shorelines permit will also be required. Final permit will be attached in Prism once they are received.

Appendices

1. Preliminary site concepts (Sub Options A and B)

2. Meeting Notes from:
   - July 30, 2012 alternative design workshop
   - October 29, 2012 cultural and historic resources investigation on-site meeting
   - February 6, 2013 project stakeholder meeting
   - March 19, 2013 site meeting with tribes and other interested parties.

Appendix 1 – Preliminary Site Concepts (Sub Options A and B)

truck access
S.T. access
Optional land swap area
Treatment Marsh
swale
3:1
5:1
marsh
Mud flat
Sub Option B
- smaller marsh area
- limited public access
- stormwater treatment marsh - upland
mudflat el. 3-5
low marsh 5-7.5
high marsh 7.5-10
OHW 10.1
Riparian 10-13
Upland 13+
for MLLW datum add 2.35'

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DUWAMISH GARDENS

CITY OF TUKWILA

MEETING NOTES AND DRAFT ALTERNATIVE DESIGN MEMO
ALTERNATIVES DESIGN WORKSHOP – J.A. BRENNAN ASSOCIATES' OFFICE
JULY 30, 2012

PARTICIPANTS:
Ryan Larson - City of Tukwila
Elissa Ostergaard - King County/WRIA8
Jim Brennan - J.A. Brennan Assoc.
Mike Perfetti - J.A. Brennan Assoc.
Bill Taylor – Cardno TEC
Dave Cline - Shannon and Wilson (S&W)
Bill LaPrade – S&W

Cultural Resources:

- Discussed archaeological testing plan by Paragon; Cody @ S+W to review for contaminant soils requirements; Expect Corps to approve plan and testing to be performed in August; results will inform design direction
- Cultural resources could make this project infeasible if it goes above $500k for cultural mitigation.
- Sound transit spent $400K to $500k for cultural resources just for pier

Grants:

- King Flood Control District is probably funding local match
- RCO ALEA funding - $500k application + match due August – application complete
- Consider applying for ESRP (Estuary and Salmon Restoration Program) (WDFW); workshops, prepoosal due in Sept. see link for more info: http://wdfw.wa.gov/grants/esrp/
- Possibility that Puget Sound Partnership may acquire funding for large restoration projects – currently lobbying the state
- Potential application for DOE grant for contaminated soils cleanup $100 to 200k maximum grant

Geotechnical:

- Bill LaPrade presented
- Drilled 2 holes - findings consistent with Sound Transit hole
- Found mostly loose silts, sands – weak; sands below
- Groundwater fluctuates where river/tidal water contact occurs causing degradation (el 5.5 to 6.8)
- River frontage influenced by tides, back area of site by rainfall – but, consistent groundwater gradient throughout site.
- Vibrating wire remains in ground – S& W will continue to read data through winter.
- Expect sloppy soil during excavation below elevation 7 (all elevations in NAVD 88)

- Highest tide reaches elev 5 -soil groundwater fluctuations dampen tidal effect
- It is possible that archaeological layer is old ground surface - not sure

Riverine Tidal Hydrology:

- Dave Cline presented
- HEC-RAS model seems more accurate than interpolating between stations; most consistent with conditions seen at site
- Elevation 3-5 will always be inundated due to effects of downstream weir
- Model predicts lowest water elevation is about el. 3, wetted to el. 5.
- Mud line up to elevation 5 - mud flats below this elevation
- Low marsh from el. 5 to 6.5; high marsh – 7.5 to 10
- North Wind Weir had low marsh vegetation to elevation 5, as well.
- 100-yr flood is el. 13 – site will likely be dry above that.
- Consider creating a spit or point formation to protect bank from boats/high flows; channel at outlet
- Spit/point also can serve as construction access ramp
- Sediment and accretion is good for the marsh environment - expect 6 to 12 inches per decade.
- Spit/ Point will result in slightly higher sediment build up in side channel
- Current velocity less than 4 feet per second in center of channel during flood. Model can't assess velocity across the channel, but can estimate. Assume less than 1 foot per second at edge of channel. 2 feet per second starts to effect juveniles.
- Vegetation ends at 5 foot elevation then transitions to sand - soils could affect distribution of vegetation.

