

City of St. Helens
RESOLUTION NO. 1910

A RESOLUTION ADOPTING THE ST. HELENS INDUSTRIAL BUSINESS PARK
PARCELIZATION FRAMEWORK AND FUNDING PLAN

WHEREAS, shortly after the Boise White Paper Mill ceased operations, the City acquired approximately 225 acres of predominately heavy industrial land in 2015 in order to spur new industrial development on the underutilized mill property, hereinafter referred to as the St. Helens Industrial Business Park (SHIBP); and

WHEREAS, the redevelopment of the SHIBP is identified as a priority in the City of St. Helens Strategic Workplan 2020-2022, Goal 4 Economic Development, as it has the potential to restore local family wage jobs, increase City utility revenues (reducing the burden on residents), and restore underutilized property to the tax rolls; and

WHEREAS, the SHIBP is located within the City's Urban Renewal Agency, a federally designated Opportunity Zone, and the South Columbia County Enterprise Zone; and

WHEREAS, the SHIBP includes an existing Oregon waterway lease with the Oregon Department of State Lands and an operational rail spur run by Portland & Western Railroad which terminates on the site; and

WHEREAS, the City received a Department of Land Conservation and Development Technical Assistance Grant to draft the St. Helens Industrial Business Park Parcelization Framework and Funding Plan to summarize existing physical conditions, previous plan documents, and decisions, define targeted industrial users by updating the existing market analyses, and create a framework for the parcelization of the SHIBP with a phased financing plan for street and utility improvements; and

WHEREAS, consultants have prepared the St. Helens Industrial Business Park Parcelization Framework and Funding Plan after review and analysis of existing plans, decisions, policies, studies, and other information, and extensive consultation with the City Public Works, Planning, Community Development Departments, and other regional economic development stakeholders throughout the planning process; and

WHEREAS, the St. Helens Industrial Business Park Parcelization Framework and Funding Plan identifies net parcel sizes and locations, utility improvements, and street extensions to guide the City through the short and long-term redevelopment of the SHIBP, and identifies a phased infrastructure development based on existing revenue sources which will assist the City in acquiring and leveraging additional infrastructure funding.

NOW, THEREFORE, THE CITY OF ST. HELENS RESOLVES that the St. Helens Industrial Business Park Parcelization Framework and Funding Plan attached hereto is adopted to help facilitate redevelopment of the St. Helens Industrial Business Park and, as such, shall be used as a guide for policy and development of the SHIBP.

APPROVED AND ADOPTED by the City Council on January 20, 2021 by the following vote:

Ayes: Morten, Topaz, Birkle, Chilton, Scholl

Nays: None



Rick Scholl, Mayor

ATTEST:



Kathy Payne, City Recorder

To: Jenny Dimsho, AICP
City of St. Helens

From: Steve Faust, AICP
Community Planning Director

Date: July 22, 2020

Project Name: St. Helens Industrial Business Park
RE: Parcelization Framework Report

Introduction

The City of St. Helens is interested in spurring new industrial development on its 200-acre industrial business park. In order to effectively facilitate redevelopment and market the business park to potential employers, the City needs to complete a Master Plan for the entire site. The St. Helens Industrial Business Park (SHIBP) Master Plan will promote regional economic development, by guiding industrial development and infrastructure development on one of the largest underutilized Industrial-zoned properties in the City. Industrial development will help restore family wage jobs, increase City utility revenues (reducing the burden on residents) and restore underutilized properties to the tax rolls. Because the site is within the Urban Renewal Agency, a federally designated Opportunity Zone, and the South Columbia County Enterprise Zone, St. Helens Industrial Business Park site preparation will stimulate further economic development and provide additional capacity for infrastructure spending.

The SHIBP Master Plan will assess existing physical conditions and development barriers, summarize pertinent information from previous plan documents and decisions, and define targeted industrial users, provide a framework for parcelization. A subsequent memorandum will develop a phased infrastructure funding plan.

Parcelization Framework

This draft parcelization framework is based on the following factors:

- **Access** – ability to provide vehicular access and circulation to the parcels, including semi-trucks with trailers.
- **In-water uses** – primarily operate in-water and require a small footprint.
- **Utilities** – access and capacity to provide utility services to the site.
- **Environmental constraints** – sufficient development area on each parcel free of Goal 5 habitat areas.
- **Potential users/desired parcel size** – a parcel size between two and five acres for small industrial users that can be consolidated for larger uses



Figure 1. Proposed Parcelization Framework



Parcel Considerations

The following is a description of factors that were considered when establishing parcels and issues that may still need to be addressed.

Parcel 1 has frontage on Old Portland Road and Kaster Road as well as unimproved right-of-way frontage on East Street and 7th Street. The proposed future roundabout at the intersection of Old Portland Road and Kaster Road may require a right-of-way dedication. Primary access to the site should be provided from 7th Street, as Kaster Road is a collector with a truck route status. An existing sanitary sewer line located within the 7th Street right-of-way would make a vacation of the right-of-way difficult. South 17th Street and East Street may have some right-of-way vacation potential with consideration for existing driveways. East street may be needed as a route outside of flood areas for critical facilities.

This parcel is being considered for locating a new St. Helens Police Station. The 500-year floodplain on the site may prohibit the development of critical facilities. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Light Industrial (LI)

Division Status: Already a legally separate property, surrounded by public right of way on all sides.

Parcel 2 has frontage on Kaster Road and 7th Street. A right-of-way vacation of the unimproved Fir Street, Park Street, Church Street, Terrace Street and East Street may provide additional area for development. Primary access to the site should be provided from 7th Street and/or Fir Street, as Kaster Road is a collector with a truck route status. An existing sanitary sewer line located within the 7th Street right-of-way would make a vacation of the right-of-way difficult. Fir Street has some potential for vacation, especially areas within significant (Goal 5) designated wetlands. Park Street and California Street appear to be vacation candidates; however, a sanitary sewer line close to or within the California Street right-of-way would make a vacation of the right-of-way difficult. A large wetland and associated 50-foot buffer impact the northern half of the site. It is assumed that the small wetland located on the parcel will be filled. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Light Industrial (LI)

Division Status: The east side of the site would require right-of-way vacations and a replat. Boundaries are clear on north, west and south sides due to existing rights-of-way.

Parcel 3 has frontage on Kaster Road. Fir Street and Park Street have potential for vacation, especially areas within significant (Goal 5) designated wetlands. A large wetland and associated 50-foot buffer impact the northern half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Primary access to the site should be provided from Fir Street, as Kaster Road is a collector with a truck route status. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 3 is part of Parcel 1 of PP No. 2020-03. The west and north sides of the site would require right-of-way vacations and a replat. The parcel will require a subsequent land division.



Parcel 4 has frontage on Kaster Road and a proposed road. Franklin Street has potential for a vacation, with half of the right-of-way going to each abutting property owners. The portion of the right-of-way vacated to Parcel 4 has a delineated wetland. The configuration of the lot may create challenges for development. A large wetland and associated 50-foot buffer impact the western half of the site. It is assumed that the small wetland located on the parcel will be filled. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 4 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 5 has frontage on two proposed roads. A large wetland and associated 50-foot buffer impact the western half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The configuration of the site may not be conducive to a large development. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 5 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 6 has frontage on a proposed road which could be an extension of S. 13th Street. A large wetland and associated 50-foot buffer impact the western half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: The majority of the site is zoned Heavy Industrial (HI) with a small portion in the northwest corner zoned Light Industrial (LI). A zone change could be considered.

Division Status: A portion of Parcel 6 is part of Parcel 1 of PP No. 2020-03, with a portion outside of Parcel 1. The site would require right-of-way vacations and a replat.

Parcel 7 has frontage on a proposed road which could be an extension of S. 13th Street. A large wetland impacts the eastern half of the site which has a 50-foot protection zone. It is assumed that the small wetland located on the parcel will be filled. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: A portion of Parcel 7 is part of Parcel 1 of PP No. 2020-03. The site would require a replat and/or a land division.

Parcel 8 has frontage on a proposed road. A large wetland with a 50-foot protection zone impacts the western and eastern edges of the site. It is assumed that the small wetland located on the parcel will be filled. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and



grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: A portion of Parcel 8 is part of Parcel 1 of PP No. 2020-03, or it may be within a separate lot of record. The site would require a replat and/or a land division.

Parcel 9 has potential for access from the north either from 9th Street or 10th Street. Additional street improvements may be necessary. A large wetland and associated 50-foot buffer impact the western edge of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI), but if access is from the north a re-zoning to Light Industrial (LI) could be considered.

Division Status: Located within a separate lot of record. May require a replat or lot line adjustment.

Parcel 9a has potential for access from the north either from 9th Street or 10th Street. Additional street improvements may be necessary. A large wetland and associated 50-foot buffer impact the western edge of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. The site is not currently under City ownership but is considered a future expansion area. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI), but if access is from the north a re-zoning to Light Industrial (LI) could be considered.

Division Status: Located within a separate lot of record. May require a replat or lot line adjustment.

Parcel 10 has frontage on a proposed road. A large wetland and associated 50-foot buffer impact the eastern half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: A portion of Parcel 10 is part of Parcel 1 of PP No. 2020-03. A portion of the site is outside of the Parcel 1 of PP 2020-03. The site would require a replat.

Parcel 11 has frontage on two proposed roads. It is assumed that the small wetland located on the parcel will be filled. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 11 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.



Parcel 12 has frontage on two proposed roads. It is assumed that the small wetland located on the parcel will be filled. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 12 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 13 has frontage on a proposed road. The parcel is located within the area the City has identified as an area needing clearing and grading prior to development. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 13 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 14 does not have right-of-way frontage. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. An easement is proposed for vehicular and utility access. Vehicular access may require a railroad crossing. A large wetland impacts the northern half of the site. This site could potentially be used as a regional storm facility location. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 14 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 15 does not have right-of-way frontage. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. An easement is proposed for vehicular and utility access. Vehicular access may require a railroad crossing. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 15 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 16 does not have right-of-way frontage. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. An easement has been provided for vehicular and utility access. Vehicular access may require a railroad crossing. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway



Division Status: Parcel 16 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 17 does not have right-of-way frontage. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. An easement has been provided for vehicular and utility access. Vehicular access may require a railroad crossing. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 17 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 18 appears to have facilities currently in use by Cascade Tissue. These facilities will require private easements prior to formal parcelization. An easement has been provided for vehicular and utility access. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. Vehicular access may require a railroad crossing. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 18 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 19 has an easement has been provided for vehicular and utility access. Vehicular access may require a railroad crossing. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. It is assumed that the small wetland located on the parcel will be filled. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 19 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 20 appears to have facilities currently in use by Cascade Tissue. These facilities will require private easements prior to formal parcelization. Frontage along the Multnomah Channel provides a unique opportunity for in-water based development. Right-of-way frontage has extended across the site to provide access to the Port's property to the south. The site is located within the 100-year floodplain and Columbia River Protection zone with a 75-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI) and Willamette Greenway

Division Status: Parcel 20 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.



Parcel 21 is currently being used by ACSP. A proposed road will provide right-of-way access to the site. A landfill (South 80 Landfill) may impact any future development. A 20-foot utility and access easement follows along the south boundary of the property. A public utility easement bisects the property in half.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 21 is Parcel 2 of PP No. 2020-03.

Parcel 22 can be accessed by the 20-foot access and utility easement that follows the southern boundary of Parcel 21.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 22 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 23 is currently in use by Cascade Tissue. Further parcelization may be achievable if Cascade Tissue consolidates operations.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 23 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 24 is currently in use by Portland General Electric. Access is currently from a public access easement recorded with PP 2020-03. An expansion of the facilities is proposed on the parcel. It is assumed that the small wetland and channel on site will be filled.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 24 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 25 has frontage on Kaster Road and a proposed road. It is assumed that the existing private drive currently used will be decommissioned. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 25 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 26 has frontage on Kaster Road. It is assumed that the existing private drive utilized by the mill and other users will be decommissioned. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 26 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 27 has frontage on Kaster Road and a proposed road. It is assumed that the existing private drive currently used by the mill will be decommissioned. The Milton Creek protection zone requires a 50-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts



to the buffers. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 27 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 28 is currently in use by the City for a recreational facility. Redevelopment of the site as an RV park is being considered. The site has frontage on Old Portland Road and Kaster Road. Access will need to be provided from Kaster Road. The proposed future roundabout at the intersection of Old Portland Road and Kaster Road may require a right-of-way dedication. The Milton Creek protection zone requires a 50-foot buffer. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Light Industrial (LI)

Division Status: Parcel 28 is already a legally separate lot.

Parcel 29 has frontage on a proposed road. A small wetland impacts the northern portion of the site. It is assumed that the small wetland located on the parcel will be filled. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. The site is located within the 100-year and 500-year floodplain. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The City is exploring options for an RV park on this parcel. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 29 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 30 has frontage on two proposed roads. The site is located within the 100-year and 500-year floodplain. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 30 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 31 has frontage on two proposed roads. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The site is located within the 100-year and 500-year floodplain. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)



Division Status: Parcel 31 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 32 has frontage on a proposed road. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The site is located within the 100-year and 500-year floodplain. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 32 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 33 has frontage on a proposed road. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The site is located within the 100-year and 500-year floodplain. A portion of the parcel is outside of the study area for Department of State Lands Wetland Determination WD 2019-0324. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 33 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 34 has frontage on a proposed road. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. A portion of a large wetland and associated 75-foot wide protection buffer are located in the southern corner of the site. The entire parcel is outside of the study area for Department of State Lands Wetland Determination WD 2019-0324. The site is located within the 100-year and 500-year floodplain. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 34 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 35 has frontage on a proposed road. The Milton Creek protection zone requires a 50-foot buffer along the western boundary. A large wetland and associated 75-foot wide protection buffer are located in the southern half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The entire parcel is outside of the study area for Department of State Lands Wetland Determination WD 2019-0324. The site is located within the 100-year and 500-year floodplain. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)



Division Status: Parcel 35 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 36 has frontage on a proposed road. A large wetland and associated 75-foot wide protection buffer are located in the eastern half of the site. Wetland and riparian protection zones may be less depending on pre-existing impacts to the buffers. The entire parcel is outside of the study area for Department of State Lands Wetland Determination WD 2019-0324. The site is located within the 100-year and 500-year floodplain. A 20-foot wide pedestrian easement is proposed through the site for a proposed trail. Easement is not actual alignment. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

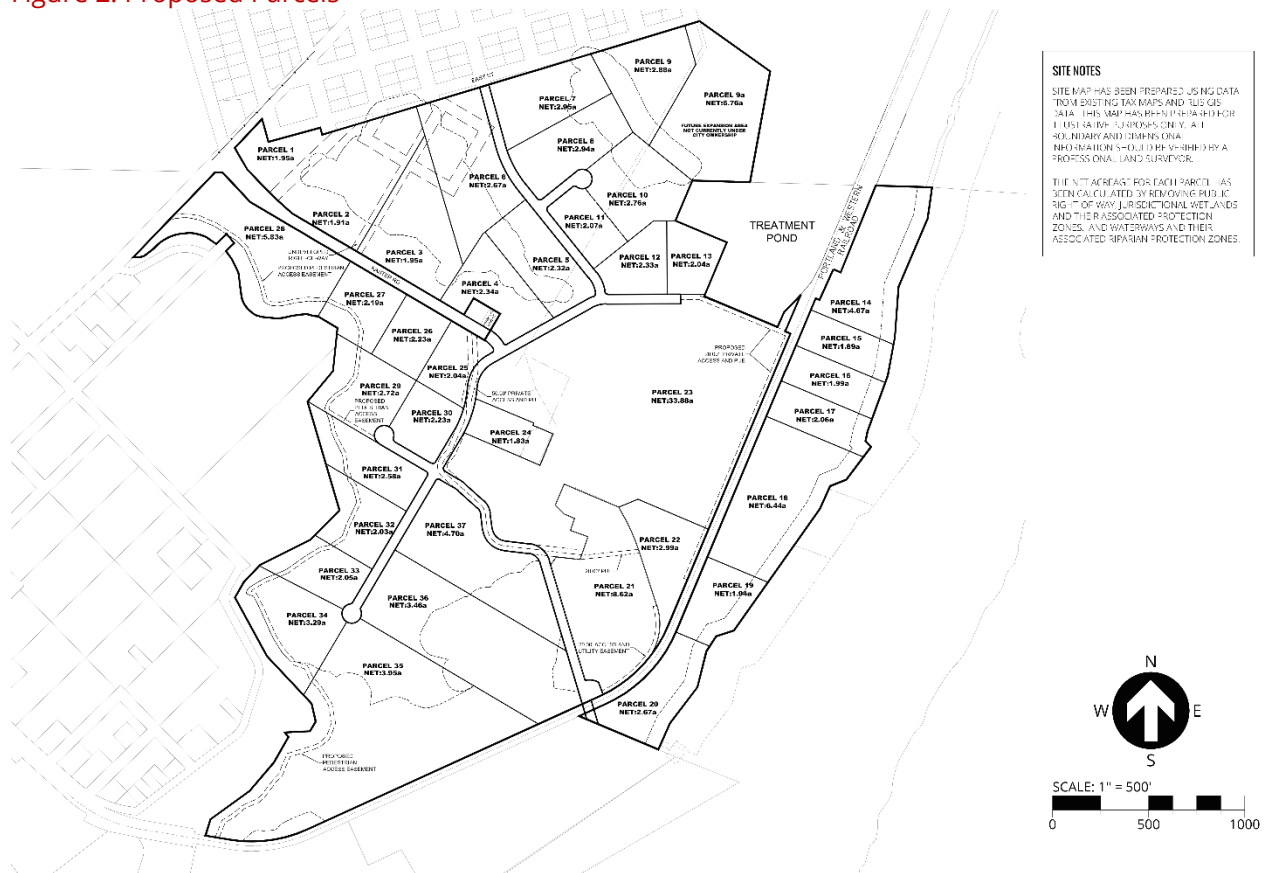
Division Status: Parcel 36 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

Parcel 37 has frontage on two proposed roads. A small wetland has been delineated on the site. The site is located within the 100-year and 500-year floodplain. Parcels may be combined with abutting parcels to accommodate larger users where applicable.

Zoning: Heavy Industrial (HI)

Division Status: Parcel 37 is part of Parcel 1 of PP No. 2020-03. The parcel will require a subsequent land division.

