Final Supplemental Environmental Assessment

East Lents Floodplain Restoration Project

FEMA-PDMC-PJ-10-OR-2005-12

Portland, Oregon

June 24, 2009

FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency
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ACRONYMS AND ABBREVIATIONS

BA	biological assessment
BES	Bureau of Environmental Services
BMP	Best Management Practice
BO	Biological Opinion
CWA	Clean Water Act
EA	environmental assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GLO	General Land Office
IP	Individual Permit
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PDFW	Oregon Department of Fish and Wildlife
PDM	Pre-Disaster Mitigation
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

SECTION ONE INTRODUCTION

The City of Portland's (the "City") Bureau of Environmental Services (BES) applied to the Federal Emergency Management Agency (FEMA) through the Pre-Disaster Mitigation (PDM) Program grant to implement a flood mitigation project. The City's PDM Program grant application applied for FEMA funding to increase floodplain storage and conveyance capacity in southeast Portland. The project area is located in the Lents area south of SE Foster Road from SE 106th Avenue to SE 110th Drive (Figure 1). FEMA prepared an environmental assessment (EA) for the project in accordance with 44 Code of the National Environmental Policy Act of 1969 (NEPA). The EA evaluated the expected environmental impacts of the proposed project and one alternative.

The EA resulted in a Finding of No Significant Impact (FONSI) for the Proposed Action, which was issued by FEMA in September 2006. At that time, it was anticipated that the project would be implemented on approximately 35 acres of property owned by the City. Following issuance of the FONSI and consequent project approval by FEMA, the City initiated the predesign phase of the flood mitigation project. During this process it was determined that additional area was needed to meet the overall objectives of the project.

The Draft and Final Supplemental Environmental Assessments provide the results of the re-evaluation to the original EA prepared for the City flood mitigation project. These documents provide the current description of the proposed project and describe expected effects the project would have on the environment that differ from those effects expected to result from the originally Proposed Action. Environmental factors for which the effects of the currently Proposed Action are expected to be similar in extent or magnitude to those expected from the originally Proposed Action are not reiterated in these documents, and include:

- Climate, Geology, and Soils
- Historical Resources
- Hazardous Wastes and Materials
- Socioeconomics and Environmental Justice

Environmental factors expected to be affected differently by the modified project and analyzed in these documents include:

- Vegetation
- Water Resources and Floodplain Management
- Wetlands
- Biological Resources
- Cultural Resources
- Cumulative Impacts

A description of the No Action Alternative and its expected environmental effects are not included in these documents because it has not changed from what was included in the original EA (FEMA 2006). These documents are a tiered review from the original EA.

1.1 PROJECT AUTHORITY

FEMA prepared the Draft and Final Supplemental EA in order to describe, understand, and take into consideration the environmental consequences of providing the City with funding to assist in the completion of the proposed flood mitigation project as required by NEPA, the Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500 through 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10).

1.2 PROJECT LOCATION

The additional proposed flood mitigation project acres would be on property owned by the City and contiguous with the existing property as outlined in the original EA (Figure 1).

1.3 PURPOSE AND NEED

The purpose and need for this project remain as described in the original EA (FEMA 2006). In general, the purpose of the project is to reduce flooding in the East Lents area while restoring the natural floodplain functions of Johnson Creek.

SECTION TWO PROPOSED ACTION

This portion of the flood mitigation project would incorporate an additional 14 acres of City owned property to increase floodplain storage and floodway conveyance capacity by removing alluvial and man-made floodplain fill along Johnson Creek, constructing earthen berms, and creating rain gardens for stormwater treatment. This excavation and construction would be paired with revegetation of the banks and the floodplain storage area to improve the natural resource functions and enhance riparian habitat for fisheries and other aquatic resources. Additionally, a culvert would be installed on 112th Avenue to direct floodwaters from Foster Road during nuisance flood periods (Figure 2). Figure 2 is a conceptual drawing of all project actions that could occur. No project activities would occur on privately-owned property.