Estuarine Ecology:

- Bill Taylor presented
- Salmon like invertebrates in mud flats. But, distributrion of three ecosystems (mud, marsh, riparian) is also important
- Inundation duration is important for salmon
- Consider adding compost to enhance productivity
- January and February typically are highest flow numbers; some years have been low, though
- Smaller fish feed more on mud surface areas
- No salt wedge impact on a site until 1000 cfs or less – which is probably only in August or so at this site; Spring out migration is at a time when there is no salinity in this portion of the river. So this site is fresh water tidal.
- Historically, this area was probably forest floodplain. Brian Collins did historic river channel analysis.
- Bill sees 3 options for ecosystem types – mudflat, marsh, forested marsh
- Concern about trying to do too much on a small site; This site is 2.16 Acres – compare w/ Herring's House which is about 16 acres; invite Ryan and Elissa to tour Herring's House.

Contaminated soil:

- Bill LaPrade presented
- 20 grids
- 3 types of contaminant levels found: clean, class 2 waste, problem waste
- Clean - dispose anywhere

- Problem waste areas – 3 identified; 2 by barn, 1 near ST pier
- Site is mostly Class 2 waste - should report it and haul; there are several approved sites.
- Site Includes PAHs from anthropogenic sources and farm use
- Problem waste material - more costly to dispose of
- what's the cost per cubic yard? – clean soil $15/Ton, Subtitle D facility (Problem Waste) $45/Ton, Facility for Class 2 is about $30/Ton
- See plan in memo for extent of different materials

Site analysis conclusions

- Factors of design – geologic, vegetative and hydrologic

Goals:

- High quality shallow water habitat for juvenile Chinook - for juvenile to transition, grow and feed. This could include mud flat and marsh.
- Planting with conifers
- Shallow water habitat for Chinook
- Enhanced wildlife habitat
- Public access, limited to small trail and maybe a hand carry boat launch - ADA not critical for water access (slopes of 10% ideal; can be steeper at shore if beach gravel is placed)
- Clean up the site contaminated soils, if funding allows
- Create a beautiful gateway to Tukwila
- Low maintenance sustainable landscape

Constraints:

- Sound Transit Easements–maintain vehicle access for ST under guideway; no cars within 5' of piers; no trees within 10' (reference ST guidelines for trees)
- Seattle City light – in process of acquiring easement from ST; vault and electrical duct bank west of guideway, plus electrical going to house; preliminarily, can dig to concrete vault, which is max 3' below grade;
- Cultural resources – in progress; highest concentration of resources at about 3 to 4 feet deep
- Wetland buffers - minimum 50 feet see shoreline code.
- Neighbor to north wants driveway in north east corner – consider land swap/value

Alternatives:

1A. *Maximum mud flat area as in WDFW alternative 1B* – note that this drawing shows excavation in vicinity of guideway and doesn't consider contaminated areas or public access; elevation goes to el. -2; high excavation cost

- Advantages – most mudflat creation; large marsh area bench at east part of site;
- Disadvantages – most excavation (note that this plan excavates to -2, which is deemed unbeneficial for habitat); high excavation cost; high contaminant disposal cost; restrictive space for public access;

1B. *Maximum mud flat area with Island* - Similar to WDFW Alt. 1B plan except Island located along river edge creating embayment separated from main channel with 2 openings

- Advantages – still moderate amount of mudflat creation; large marsh area bench at east part of site; potential unique island feature – benefits include general wildlife habitat, shore protection and aesthetic feature; good for construction access

- Disadvantages –moderate to moderately high excavation cost; high contaminant disposal cost; restrictive space for public access