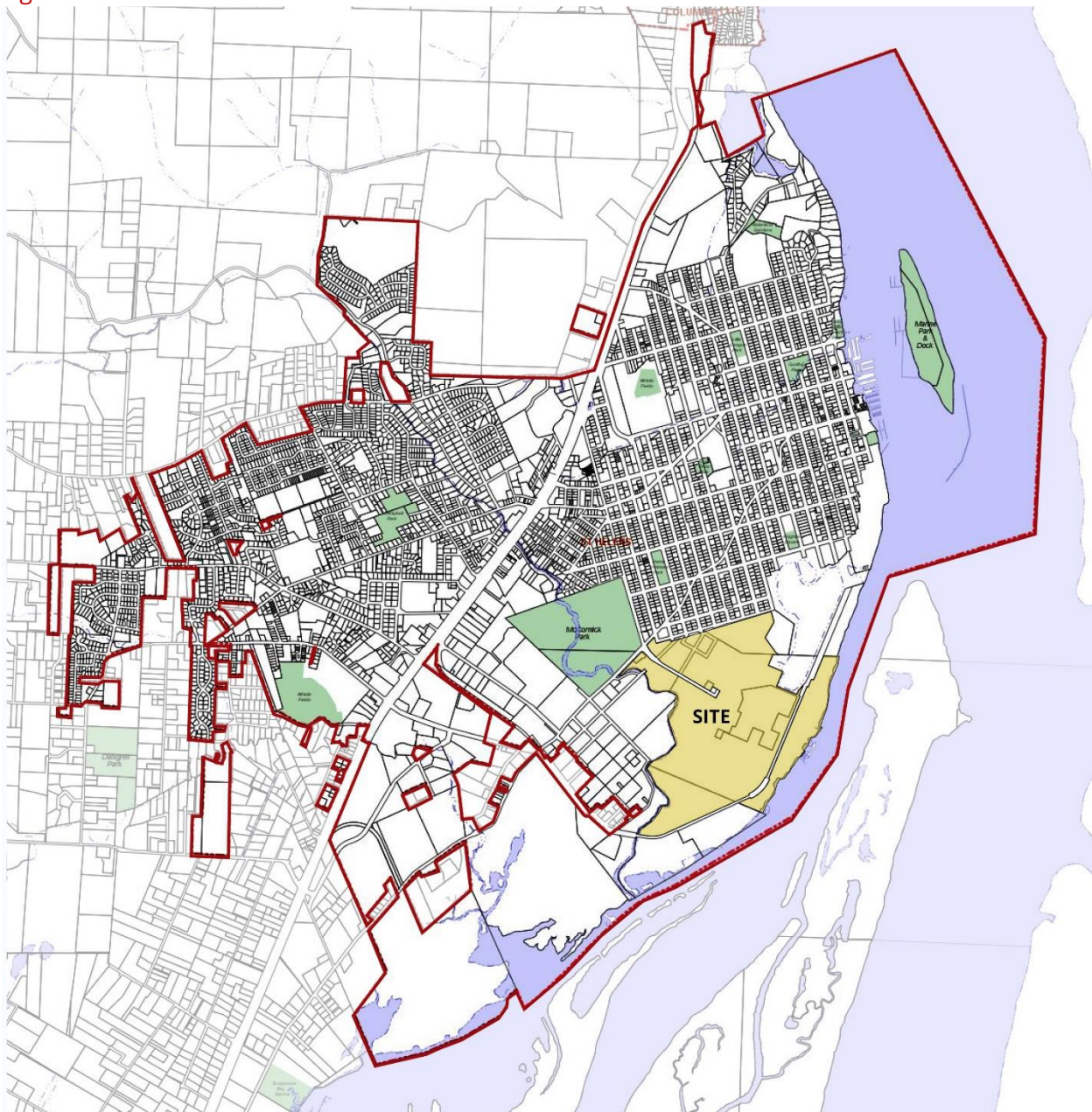
Figure 2. Proposed Parcels



Existing Conditions of the Site

The St. Helens Industrial Business Park is 205-acre property located at 1300 Kaster Road, on the banks of the Multnomah Channel of the Willamette River, and one mile east of Highway 30 (Figure 3). A portion of the site's northwestern boundary runs along Old Portland Road. Portland & Western Railroad tracks run parallel to the river along the eastern boundary. Milton Creek meanders along the northern portion of the western boundary and into the adjacent Port of Columbia County property. The SHIBP is on a 225-acre brownfield site purchased the City in 2015, shortly after Boise White Paper Mill ceased operations on the site.

Figure 3. Site Location



Current Uses

The SHIBP consists of parcels comprised of open spaces, paved areas, outdoor storage areas, loading areas, ditches, and pipes. There are approximately 20 structures on the site. Several uses currently operate on the property. Cascade Tissue Group, a tissue manufacturer, is the primary user, occupying about 24 acres of the site, as shown in Figure 4. While operations have been scaled down, the paper processing mill still utilizes several existing buildings and facilities. ACSP LLC, an indoor commercial agricultural facility, operates on 8.62 acres of the site. Portland General Electric (PGE) has an easement for a substation, though the current substation is inadequate. PGE plans to expand and upgrade the substation. These uses are clustered toward the center of the site.

Other uses on the site are located in the northwest portion of the site along Kaster Road. The St. Helens Recreation Center is located on the south side of Kaster Road at the intersection with Old Portland Road. The recreation center is owned and operated by the City of St. Helens. Several softball fields are located further east along Kaster Road. An old Association of Western Pulp and Paper Workers Union building is located at the eastern terminus of Kaster Road. This site is not under City ownership currently.

Other Site Features

- Access and utility easements: a 50-foot access easement located southeast of the Cascade Tissue facilities provides access to the ACSP site, A 20-foot access and utility easement along the south end of the ACSP site, and a public utility easement bisecting the site.
- Right-of-Way: Kaster Road is the only improved right-of-way on site. Several unimproved right-of-way streets have been platted on site. These include Fir Street, Church Street, Terrace Street, Park Street, California Street, East Street and 7th Street. The Portland and Western Railway right-of-way runs parallel to the Multnomah Channel, bisecting the site.
- Treatment Pond – a 39-acre wastewater treatment facility and lagoon, located just north of the SHIPB along the Multnomah Channel. The City is considering a redevelopment of the site as part of the Central Waterfront Redevelopment Project.
- Topography: The site generally slopes down from Old Portland Road towards the Multnomah Channel. Several rock outcroppings exist in the northern portion of the site.



Figure 4. Existing Conditions Map



Comprehensive Plan and Zoning Designations

Comprehensive Plan

The St. Helens Comprehensive Plan includes goals and policies related to land use within the SHIBP.

Heavy Industrial Category

Goals:

- To establish large tracts of land where manufacturing and industrial operations of an intensive or heavy character may be carried out with minimal impact upon the community.
- To provide suitable sites where transportation, including employee carpooling, public utilities, and other special industrial requirements, such as the disposal of waste materials, can be met.

Policies:

- Apply this category to areas that already have existing heavy industry or can serve such industry with adequate rail, river or highway access.
- Ensure that the size, location and boundary conditions of heavy industrial areas are such that surrounding residential areas are protected.
- Follow a site design review process for heavy industrial activity to ensure proper setback, screening and buffering, and adequate consideration of significant fish and wildlife habitats; screening and buffering are particularly important for unsightly areas which can be viewed from arterials or adjoining residential areas.
- Ensure that heavy industrial operations have sufficient space for employee and truck parking, loading, maneuvering and storage.
- Designate sufficient land for heavy industrial purposes to meet estimated future needs and preserve these areas for such activities by excluding unrelated uses which would reduce available land and restrict the growth and expansion of industry and consider adding additional lands when the need for a specific site becomes known.
- Activities which have no off-site effects will be allowed in this area; heavy industrial activities with off-site noise, odor, air pollution or vibrating effects may be required to increase the setback from a property line.

Light Industrial Category

Goals:

- To provide a place for smaller and/or less intensive industrial activities where their service and transportation requirements can be met, and where their environmental effects will have minimal impact upon the community.

Policies:

- Apply this category where light industrial concerns have become established and where vacant industrial sites have been set aside for this purpose.
- Encourage preserving such designated areas for light manufacturing, wholesaling, processing and similar operations by excluding unrelated uses which would reduce available land and restrict the growth and expansion of industry.
- Ensure that light industry operations have adequate space with respect to employee and truck parking, loading, maneuvering and storage.
- Follow a site design review process for light industrial activity to ensure proper setbacks as well as screening and buffering, particularly for unsightly areas which can be viewed from



arterials or from adjoining residential areas; in contemplating the setbacks, consideration should be given to the effect of the activity on significant fish and wildlife areas.

Community Development Code

The St. Helens Community Development Code establishes standards and procedures governing the development and use of land in the city of St. Helens and to implement the St. Helens Comprehensive Plan. As shown in Figure 5, assigned zoning districts in the SHIBP are concurrent with Comprehensive Plan designations. The following standards and procedures pertain to zoning districts within the SHIBP.

Heavy Industrial

The Heavy Industrial zone allows for intensive manufacturing activities including fabrication, processing, or assembling of semi-finished or finished products from raw materials, outdoor storage areas, and the storage of heavy equipment. It is also intended to provide locations for activities that need to be separated from more easily impacted activities such as schools, churches, etc. Standards are determined by the proximity to residential zones and the anticipated off-site impacts and include noise, vibrations, glare, odor, smoke, and gases/chemicals. The maximum height within 100 feet of any residential zone is 35 feet.

Light Industrial

The light industrial zone allows for general industrial use including light manufacturing and related activities with few, if any, nuisance characteristics such as noise, glare, and smoke. It permits manufacturing, processing, assembling, packaging or treatment of products from previously prepared materials and discourages residential and limited commercial uses. Standards are determined by the proximity to residential zones and the anticipated off-site impacts. The maximum height within 100 feet of any residential zone is 35 feet.

Willamette Greenway

The Willamette Greenway (WG) zone protects, conserves, enhances and maintains the natural, scenic, historical, agricultural, economic, and recreational quality of lands along the Willamette River. The WG zone is a superimposed zone to be used in combination with the existing underlying zone.

Within the WG zone, development shall be directed away from the Willamette River to the greatest practicable degree. However, lands committed to urban uses are permitted to continue, and intensification or development associated with existing or historical urban uses is allowed subject to the approval of the director. Urban uses are industrial and commercial activities including facilities relating to the production, storage and transportation of timber and paper products.

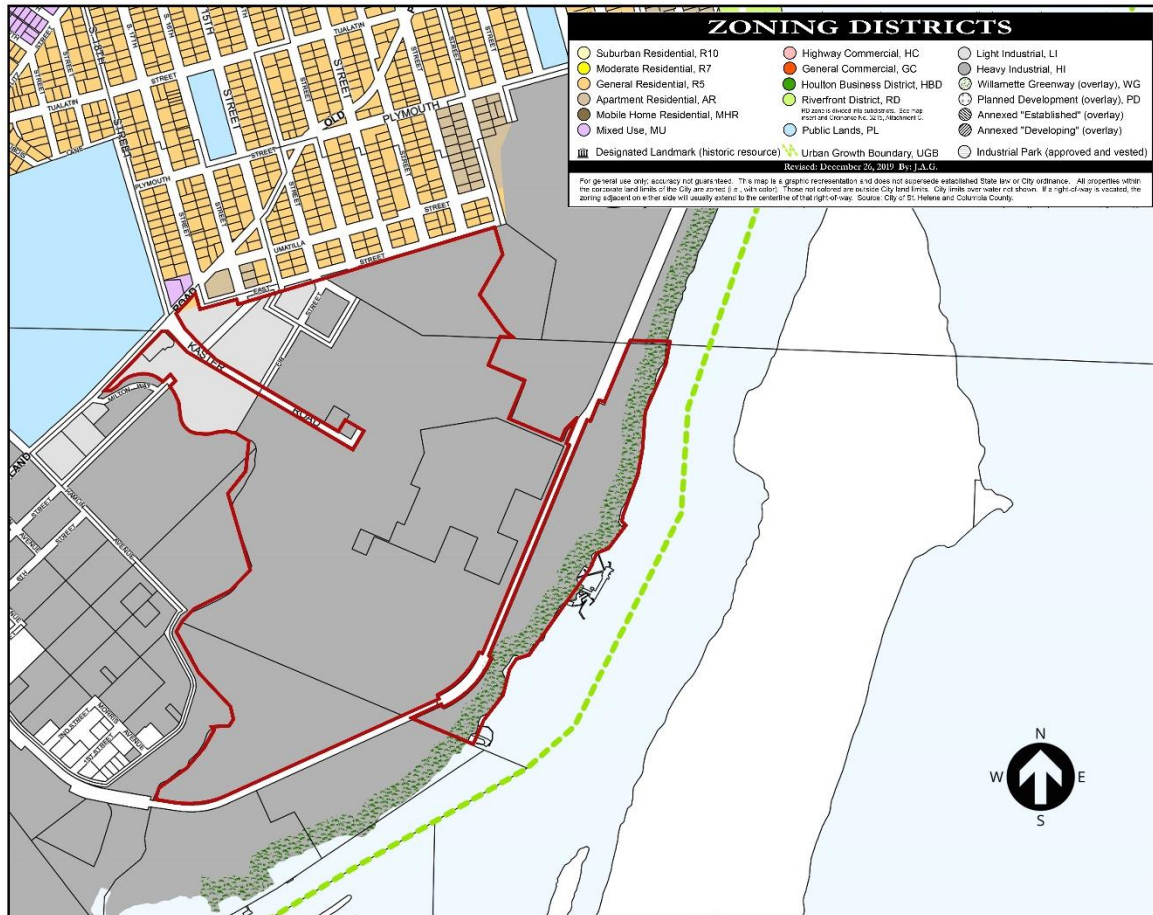
In evaluating a proposal, the director shall take into consideration the proposed activity's impact on fish and wildlife, public access, safety, and the vegetative fringe. The director may impose a setback in the WG zone if he/she believes these aspects have not been reasonably taken into account. Non-water-dependent and non-water-related uses shall be set back 150 feet from the river bank.

In areas in which there are industrial and commercial activities, public access is discouraged when there is a potential for physical harm to members of the public. Allowed activities will provide



maximum practicable landscaping, aesthetic enhancement, open space or vegetation between the activity and the Willamette River.

Figure 5. Zoning Map



Buildable Lands

The majority of the site, approximately 186 acres, is zoned Heavy Industrial. Approximately 15 acres to the south of Old Portland Road and to the east and west of Kaster Road are zoned for Light Industrial use. Upland areas along the waterfront are subject to the Willamette Greenway overlay.

Zone	Abbreviation	Acres
Heavy Industrial	HI	185.8
Light Industrial	LI	15.4



Transportation

Streets

Primary access to the site is provided from Old Portland Road. Old Portland Road is classified as a minor arterial and is maintained under City jurisdiction. The right-of-way section is currently 60-feet and has been improved with two vehicle travel lanes and designated bicycle lanes on either side. Kaster Road, a dead-ended collector road, provides access from Old Portland Road to several parcels on site. A private access drive owned and maintained by the Cascade Tissue Group connects at Kaster Road and functions as the primary entrance into the site.

The intersection of Old Portland Road and Kaster Road is signalized; however, the signal is not operating under current standards. Multiple improvement options have been considered to bring the intersection into compliance. The preferred option would be a four-leg roundabout at the intersection, as proposed within the Riverfront Connector Plan (Figure 6).

Figure 6. Preferred Old Portland Road and Kaster Road Intersection Improvement Option



There are several unimproved right-of-way sections on site which may potentially be vacated for future development. Fir Street, Church Street, Terrace Street and Park Street are unimproved and do not have known utilities located within the right-of-way. East Street and 7th Street have underground utilities that would need to be considered before vacating. An existing 50-foot access easement just south of the Cascade Tissue facility provides access to the ACSP, LLC lease area. A 20-foot wide access and utility easement located along the south end of the ACSP site provide access along the south of the site.

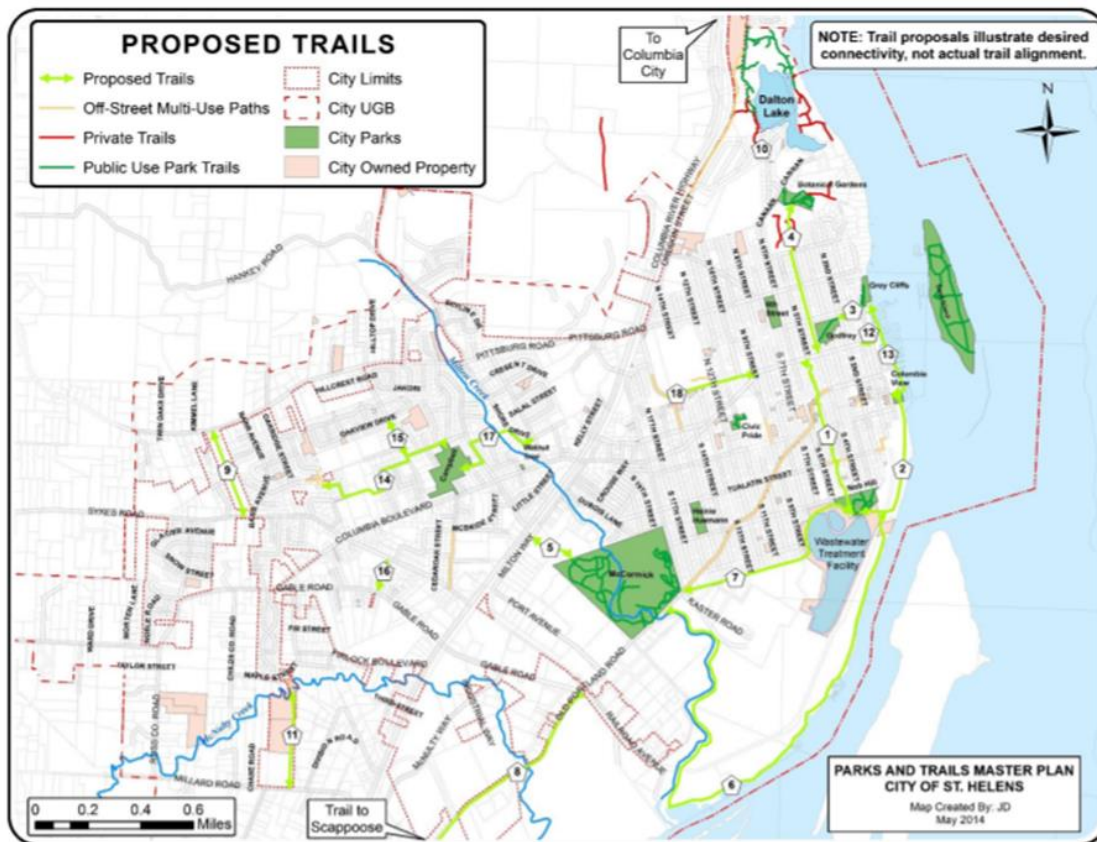
Railway

The site is bisected by an operational railspur run by Portland & Western Railroad which dead-ends at the site.

Trails

An existing shared use pathway runs along the east side of Old Portland Road. There are also several proposed shared use paths and trails within parks located adjacent to the study area roadways, including McCormick Park, Nob Hill Nature Park, and Columbia View Park. Milton Creek Trail, a regional trail, follows Milton Creek from McCormick Park to the Riverfront. The East Street Trail, a local access trail, connects the McCormick Park trails to the Nob Hill Nature Park Trails. A trail connection following the Milton Creek and connecting at the waterfront downtown through the site has been shown on the City's Parks and Trails Master Plan (Figure 7).

Figure 7. Trails Master Plan Map



Environmental Conditions

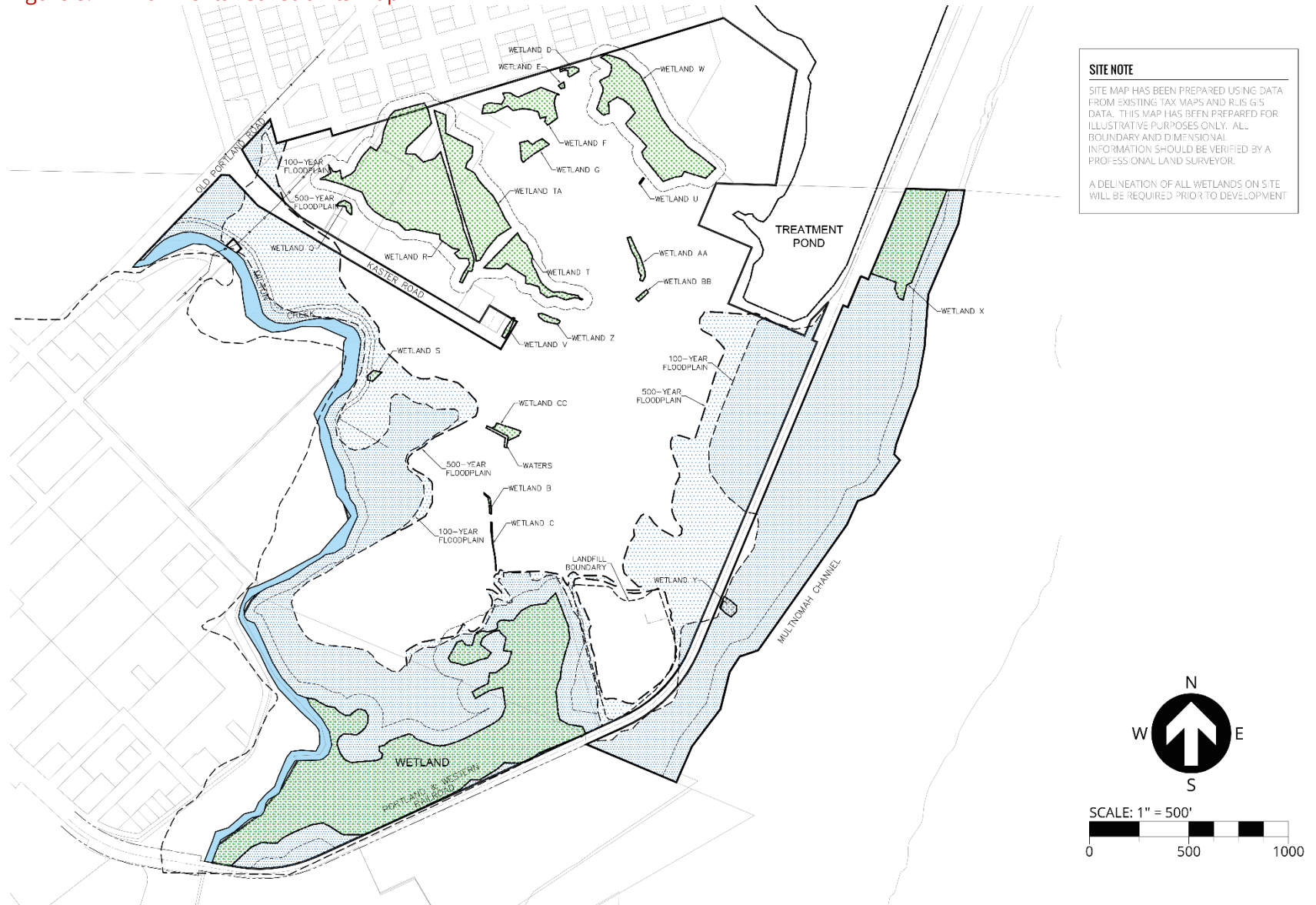
The SHIPB site is located along the Multnomah Channel, a distributary of the Willamette River. Milton Creek, an essential salmonid stream, runs along the eastern perimeter of the property, continuing in McCormick Park, north of Old Portland Road. Milton Creek terminates south of the SHIPB site at the Multnomah Channel. The Multnomah Channel and Milton Creek riparian areas are identified as Statewide Planning Goal 5 resources. The City's Goal 5 riparian corridor areas include water areas, fish habitat, adjacent riparian areas and wetlands within the riparian boundary area, and significant wetlands identified by the city. The site is mapped with 100-year and 500-year floodplains associated with the Multnomah Channel and Milton Creek waterways. A wetland delineation of the majority of the SHIPB site was prepared by Wetland Solutions Northwest, LLC "(WD 2019-0324)". Within the study area, 19 wetlands, a waterway and the Milton Creek high water line were delineated. The delineated wetlands identification and size has been listed in the table below and Figure 8. The additional wetlands or areas with potential wetlands will need to be delineated prior to development of the site. The protection zones for the significant Goal 5 wetlands have not been included in the area calculations of each wetland below.