In March 2008, the *East Lents/South Foster Predesign Phase Hydraulic Modeling and Analysis and the East Lents Floodplain Restoration Project Pre-Design Report* modeled the Proposed Action to establish if the design would have the desired effect of meeting the project objectives. In December 2007, a nuisance flood provided additional data to assist in final design. The difference in the flood patterns and volumes observed during this flood event made it necessary to evaluate and incorporate the use of the City owned properties between Brookside and 111th Avenue for additional storage to meet the overall objectives of the project.

SECTION THREE AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The following information is intended to supplement the information contained in the original EA (FEMA 2006). All information regarding resources, local and regional requirements, and project features outlined in the original EA remain the same. A copy of the original EA can be obtained from the City.

3.1 VEGETATION

The additional 14 acres have a mosaic of vegetation types, including wetland and upland urban plant communities, with two narrow forested riparian corridors along the current Johnson Creek channels. The upland vegetation is a mix of grasslands and remnant cultivated species that reflects the relic residential lots and the mowing of grasses (for fire protection) and planting of native species by the City. The predominant grassland species in these upland areas are meadow foxtail (*Alopecurus pratensis*), several bluegrass species (*Poa* spp.), and common velvetgrass (*Holcus lanatus*). Cultivated tree species include weeping willow (*Salix babylonica*), rhododendron species (*Rhododendron* spp.), and horsechestnut (*Aesculus hippocastanum*).

The riparian forest immediately adjacent to the historic Johnson Creek stream channel is moderately wooded. The corridor is characterized by western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), big leaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), and black cottonwood (*Populus balsamifera*) in the tree stratum. The shrub and herbaceous component has several native species, but are more heavily dominated by non-native species including Himalayan blackberry (*Rubus discolor*), and English ivy (*Hedera helix*). This riparian corridor has fewer mature trees than the historic stream corridor and is characterized by more shrubs and non-native species. The native component consists primarily of black cottonwood and saplings.

3.1.1 Threatened and Endangered Plant Species Biological Evaluation

A preliminary data review recorded in the original EA indicated six special status species as potentially occurring within the project area. Table 1 identifies all Endangered Species Act (ESA) listed plant species potentially occurring in the project vicinity and their status. The proposed project site was surveyed and evaluated for potential existing vegetation and habitat conditions that would support any of these species and none was found on the additional 14 acres.

Table 1: ESA Listed Plant Species Potentially Occurring in the Proposed Project Area

Common Name *Scientific Name*	Federal Status[1]	State Status	Determination[2]
Golden Indian paintbrush *Castilleja levisecta*	LT	LE	NE
Willamette Valley daisy *Erigeron decumbens var. decumbens*	LE	LE	NE
Howellia *Howellia aquatilis*	LE	--	NE
Bradshaw's lomatium *Lomatium bradshawii*	LE	LE	NE
Kincaid's lupine *Lupinus sulphureus* ssp. *kincaidii*	LT	LT	NE
Nelson's checker mallow *Sidalcea nelsoniana*	LT	LT	NE

3.1.2 Environmental Consequences

With the addition of the 14 acres to the project area, vegetation would be directly affected due to clearing necessary to access and construct the project. Types of vegetation include riparian, wetland, and upland as described in the section above. Impacts to vegetation would be low in the short-term construction but the project would result in long-term beneficial effects after mitigation and restoration of the floodplain have been completed. No effect to threatened and endangered species would be expected from expansion of the project since none were found to be present. Mitigation for vegetation outlined in the original EA will be incorporated into this portion of the project.

3.2 WATER RESOURCES

The addition to the project area is within the 100-year floodplain of Johnson Creek and a large part of the site is within the floodway. The information regarding local water resources, local and regional water quality, and project location remain as described in the original EA. The changes in the project design and incorporation of the additional acres for floodplain storage would decrease the potential for nuisance flooding in the area.