2. *Moderately-sized Embayment Behind Protective Spit*
    - ~170'-long spit protects embayment against higher velocities, traps sediments/creates quiescent backwater-good for vegetation/protected for fish
    - Use log structures or other retaining structures to avoid excavation in problem contaminant areas while allowing space for marsh creation.
    - Use of spit for construction access and also hand-carry boat access
    - Marshy backwater area behind spit/east part of site with optional mud flat channel bottom
    - Allows truck access and internal parking
    - Advantages – spit is unique feature; allows good construction access, and public water access. still moderate to moderately high amount of mudflat creation; potentially largest marsh area bench at east part of site; no disturbance of problem contaminants
    - Disadvantages –moderate excavation cost; added cost for retaining structures

3A. *Moderately-sized Embayment with Terrace*
    - Similar configuration to Large Embayment Behind Protective Spit, except that that the spit is removed; this creates a more open/exposed condition
    - More mudflat
    - Use of wood structures between about el 5.5 – 6.8 (weak zone); this reduces low marsh habitat (el ~5.5 to 7)
    - Advantages – moderately high to high amount of mudflat creation; no disturbance of problem contaminants; moderate to moderately high high marsh area; good upland access
    - Disadvantages –limited to no low marsh vegetation; moderate to moderately high excavation cost; potentially highest cost for retaining structures; limitations to public water access; less acquiescent backwater conditions

3B. *Moderately-sized Embayment with Higher Terrace*

    - Alternative to place wood structures at OHW (about el 10) more closely akin to natural condition, and gently grade through the weak zone – max 5:1 – note Northwinds Weir wood anchors were unsuccessful and had to be re-installed;
    - Advantages – moderately high to high amount of mudflat creation; no disturbance of problem contaminants; has both low and high marsh vegetation areas; good upland access; less structural costs than 3a; simulates natural condition more than 3a
    - Disadvantages –moderate to moderately high excavation cost; potentially high cost for retaining structures; limitations to public water access; less acquiescent backwater conditions; possibly more potential for erosion in weak zone

4A. *Small Open Embayment with Riparian Forest*
    - Open embayment with no spit; no backwater area on eastern part of site
    - Provide combination of mudflat and marsh in embayment

- On the eastern part of site, create a high (about el. 20-22) depression flanked by berms (of excavated material) – would be perched wetland or riparian forest not associated with river; less impact to cultural resources at that elevation
- Consider bringing stormwater into the site from E. Marginal and treating in this perched wetland
- Advantages – less excavation/can store most/all spoils site; more upland area for public access/water access; less cost; storm drainage benefit; least cultural resource impacts of alternatives
- Disadvantages – less mudflat, less marsh, still have potential cultural resource impacts

4B. *Small Open Embayment with forested floodplain*

- Alternative with same configuration as 4A, but eastern area of site is dug to about el. 11 or 12 to recreate portion of historical forested floodplain below cultural lens, but better fish access, consider bringing storm water from the street
- Advantages – moderate excavation/can store some spoils site; more upland area for public access/water access; restore forested floodplain is unique to this alternative; somewhat less cost-wet soils don't begin until el. 7
- Disadvantages – less mudflat, less marsh, still have potential cultural resource impacts

<u>Next Steps:</u>

- Reduce to 2 alternatives
- Provide draft alternatives to Paragon during cultural resource investigation, and to the Corps for project /cultural resource review. JAB to provide 1 cross-section of each alternative
- Conduct cultural resource testing/results -August
- Ryan to arrange Stakeholder meeting for September – present status/alternatives or preferred
- Preferred alternative –after cultural review, City review – then, into schematic design

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DUWAMISH GARDENS

CITY OF TUKWILA

MEETING AGENDA – CULTURAL AND HISTORIC RESOURCE INVESTIGATION ON-SITE MEETING

OCTOBER 29, 2012

10:00 AM – 11:30 AM

Attendees:
Ryan Larson - City of Tukwila
Elissa Ostergaard - King County/WRIA8
Elizabeth Butler – WA State Recreation & Conservation Office
Chris Jenkins – US Army Corps of Engineers
Lori Lull – US Army Corps of Engineers
Lance Lundquist – US Army Corps of Engineers
Dennis Lewarch – Suquamish Tribe
Laura Murphy – Muckleshoot Tribe
Mitchell – Muckleshoot Tribe
Jim Brennan - J.A. Brennan Assoc.
Mike Perfetti - J.A. Brennan Assoc.
Paula Johnson – ESA/Paragon
Chris Lockwood – ESA/Paragon

DNR Project Coordination

- Is DNR coordination needed? Project will require some coordination since we will need to tie the project into the river but no significant issues are expected and preliminary discussions with DNR have taken place.