Potentially Jurisdictional Feature	Size (Acres)
Wetland B	0.02
Wetland C	0.02
Wetland D	0.05
Wetland E	0.01
Wetland F	0.72
Wetland G	0.19
Wetland Q	0.05
Wetland R	5.31
Wetland S	0.05
Wetland T	0.83
Wetland U	0.01
Wetland V	0.04
Wetland W	2.84
Wetland X	1.48
Wetland Y	0.12
Wetland Z	0.06
Wetland AA	0.12
Wetland BB	0.03
Wetland CC	0.12
Total Wetland Area	12.07

The SHIPB site has known and suspected contamination as a result of the historical use as an industrial paper mill. An existing landfill located on the site is approximately 5.3 acres in size. The landfill is located entirely within the ACSP lease agreement area (Figure 8). Boise White Paper has an Environmental Indemnification Agreement with the City to address existing or discovered contamination on the site.



Figure 8. Environmental Constraints Map



Existing Utilities

The existing utility assessment and map were prepared through a review of documentation provided by the City, meetings with key stakeholders and a site visit. The following is a description of the existing public water, stormwater, sewer, and power infrastructure providing service to the site. The site has been divided into four quadrants for ease of discussion (Figure 9).

Water

There are existing 6" public water mains that run along S. 18th Street and Old Portland Road. These water mains intersect at the Old Portland Road and S. 18th Street intersection. The 6" public main then extends down Kaster road for approximately 400-feet, where it then enlarges to an 8" main and continues for another 1,000-feet before it terminates at the water meter for Cascade Tissue. Additionally, there is a raw water intake owned by the City of St. Helens at the southwest side of the site within the Multnomah Channel that is the source of process water supply for Cascade Tissue.

The existing static pressure at the Cascade Tissue water meter is 96-psi. Water flowrates for industrial and fire supply will need to be modeled for each parcel to confirm serviceability to the potential future industrial users onsite. It should be noted that the fire flow will likely be the limiting factor for supply due to high flow requirements required by the local fire district. It should also be noted that looping the water system onsite can aid in providing adequate water supply at desired pressure.

Stormwater

Stormwater onsite is collected and conveyed through a series of ditches, catch basins, and stormwater pipes. The Stormwater Pollution Control Plan divides the site into four quadrants. Quadrant 1 does not contain any mill process area and drains to an outfall in the Multnomah Channel. Quadrant 2 does not contain any mill process area and drains to an outfall in Milton Creek. Quadrant 3 and 4 are process areas and are treated onsite prior to discharging to the Columbia River. See Figures 1-6 from the Stormwater Pollution Control Plan (Appendix A) for additional information on stormwater drainage patterns.

Stormwater treatment for future development can either be handled by each parcel or with a regional stormwater treatment facility. Providing a regional stormwater treatment facility could both ensure stormwater facilities are properly maintained and make parcels more attractive. Having a regional facility located near the waterfront would allow existing drainage patterns to be utilized without the addition of a stormwater pump station.

Sanitary Sewer

There is an existing 24" public gravity sanitary sewer line flowing from southwest to northeast that runs along the 7th Street right-of-way. This gravity main enlarges to 27" just east of Kaster Road. The

Figure 9. Quadrant Map



sanitary main then continues by routing along the East Street right-of-way. This main then upsizes to 33" and continues along the northern boundary of Parcels 6, 7, 8, and 9. Additionally, there is a 15" main which flows to the north and terminates in Kaster Road approximately 310-feet south of the Old Portland Road and S. 18th Street intersection. All future development will be required to connect to the public sanitary sewer system.

The site drains from northwest to southeast, with a change in elevation of approximately 37-feet. There is an existing private wastewater treatment facility onsite which handles the process wastewater from Cascade Tissue and ACSP's pre-existing lavatory waste. DEQ requires that only the pre-existing mill will be able to discharge directly to the Wastewater Treatment Plant.

To provide sewer service to future development, a sewer pump station will be needed. This sewer pump station will likely need to be located near the waterfront as existing drainage patterns dictate gravity sewer drainage. The gravity sewer piping will need to follow the alignment of the proposed roadways and drain down to the sewer pump station location. The force main can be routed along existing and/or proposed roadways to deliver the flow to the public sewer system. No current capacity issues are noted on the existing public gravity sewer mains. All future development will be required to connect to the public sanitary sewer.

Electrical Power, Natural Gas, and Communications

Electrical power is serviced by Portland General Electric (PGE). There is an existing substation onsite which is leased by PGE. The City of St. Helens is serviced by Northwest Natural Gas. The location of the nearest communication lines (including telephone, fiber, cable) for franchise utilities are unknown.

No issues are anticipated to provide electrical power, natural gas, or communications (including telephone, fiber, cable) for future development. It is anticipated that these utilities will be provided in a combined private utility trench within the public right-of-way or utility easements.



Figure 10. Quadrant 1 Utilities Map (Figure 3 from 2017 SWPCP)

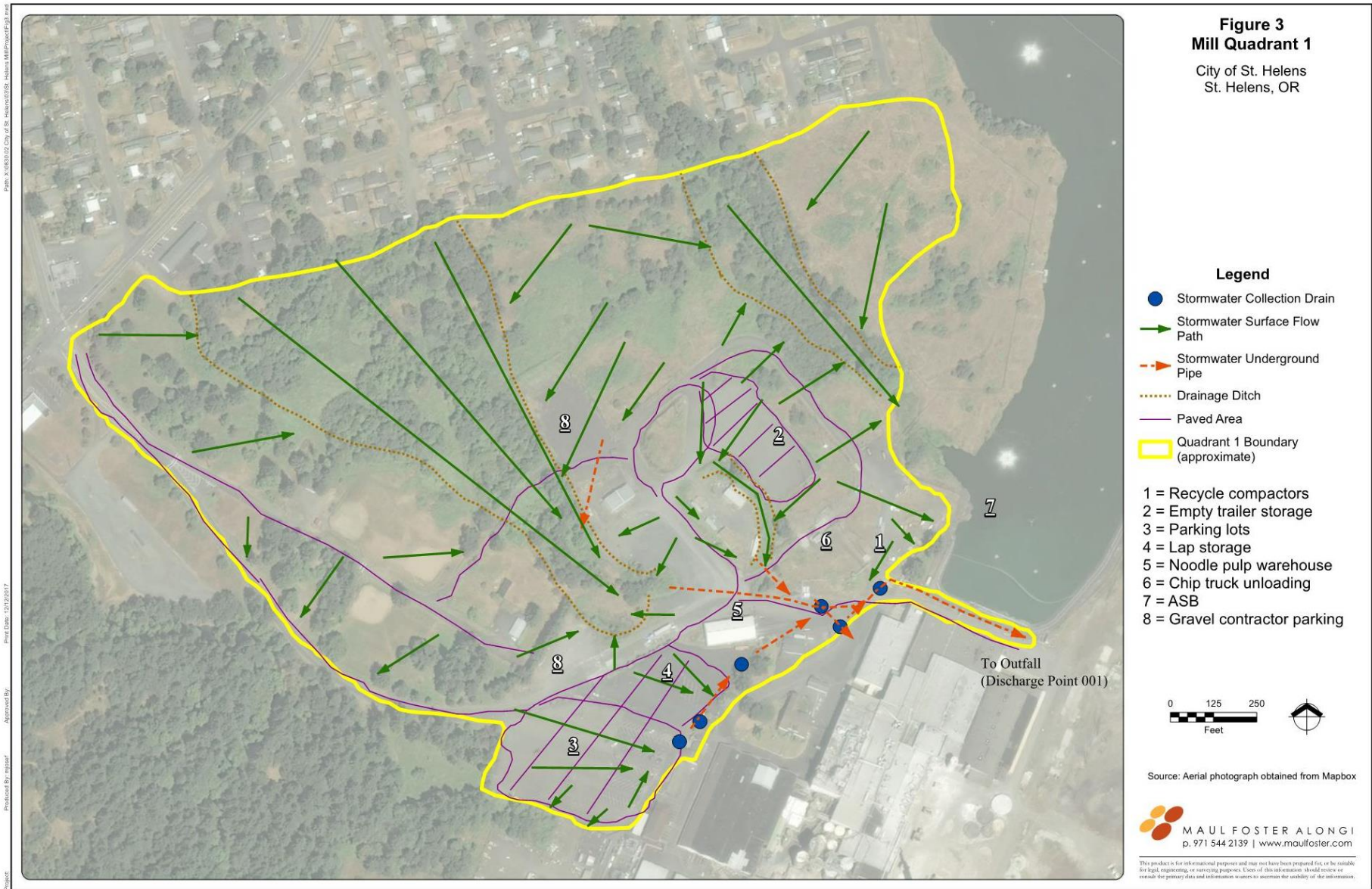


Figure 11. Quadrant 2 Utilities Map (Figure 4 from 2017 SWPCP)

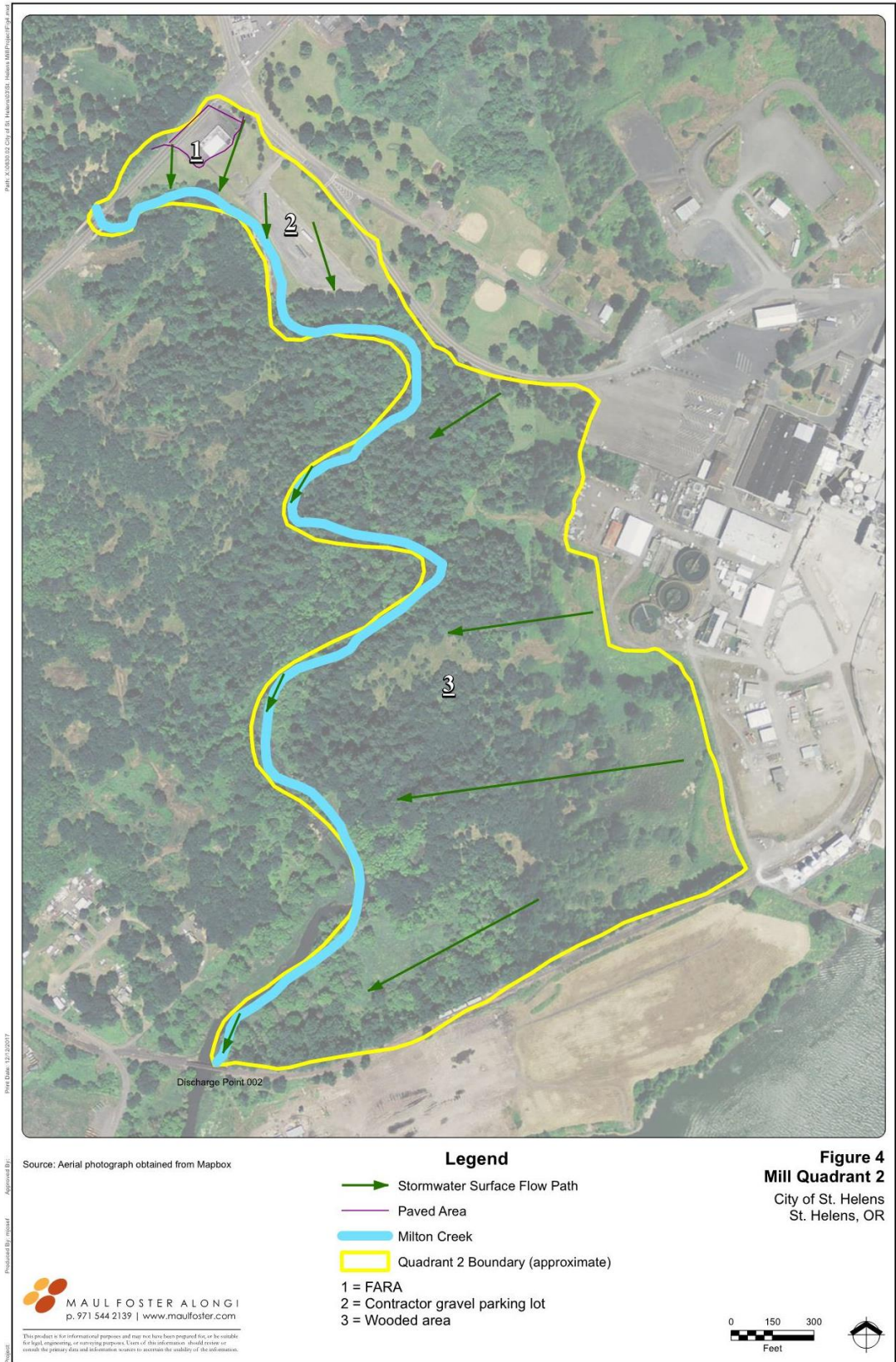


Figure 12. Quadrant 3 Utilities Map (Figure 5 from 2017 SWPCP)



Figure 13. Quadrant 4 Utilities Map (Figure 4 from 2017 SWPCP)



Waterway Lease

The City has an existing waterway lease along the Columbia River boundary of the property with a sub-lease agreement with Wilsonville Concrete.

Figure 14. Oregon DSL Waterway Lease Map – Parcels 1, 2, 3, 4 and 5



Updated Market Analysis

This analysis updates an existing market analyses to inform potential parcel size and industrial users, including potential water-related users, based on the regional industrial climate.

ECONOMIC OUTLOOK IN THE MIDST OF THE COVID-19 PANDEMIC

This report was drafted in the Spring of 2020. As of this draft, the Covid-19 virus has created a global pandemic that has resulted in entire sectors of the economy being put on pause. Short- to intermediate-term impacts on the economy remain uncertain, although disruptions in commercial and industrial market fundamentals are expected. Over the long-term horizon of which the study area will build out, prevailing demographic and economic trajectories will have greater influence than cyclical variations or economic shocks. As such, this analysis assumes a return to long-term economic stabilization.

In 2015, ECONorthwest conducted extensive market analysis for the business park as part of a larger economic analysis of the proposed new transportation connection from Highway 30 to the Riverfront District. At that time, a declining manufacturing sector had led to a decrease in employment and wages in St. Helens, and most people commuted out of the area for work. A key finding is that the City and its partners should focus finding strategies for keeping workers in St. Helens, especially in growing companies. One recommendation from that analysis is to conduct extensive analysis of the site's existing conditions, including parcel "shovel-readiness," site constraints, and identifying the location(s) of developable pockets of parcels.

The consultant team prepared an updated look at user needs in Columbia County to inform the Master Plan's parcelization plan and infrastructure funding plan by compiling U.S. Census Quarterly Census of Employment and Wages data for Columbia County and conducting five stakeholder interviews with local economic development stakeholders, including the Port of Columbia County, the City of St. Helens, Oregon Manufacturing Innovation Center (OMIC), Columbia-Pacific Economic Development District (Col-Pac), and local industry representatives.

What has changed over the past five years?

From 2015 to early 2020, the Portland region's employment grew, and the economy continued to diversify and broaden its base. While the region does specialize in some sectors, like semiconductors and the outdoor apparel cluster, the region's evolving industrial structure is matching trends with the country.¹ At the same time, the urban-rural economic divide has grown, and Columbia County experienced both spillover effects of growth from the Portland region, and continued impacts from its transition away from a timber-dependent economy.

Key developments in Columbia County include:

¹ Lehner, Josh. Industrial Diversification in Oregon. March 13, 2019. Oregon Office of Economic Analysis Blog. <https://oregoneconomicanalysis.com/2019/03/13/regional-business-cycle-exposure-pt-2/>



- The Oregon Manufacturing Innovation Center was established in Scappoose, bringing new talent and attention to the area and driving interest in the county's industrial land.
- Portland Community College broke ground on its workforce training center adjacent to OMIC.
- Cascade Tissue affirmed its long-term presence in the Columbia County, opening a 285,000 square foot facility in Scappoose.
- As target industries have changed, there has been a shift in focus from heavy industry users and larger 20+ acre industrial parcels to smaller parcels and light industrial users.
- At the SHIBP, the City has welcomed one new user to the site (ACSP, LLC), along with several new development proposals and ideas.

In February 2020, the COVID-19 pandemic hit the United States. After 11 years of economic expansion, the social distancing required by the pandemic has precipitated massive layoffs, supply chain disruptions, and stay-at-home orders in the Pacific Northwest. The pandemic has the potential of leading to a recession, the extent or depth of which is not currently known.

What is the industrial landscape in St. Helens?

Small firms comprise the majority of industrial businesses, and there is a diverse business mix within industrial areas.

The United States Census Quarterly Census of Employment and Wages (QCEW) from 2018 data on firms provides an updated overview of the industrial landscape in St. Helens and Columbia County, we evaluated. Key findings from this analysis include:

- About a quarter of Columbia County's employees work in industrial sectors. Overall, the County has 2,959 employees working in industrial sectors, and 1,633 employees working in manufacturing.
- Among traditional industrial sectors², the majority of firms (83%), have fewer than 15 employees.
- Large heavy manufacturing firms in the city are concentrated in legacy industries including fabricated metals, paper, and packaging materials.
- Some retail and other services (i.e. maintenance, repair, equipment leasing) have located in industrial areas, showing there is demand beyond traditional industrial sectors.
- Many businesses in St Helens are home businesses operating out of outbuildings on large parcels that also include a metal structure. Nearly the entire construction sector functions in these spaces.

² Construction, manufacturing, wholesaling, transportation, and warehousing.



Who are the potential users of the St. Helens Industrial Business Park? What size sites do they need?

Small footprint users are the most likely candidates for the site.

The 2015 Columbia County Market Analysis posited that the business park would be “best situated to capture spillover light industrial industry from Portland, as well as growing light industries located in the region that need more space.” Based on findings from the 2020 interviews, this remains true.

The market for smaller footprint industrial uses is a function of both supply and demand. The quantitative data on existing businesses and qualitative input from interviewees suggest a market for small- to mid-sized firms in the area. Potential industries cited in interviews included light manufacturing, bulk commodities, natural resources (biomass and off-products), and recycling / green industry.

There may be opportunities for speculative development.