3.2.1 Environmental Consequences

The proposed addition of the 14 acres would increase multiple long-term benefits with respect to water resources within the project area and within the larger context of the lower Johnson Creek watershed. The project provides for substantially greater floodplain connectivity between Johnson Creek and the adjacent land within the project area as outlined in the modeling report and preliminary design (March 2008).

[1] Status Legend: Federal ESA: LT = Listed Threatened, SOC = Species of Concern
[2] Determination Legend: NE= No Effect

The Proposed Action is designed to reduce flooding of nearby SE Foster Road, and provide some downstream flood reduction benefits in the Lents neighborhood through improved in-channel and floodplain storage of floodwaters and increasing floodplain storage capabilities.

The improved floodplain connectivity increases infiltration of floodwaters, which can in turn improve baseflow conditions within and downstream of the project area. Removal of the bank revetment may also facilitate recharge of baseflow during late spring and early summer.

Short-term water quality impacts are anticipated due to construction activities. Because the water quality changes associated with the supplemental actions and the actions proposed in the original EA would be regulated and allowed by permit, and because the City has managed stream restoration projects without substantial water quality impacts, changes in the resource or resource related values would be at the level of detection but considered slight with no perceptible consequences to health or visibility.

3.2.2 Floodplain Management (Executive Order 11988)

For compliance with Executive Order (EO) 11988 Floodplain Management and the City's floodplain management ordinance, the project would be designed to result in no net rise of the 100-year floodplain and no encroachment on the floodway (consistent with a resultant long-term beneficial affect to floodplain values). Loss of conveyance associated with improved riparian and floodplain vegetation would be compensated for by the larger channel cross-section associated with the increase in floodplain storage within the channel, and removal of structures within the floodplain. It is anticipated that the permitting and best management practices (BMPs) listed in the original EA would provide the necessary minimization measures for the adverse construction related, short-term impacts to floodplain values.

3.3 WETLANDS

The area for inclusion into the original proposal is already functioning as a storage area during nuisance flooding periods. A field review and assessment of wetland characteristics in the 14 acres outlined less than 0.20 acres of inundation and/or areas of high groundwater where wetlands exist. These areas tend to be isolated but do contribute minimally to the maintenance of water quality in Johnson Creek. The original EA identified the existence of wetlands in the proposed area and those findings are incorporated into this section.

3.3.1 Clean Water Act (CWA)

Section 404 of the CWA regulates the discharges of dredged or fill material into all "waters of the U.S.," including wetlands. Authorization to fill wetlands and waters are granted from the Secretary of the Army, acting through the Chief of Engineers for the U.S. Army Corps of Engineers (USACE).

Based on the proposed level of impact to wetlands and floodplain modification of Johnson Creek, USACE would require that the City apply for an Individual Permit (IP). An IP is reviewed through the USACE's comprehensive review procedures, which includes public notice, opportunity for a public hearing, and receipt of comments.

BES' Streamlining Team has representation from the USACE and prior to implementation of the project, a full delineation and function assessment would be undertaken for compliance with Section 404(b)(1). Mitigation for the project is expected to be through the project design and no additional mitigation would be required.

3.3.2 Environmental Consequences

With the expansion of the Proposed Action, excavation within the wetlands would directly affect approximately 0.20 additional acres of wetlands. Wetlands that would be affected are outlined in the original EA. This would be a moderate short-term impact with a long-term benefit in the reestablishment of floodplain and higher value of wetlands within the overall project area.

3.3.3 Mitigation Measures

This assessment incorporated a wetlands determination to evaluate wetland impacts from the original EA. The wetlands determination concluded that approximately 3 acres of wetlands would be affected by the original project but that the project's long-term goals and objectives would mitigate for that loss of wetlands. The addition of approximately 0.20 acres is expected to have similar consequences. If the process for the Section 404 permit concludes that the long- term goals and objectives would not adequately mitigate for the loss, then a reevaluation of the additional scope and the finding of effects would need to be completed, in coordination with the USACE.