Cultural Investigations

- 17 excavation trenches dug; investigations led by Chris Lockwood, ESA/Paragon
- ESA/Paragon provided a map showing trench locations called, "Figure – Trench Results"
- Trenches were generally excavated 3 ½' to 4' deep, then potholed to 6' deep.
- Generally, historic fill is 1 ½' to 2' deep, and up to 6' deep closer to the river bank
- A lot of previous earthwork on this site – much material moved around the site, imported material brought in that contains asphalt, brick and other waste items..
- Figure shows results from the 17 trenches:
    - 1-Lithics and Organic Charcoal lens(es)
    - 2-Very sparse crushed Shell/Bone and Organic Charcoal lens(es)
    - 9-Organic/Charcoal lens(es)
    - 5-Negative

- Excavation findings show much contemporary artifacts, less historic. There are historic artifacts across most, if not all, of the landform. However, they are largely non-diagnostic (lack chronological traits), and many may have been imported from off-site (lack context).
- West side trenches – no historic or precontact findings
- Site 16 – adjacent to Carasino house is the only trench that show lithics
    - Discovered stone tool flakes

Next Steps-Test Pits

- ESA Paragon to perform test pits adjacent to or in the vicinity of excavations with positive cultural deposits. The seven (7) test pit locations were agreed upon by the meeting attendees and are included in the aforementioned figure.
    - The one test pit location that is not directly adjacent to a trench is located between the Carisino house and shed, an area not represented in the trench testing, but near Site 16.

Site history and interpretive

- There is expressed interest in telling the story and recalling the history of the pre-contact use of the site and, more broadly, the greater Duwamish River corridor
- Conveying this message through interpretive installations could provide mitigation for potential project impacts to cultural and historic resources.

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THE DUWAMISH GARDENS PROJECT

CITY OF TUKWILA

STAKEHOLDER WORKSHOP MEETING NOTES
WHEN: W. FEB 6, 2013, 10:00 AM – 12:00 PM
WHERE: 6300 SOUTHCENTER BOULEVARD, TUKWILA WA 98188 - 6300 BUILDING, CONFERENCE ROOM 5

PROJECT HISTORY/OVERVIEW – Ryan Larson, Project Manager, City of Tukwila

PARTICIPANTS
Mike Perfetti, J. A. Brennan Associates
Ryan Larson, City of Tukwila
Larry Fisher, WDFW
Cindy Rathbone, DNR
Jim Muck , USFWS/NMFS
Bill Taylor, Taylor Aquatic Science & Policy
Sandra Whiting, City of Tukwila
Chris Partman, Tukwila PD
Dan Temkin, Amalfi Investments
Carol Lumb, City of Tukwila
Rick Still, Tukwila Parks & Recreation
Michael Jones, King Conservation District
Jim Brennan, J.A. Brennan Associates
Elissa Ostergaard, WRIA 9
Russell Holter, DAHP (call-in)

PROJECT INTRODUCTION – Jim Brennan, J.A. Brennan Associates

PROGRESS REPORT – Mike Perfetti, J.A. Brennan Associates

- Site investigations and background data
    - Mike presented site analysis studies performed to date, which include Contaminated Soils Report, Cultural Resources Investigation, Hydrologic Study
    - Also, light rail easement and power lines are on the east part of the site; Mike and Ryan have been coordinating w/ Seattle City Light and Sound Transit
    - These items provide constraints to the physical limits and cost associated with excavation
    - Bill presented OHWM delineation and estuarine ecology analysis.