However, due to their scale, many small footprint users are not interested in owner-occupied or build-to-suit spaces. This falls in line with the supply constraints in the market. Interviewees state that it is generally not feasible to develop industrial buildings smaller than 30,000 sq. ft. This is because small buildings are not capable of absorbing costs associated with providing transportation access and utilities or addressing onsite development constraints. These factors show that there may be market opportunities for some speculative development in St. Helens, which was also affirmed through the interviews. Under stable market conditions, we would expect supportable demand for a 30,000 to 50,000 sq. ft. speculative light industrial building. Speculative projects in similarly positioned markets (Port of Kalama, Port of Camas/Washougal) are recent precedent successes. However, these recent successes preceded the economic implications of the COVID-19 pandemic. In the near-term, we would expect low rates of new business formation and/or expansion resulting from more measured market growth, access to capital, and appetite for risk. Increases in industrial vacancies will likely deteriorate market conditions further. Collectively these factors will likely delay the timing of market support for speculative industrial development well into the post COVID-19 recovery.

Light manufacturing is a likely target industry.

Interviewees cite the need for a critical mass of integrated businesses which can help to shorten the supply chain so that local businesses can source locally. Interviewees cite several factors that set up to complement a light industrial manufacturing industry in St. Helens: favorable local government regulations, the area’s strategic location close to the I-5 corridor but on the less trafficked Highway 30 corridor, and strong local workforce that currently commute to Portland and to a lesser extent Hillsboro. In addition, the City’s efforts to revitalize downtown and the waterfront may help to attract new residents who seek a vibrant, small-town experience. Each of these factors may contribute to some spillover from the Portland region of manufacturers looking for room to grow.

Potential manufacturing sectors may include specialty manufacturing and manufacturers that are complementary industries to current businesses, including industries that can cluster with Cascade Tissue. These users have demonstrated market interest along the Lower Columbia, ranging from Scappoose to Port Westward and at the Port of Kalama in Washington State.



Key takeaway: Uses would skew to smaller two- to five-acre parcels, but some users may be in need of larger ten- to twenty-acre parcels. There remains regional demand for larger 20- to 40-acre sites, but other industrial areas (e.g. Port Westward or Scappoose Industrial Park) may be better positioned to attract such users.

What users might be interested in locating on the waterfront?

The SHIBP is a strategic location for a narrow set of users who can locate in a shallow water area.

The main constraint of the waterfront portion of the SHIBP is that it is limited to shallow draft boats and maneuverability is low. For certain users, such as tugboat operators, this could be an asset. A local maritime industry stakeholder said that this location is ideal because it is central to many potential freight destinations and at the confluence of the Multnomah Channel and the Columbia River. If the City were to offer incentives and proactively build infrastructure to support uses at the business park, the City could potentially attract a suitable maritime use. Another factor for some users is the ability to own the waterfront sites outright. However, there are several barriers to development of maritime uses, including State of Oregon Department of State Lands regulations, and the cost associated with removing abandoned and submerged derelict boats at the existing high dock. A working waterfront may also have associated operational costs for dredging and dock maintenance. Beyond the water uses, ancillary land side buildings could include business offices or storage.

If the SHIBP is able to attract water-based industry, there may be other industries that would want to be close to that user, including:

- Drydock repair and the ability to pull vessels out of the water. While a user at this site would not compete with larger repair operations like Vigor or Sundial, there are opportunities for smaller scale vessels. An example of this can be found at Tongue Point in Astoria.
- Shoreside heavy lift crane. This would offer the ability to do barge loading/off-loading, load and unload bulk material. There is clear demand for such uses.
- Small intermodal facilities. The viability of such a facility would depend on the cost per unit and traffic on the rail line, which may not provide the necessary value-add to justify the cost of construction. The site may also be at a competitive disadvantage relative to Scappoose and Longview unless there is a rail cost advantage.
- Drilling/Dredging support. Such a user would support the maintenance of the waterfront area as well as other water-dependent industrial areas nearby. An example of this is DMI in Portland.

Key takeaway: An active waterfront at the SHIBP could serve as a catalyst for other complementary users. These users would similarly require a small footprint, as most of their operations would be in-water.



For light industrial users, what are the Industrial Business Park's competitor areas, and what advantages does the SHIBP have?

The SHIBP competes with other industrial areas at the regional scale.

Beyond Columbia County, users are generally evaluating alternatives in Portland and in rural Clackamas County. For non-marine dependent users, areas like Estacada and Molalla offer similar cost advantages, distance from the metro area, and the ability to draw from Clackamas Community College's workforce training.

Within Columbia County, there are several direct competitor areas.

These include the Port's McNulty Creek and Milton Creek Industrial Parks, and the Scappoose Industrial Park. Since 2015, the Scappoose Industrial Park has come online, with 200 acres of land available for new development closer to the Portland market and the OMIC. It may also be more desirable to some users, given its closer proximity to Portland. However, OMIC is largely regarded as a regional resource will improve the overall marketability of Columbia County once technical training and other synergy materialize at and around OMIC. With its position adjacent to OMIC, the Scappoose Industrial Park is well positioned to attract anchor industries with direct dependencies on OMIC (e.g. larger scale metals manufacturing) and or airport-related uses.

As the relationship between OMIC and local businesses takes shape, complementary businesses will influence demand for industrial space throughout Columbia County. While this phase is a cycle or two in the future, it will likely represent a transition toward mid-size firms.

Collectively, industrial properties in Columbia County offer a cost advantage vis-à-vis the Portland market, space for future expansion and growth, and a less restrictive regulatory environment. The largely unbuilt nature of many industrial areas in the market offers a blank slate for new business clusters to organize around both legacy and emerging industrial anchors.

What can the City do to best encourage a healthy business mix on the SHIBP site?

For businesses evaluating investment opportunities, the risk profile is still very high for the SHIBP, and it will take some shoring up to catalyze new private investment. Interviewees are impressed with the City of St. Helens' business friendliness and willingness to be creative and entrepreneurial.

Key next steps could include:

- Complete due diligence on the site. Interviewees mention the need to provide better certainty of what City's asset is, including environmental issues, existing infrastructure issues, easements, etc. This will be completed as part of the master plan.



- Prioritize infrastructure to key opportunity sites. Multiple interviewees characterized the lack of access and transportation infrastructure as the primary development challenge for matching potential users with sites in Columbia County. Users would prefer to have city water, sewer, and electrical service ready to go at the property line, along with a public access road. Given the range of potential user needs described above, it is not necessary at this point to fully flesh out exact lot sizes. Instead, the City can focus on providing the main access road to the site, and provide stubbed utilities to serve collections of parcels.
- Focus on training. The St. Helens workforce is a great asset to the area. Craig Campbell from OMIC explained OMIC's potential role in helping to transition the economy through training from its paper mill focused to a broader, more resilient set of industries. OMIC is a resource for every business in Columbia County and beyond, and is committed to partnering with local governments to serve as a resource. This condition will only improve when the PCC campus comes online.
- Explore the feasibility of speculative development. Both qualitative and quantitative inputs to this study identify market opportunities for speculative light industrial development. The City should have a plan to capitalize on opportunities when market conditions normalize.
- Promote a flexible parcelization plan. All indications point to an established market for two to five-acre sites capable of accommodating 30,000 to 50,000 square foot structures. However, the City's parcelization strategy should allow for opportunities to aggregate sites to accommodate mid-sized users. With transportation access and infrastructure presenting the greatest challenges to development, a path of growth phasing strategy stemming from primary access points along Old Portland Road is likely.

Col-Pac indicates that they have received requests for 25-acre or larger sites, especially for businesses that are priced out of the Portland market or who do not need to be centrally located.

Col-Pac has had difficulty matching potential users with sites. This is because while the land may be available, the transportation and utility infrastructure is not yet available to service the development, and is beyond the investment timeframe of the potential business.

While we consider the market for the SHIBP to be for smaller parcels in the 2-5-acre range, this unmet market need is indicative of a need to maintain flexibility and provide opportunities for aggregation.



Appendix A. Stormwater Pollution Control Plan Exhibits



STORMWATER POLLUTION CONTROL PLAN

CITY OF ST. HELENS MILL

Prepared for

CITY OF ST. HELENS

SITE NAME: CITY OF ST. HELENS MILL
SITE OPERATOR/OWNER: CITY OF ST. HELENS
DEQ PERMIT FILE NO.: 9582
EPA PERMIT NO.: ORR220121
PRIMARY SIC CODE: 2621
SITE CONTACT: JOHN WALSH
PHONE NO.: 503-366-8211
EMAIL: JWALSH@CI.ST-HELENS.OR.US
SITE PHYSICAL ADDRESS: 1300 KASTER ROAD
ST. HELENS, OREGON 97051
COLUMBIA COUNTY
MAILING ADDRESS: P.O. BOX 278
ST. HELENS, OREGON 97051

December 28, 2017

Project No. 0830.02.03



Prepared by
Jacob Faust, PE
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200, Portland OR 97209

STORMWATER POLLUTION CONTROL PLAN

CITY OF ST. HELENS MILL

*The material and data in this plan were prepared
under the supervision and direction of the undersigned.*

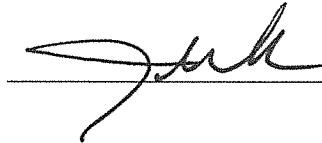
MAUL FOSTER & ALONGI, INC.



*Jacob Faust, PE
Senior Engineer*

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



*John Walsh
City Administrator*

STORMWATER POLLUTION CONTROL PLAN CHECKLIST

SITE NAME: BOISE ST. HELENS PAPER DEQ FILE NO. 9582

Permit Schedule		SWPCP Required Element	Page No.	Comments (Official Use Only)
New Discharger	Permit Cover and Exclusion	A new discharger to an impaired water without a TMDL must meet one of the conditions in this section of the permit to obtain coverage	N/A	
Tier II Status	A.3	Facility triggered Tier II under previous permit <input type="checkbox"/> Yes Facility triggered Tier II under current permit <input type="checkbox"/> Yes Provide a description of treatment controls or source control or mass load reduction waiver, including low impact development, in response to corrective action requirements and operation and maintenance procedures.	N/A	
Signature	A.6.b.	Signed and certified in accordance with 40 CFR 122.22	III	
Title Page	A.7.a.	Plan date	I	
		Name of the site	I	
		Name of the site operator or owner	I	
		Name of the person(s) preparing the SWPCP	I	
		DEQ File No. and EPA Permit No.	I	
		Primary SIC code and any co-located SIC codes	I	
		Contact person(s) name, telephone number and email	I	
		Physical address, including county	I	
		Mailing address if different	I	
Site Description*	A.7.b.ii	A description of industrial activities conducted at the site and significant materials stored, used, treated or disposed of in a manner which exposes those activities or materials to stormwater. Include in the description the methods of storage, usage, treatment or disposal.	2	
	A.7.b.iii	Location and description, with any available characterization data, of areas of known or discovered significant materials from previous operations.	N/A	
	A.7.b.iv	Regular operating hours of operation.	2	
General Location Map	A.7.b.i	General location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.	Figure 1	
Site Map* (please identify clearly)	A.7.b.i	Drainage patterns	Figures 3,4,5,6	
		Conveyance and discharge structures, such as piping or ditches	Figures 3,4,5,6	
		All discharge points assigned a unique three-digit identifying number starting with 001, 002 used for electronic reporting	Figure 6	
		Outline of the drainage area for each discharge point	Figures 3,4,5,6	
		Paved areas and buildings within each drainage area	Figures 3,4,5,6	
		Areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials	Figures 3,4,5,6	
		Existing structural control measures for minimizing pollutants in stormwater runoff	Figures 3,4,5,6	
		Structural features that reduce flow or minimize impervious areas	Figures 3,4,5,6	

Permit Schedule		SWPCP Required Element	Page No.	Comments (Official Use Only)
Site Map* (please identify clearly)	A.7.b.i	Material handling and access areas	Figures 3,4,5,6	
		Hazardous waste treatment, storage and disposal facilities	N/A	
		Location of wells including waste injection wells, seepage pits, drywells	N/A	
		Location of springs, wetlands and other surface waterbodies both on-site and adjacent to the site	Figures 3,4,5,6	
		Location of groundwater wells	N/A	
		Location and description of authorized non-stormwater discharges	Figures 3,4,5,6	
		Exact location of monitoring points, indicating if any discharge points are "substantially similar" and not being monitored	Figures 3,4,5,6	
		Location and description of spill prevention and cleanup materials	Figures 3,4,5,6	
		Locations of the following materials and activities if they are exposed to stormwater and applicable:		
		Fueling stations	N/A	
		Vehicle and equipment maintenance cleaning areas	Figures 3,4,5,6	
		Loading/unloading areas	Figures 3,4,5,6	
		Locations used for the treatment, storage, or disposal of wastes	Figures 3,4,5,6	
		Liquid storage tanks	Figures 3,4,5,6	
		Processing and storage areas	Figures 3,4,5,6	
		Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste materials, or by-products used or created by the facility	Figures 3,4,5,6	
		Transfer areas for substances in bulk	Figures 3,4,5,6	
Machinery	Figures 3,4,5,6			
Locations and sources of run-on to your site from adjacent property	Figures 3,4,5,6			
Potential Pollutants	A.7.b.v	For each area of the site where a reasonable potential exists for contributing pollutants to stormwater runoff, a description of the potential pollutant sources that could be present in stormwater discharges and if associated with a co-located SIC code.	3	
Impervious Area	A.7.b.viii	An estimate of the amount of impervious surface area (including paved areas and building roofs) and the total area drained by each stormwater discharge point to be reported in area units.	3, 4	
Receiving Waters	A.7.b.ix	The name(s) of the receiving water(s) for stormwater drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.	3, 4	
Monitoring Locations*	A.7.b.x	The identification of each discharge point and the location(s) where stormwater monitoring will occur as required by Schedule B.2. The monitoring location must also be labeled in the SWPCP as "monitoring location".	3, 4	

Permit Schedule		SWPCP Required Element	Page No.	Comments (Official Use Only)
		Existing discharge points excluded from monitoring must include a description of the discharge point(s) and data or analysis supporting that the discharge point(s) are substantially similar as described in Schedule B.2.c.ii of this permit SWPCP as "monitoring location".	3, 4	
Site Controls*	A.7.b.vi	A description of the control measures installed and implemented to meet the technology and water quality based requirements below and any applicable sector specific requirements (Sch.E)	4-6	
		Minimize exposure	4, 5	
		Oil and grease	5	
		Waste chemicals and material disposal	5, 6	
		Erosion and sediment control	6	
		Debris control	6	
		Dust generation and vehicle tracking	6	
		Housekeeping	6	
		Spill prevention and response	6-9	
		Preventative maintenance	9, 10	
		Employee education	11	
		Non-stormwater discharges	11, 12	
Procedures and Schedules	A.7.c.i	Spill Prevention and Response Procedures. Procedures for preventing and responding to spills and cleanup and notification procedures. Indicate who is responsible for on-site management of significant materials and include their contact information. Spills prevention plans required by other regulations may be substituted for this provision if the spill prevention plan addresses stormwater management concerns and the plan is included with the SWPCP.	6-9	
		Indicate how spill response will be coordinated between the permit registrant and otherwise unpermitted tenants. The permit registrant is ultimately responsible for spills of the tenant and appropriate response.	9	
	A.7.c.ii	Preventative Maintenance Procedures. Procedures for conducting inspections, maintenance and repairs to prevent leaks, spills, and other releases from drums, tanks and containers exposed to stormwater and the scheduled regular pickup and disposal of waste materials. Include the schedule or frequency for maintaining all control measures and waste collection.	9, 10	
	A.7.c.iii	Operations and Maintenance Plan. Include an operation and maintenance plan for active treatment systems, such as electrocoagulation, chemical flocculation, or ion-exchange. The O&M plan must include, as appropriate to the type of treatment system, items such as system schematic, manufacturer's maintenance/operation specifications, chemical use, treatment volumes and a monitoring or inspection plan and frequency. For passive treatment and low impact development control measures, include routine maintenance standards.	N/A	
A.7.c.iv	Employee Education Training Program and Schedule. Orientation no later than 30 calendar days of hire or change in duties, education annually. Include a description of the training content and the required frequency.	11		
*Some facilities must meet sector specific requirements (Schedule E) and include additional information in SWPCP, including the site map. If applicable, ensure that the SWPCP includes the sector specific information.				

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1 INTRODUCTION

This Stormwater Pollution Control Plan (SWPCP) was prepared on behalf of City of St. Helens (City) consistent with the National Pollutant Discharge Elimination System Stormwater Discharge Permit No. 1200-Z (the Permit) issued to the City by the Oregon Department of Environmental Quality (DEQ) for stormwater discharges from the St. Helens Mill located at 1300 Kaster Road in St. Helens, Oregon (see Figure 1).

This SWPCP addresses the requirements of the Permit with an effective date of August 1, 2017. This SWPCP is prepared consistent with the SWPCP requirements outlined in the Permit Schedule A and the provisions of Title 40, Code of Federal Regulations (CFR), Part 122, and serves as a guidance document for City personnel to manage the quality of stormwater discharged from the site to the receiving waters.

1.1 Revisions and Reviews

This SWPCP must be kept current and updated to reflect any substantial changes to the site controls or industrial activities. The SWPCP will be updated within 30 days of making changes and reviewed within 30 days of receiving results from a sampling event that indicate an exceedance of a Permit benchmark.

This SWPCP and all revisions will be kept on site. Revisions to the SWPCP will be submitted to DEQ only if the revisions are made for any of the following reasons:

- Change in site contact
- In response to a corrective action or inspection
- Changes to the site or site control measures that may significantly change the nature of pollutants present in stormwater discharge or significantly increase the pollutant(s) levels, discharge frequency, volume or flow rate
- Changes to the monitoring locations

If DEQ does not comment within 30 days of receipt of the revised SWPCP, the proposed revisions are deemed accepted. DEQ approval is not required prior to implementation of proposed control measures, except for changes in monitoring locations.

2 SITE DESCRIPTION

2.1 Site Location

The St. Helens Mill (the site) is located at 1300 Kaster Road in St. Helens, Oregon (see Figure 1). The site is located on a 60-acre site on the banks of the Multnomah Channel of the Willamette River, and one mile east of Highway 30.

2.2 Site Description

The site is also known as the former Boise St. Helens Mill. The site consists of four quadrants comprised of open spaces, paved areas, buildings, outdoor storage areas, loading areas, ditches, and pipes. Site features, including drainage patterns, are shown on Figures 2 through 6.

Quadrant 1 facilities include: asphalt roads; recycle compactors; storage areas; parking lots (gravel and paved); warehouse and treatment buildings; and the unloading area. Approximately 15 acres of Quadrant 1 are impervious and drain to the storm sewer (see Figure 3).

Quadrant 2 facilities include: FARA (lessee to the City), gravel contractor parking lot, and wooded/vegetated area. Approximately 1.5 acres of Quadrant 2 are impervious and drain to Milton Creek (see Figure 4).

Quadrant 3 facilities include: asphalt roads; hazardous waste storage building; plant, pulp mill, and treatment operations and associated equipment; contractor staging area; lime pit; storage areas (used oil, clarifier solids storage) and storage tanks (black liquor, chlorine dioxide, fuel oil, and methanol); loading area; and maintenance shops. Approximately 23.5 acres of Quadrant 3 are impervious (gravel, structures, paving), and drain to the process sewer system (see Figure 5).

Quadrant 4 facilities include: asphalt roads; machines building and warehouse; shipping area; woodyard; chip piles; and the storeroom and the main office buildings. Approximately 17 acres of Quadrant 4 are impervious (gravel, structures, paving), and drain to the process sewer system (see Figure 6).

2.3 Industrial Activities

The mill manufactures fine white tissue paper, operating 24 hours per day. Chemicals used at the mill include paper additives (calcium carbonate, hypochlorite, biocides, and various sizing agents). Other activities include steam production, maintenance and transportation support (which utilize hydrochloric acid, gasoline, diesel, oils and greases), and process wastewater treatment.

Environmental staff are on site from 8:00AM to 4:00PM.

The mill activities are classified with a standard industrial classification (SIC) code 2621 (paper mills).

2.4 Significant Materials and Potential Pollutants

All process areas are serviced by process sewers. Process wastewater is treated in a primary clarifier and a 45 million gallon per day (MGD) secondary treatment aerated stabilization basin (ASB) prior to discharge into the Columbia River consistent with a wastewater discharge permit. A 300-gallon portable container of sodium hypochlorite is stored at the wastewater treatment plant located at the southwest corner of the lagoon. A secondary containment pallet is provided for the container.

Other significant materials that are stored on the site include: motor oil, gasoline, diesel, antifreeze, hydraulic fluids, grease.