3.4 BIOLOGICAL RESOURCES

This section describes potential effects of the additional project acres on wildlife and aquatic species and associated critical habitat that are present within the project area. This includes the potential for any additional impacts relative to the ESA and the Magnuson-Stevens Act.

3.4.1 Federally Listed Species

A list of federally endangered and threatened species with the potential to occur in the project area was obtained in the original EA and evaluated for the supplement. Fisheries biologists with the National Marine Fisheries Service (NMFS) and the Oregon Department of Fish and Wildlife (ODFW) were contacted to verify salmonid and critical habitat presence in the project area. Isaacs and Anthony's "*Bald eagle nest locations and history of use in Oregon and the Washington portion of the Columbia River Recovery Zone, 1972 through 2005*" was also referenced. According to these inventories, the federally listed wildlife and fish species that may be found within the extended project areas are described in Table 2.

Table 2: ESA Listed Fisheries Species Potentially Occurring in the Proposed Project Area

Common Name *Scientific Name*	Federal Status	State Status	Presence in Relation to Project Area
Lower Columbia River steelhead ESU (winter run) *Oncorhynchus mykiss*	LT	--	Spawning Rearing
Upper Willamette River steelhead ESU *Oncorhynchus mykiss*	LT	--	Migration Rearing
Lower Columbia River Chinook salmon ESU (fall run) *Oncorhynchus tshawytscha*	LT	--	Migration Spawning Rearing
Upper Willamette River Chinook salmon ESU *Oncorhynchus tshawytscha*	LT	--	Migration Spawning Rearing
Lower Columbia River coho salmon ESU *Oncorhynchus kisutch*	LT	LE	Migration Spawning Rearing

3.4.2 Migratory Birds

The addition to the project area provides habitat for a variety of migratory birds including songbirds and birds of prey. The U.S. Fish and Wildlife Service (USFWS) Office of Migratory Bird Management maintains a list of migratory birds (50 CFR 10.13). The Migratory Bird Treaty Act (MBTA) of 1918, as amended, provides federal protections for migratory birds, their active nests, eggs, and parts from harm, sale, or other injurious actions; the MBTA has no take provision. Restoration activities such as vegetation removal have the potential to directly and indirectly affect migratory birds. However, potentially negative impacts to migratory birds can be eliminated or greatly reduced by not allowing construction activities during the most sensitive portion of the breeding season (early March through July). If seasonal restrictions are not practicable, a pre-construction survey to identify active nests should be conducted by a qualified biologist prior to any disturbing activities.

3.4.3 Environmental Consequences

The Proposed Action and the addition of the 14 acres is expected to result in temporary construction related adverse impacts to ESA protected salmonids, detailed in Table 2. These impacts would result in a "Likely to Adversely" effect determination for salmonids. Adverse impacts that could rise to the level of "take" should be limited to the year in which construction occurs. In agreement with NMFS, FEMA would be completing a biological assessment (BA) for this project using the City's existing "streamlining agreement" with federal and state agencies. The Proposed Action and the Supplemental EA information would be evaluated through a BA process initiated by BES and evaluated by NMFS with a resultant Biological Opinion (BO) being issued. BES will not proceed with construction of the project until all terms and conditions of the BO are incorporated into the Proposed Action. If any unusual circumstances or unknown impacts not fully disclosed in this assessment arise out of this streamlining process, BES will be required to notify FEMA for reevaluation of the project under NEPA.

No effects to wildlife species are expected with the inclusion of the additional acres. Long-term effects of the Proposed Action are expected to be beneficial to listed and non-listed fish resources present in Johnson Creek and its tributaries.