DESIGN DISCUSSION

- Goals

    - Habitat goals – try to achieve 1 acre of intertidal and mudflat area
    - Consider neighboring property impacts
    - Educational use –outdoor classroom
    - Safety
- Context
    - Outdoor classrooms along E. Marginal Way – Grandmother's Hill
    - Seattle City Light – Bluefields Project, just north of North Winds Wier
- Property
    - Dan concerned about adjacent property being impacted by new location of shoreline
    - Carol clarified that shoreline jurisdiction will move w/ new shore, but that buffer requirements will not; City code allows for 25' minimum setback through buffer averaging.
    - Lin & Associates' survey notes that the site boundary ends at the Ordinary High Water Line, and parcel data notes that as well. While DNR will attempt to find out, It is the applicant's responsibility to delineate the site boundary along the river.
    - Dan proposed to swap land with the City – the northeast corner of the site for adjacent site truck access for riverfront property to the west; Dan also said that the parcel immediately to the west of his, which is also waterfront, was for sale and perhaps that could be part of the trade.
    - Perhaps a Conservation easement would be appropriate if this idea is pursued – Cindy just wrote one
    - Some concern over project delays associated with such an arrangement, but also interest in the opportunities for habitat restoration and public access
    - DNR owns land adjacent-waterward-of this property, which is in issue
    - Russell suggested Paula (archaeologist at ESA) should do a pedestrian survey to ascertain whether to expect cultural resource issues on the property; Jim Brennan offered to explore a design on that site
    - Parks owns property to Grandmother's Hill
- Crime Prevention through Environmental Design (CPTED)
    - Chris mentioned that there are transient people along the bike trail and graffiti tagging in the neighborhood
    - Requests design pays attention to CPTED
    - Park will operate dawn to dusk, with no lights
    - Sloped terrain can be a good technique to detract from illegal camping
    - Use of thorny, native plants good for that as well
- Contaminated Soils
    - Mike presented Shannon & Wilson's report and showed the mapped problem areas
    - Sandra asked if there is any health risk associated w/ exposure to contaminated soils; JA Brennan will ask Shannon & Wilson
- Habitat and River conditions
    - Bill notes that spring is the target outmigration period for juveniles
    - However, we can expect some juveniles as early as January and also into the fall, based on Bill and Larry's observations at other regional locations
    - The fresh/saltwater mix is good for smoltification;
    - This reach is low velocity
    - During the day, juveniles want to find lateral places to come out of the current
    - Discussion about sedimentation – Shannon & Wilson's report notes that the proposed spit (the eastern ~170' of the river bank) provides quiescent backwater conditions to

facilitate sedimentation. Ryan said he doesn't expect too much sedimentation. Should anticipate and plan for sediment accumulation.

- Geotechnical and Grading design
    - Mike presented Shannon & Wilson's report; mentioned that a slope stability analysis will be done once design grades are established
    - Jim Muck expressed concern about erosion during high water flows
    - Larry says that benches are a crucial part of the design
    - Bill says that 5:1 is pretty steep for intertidal; the design of Herring's House Park was closer to 2%

DRAFT DESIGN ALTERNATIVES PRESENTATION -- Mike Perfetti, J.A. Brennan Associates

- Access
    - Some prefer pedestrian access across the site as shown in Option A
        - Beneficial from a CPTED point-of-view to minimize illegal use of the site
        - Provides site maintenance access
        - Provides potential connection to the west site and beyond if it becomes added to project
        - Hand-carry boat launch is high priority for City
    - Some prefer limited pedestrian access as shown in Option B
        - Less impact to habitat component of project
        - Security issues associated with entering the adjacent trucking facility
    - Rick notes that the use of wood rail fence would be effective to keep people out parts of the restoration area.
- Habitat
    - Widely agreed that the design should show the larger mud-flat and intertidal restoration area as shown in Option A, but should create more than what was shown; target is approximately 1 acre
    - Elissa noted that having a diversity of native plants in important
    - Bill noted that both mudflat and intertidal habitats have value, and that it's not necessarily preferable to have more of one than another.
    - Larry notes that wood structures w/ branches lain along the shore are good for habitat
- Uplands
    - Chris notes that berm shown in Option A shouldn't be more than 2 or 3' so that police/people can see activity from vicinity of roadway to the other side.