Generally, potential pollutants in stormwater at the site are associated with trucks, vehicles, and equipment, waste management, and particulates and debris from impervious areas. The potential pollutants are listed below:

- Galvanized surfaces (e.g. roofs, siding, vents, fencing), as well as vehicle and equipment tires are a potential source of zinc in stormwater.
- Particulates, debris, and oil and grease from the recycle area are a potential source of oil and grease, suspended solids and metals in stormwater.
- Leaks/spills of motor oil, gasoline, diesel, antifreeze, and hydraulic fluids from equipment, trucks and vehicles are a potential source of oil and grease, hydrocarbons and oxygen demand in stormwater.
- Vehicle and equipment brake pads are a potential source of copper in stormwater.
- Unvegetated, pervious areas, including gravel areas are a potential source of suspended solids in stormwater.
- Outdoor storage areas that are exposed to rainfall and/or runoff can contribute pollutants to stormwater when solid materials wash off. Transporting pulp to and from the storage area may discharge small amounts of wood fiber which are a potential source of oxygen demand and suspended solids in stormwater.

2.5 Site Stormwater System

The site is divided into four quadrants. Drainage patterns are shown in detail on Figures 3 through 6.

Quadrant 1 consists of vegetated areas, paved parking areas, and paved roadways. Stormwater from vegetated areas is collected by surface flow to drainage ditches; storm drains collect stormwater within the paved areas. The storm sewers drain the majority of Quadrant 1 and flow to the outfall in Multnomah Channel (Discharge Point 001). There are no discharges into the storm sewer from the mill process areas.

Quadrant 2 is mostly vegetated and separated by berms from the process areas of the mill. Stormwater from this area drains directly into Milton Creek (Discharge Point 002).

Quadrant 3 and Quadrant 4 are process areas where stormwater from impervious areas drains into the process sewer system, is treated with an onsite primary clarifier, then routed through the City's

secondary sewage treatment lagoon before discharge to the Columbia River. Discharges from the City's lagoon are covered under a wastewater discharge permit. One catch basin collects stormwater from the western access road that discharges to Multnomah Channel through the outfall (Discharge Point 001).

2.6 Stormwater Monitoring Locations

Stormwater samples (from Quadrants 1, 3 and 4) are collected from the outfall to the Multnomah Channel located on the northeastern most point of the property (see Monitoring Location 001, Figure 6).

Stormwater in Quadrant 2 is not impacted by industrial activities at the site and therefore no samples are collected.

2.7 Receiving Waters

The receiving water for Quadrants 1, 3, and 4 is the Multnomah.

The receiving water for Quadrant 2 is Milton Creek.

3 SITE CONTROL MEASURES

The following operational and structural source control and treatment measures are implemented at the site, consistent with the narrative technology-based effluent limits listed in Schedule A of the Permit.

3.1 Minimize Exposure

The City implements structural and operational source control measures to minimize the exposure of potential pollutants to stormwater runoff.

- All process areas are serviced by a process sewer system, which discharges to the wastewater treatment system.
- The stormwater system is protected on all sides from process runoff by a berms and grading.
- To the extent practicable, industrial activities (including any associated materials) that have the potential to contaminate stormwater are conducted indoors or under cover.
- Uncovered activities (such as liquid fueling, manufacturing, treatment, and disposal) are located in the area draining to the process sewer system.
- Manufacturing activities are performed indoors.
- To the extent practicable, materials and products that are stored outside the buildings are stored under cover (e.g., lean-to roofs, shipping containers, covered with tarps).
- Equipment maintenance is conducted in designated indoor areas, to the extent practicable.

- Leaking or leak-prone equipment is stored indoors, to the extent practicable, or equipped with absorbent materials or drip pans.
- Drums stored outdoors are securely closed to minimize exposure of residual petroleum products with stormwater runoff.
- Leaks and spills are cleaned promptly to minimize potential exposure in stormwater.

3.2 Oil and Grease

Oil absorbing booms are deployed in areas where oil sheen is observed to capture oil and greases from stormwater.

3.3 Chemicals and Waste Materials Storage and Disposal

Chemicals are stored in a contained area that does not drain to the stormwater system. Waste material is stored in areas that are serviced by the mill's effluent treatment system.

Waste paper material (produced material not meeting manufacturing specification) is wrapped in plastic and stored in the outdoor storage areas. The waste paper is recycled and reused in the manufacturing process. Other paper waste and packaging is disposed an offsite recycling facility.

Chemical storage and handling is allowed only in those areas which drain to a mill process sewer, with the exception for one 300-gallon portable container of sodium hypochlorite that is used for treating the mill's sanitary wastewater, which is stored within secondary containment. No waste sodium hypochlorite is generated.

Used oil and air compressor condensate are stored and picked up by an outside service and transported to an off-site recycling facility.

Waste bins or dumpsters are equipped with lids and closed when not in use or stored indoors/tarped. Recycle compactors are equipped with lids and closed when not in use. Municipal and non-hazardous wastes are picked up by a municipal waste management provider and disposed of at a Subtitle D landfill.

Waste solids from the clarifier (process sewer system), are stored in a concrete basin that drains to the process sewer. Solids are dried then disposed at a Subtitle D Landfill.

3.4 Erosion and Sediment Control

Most of the site is pervious and vegetated. Areas subject to vehicle traffic are paved, to the extent practicable, to minimize erosion. Paved surfaces are swept to remove sediment. Stormwater from Quadrant 2 filters through vegetation that filters out sediment before discharging to the creek.

3.5 Debris Control

The City implements an ongoing inspection program to monitor for discharges of debris and litter into the stormwater system. Debris and litter are picked up upon discovery and placed in an appropriate disposal container. Catch basin drains are equipped with screens on inlet pipes, slotted drain covers that block debris. In some instances, filter fabric inserts are used to keep debris out of the stormwater system. A pavement sweeper is used as needed to remove accumulated debris from paved surfaces.

3.6 Dust Generation and Vehicle Tracking of Industrial Materials

Vehicle and equipment traffic areas are paved to minimize generation and tracking of dust. The pavement is swept to minimize the potential for vehicle tracking of materials off site.

3.7 Housekeeping

The City implements a rigorous housekeeping program, including pavement sweeping to remove solids, fluids and debris from paved surfaces, promptly clean up leaks or spills, and ensure regular maintenance of facility vehicles and equipment. The housekeeping program ensures that particulate matter, dust and debris (from industrial sources) are promptly cleaned up, especially from areas where materials are loaded and unloaded, stored or otherwise handled. Materials and products are stored in designated areas. Petroleum products and wastes are stored in a designated area and in appropriately labeled containers.

3.8 Spill Prevention and Response Measures

The City is committed to the prevention of leaks and spills and mill personnel are trained to respond to spills and leaks safely and promptly. Spill kits are maintained on site to allow for prompt and safe spill response.

3.8.1 Spill Prevention

Facility equipment is routinely inspected and maintained. Equipment maintenance activities are conducted in an indoor designated maintenance area, away from the stormwater system and adjacent to a spill kit.

Fuel, used oil and antifreeze are stored in tanks and within secondary containment. The following measures are implemented to prevent spills at the site:

- The portable container is located on a spill pallet that provides secondary treatment.
- Mill employees adhere to the following procedure for draining the spill containment pallet
 - The spill pallet will be inspected after each rainfall event
 - If the visual inspection indicates that no release of hypochlorite has occurred, the drain valve on the spill pallet will be opened to allow the water to drain to the stormwater system

- The valve will be closed and locked after the water has drained completely from the spill containment pallet
 - If sodium hypochlorite is discovered in the spill containment pallet, the Environmental Department is contacted for assistance in removing and disposing of the pallet contents
- Container lids are securely fastened.
 - Containers are labeled to facilitate proper response in the event of a spill.
 - Fueling or transfer activities are continuously attended.
 - Pads, drip pans and appropriate transfer equipment are used when transferring used oil or antifreeze.

3.8.2 Spill-Response Procedures

Spill kits containing oil absorbent booms, pads, and granular clay absorbent are located onsite. The mill keeps absorbent material including booms and mats onsite at all times. In the event of a spill, immediate response is required to prevent the spill from entering the stormwater system:

- Immediately assess the situation, including, to the extent possible, the source of the spill, the spilled material nature and hazards, and proximity to the stormwater system or pervious areas of the site.
- If the spill is minor (i.e., can be contained and cleaned up safely and with spill-response materials available on site), proceed with the spill response procedures listed in the following section, and report to the Environmental Manager when cleanup is complete.
- If the spill is major (i.e., cannot be contained and cleaned up safely and with spill-response materials available on site), contact the Environmental Manager immediately. The Environmental Manager will contact a qualified spill-response contractor as soon as possible and notify the appropriate agencies.

3.8.2.1 Minor Spill Response

A spill is considered minor if:

- The spilled material is localized and easily controlled at the time of the spill.
- The spilled material is not likely to reach storm drains, surface water, or groundwater.
- There is little danger of fire, explosion, or risk to human health.

To respond to a minor spill, immediately locate a spill kit and implement measures to contain the spill and divert it from the stormwater system or pervious areas. Notify the Environmental Manager as soon as possible. Spill-response actions may include:

- Use of absorbent material to contain the spill, including:
 - Surrounding the perimeter of the spill with oil-absorbent booms or berms of loose absorbent material

- Placing absorbent pads or loose absorbent material to absorb spills
- Isolate nearby drainage structures to reduce the potential for the spill to reach the stormwater system using oil-absorbent booms or berms of loose absorbent material.
- Clean up all spill-response materials and store them in a designated, labeled and covered container (e.g., drum with lid) prior to disposal at a permitted facility.

3.8.2.2 Major Spill Response

A spill is major if:

- The spilled material enters storm drains, surface water, or groundwater (regardless of spill size).
- The spill cannot be contained and cleaned up safely and with spill-response materials available on site.
- The spill requires special training and equipment to clean up, as determined by the Environmental Manager.
- The spilled material is dangerous to human health or there is a danger of fire or explosion.

To respond to a major spill, immediately notify the Environmental Manager, who will coordinate cleanup and seek assistance from an outside contractor, if necessary.

3.8.2.3 Notifications

All spills must be reported to the Environmental Manager, who will determine if additional notifications are necessary.

Jeff South, Environmental Manager..... 503-397-2900

Emergency Response Notification

National Response Center..... 800-424-8802

Oregon Emergency Response System (OERS)..... 800-452-0311

Emergency Response Contractor

NRC Environmental Services..... 800-33-SPILL

3.8.2.4 Reporting

All pertinent information related to a spill must be recorded on a Spill Record form (see Appendix A), including but not limited to a description of the event, the equipment or procedural failures that led to the spill, cleanup measures conducted, available analytical data, and future physical and/or procedural changes that will be implemented to mitigate the potential for future releases. The Environmental Manager is responsible for reporting any spill that exceeds a reportable quantity, consistent with the following guidelines:

- Petroleum product spills of any amount that are likely to contact waters of the state (Multnomah Channel, Milton Creek, groundwater, and stormwater system) must be reported within one hour to the National Response Center and OERS.
- Petroleum product spills greater than 42 gallons to land (including soil, gravel, or asphalt, but not indoor areas that do not have the potential to reach waters of the state) that are not likely to contact waters of the state must be reported within one hour to OERS.
- Release of hazardous materials equal to or greater than the quantity listed in [40 CFR Part 302 \(Table 302.4—List of Hazardous Substances and Reportable Quantities\)](#) requires immediate notification of the National Response Center and OERS.

3.9 Preventative Maintenance

The City implements a preventative maintenance program that regularly evaluates the condition of drainage areas and source controls to minimize the potential for discharging pollutants with stormwater. At minimum the preventative maintenance program includes the following:

- Monthly visual inspections of the stormwater management system, including the pollution-control measures.
- Catch basins cleaning as needed.
- Pavement sweeping to maintain sediment- and debris-free surfaces. Pavement is swept as needed. This activity is carried out by the mill's yard crew or contractor. A sweeper log is maintained to document each use of the vacuum sweeper truck.
- Regular pickup of waste materials and disposal at permitted disposal facilities.
- Preventative maintenance is routinely done on mill vehicles and machinery.

3.9.1 Monthly Stormwater Inspections

Monthly inspections of the facility stormwater system and drainage areas are conducted to evaluate the condition of site control measures. Inspections focus on:

- Visual inspection of the site and identification of sources of pollutants (i.e., industrial materials, residue or waste) to which stormwater is exposed. New sources of pollutants must be added to the SWPCP.
- Leaks or spills from equipment, trucks, vehicles, drums, tanks and other containers.
- Off-site tracking of waste materials or sediment where vehicles enter or exit the site and/or internal tracking.
- Tracking or blowing of raw, final or waste materials that results in exposure of these materials to stormwater.
- Evidence of, or the potential for, pollutants entering the drainage system or receiving waters.
- Evaluation of the condition of source control measures and the need for maintenance and/or repairs, including the spill kits and containment berms.
- Visual inspection of stormwater at the stormwater monitoring location (see Figure 6), when discharge is occurring during regular business hours, for the presence of floating, suspended

or settleable solids, foam, visible oil sheen, odor, color, or other obvious indicators of stormwater pollution.

Monthly inspections and maintenance activities are recorded on the Monthly Stormwater Inspection and Maintenance Record (Appendix B).

3.10 Employee Education

A continuing program of employee orientation and education is implemented to raise awareness about site-specific control measures and prompt and safe response to a spill or accident. City personnel are informed of the goals of the SWPCP and control measures such as:

- Good housekeeping and debris/litter control
- Measures to minimize exposure of stormwater runoff to potential pollutants
- Erosion and sediment control measures
- Waste storage and disposal
- Oil and grease control measures and used oil management
- Spill prevention and response
- Preventive maintenance of equipment and stormwater control measures
- Unauthorized discharges to the stormwater system

This training is included with new-employee orientation (within 30 days of the start of employment) and is repeated annually as part of the facility safety training program. A sample employee education documentation form is included in Appendix C.

3.11 Non-stormwater Discharges

There are no known unauthorized non-stormwater discharges at the site. The following non-stormwater discharges are authorized under the Permit:

- Landscape watering providing pesticides and fertilizers has been applied in accordance with manufacturers' instructions
- Potable water, including water line flushing
- Pavement wash waters where no detergents or hot water are used, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept prior to washing
- Routine external building wash-down that does not use detergents or hot water
- Fire hydrant flushing
- Discharges from firefighting activities
- Uncontaminated air conditioning condensate
- Uncontaminated groundwater or spring water

4 REPORTING AND RECORDKEEPING

4.1 Discharge Monitoring Report

Stormwater monitoring results (analytical sampling data and field pH measurements) are reported using a DEQ-approved Discharge Monitoring Report (DMR) form. The data must be entered into the DMR form and submitted no later than July 31 of each year, along with laboratory reports and records of pH meter calibration and field measurements (see Appendix D).

4.2 Tier I Corrective Action

A Tier I Report must be prepared in response to any exceedance of a Permit benchmark or impairment pollutant reference concentration. Each Tier I Report should include:

- A summary of an investigation of the cause of the elevated pollutant levels, including a previous and/or planned source control measures to minimize exposure of the pollutant source to stormwater.
- A statement confirming the SWPCP was reviewed following the receipt of the monitoring data showing a benchmark exceedance to determine whether the SWPCP controls were properly installed, maintained and selected.
- Corrective action (additional control measures or modifications/improvements to existing controls) implemented in response to the benchmark exceedance and the implementation schedule. Corrective actions must be implemented before the next storm event, if possible, or no later than 30 days after receipt of the monitoring results. Justification for extending the implementation beyond 30 days must be included in the report and the corrective action must be implemented as soon as practicable.

Tier I Reports must be filed on site and submitted to the DEQ upon request. If a Tier II corrective action is triggered, sampling results collected during the third and fourth year of the Permit, prior to the Tier II implementation deadline are exempt from Tier I Report requirements.

4.3 Tier II Corrective Action

If the geometric mean of the qualifying sampling results collected during the second year of the Permit (July 2018 through June 2019) exceed any Permit statewide benchmark, or if 50 percent or more of the pH measurements collected during the first two years of the Permit (July 2017 through June 2019) are outside of the permitted range for pH, a Tier II Report, Tier II Mass Reduction Waiver Request or Tier II Natural Background Waiver Request must be submitted to the DEQ no later than December 31, 2019.

4.3.1 Tier II Report

The Tier II Report must summarize proposed stormwater treatment measures or a combination of stormwater treatment and source control designed by a professional engineer licensed in Oregon with the goal of achieving the applicable Permit benchmark. The Tier II Report should include a rationale for the selection of the treatment measures, the projected reduction of pollutant concentration(s) and the implementation schedule. Tier II treatment measures must be implemented no later than June 30, 2020, unless a later date is approved by the DEQ in writing.

4.3.2 Tier II Mass Reduction Waiver Request

A Tier II Mass Reduction Waiver Request may be submitted if volume-reduction measures (e.g., infiltration, reuse) have or will result in a reduction of the mass load of pollutant(s) in the discharge to below the mass-equivalent of the applicable statewide benchmark. The request must include data and analysis to support the rationale, including a description of the measure(s), a mass load analysis, and expected implementation date(s). The request must be stamped by a professional engineer licensed in Oregon or a certified engineering geologist.

4.3.3 Tier II Natural Background Waiver Request

A Tier II Natural Background Waiver Request may be submitted if an exceedance of a statewide benchmark is attributed solely to the presence of the pollutant(s) in natural background and not associated with industrial activities at the site. The request must include the results of investigations and data collected on or around the site and/or published peer-reviewed studies.

4.4 Recordkeeping

Records of the following documents are maintained on site for at least three years and make them available to the DEQ upon request:

- A copy of this SWPCP and revisions
- A copy of the Permit
- Permit assignment letter and Permit coverage documents
- DMRs
- Inspection reports
- Employee education records
- Maintenance and repair of stormwater source control and treatment measures
- Spill records, if applicable
- Tier I Reports and corrective action implementation records
- Tier II Report, if applicable

LIMITATIONS

The services undertaken in completing this plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This plan is solely for the use and information of our client unless otherwise noted. Any reliance on this plan by a third party is at such party's sole risk.


Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this plan.