3.4.4 Mitigation Measures

All mitigation and minimization measures associated with impacts to federally listed species would be addressed in the BA and resultant BO. Additionally, the appropriate BMPs and mitigation measures required by the various permitting authorities would further reduce or eliminate impacts to the federally listed species. To avoid and minimize impacts associated with construction related activities and loss of fish bearing habitat, a Fish Salvage Plan and Fish Passage Plan will be developed in accordance with state and federal permits. In addition, a Fish Salvage Permit will be obtained from ODFW to authorize safe capture, handling, and transport of listed fish species.

3.5 CULTURAL RESOURCES

Prior to the site visit, a review of existing information was conducted. The review included: (1) records stored at the Oregon State Historic Preservation Office (SHPO), Salem, (2) data from previous surveys, and (3) records of archaeological sites in the vicinity of the project addition. The record search indicated that the project's Area of Potential Effects had been previously surveyed and that no cultural resources have been recorded in the expanded project area.

3.5.1 Environmental Consequences

Under the Proposed Action it is possible that deeply buried, intact archaeological deposits are present below the fill despite shovel probing efforts not yielding any near-surface cultural resources. The project area is considered to have moderate probability for containing buried cultural resources based on proximity to Johnson Creek and the presence of the historic Johnson homestead noted on the 1854 General Land Office (GLO) plat map. A "no effect" with mitigation was submitted to SHPO and concurrence was completed.

3.5.2 Mitigation Measures

Should any archaeological resources be identified during construction, all work should cease in the immediate area until the significance of the find can be evaluated, in compliance with state and federal regulations and laws.

SECTION FOUR CUMULATIVE EFFECTS

The CEQ regulations for implementing NEPA require an assessment of cumulative effects during the decision-making process for federal projects. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative effects are considered for the Proposed Action and the addition of the supplemental actions. Cumulative effects were determined by combining the effects of the actions with other past, present, and reasonably foreseeable future actions.

In 2001 the City published the Johnson Creek Restoration Plan. The Restoration Plan is an action plan focused on restoring natural functions of Johnson Creek. The Restoration Plan recommends projects along the entire main-stem of Johnson Creek that are designed to meet the goals of reducing the impacts of nuisance flooding, improving water quality, and improving fish and wildlife habitat. The plan identifies Lents, east of Interstate 205, as one of eight priority project areas for focusing restoration efforts.

Flood management at the proposed project area and the additional 14 acres is one of several projects planned for the entire length of Johnson Creek. Upstream of Lents, the Kelley Creek Confluence Restoration Project was constructed in summer 2004 near SE 159th Avenue. Immediately upstream of Kelley Creek, the Alsop/Brownwood Project is in the design phase. Downstream near SE 45th Avenue, designs are underway to protect an exposed major sewer pipe by restoring the creek through Tideman Johnson Park, and reconnecting floodplain habitat and springs to the main channel. Also near SE 45th Avenue, plans are underway to restore salmonids access to Errol Creek, a cool-water tributary to Johnson Creek. Along Crystal Springs Creek in Westmoreland Park, work is in the design phase to stabilize creek banks and improve salmonid habitat. These projects, and many more, will work together to restore some of the natural functions of Johnson Creek. The additional acres were already proposed as part of the floodplain mitigation. The increase in floodplain storage capabilities is the only addition to the project and the cumulative effects.

Project construction impacts on fisheries resources are expected to be temporary and minimal as recommended practices for construction and maintenance are employed. No activities that violate existing state or federal water quality standards are anticipated. The collective effects of construction related activities are not expected to significantly impair water resources and/or interfere with the productivity of the existing aquatic environment. Rather, project activities would benefit larger watershed functions in Johnson Creek.