PROJECT SCHEDULE AND NEXT STEPS

- Mike said he will send out a Doodle poll to the group to schedule the next Stakeholder meeting in March to discuss the direction of the preferred schematic design
- Elissa is working on grant applications due this spring, which also drives the project schedule, as do existing grants.
- Project schedule is to submit JARPA in May

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DUWAMISH GARDENS

CITY OF TUKWILA

MEETING NOTES
SCHEMATIC DESIGN WORKSHOP – J.A. BRENNAN ASSOCIATES' OFFICE
MARCH 19, 2013

PARTICIPANTS:
Ryan Larson - City of Tukwila
Elissa Ostergaard – King County/WRIA 9
Laura Murphy – Muckleshoot Tribe
Glen St. Amant – Muckleshoot Tribe
Jim Brennan - J.A. Brennan Assoc.
Mike Perfetti - J.A. Brennan Assoc.
Chris Lockwood – ESA Paragon
Bill Taylor – Taylor Aquatic Science & Policy

Contaminated Soils:

- Shannon & Wilson report found to a depth of 2 feet; calls for problem areas if disturbed to be taken to approved area of site; JA Brennan to verify

Cultural Resources and Interpretation:

- Chris presented cultural process and findings; Tribe agrees with ESA's findings and that there is not likely to be more information learned from data recovery.
- Laura is interested in retaining intact portions of the site roughly between Carisino House and Sound Transit excavation (mapped during meeting); However, monitoring data from Sound Transit's archaeological research is lacking; Chris mapped Sound Transit's presumed area of disturbance with the best available information.
- Tribe is interested in creating a message about the place (the pre-contact Duwamish River area) as mitigation for any cultural impacts on site.
- This message is known from the "Epic of the Winds" story; it is a multi-faceted story involving the two adversaries, North Wind and Storm Wind, (there are several versions of this story) the freezing and damming of the river at the North wind Weir by North Wind, which deprived people upstream by blocking fish migration, and the subsequent breaking of the ice dam and time of relative peace and prosperity; the story conveys the importance of fish in the region, to humanity, as well as to changes in season. (Laura provided several written versions of the story).
- This story and this history include several sites up and down river from the DG site.
- Tribe is interested in nominating these sites for the National Historic Register; documentation has already been prepared for this during Sound Transit's process; however, the FTA (Federal Transit Administration), who oversaw the light rail development decided not to submit for the designation;
- DG wasn't a special site in itself, but the river adjacent to it was.
- Laura interested in a visual element as part of the messaging.

- Additionally, the area is significant for its role in the Fish Wars of the 1970s as the put-in for boats was just up-river from the DG site; fishing camps were located nearby along the river.
- Laura encouraged involving other Tribes with regards to the message and mitigation potential.
- Chris and Laura discussed that within the cultural site, the project could excavate to a depth of 2 ½', and place a protective layer such as a geotextile to help protect the cultural site below; Laura requested not planting plants whose roots could disturb into the cultural resource area.
- Laura suggests that archaeological monitoring be provided during excavation within the cultural site area

Hand-carry boat launch

- Tribe sometimes is in favor of this provision, but sometimes not; it is project specific.

Habitat restoration

- WRIA 9 is interested in mudflat primarily, but also marsh and riparian restoration.
- Discussion about guidance in the "Duwamish River Transition Zone Blueprint" which provides recommendations for restoration below river mile 5.5, somewhat different than above (the DG site is at about RM 6.75
- Discussed creating a gently-sloped marsh at inlet at eastern part of site; Glen likes the idea of a tidal creek to lengthen duration of fish access into marsh.

Schedule:

- Work towards grant deadlines in upcoming months; construction in early 2014.

Next Steps:

- Provide Corps with preferred site plan, as requested, in order to initiate formal consultation process for the Section 106 compliance
- Upcoming stakeholder workshop