FIGURES





Legend

 Location Boundary (approximate)

**Figure 1
General Location**

City of St. Helens
St. Helens, OR

Source: Aerial photograph obtained from Mapbox




Quadrant 1

Quadrant 4

Quadrant 3

Quadrant 2

Legend

 Quadrant Boundaries (approximate)

**Figure 2
General Site Quadrant Map**

City of St. Helens
St. Helens, OR

Source: Aerial photograph obtained from Mapbox

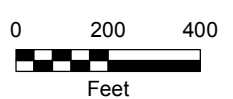








Figure 3 Mill Quadrant 1

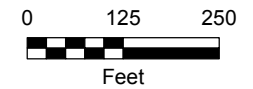
City of St. Helens
St. Helens, OR

Legend

-  Stormwater Collection Drain
-  Stormwater Surface Flow Path
-  Stormwater Underground Pipe
-  Drainage Ditch
-  Paved Area
-  Quadrant 1 Boundary (approximate)

- 1 = Recycle compactors
- 2 = Empty trailer storage
- 3 = Parking lots
- 4 = Lap storage
- 5 = Noodle pulp warehouse
- 6 = Chip truck unloading
- 7 = ASB
- 8 = Gravel contractor parking

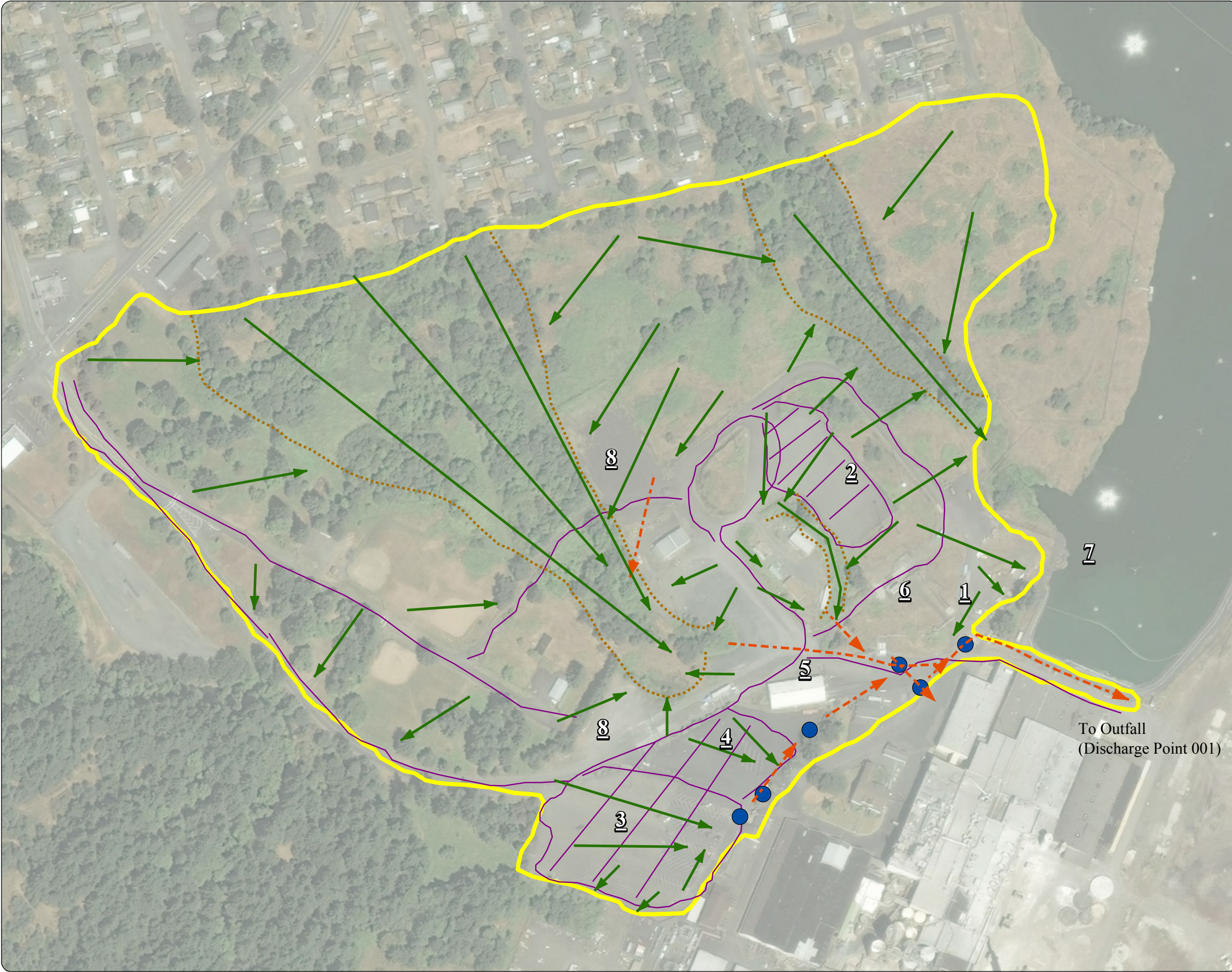
To Outfall
(Discharge Point 001)

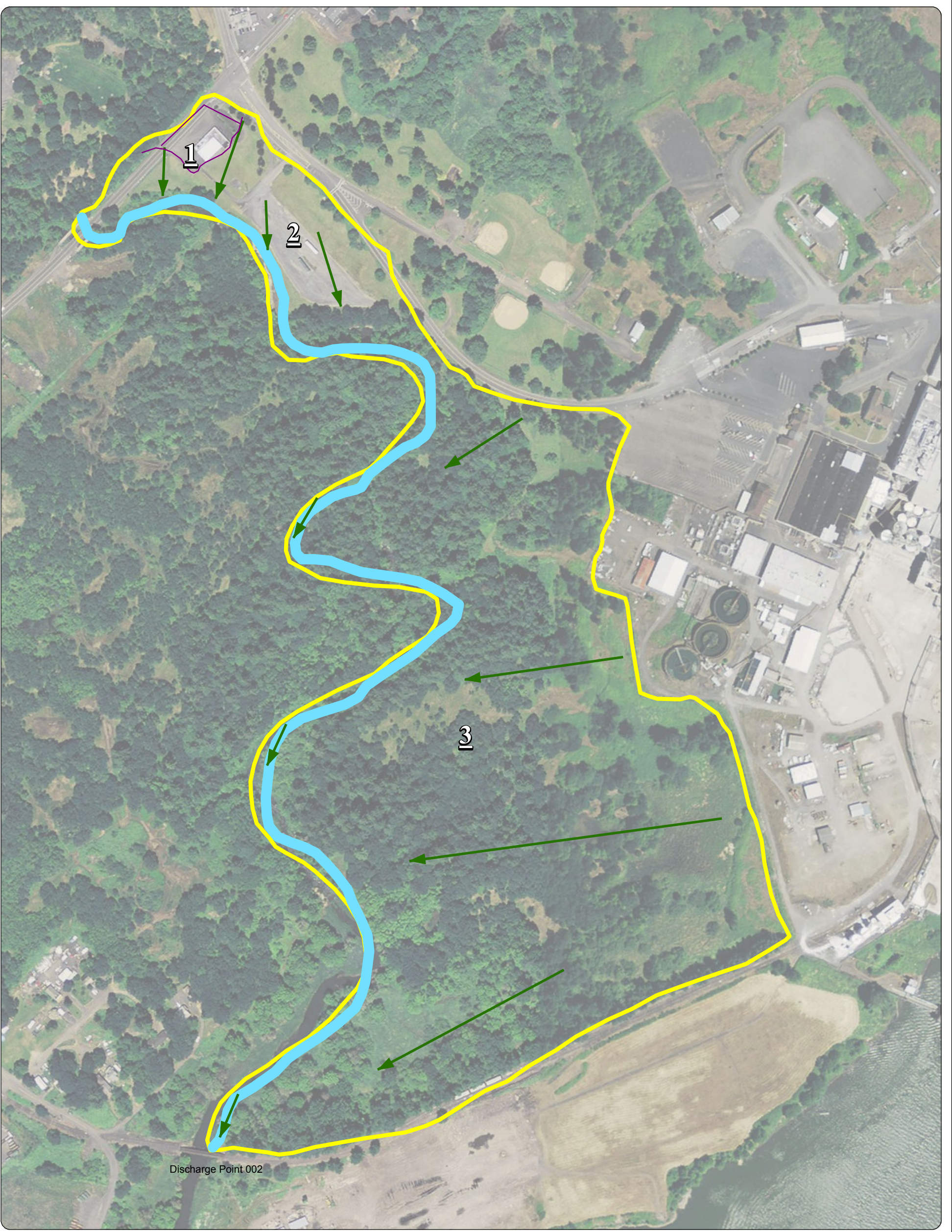


Source: Aerial photograph obtained from Mapbox



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Source: Aerial photograph obtained from Mapbox

Legend





-  Stormwater Surface Flow Path
-  Paved Area
-  Milton Creek
-  Quadrant 2 Boundary (approximate)
- 1 = FARA
- 2 = Contractor gravel parking lot
- 3 = Wooded area

Figure 4
Mill Quadrant 2
 City of St. Helens
 St. Helens, OR









Figure 5
Mill Quadrant 3

City of St. Helens
St. Helens, OR

Legend

-  Process Sewer Drain
-  Surface Flow Path
-  Paved Area
-  Quadrant 3 Boundary (approximate)

- 1 = Hazardous waste storage
- 2 = PCC plant
- 3 = Primary clarifier
- 4 = Power and recovery
- 5 = Contractor staging area
- 6 = Lime pit
- 7 = Used oil storage
- 8 = Clarifier solids storage and loading area
- 9 = Maintenance shops
- 10 = Methanol storage tank



Source: Aerial photograph obtained from Mapbox



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



Figure 6
Mill Quadrant 4

City of St. Helens
St. Helens, OR

Legend

- Process Sewer Drain
- Stormwater Collection Drain
- Stormwater Discharge Outfall
- Stormwater Surface Flow Path
- - - Stormwater Underground Pipe
- Paved Area
- Quadrant Boundary (approximate)

- 1 = Paper machines
- 2 = Shipping
- 3 = Woodyard
- 4 = Paper warehouse
- 5 = Storeroom
- 6 = Main office



Source: Aerial photograph obtained from Mapbox



This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

APPENDIX A

SPILL REPORT FORM



SPILL/RELEASE REPORT

1 - GENERAL INFORMATION

- a. Company Name: _____
- b. Address: _____

- c. Company Contact Person: _____
- d. Phone Number(s): _____
- e. Specific on-site location of the release (and address if different from above):

Please provide a map of the site showing area(s) where the release occurred, any sample collection locations, location of roads/ditches/surface water bodies, etc.

2 - RELEASE INFORMATION

- a. Date/Time Release started: _____ Date/Time stopped: _____
- b. Release was reported to (specify Date/Time/Name of Person contacted where applicable):
- ODEQ _____
- OERS _____
- NRC _____
- Other (describe): _____
- c. Person(s) reporting release: _____
- d. Name, quantity and physical state (gas, liquid, solid or semi-solid) of material(s) released:

Please attach copies of material safety data sheets (MSDS) for released material(s).

- e. The release affected: ___Air ___Groundwater ___Surface Water ___Soil ___Sediment
- f. Name and distance to nearest surface water body(s), even if unaffected (include locations of creeks, streams, rivers and ditches that discharge to surface water on maps):

Has the release reached the surface water identified above?: ___Yes ___No

Could the release potentially reach the surface water identified above? Yes No

Explain: _____

g. Depth to nearest aquifer/groundwater: _____

Is nearest aquifer/groundwater potable (drinkable)? Yes No

Has the release reached the nearest aquifer/groundwater? Yes No

Explain: _____

h. Release or potential release to the air occurred? Yes No

Explain: _____

i. Was there a threat to public safety? Yes No

j. Is there potential for future releases? Yes No

Explain: _____

k. Describe other effects/impacts from release (emergency evacuation, fish kills, etc.):

l. Describe how the release occurred. Include details such as the release source, cause, contributing weather factors, activities occurring prior to or during the release, dates and times of various activities, first responders involved in containment activities, etc.:

3 - SITE INFORMATION

- a. Adjacent land uses include (check all that apply and depict on site maps):
 Residential Commercial Light Industrial Heavy Industrial
 Agricultural Other (describe): _____
- b. What is the population density surrounding the site: _____
- c. Is the site and/or release area secured by fencing or other means? Yes No
- d. Soil types (check all that apply): alluvial bedrock clay sandy
 silt silty loam artificial surface (cement/asphalt/etc.)
- e. Describe site topography: _____

4 - CLEANUP INFORMATION

- a. Was site cleanup performed? Yes No
If No, explain: _____

- b. Who performed the site cleanup?
Company Name: _____
Address: _____

Cleanup Supervisor: _____
Phone Number(s): _____
- c. Has all contamination been removed from the site? Yes No
If No, explain: _____

- d. Estimated volume of contaminated soil removed: _____
- e. Estimated volume of contaminated soil left in place: _____
- f. Was a hazardous waste determination made for cleanup materials? Yes No
- g. Based on the determination, are the cleanup materials hazardous wastes?
 Yes No If Yes, list all waste codes: _____
- h. Was contaminated soil or water disposed of at an off-site location? Yes No

If yes, attach copies of receipts/manifests/etc., and provide the following information:

Facility Name: _____

Address: _____

Facility Contact: _____

Phone Number(s): _____

- i. Is contaminated soil or water being stored and/or treated on-site? ___Yes ___No

If yes, please describe the material(s), storage and/or treatment area, and methods utilized (attach additional sheets if necessary):

- j. Describe cleanup activities including what actions were taken, dates and times actions were initiated and completed, volumes of contaminated materials that were removed, etc. (attach additional sheets or contractor reports if necessary or more convenient):

5 - SAMPLING INFORMATION

Attach copies of all sample data and indicate locations of sample collection on maps.

- a. Were samples of contaminated soil collected? ___Yes ___No ___N/A
- b. Were samples of contaminated water collected? ___Yes ___No ___N/A
- c. Were samples collected to show that all contamination had been removed?
___Yes ___No ___N/A
- d. Describe sampling activities, results and discuss rationale for sampling methods:

6 - SPILL REPORT CHECKLIST

To ensure that you have gathered all pertinent information, please complete the following checklist:

- _____ Map(s) of the site showing buildings, roads, surface water bodies, ditches, waterways, point of the release, extent of contamination, areas of excavation and sample collection locations attached.

- _____ Material Safety Data Sheet (MSDS) for released material(s) attached. **Note: an MSDS is not required for motor fuels.**

- _____ Sampling data/analytical results attached.

- _____ Receipts/manifests (if any) for disposal of cleanup materials attached.

- _____ Contractor reports (if any) attached.

If you would like to submit your report by e-mail it can be submitted electronically to:
DOSPILLS@deq.state.or.us

APPENDIX B

MONTHLY STORMWATER INSPECTION AND MAINTENANCE REPORT



MONTHLY STORMWATER INSPECTION AND MAINTENANCE REPORT

PERMITEE/FACILITY NAME

MONTHLY VISUAL OBSERVATIONS OF STORMWATER DISCHARGE DATE AND TIME: _____

Visual inspection of stormwater at the stormwater sampling locations (see Figure 6), when discharge is occurring during regular business hours, for the presence of floating solids (associated with industrial activity), foam, visible oil sheen, and discoloration.

Sampling Location	(Yes/No)	Additional Information (e.g., Detailed Description, Source, Corrective Action and Implementation Date)
Are there floating, suspended or settleable solids, foam, oil sheen, color or odor in <u>stormwater discharging from Monitoring Location 001.</u>		

MONTHLY SITE INSPECTION DATE AND TIME: _____

Monthly inspections of the drainage areas and stormwater system are conducted to evaluate the condition of source controls. Inspections focus on:

- *Visual inspection of the facility stormwater system and identification of sources of pollutants to which stormwater is exposed.*
- *Industrial materials, residue or waste that may have or could come into contact with stormwater.*
- *Leaks or spills from equipment and tanks/drums.*
- *Off-site and internal tracking of waste materials or sediment where vehicles enter or exit the site.*
- *Tracking or blowing of raw, final or waste materials that may have or could come into contact with stormwater.*
- *Evidence of, or the potential for, pollutants entering the drainage system or receiving waters.*
- *Evaluation of the condition of site control measures and the need for maintenance and/or repairs.*

Inspection Item	(Yes/No)	Additional Information (e.g., Detailed Description, Source, Corrective Action and Implementation Date)
Are paved surfaces free of solids/sediment accumulation?		
Are there visible discharges, leaks, or spills of petroleum products?		
Are the spill kits properly stocked and in their designated location?		
Is there evidence of non-stormwater discharges to storm drains?		
Is there visible tracking of materials or waste from indoor areas to the outside?		
Is there visible tracking of waste or sediment where vehicles enter or exit the site?		
Are process sewer collection points functioning and preventing comingling of stormwater?		
Do catch basins show excessive accumulation of sediment, debris, or oil sheen?		

STORMWATER SOURCE AND TREATMENT CONTROLS MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH

Inspected By:	Signature:
---------------	------------

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

APPENDIX C

EMPLOYEE TRAINING DOCUMENTATION FORM



APPENDIX D

PH RECORDS



PH METER CALIBRATION AND PH MEASUREMENT RECORDS
PERMITEE/FACILITY NAME

PH METER CALIBRATION RECORD			
<i>The pH meter must be calibrated prior to the collection of pH measurements in the field.</i>			
Calibration Date and Time: _____			
Calibration Solution 4.01 S.U. _____			
Calibration Solution 7.00 S.U. _____			
Calibration Solution 10.01 S.U. _____			
Calibration Notes:			
PH MEASUREMENT RECORD			
<i>pH must be measured within 15 minutes of sample collection.</i>			
Monitoring Location	pH (s.u.)	Sample Collection Date and Time	pH Measurement Date and Time
Monitoring Location 001			
Calibrated and Measured By:		Signature:	

St. Helens Industrial Business Park Funding Plan

December 2020

Prepared for: City of St. Helens

Final Report

ECONorthwest

ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503-222-6060

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1. Introduction

Purpose and Context

The purpose of this Funding Plan is to communicate *how* and *when the City could fund* infrastructure in the St. Helens' Industrial Business Park (SHIBP). The SHIBP is a 205-acre area, zoned for industrial uses, and situated along the banks of the Multnomah Channel of the Willamette River (see Exhibit 1). The area is located at the former Boise White Paper Mill Site and is identified as a brownfield.

In 2015, the City of St. Helens purchased the former Boise White Paper Mill Site. As it stands today, the SHIBP offers considerable economic development upside. It sits within the City's Urban Renewal District, a federally designated Opportunity Zone, and the South Columbia County Enterprise Zone. The area's proximity to the waterfront, Highway 30, Interstate 5, and other quality of life amenities makes it a choice location for businesses looking to locate or expand operations within the regional economy.

The City is now working on a Master Plan for the SHIBP to facilitate redevelopment and market the area to potential employers. To develop the Master Plan, the City received a technical assistance grant from the Oregon Department of Land Conservation and Development (DLCD) in 2019. The SHIBP Master Plan assesses existing physical conditions and development barriers, summarizes pertinent information from previous plan documents and decisions, defines targeted industrial user types, and provides a framework for parcelization. Importantly, the City also scoped this Master Plan to include a phased infrastructure funding plan (this document).

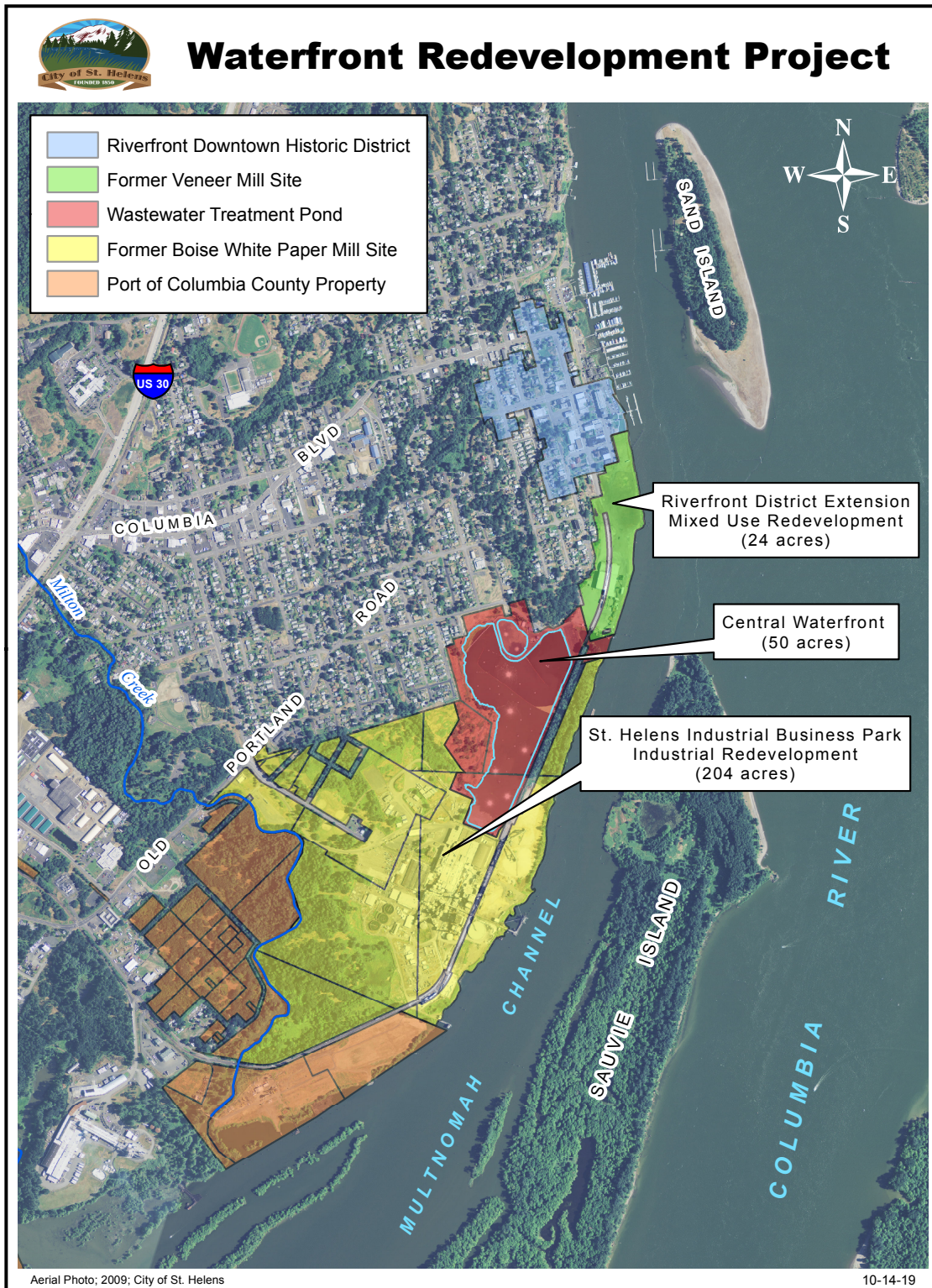
To date, we understand that the key development barriers in the SHIBP are its environmental, regulatory, and infrastructure conditions. The intent of this Plan is to coordinate solutions to address *infrastructure barriers* by:

- Clarifying how infrastructure will be delivered and funded.
- Coordinating investment responsibilities across a range of public and private partners (i.e., those who will be involved in funding the capital projects needed to allow development of the SHIBP).
- Identifying actions and funding resources to address the infrastructure needs in the SHIBP.