An increase in urbanization throughout the Willamette River basin has either eliminated or adversely affected habitat for listed species (PNERC 1998). Effects are greatest for the listed species living and reproducing below Willamette Falls, where urbanization has been the most extensive. With respect to fish habitat, urbanization has resulted in increased point and non- point source water pollution, increased peak flows, reduced base flows, channel erosion, landslides, channelization, and reduced habitat complexity and availability. Although this project by itself will not restore properly functioning conditions watershed wide, nor will it halt the decline of listed species throughout the lower Willamette River basin and Columbia River basin, the Proposed

Action and the additional acres and project design will incrementally restore and enhance critical fish bearing habitat, and adjacent riparian and floodplain habitat in the Johnson Creek watershed. No cumulative effect beyond a short-term construction related effect and a long-term beneficial effect are anticipated.

SECTION FIVE REQUIRED PERMITS AND COMPLIANCE

The City is required to obtain and comply with all required local, state, and federal permits and approvals prior to implementing the original EA and the Supplemental EA. Development of the Proposed Action and the supplemental information shall be in compliance with the approved site plan. Any expansion or alteration of this use, beyond that initially approved would require a new or amended permit. The City must provide consultation with NMFS and SHPO as described in the above sections. In the event that historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of the project, the project shall be halted immediately and all reasonable measures taken to avoid or minimize harm to property. The City would then be required to consult with FEMA and SHPO for further guidance.

Permits that may be required include:

- CWA Section 404 Permit prior to conducting any work in the delineated wetlands, which will include consultation with USFWS, Environmental Protection Agency (EPA), and the Tribes
- Section 7 BA and BO from the National Oceanic and Atmospheric Administration (NOAA)
- ODFW Fish Salvage Permit
- CWA Section 401 certification by DEQ of federal issuance of the Section 404 Permit
- State DSL Removal-Fill permit
- State ODFW concurrence with the Removal-Fill and Section 404 Permits
- Non-conforming Use Permit – issued by Multnomah County
- Grading and Erosion Control Permit – issued by Multnomah County
- Submission of project-specific documents necessary to comply with DEQ's general 1200-CA construction stormwater permit
- Floodplain Development Permit – issued by Multnomah County

SECTION SIX PUBLIC INVOLVEMENT

FEMA is the lead federal agency for conducting the Supplemental NEPA compliance process for the floodplain restoration project and expansion area. As the lead agency, FEMA expedites the preparation and review of NEPA documents, responds to the needs of residents surrounding the project area, meets the spirit and intent of NEPA, and complies with all NEPA provisions.

A public notice was required for the original EA. The public was provided an opportunity to comment on the Supplemental EA from April 24, 2009 to May 26, 2009. The notice identified the action, location of the proposed additional site acres, participants, location of the final Supplemental EA, and who to contact to provide comments. No substantive comments were received on the Draft Supplemental EA.

SECTION SEVEN MITIGATION MEASURES

Mitigation measures and permits required to be obtained by the Applicant, and conditions of the original EA, remain identical to those identified in the original EA (FEMA 2006) including completion of consultation and coordination through the City's streamlining process. Avoidance mitigation, best management practices, and permit requirements will be the same as those outlined in the original EA for East Lents.

SECTION EIGHT CONCLUSIONS

The Draft and Final Supplemental East Lents EA evaluated potentially significant resources that could be impacted with the addition and expansion of the project area assessed in the East Lents EA. The evaluation resulted in no identification of significant impacts associated with the resources of Climate, Geology and Soils, Vegetation, Water Resources, Wetlands, Biological Resources, Cultural Resources, Historical Resources, Hazardous Wastes and Materials, and Socioeconomics and Environmental Justice. Additional review and consultation as required by other federal laws (NHPA, ESA, CWA, etc.) will be ongoing and is expected to result in an outcome supporting the initial findings outlined in this Final Supplemental EA. Obtaining and implementing permit requirements along with appropriate BMPs will avoid or minimize any effects associated with the action.

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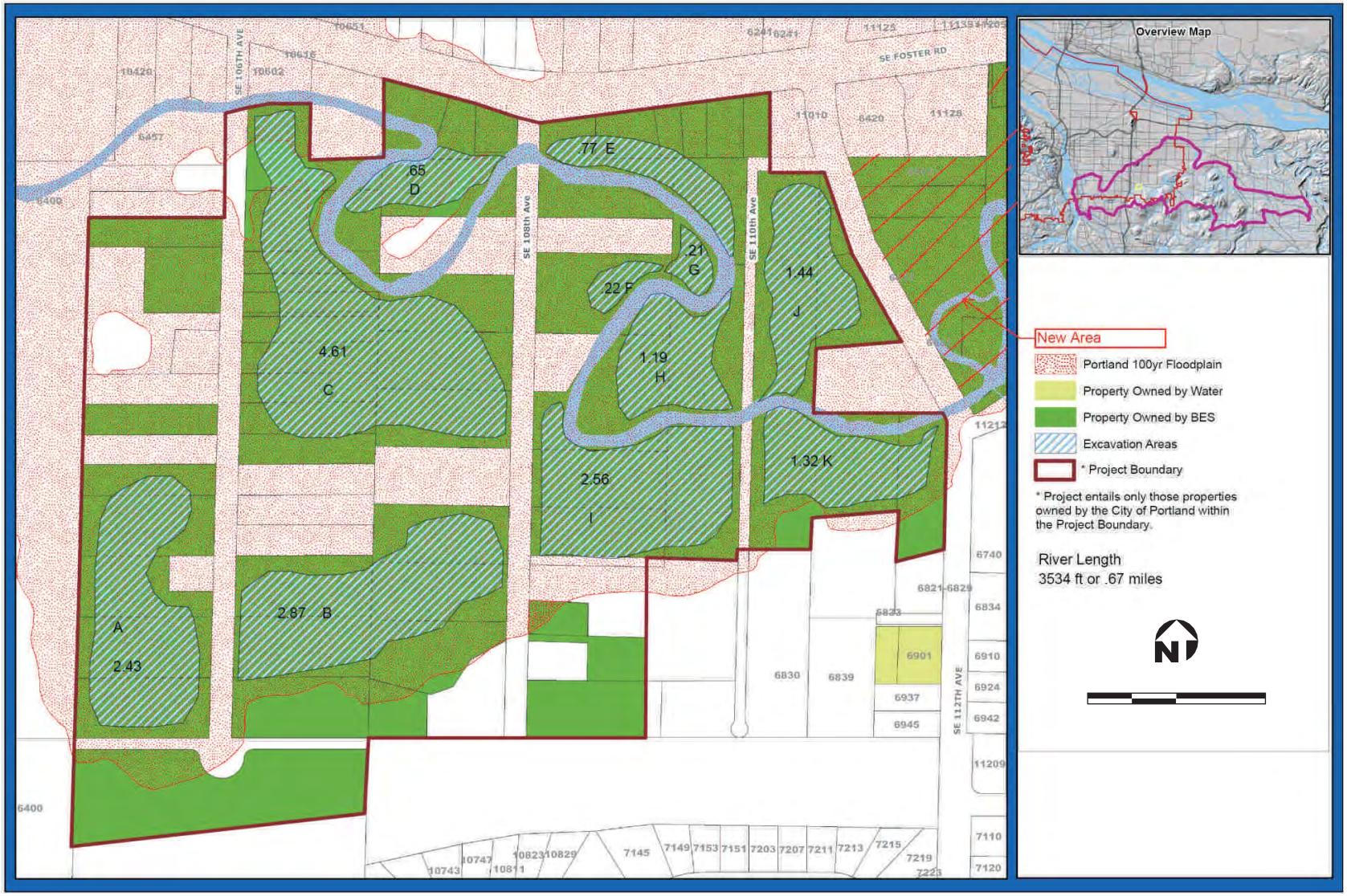
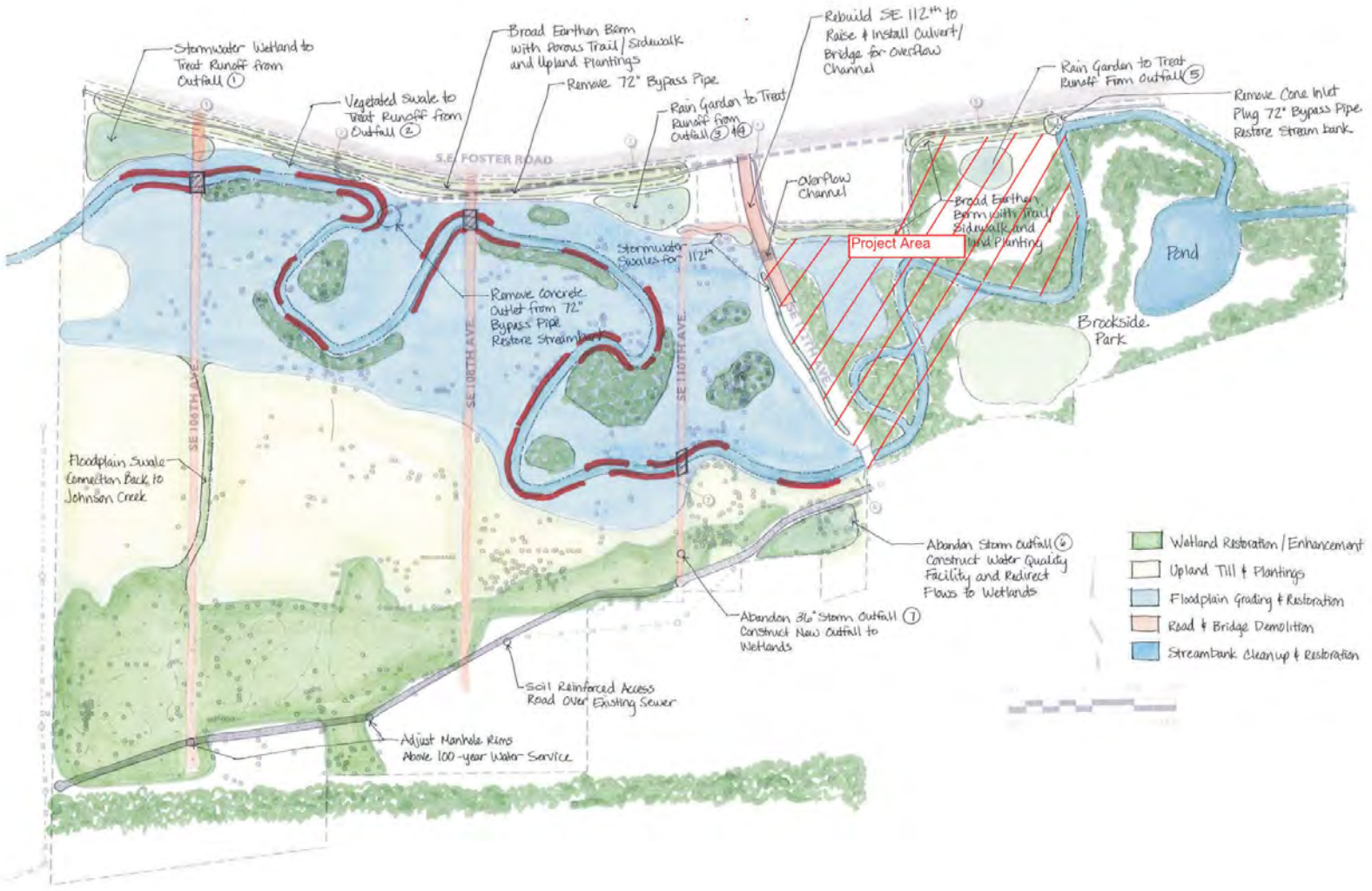


Source: City of Portland Environmental Services
Job No. 15300278

Figure 1: Supplemental Location Map



Source: Otak
Job No. 15300278

Figure 2: East Lents Floodplain Rendering