Because this Funding Plan is a long-range strategy. The City of St. Helens should maintain flexibility to accommodate shifting economic and fiscal conditions over time. To provide a snapshot of the existing conditions at the time of this writing (Fall 2020), this chapter presents important contextual information, including methods used in the analysis.

Exhibit 1. St Helens' Industrial Business Park and Surrounding Area

Source: City of St. Helens.



Findings of the Parcelization Framework

The SHIBP Master Plan’s parcelization framework¹ outlines the intended division of SHIBP land into smaller pieces (parcels) based on the five factors described in the sidebar to the right. To develop the Funding Plan, ECONorthwest used this parcelization scenario to better understand how needed infrastructure for development might be delivered and phased to guide funding strategy decisions and revenue projection assumptions for the entire SHIBP and its sub-areas.

The parcelization framework defined 37 parcels (see Exhibit 2) which comprise open spaces, paved areas, outdoor storage areas, loading areas, ditches, and pipes. There are approximately 20 structures on the site, and several uses currently operate in the area. In addition, 3J Consulting described infrastructure issues, access constraints, and environmental limitations by parcel, which then informed their determination of needed infrastructure and project cost estimates—a key component for this funding plan.

Findings of the Market Analysis

In 2016, ECONorthwest prepared an economic analysis² for the City of St. Helens to assess the potential economic benefits of a new transportation connection from Highway 30 to the City’s waterfront and industrial property.

An updated analysis (2020) was incorporated into the *Parcelization Framework Report* to define the industrial landscape of the area and identify potential users of the SHIBP, including potential users that may locate on the waterfront. The analysis found that the users mostly likely to locate in the SHIBP are those with a small footprint (i.e., in the three- to five-acre range) and those in the light manufacturing sector. The analysis also determined that the users most likely to locate along the SHIBP waterfront are those who can locate in a shallow water area (e.g., maritime, drydock repair, shoreside heavy lift crane, small intermodal facilities, and drilling/dredging support users).

A key conclusion of the market analysis, for purposes of this funding plan, is to:

“Prioritize infrastructure to key opportunity sites. Multiple interviewees characterized the lack of access and transportation infrastructure as the primary development challenge for matching potential users with sites in Columbia County. Users would prefer to have city water, sewer, and electrical service ready to go at the property line, along with a public access road. Given the range of potential user needs described above, it is not necessary at

Five Factors Guiding the Parcelization Framework:

1. Access: ability to provide vehicular access and circulation to the parcels, including semi-trucks with trailers.
 2. In-water uses: primarily operate in-water and require small footprint.
 3. Utilities: access and capacity to provide utility services to the site.
 4. Environmental constraints: sufficient development area on each parcel free of Goal 5 habitat areas.
 5. Market factors: a parcel size between two and five acres for small industrial users that can be consolidated for larger uses.
-

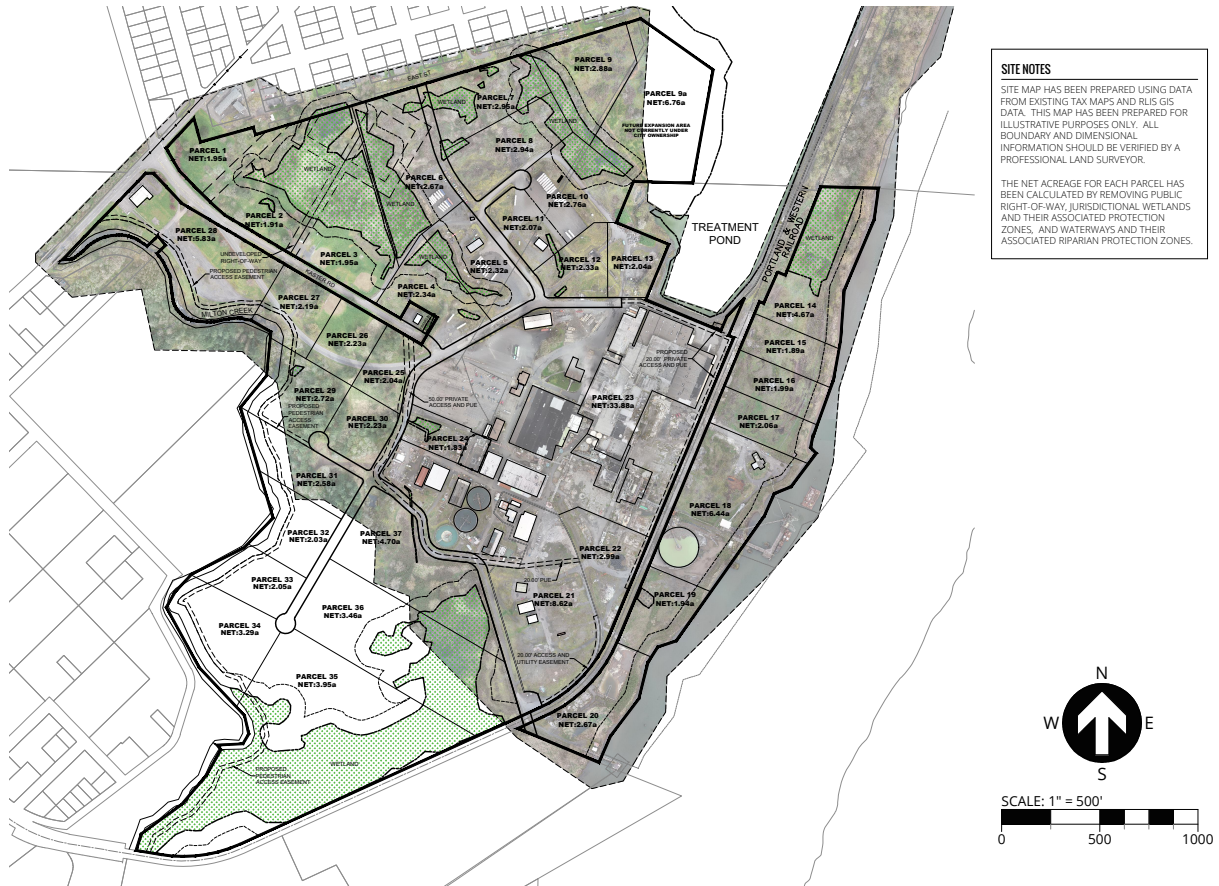
¹ 3J Consulting. (July 22, 2020). *Parcelization Framework Report*, St. Helens Industrial Business Park.

² ECONorthwest. (January 25, 2016). *Economic Analysis, St. Helens Transportation Connection*.

this point to fully flesh out exact lot sizes. Instead, the City can focus on providing the main access road to the site and provide stubbed utilities to serve collections of parcels."

Exhibit 2. Parcelization Framework for the St. Helens Industrial Business Park

Source: 3J Consulting. (July 22, 2020). *Parcelization Framework Report*, St. Helens Industrial Business Park, Figure 1. Proposed Parcelization Framework.



Methods

The steps taken to conduct this analysis were:

- **Analyze the parcelization framework.** This analysis relied on the parcelization framework developed by 3J as part of the Master Plan process. The determination of parcel sizes and potential issues helped to inform funding strategies that were responsive to subarea-specific challenges and land use scenarios in the SHIBP.
- **Assess infrastructure needs and develop a list of projects.** This analysis relied on an infrastructure needs assessment provided by 3J as part of the Master Plan process. This work resulted in a list of specific infrastructure projects with cost estimates by project.
- **Estimate basic revenues.** This analysis estimated the revenue capacity for various funding tools. ECONorthwest worked with City staff to forecast revenue of existing, City sources and relied on the best available data to forecast revenue for potential, new sources.
- **Analyze funding alternatives.** The result of this process is a funding plan that shows how projected revenues can be allocated to projects to cover total costs.

2. Infrastructure Funding Options

This chapter identifies and describes various funding mechanisms (tools) and programs that the City may use to fund infrastructure in the SHIBP. The list of potential funding mechanisms accounts for several existing funding tools that the City could use to pay for needed infrastructure. It also identifies potential new tools that could be implemented to address infrastructure costs, in the event that existing sources of revenue are insufficient.

Funding Options

Infrastructure funding tools and programs documented in this section are organized into three categories. They are: (1) the City's existing sources of revenue; (2) potential revenue sources that the City could access by implementing new, local tools; and (3) potential revenue from external sources that the City could access through a competitive process.

Existing Local Funding Sources

The City of St. Helens currently has five existing funding tools that it might use in the SHIBP, described generally below. Exhibit 3 presents important funding and usage implications for each tool.

- **Tax increment financing (TIF).** TIF revenues are generated by the increase in total assessed value in an urban renewal district, from the time the district is first established. When investments in the district are made, property values increase in the district, and the increase in total property taxes is used to pay off bonds (taken out to pay for specific projects/investments in the area). The City's existing urban renewal area overlaps with the majority of the SHIBP. Therefore, the City may use the District's TIF revenues to fund key infrastructure projects in the SHIBP, if they are identified in the urban renewal plan.
- **Timber revenues.** The City owns approximately 2,500 acres of forest land and receives revenue from timber sales. Approximately 40 to 60 acres of timber are cut every one to two years, resulting in some annual fluctuations in revenues received.
- **Site Prep and Grading Revenues.** The City plans to receive limited duration revenues for surplus rock extracted during site preparation and grading of new development in the SHIBP.
- **Ground Leases.** A ground lease is an agreement between a property owner and a tenant that allows a tenant to develop and/or use a piece of property owned by another party. Contingent on lease terms, the tenant is able to operate on the property and/or retain

Per analysis from Tiberius Solutions: Cascade Tissue, a company in the SHIBP which leases land from the City, has an expiring Enterprise Zone tax exemption, which will provide immediate financial capacity via TIF upon expiration.

ownership of the improvements over the lease period (typically 50 to 99 years). The City currently has one ground lease with Cascade Tissue. A portion of this lease payment goes towards the original SHIBP property transaction. The net lease revenue from Cascade Tissue is \$150,000 per year.

- **Property Sales.** The City receives monthly contract payments from the sale of the ACSP parcel (Parcel 21). Fifty percent of the payment is used to pay off the original SHIBP property transaction, resulting in a net payment of \$82,800 per year.

Exhibit 3. Summary and Details of Existing Funding Sources, 2020 dollars

Source. ECONorthwest and City of St. Helens.

Mechanism / Revenue Source	Financial Capacity, 2020 dollars*	Revenue Assumptions	Notes
Tax Increment Financing (TIF)	\$27.8m to \$43.6m total in years 1 to 25. See Exhibit 4 for detailed breakdown.	Tiberius Solutions estimated financial capacity of the St. Helens Urban Renewal District.	No TIF revenues spent to date, and the City does not expect to spend TIF dollars until year 5 - 10 of the planning period. TIF may fund projects within the City's Urban Renewal District and listed in the Urban Renewal Plan.
Timber	Average of \$200,000 per year	This City assumes a modest, sustainable yield harvest every 1 to 2 years. The actual financial return is contingent on market demand, supply, and tree size (volume).	Timber revenues historically went toward the City's Water Fund, and now they go toward the Community Development Fund for economic development and planning activities. Timber revenues are earmarked to fund infrastructure project design and engineering costs.
Site Prep and Grading	\$700,000 in year 1 - 3. Capacity is anticipated to increase over time, a result of additional excavation sites.	A third-party company estimated financial capacity for this source, indicating that revenues may accrue as early as Summer 2021.	No limitations on use of funds. Likely appropriate for Phase 1 infrastructure projects.
Ground Lease	\$150,000 per year	Net lease revenue from Cascade Tissue.	N/A

Mechanism / Revenue Source	Financial Capacity, 2020 dollars*	Revenue Assumptions	Notes
Property Sales and Contract Payments	\$82,800 per year	Net payment from the sale of the ACSP parcel.	N/A

Exhibit 4. Estimated Financial Capacity, St. Helens Urban Renewal Area, 2020 dollars

Source: Tiberius Solutions. (July 17, 2020). *City of St. Helens Urban Renewal Financial Update – DRAFT*. Exhibit 17. Capacity Summary, Updated Forecasts, St. Helens URA.

Capacity	Low Estimate	Mid Estimate	High Estimate
Capacity	\$27,800,000	\$33,100,000	\$43,600,000
Years 1-5	\$8,200,000	\$8,200,000	\$8,200,000
Years 6-10	\$6,300,000	\$7,200,000	\$13,500,000
Years 11-15	\$6,600,000	\$8,100,000	\$11,600,000
Years 16-20	\$4,100,000	\$5,600,000	\$7,400,000
Years 21-25	\$2,600,000	\$3,900,000	\$2,900,000

New Local Funding Sources

The analysis identified several new local funding tools that could be implemented to pay for infrastructure costs. These tools are:

- **Local improvement district (LID).** An LID enables a group of property owners to share the cost of a capital project or infrastructure improvement. It is a type of special assessment district where property owners, within a specific area, are assessed a fee to pay investments that benefit them.³ An LID may be appropriate for the SHIBP to finance infrastructure that is needed to develop properties within the LID boundary. The LID boundary could be the entire area of the SHIBP or a smaller sub-area.
- **Advanced Finance District.** An Advanced Finance District is a cost sharing mechanism, typically initiated by a developer. It provides a reimbursement method to the developer of an infrastructure improvement, through fees paid by property owners at the time the property benefits from the improvement. A developer applies to create an Advanced Finance District by demonstrating benefit to properties beyond their own. In addition, the size of the improvement must be measurably greater than would ordinarily be required for the improvement.
- **Ground leases and property sale revenues.** A ground lease is an agreement between a property owner and a tenant, where the tenant is permitted to develop a piece of property and then retain ownership of the improvements over the lease period. Relatedly, the City could purchase and improve, and subsequently sell, their property to use the revenue for key projects. It is most likely that the City would sell their property below market-rate to developers of key projects to help achieve redevelopment objectives and catalyze TIF generation in the district. This option increases development feasibility by reducing development costs while giving the public sector leverage to achieve its goals via a development agreement with the developer.

External Sources

The City may apply for grants or low-interest loans to pay for infrastructure projects. Grants and loans are not included in any of the funding forecasts in this report because they are too project-specific and uncertain to predict. A list and description of grant and low-interest loan programs are documented in Appendix B. As a strategy, the use of external sources allows greater flexibility in using internal funding sources.

³ While it is possible for property owners to be subject to fees from an LID and an Advanced Finance District, administrative burden could be reduced and optics could be improved through a more coordinated effort.

Evaluation of Potential, New Funding Tools

This section presents a high-level evaluation of potential, new funding options (see Exhibit 5). This analysis allows the City to consider the tradeoffs of various tools to determine whether they should be considered for future implementation, should they be needed.

The evaluation used four criteria as benchmarks to compare how the tools fare against one another. The primary criteria are:

- **Legality.** Legality considers whether a new funding tool is currently legal, if it would be too hard to make legal in the time available, or if it would be too complicated to implement because of legal requirements.
- **Financial Capacity.** The amount of money that a funding tool can be expected to generate, based on various assumption about how it is implemented. The ability of a funding mechanism to generate the needed revenue is a key measure of its attractiveness. The amount any mechanism can raise is directly tied to the rate imposed, and the rate imposed is always, at least partially, determined by legality and political acceptability. One may also consider the following subcategories:
 - *Yield.* Different revenue mechanisms will produce different yields. Some mechanisms are unlikely to produce adequate funding to support large capital projects, although they may be sufficient to cover smaller funding needs.
 - *Growth Potential.* The value of a revenue stream's potential for growth over time.
- **Near-term Revenue Availability.** This criteria is associated with financial capacity in that it considers the financial yield a tool could generate early in the planning horizon. This criteria also considers implementation considerations. For example, if a tool takes years to implement, it would not be conducive to funding projects that must be constructed right away.
- **Political Acceptability.** One may think that if a tool is legal, efficient, and fair that it would be politically acceptable. While this is true in some situations, it is not always true. Many times, jurisdictions have pursued the adoption of a funding tool that seemingly scores well on those criteria, only to have their efforts fail because the tool was politically unpopular with elected officials or the public. Thus, this criterion is important to not only understand how each tool scores against technical criteria, but also whether the tool may be politically acceptable when the jurisdiction attempts to implement or use it.

The results of the evaluation are summarized in Exhibit 5. A description of each tool is provided in Chapter 2.

Exhibit 5. Funding Tool Evaluation

Source. ECONorthwest.

Tool	Local Improvement District (LID)	Advanced Finance District	Ground Lease and Property Sales
Legality	Local Improvement Districts are legally allowed in Oregon.	Chapter 12.28 of St. Helens' Code enables Advanced Finance Districts for public improvements. It provides a legal mechanism for developers to share project costs with those who benefit from the project.	The City of St. Helens can legally sell or lease properties which they own.
Financial Capacity	Revenue capacity is more of a political question than a technical question. If LIDs covered enough assessed value, and had high enough rates, then they could generate tremendous revenue. But, due to political acceptability, the amount of revenue generated through LIDs tends to be fairly humble.	Financial capacity is based on the project cost(s) in which the district applies. However, individual properties would only become subject to the Advanced Finance District assessments if they connect to the project. Because these districts have a limited duration period, if benefiting properties do not connect to the project within an established period of time (10 years), then the district expires. In these instances, the initial developer who paid the upfront costs loses out on the reimbursements.	<p>The financial capacity of a ground lease or property sale would correspond to the market value of the property. If the City seeks to incent new development, the lease rate or sale price could be reduced below market value to attract priority development.</p> <p>Based on Costar analysis of industrial developed properties in Columbia County between August 2017 and July 2020, the average sale price per square foot of developed property was \$112.86.</p> <p>Based on Costar analysis of current land lease listings and conversations with the Port of Columbia County (2020), an expected land lease transaction price per net acre is between \$17,000 and \$20,000.</p>
Timing of Revenue Availability	Local Improvement District (LID) assessments are due upon project completion. However, LIDs allow for the use of financing options, meaning they are typically established to repay a bond,	Revenues from an Advanced Finance District would accrue over time as development occurs. These districts are a financing mechanism (rather than a funding tool) and are established to pay	A ground lease could provide monthly revenues, while a property sale would provide one lump sum of revenue.

Tool	Local Improvement District (LID)	Advanced Finance District	Ground Lease and Property Sales
	<p>allowing projects to be developed up front and repaid over time.</p> <p>Further, despite the financing mechanism allowing the LID payments to be amortized over time, most property buyers will use bank loans to complete their purchase, and those banks are highly likely to insist on the LID payment being paid in full before entering into a new mortgage (this better protects the bank's investment in the event of a default).</p>	<p>back a land developer who fronts the funds to pay for specific projects up front.</p>	
Political Acceptability	<p>Revenue sources that are not already in use tend to be less politically acceptable than existing sources.</p> <p>The creation of LIDs usually requires extensive political outreach, to garner support from property owners who will be asked to pay for the capital improvement. If property owners believe they will receive tangible benefits from the capital improvement, then the political acceptability is relatively high.</p> <p>However, LIDs that are excessively high may also influence the location decisions of users and financial feasibility of development. Political acceptability of the LID could decline to the extent that LID rates limit business recruitment opportunities.</p>	<p>Individual properties would only become subject to the Advanced Finance District charges (which would be proportional to the benefits they received) if they connect to the project. Thus, political acceptability can be relatively high, if the payments are evaluated from a fairness perspective (i.e. those who benefit from the system, help pay for the system).</p>	<p>The political acceptability of a ground lease or the disposition of city-owned property through a property sale would vary depending on the location of the site, the monies received, and the intended use of the property.</p>

3. Funding Plan

This chapter discusses needed infrastructure projects and their costs, by infrastructure type. The purpose of this chapter is to document the intended funding strategies to pay for those project costs. To help inform those decisions, this chapter begins with a set of funding principles (i.e., objectives).

Funding Principles

Several funding principles helped to guide the selection of funding strategies and may continue to guide the implementation process. Those principles are:



Promote regional economic development by implementing a funding strategy that targets funds toward the implementation of specific projects that are most likely to spur industrial development in SHIBP.



To demonstrate that SHIBP is a priority to the City, the City will take the lead in catalyzing infrastructure development by contributing existing sources of revenue to key projects.



To the extent possible, the City will take advantage of grants and low-interest loans to offset the need to impose new fees and taxes or divert funds from existing sources.



Promote economic resiliency through economic growth and diversification.

Infrastructure Funding Needs

This section discusses infrastructure funding needs and costs in the SHIBP. Needs are discussed by infrastructure type, in the order outlined below.

- Transportation
- Water
- Sewer
- Stormwater
- Wetlands Mitigation

Transportation Infrastructure Needs

Transportation costs in the SHIBP primarily include costs related to collector and local street construction. Exhibit 6 presents transportation cost estimates, totaling \$10,875,680, and Exhibit 7 presents the proposed street layout overlaid on the parcelization plan. Development of transportation infrastructure occurs in three phases:

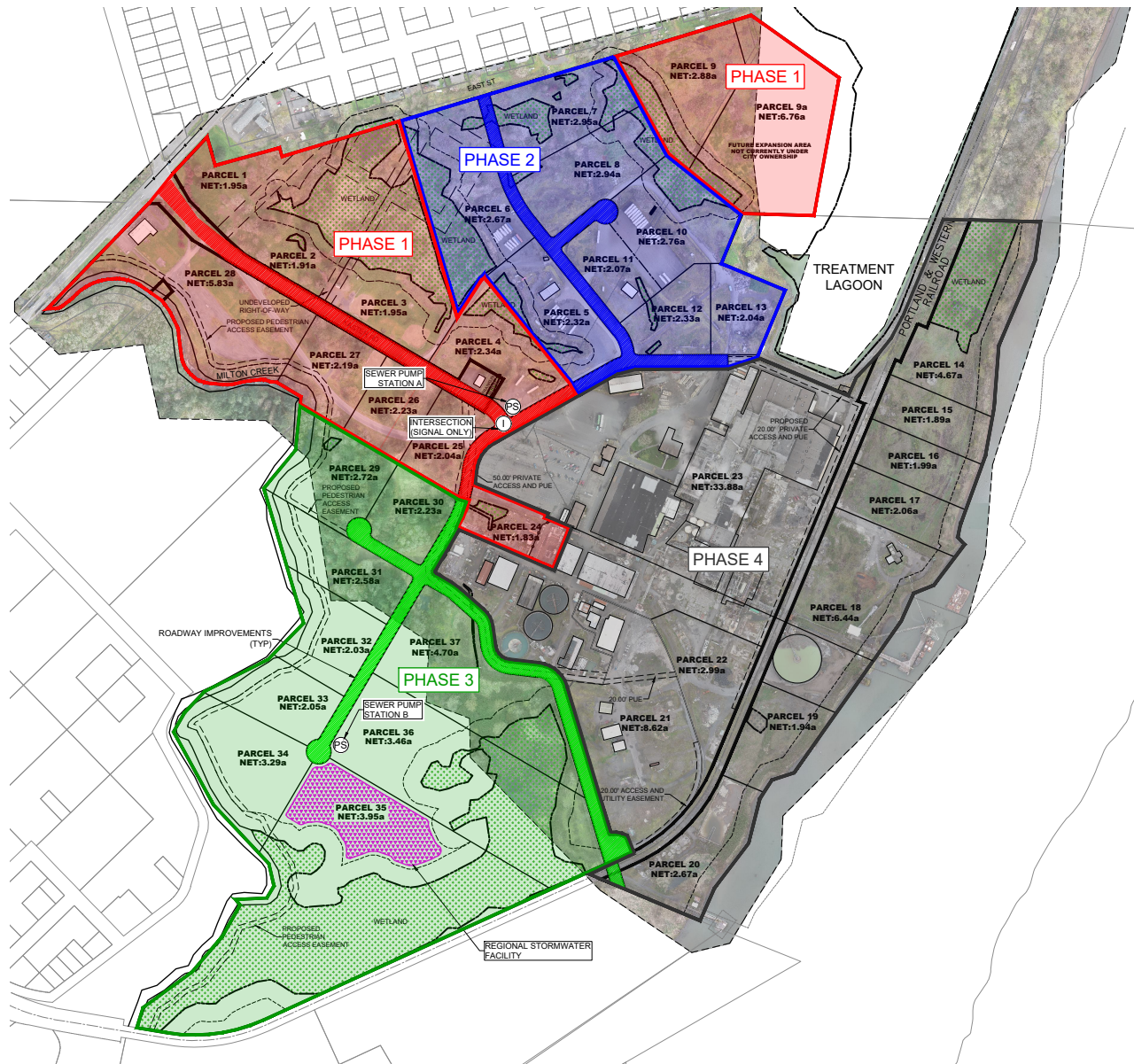
- **Phase 1:** A primary driver of future development in the SHIBP is development of the collector street from Old Portland Road toward the center of the study area. These improvements, totaling \$2.7 million, unlock many parcels of the SHIBP (delineated in red in Exhibit 7) and will require a sewer pump station and pressure line A. Delivery of local street improvements, totaling about \$912,000, would also occur in Phase 1. It is assumed that parcels 9 and 9a can be accessed with minimal infrastructure improvements.
- **Phase 2:** Phase 2 comprises development of local street improvements in the northern portion of the SHIBP. The local street links with Kaster Road and unlocks parcels five through eight, and ten through 13 (delineated in blue in Exhibit 7). Phase 2 transportation improvements total about \$2.7 million.
- **Phase 3:** Delivery of local streets servicing parcels 29 through 37 as well as parcel 20 and 21 would occur in Phase 3. These improvements total over \$4 million. In addition, development of a centrally located intersection signal will occur in Phase 3 (near parcel 4 and 25). The traffic signal costs \$404,000.

Exhibit 6. SHIBP Transportation Costs (2020 dollars)

Source: Costs provided by 3J Consulting.

Projects	Project Costs (including General Conditions)			
	Phase 1	Phase 2	Phase 3	Phase 4
Roadway Improvements (Collector)	\$2,654,280	-	-	-
Travel Lanes (16.5-ft width each side)	\$581,760	-	-	-
Curb and Gutter (2-ft each side)	\$90,900	-	-	-
Sidewalk (6-ft width each side)	\$181,800	-	-	-
Landscape Buffer (5-ft each side)	\$109,080	-	-	-
Clear Zone (0.5-ft each side)	\$18,180	-	-	-
Grading and Erosion Control	\$109,080	-	-	-
Rock Excavation	\$1,563,480	-	-	-
Roadway Improvements (Local)	\$912,030	\$2,866,380	\$4,038,990	-
Travel Lanes (15.5-ft width each side)	\$155,540	\$488,840	\$688,820	-
Curb and Gutter (2-ft each side)	\$35,350	\$111,100	\$156,550	-
Sidewalk (5-ft width each side)	\$56,560	\$177,760	\$250,480	-
Landscape Buffer (2.5-ft each side)	\$21,210	\$66,660	\$93,930	-
Grading and Erosion Control	\$35,350	\$111,100	\$156,550	-
Rock Excavation	\$608,020	\$1,910,920	\$2,692,660	-
Intersection (Signal Only)	-	-	\$404,000	-
Rail Crossing	Not Determined	Not Determined	Not Determined	Not Determined
Dock Improvements	*Depends on user*	*Depends on user*	*Depends on user*	*Depends on user*
Total Costs	\$3,566,310	\$2,866,380	\$4,442,990	\$0

Exhibit 7. Proposed Transportation Network and Phasing Plan in the SHIBP
 Source: 3J Consulting, Cost Estimate Map (October 2020).



Water Infrastructure Needs

The City of St. Helens is responsible for providing water services to the SHIBP. SHIBP water infrastructure projects amount to \$1,575,600 for water utilities (i.e., 8" mains as well as 10" mains along Kaster Road, valves, bends, hydrants) to serve sites along the roadway identified in Exhibit 7.

Exhibit 8. SHIBP Water Costs (2020 dollars)

Source: Costs provided by 3J Consulting.

Projects	Project Costs (including General Conditions)			
	Phase 1	Phase 2	Phase 3	Phase 4
Water Utilities	\$505,000	\$444,400	\$626,200	-
Total Costs and Revenues	\$505,000	\$444,400	\$626,200	\$0

Sewer Infrastructure Needs

The City of St Helens is responsible for providing sewer services to the SHIBP. Sewer infrastructure costs total \$3,260,280.

About 37% of those costs are for two sewer pump stations and pressure lines to serve the entire area.⁴ The first station (sewer line A) has a sewage capacity of about 30,000 gallons per day (anticipated development is Phase 1). The second station (sewer line B) has a sewage capacity of about 15,000 gallons per day (anticipated development is Phase 3). The pump stations' locations capitalize on the area's gravity-based drainage patterns.

The larger share of sewer infrastructure costs (63%) are for an 8" main, manholes, and lateral sewer utilities to serve sites along the roadway identified in Exhibit 7.

Exhibit 9. SHIBP Sewer Costs (2020 dollars)

Source: Costs provided by 3J Consulting.

Projects	Project Costs (including General Conditions)			
	Phase 1	Phase 2	Phase 3	Phase 4
Sewer Utilities	\$656,500	\$577,720	\$814,060	-
Sewer Pump Station and Pressure Line A	\$808,000	-	-	-
Sewer Pump Station and Pressure Line B	-	-	\$404,000	-
Total Costs and Revenues	\$1,464,500	\$577,720	\$1,218,060	\$0

⁴ While a few parcels (e.g., parcel 1, 2, 28) could potentially develop and connect to the existing sewer on the north side of the SHIBP, parcels further south would face challenges connecting to it – depending on the depth of the existing sewer line. Similarly, parcels 6, 7, 9, and 9a could potentially connect to the existing sewer line; however, the sewer connection line would be required to go in that direction. In any case, a majority of parcels (about 80%) would need to connect to the sewer pump station to enable future development.

Stormwater Infrastructure Needs

The City of St Helens is responsible for providing stormwater services to the SHIBP. Stormwater infrastructure costs include storm utilities for an 18" main, manholes, laterals, and inlets along the roadway identified in Exhibit 7 (\$1,969,500) as well as a regional stormwater facility (\$2,424,000) located at the southern portion of the site (parcel 35). Combined, stormwater infrastructure amounts to \$4,393,500 which represents the second most expensive infrastructure category in the SHIBP, after transportation.

Stormwater treatment and detention is the responsibility of the developer and could happen independently on a parcel by parcel basis. The project identified an opportunity to handle the stormwater in a regional facility⁵ and capture the cost burden in SDC fees (i.e., a rain garden with the capacity of 860,000 ft³). The benefit of a regional facility is that it improves functionality, long-term maintenance and supports the visual appeal of the area by eliminating redundancy of individualized treatment schemes. Further, the regional facility located in Parcel 39 (i.e., near the waterfront) allows the system to take advantage of the SHIBP's existing drainage patterns without the need to further implement a stormwater pump station, which would unnecessarily increase costs. However, there are ongoing permitting and maintenance costs of implementing a regional stormwater treatment system which are not accounted for in this estimation.

Exhibit 10. SHIBP Stormwater Costs (2020 dollars)

Source: Costs provided by 3J Consulting.

Projects	Project Costs (including General Conditions)			
	Phase 1	Phase 2	Phase 3	Phase 4
Stormwater Utilities	\$631,250	\$555,500	\$782,750	-
Regional Stormwater Facility	-	-	\$2,424,000	-
Total Costs and Revenues	\$631,250	\$555,500	\$3,206,750	\$0

Wetlands Mitigation

Wetlands mitigation will occur in each phase of construction in the SHIBP. Through Phase 4, costs to address wetlands will amount to \$1,010,000. Note that, wetlands delineation is only needed in Phase 3 as wetlands delineation has already occurred in part of the SHIBP study area.

Exhibit 11. SHIBP Wetlands Mitigation Costs (2020 dollars)

Source: Costs provided by 3J Consulting.

Projects	Project Costs (including General Conditions)			
	Phase 1	Phase 2	Phase 3	Phase 4
Wetland Mitigation (Allowance)	\$202,000	\$202,000	\$202,000	\$202,000
Wetland Delineation (Allowance)	-	-	\$202,000	-
Total Costs and Revenues	\$202,000	\$202,000	\$404,000	\$202,000

⁵ Funding and delivery of the Regional Stormwater Facility is assumed to occur in Phase 3. Any parcels that want to develop prior to this infrastructure delivery would need to have onsite treatment and detention (led by the developer).

SHIBP Infrastructure Funding Strategy

Upon analysis of the City’s existing sources of revenue, ECONorthwest finds that in total the City does have sufficient funds to pay for total infrastructure costs (\$21.1 million) in the SHIBP (see Exhibit 12 for cost breakdown by phase). However, financial capacity relies heavily on one important funding tool: TIF. Due to the sometimes slow or indirect nature of property tax growth in relation to targeted projects, TIF from urban renewal can often take many years to produce meaningful levels of revenue which can result in loss of project alignment.

Exhibit 12. SHIBP Cost Summary by Phase, Fiscal Year Ending 2021-2045

Source: ECONorthwest.

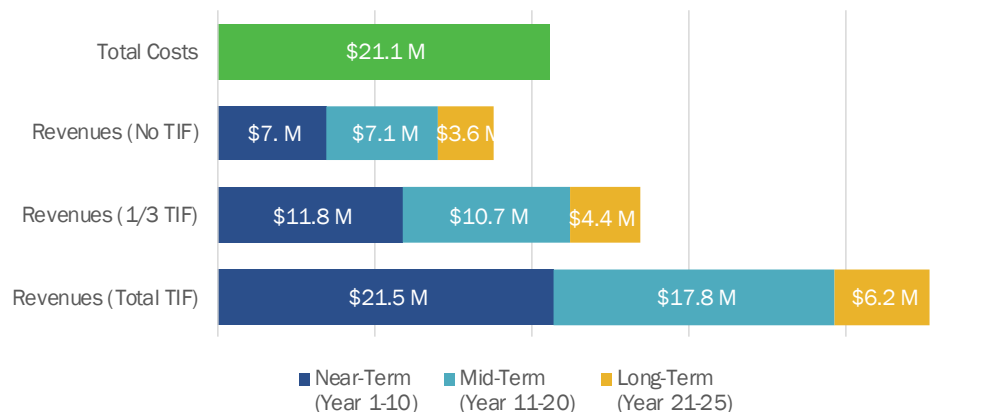
Funding Schedule	Total Infrastructure Costs	Net Developable Acres per Phase	Cost per Net Acre per Phase
Phase 1	\$6,369,200	30.08	\$211,742
Phase 2	\$4,646,000	20.08	\$231,375
Phase 3	\$9,898,000	23.06	\$429,228
Phase 4	\$202,000	24.65	\$8,195
Total	\$21,115,200	97.87	-

Note: Parcels 21, 23, 24, and 35 were excluded from the analysis (undevelopable or regional facility site).

Therefore, the ability to fund infrastructure in the SHIBP depends on the amount of TIF revenues actually received – and the extent to which TIF funds are best prioritized for industrial infrastructure or for other projects and objectives listed in St. Helens’ Urban Renewal Plan. Exhibit 13 illustrates the impact of varying levels of TIF support. It shows that without TIF dollars, existing revenues are insufficient to pay for total infrastructure costs in the SHIBP.

Exhibit 13. SHIBP Cost and Revenue Comparative Analysis, Fiscal Year Ending 2021-2045

Source: ECONorthwest.



Note: “Revenues (Total TIF)” includes projected TIF (low estimate), timber, site prep and grading, ground lease, and property sales/contract payment revenues. “Revenues (1/3 TIF)” includes the aforementioned projected revenues but

decreases TIF (low estimate) revenues by two thirds. “Revenues (No TIF)” includes timber, site prep and grading, ground lease, and property sales/contract payment revenues.

Near-term Strategy (Year 1-10)

The SHIBP near-term strategy aims to fund all Phase 1 infrastructure. In addition to unlocking development in Phase 1 and opening up an opportunity for future development in Phase 2 and 3, this strategy aims to ensure that the Urban Renewal Area tracks with projections. The City should:

- **Prioritize timber, site prep and grading, ground lease, and property sales/contract payment revenues toward Phase 1 infrastructure (less any loans or grants from external sources):** Per our estimates, capacity of these revenue sources in the near-term (Year 1-10) would allow the City to dedicate about \$6.9 million to investments in catalytic infrastructure that adds capacity to support new growth in the SHIBP. If the City chose to invest all \$6.9 million in the SHIBP, these revenues would fund 100% of Phase 1 project costs⁶ and about 13% of Phase 2 project costs.
 - However, the City should evaluate the policy implications of investing the total capacity of these resources on infrastructure in the SHIBP solely. In that, the SHIBP is one of many ongoing, essential projects in St. Helens and allocating all or the majority of existing revenues to one project is a narrow economic development strategy. Thus, it is recommended that the City seek, leverage, and prioritize other exogenous funding options (see to Appendix B) to ensure that the City has sufficient funds to continue to invest in other areas of the community that will allow for greater economic diversity and resiliency.
- **Account for any TIF expenditures:** The City’s primary opportunity over the longer term is its Urban Renewal District. Revenues generated from TIF are more than sufficient to cover project costs. However, those dollars are not likely to be spent until year 5 through 10 of the planning period. For instance, by year 10, current projections suggest that the City may have approximately \$14.5 million in unspent TIF dollars, which is enough to fund approximately 69% of total infrastructure costs in the SHIBP. Given this finding, the analysis highlights policy questions, rather than technical questions:
 - How much of the City’s TIF dollars will be allocated to infrastructure in the SHIBP?
 - When will TIF dollars be allocated to the infrastructure costs in the SHIBP?
 - To what extent should TIF dollars offset other, existing city funds (e.g., timber and site prep and grading revenues) that could be more broadly applied to the city as whole and other developer contributions?

⁶ Note: 100% of Phase 1 project costs represents 33% of total transportation, 32% of total water, 45% of total sewer, and 14% of total stormwater improvement costs. It also represents 20% of total wetlands mitigation issue costs.

While this near-term strategy does not rely on TIF dollars, any TIF dollars spent before Year 11 could offset use of timber, site prep and grading, ground lease, and property sales/contract payment revenues in the SHIBP.

Mid- and Long-Term Strategy (Year 11 and beyond)

Phase 2, Phase 3, and Phase 4 infrastructure costs amount to \$14.7 million. The City may use any of its existing revenues sources to pay for these costs, including TIF dollars, which will be more than sufficient to cover the balance of project costs in the SHIBP.

Alternative Near-term Strategies

Revenue-backed Bond

To catalyze delivery of all infrastructure projects, almost immediately, the City could issue a revenue bond, backed by TIF. The opportunity allows that City to take advantage of the SHIBP’s most prominent funding resource to lead economic growth and diversification in the area. The strategy allows the City’s other existing funding sources to remain untouched (or rather, funneled to other fiscal priorities in the city) while still allowing the City to take advantage of grant/loan programs to substitute use of TIF, as applicable. Further, an important marketing tactic to incent industrial/manufacturing uses to locate in the area is the messaging that this alternative funding strategy would not place an added burden of cost on development.

District Approach

Three regional facilities could benefit from an area-wide funding mechanism such as a Local Improvement District or Advanced Finance District. Those facilities are the Regional Stormwater Facility (\$2,424,000)

in Phase 3, the Sewer Pump Station and Pressure Line A (\$808,000) in Phase 1, and Sewer Pump Station and Pressure Line B (\$404,000) in Phase 3. Exhibit 14 shows the impact of these investments if they were spread over SHIBP property owners proportionately by phase.

For example, Exhibit 14 shows that regional costs in Phase 3 amount to \$2,828,000. Because Phase 3 is composed of 27 net acres, the cost impact on property owners within the Phase 3 geographic boundary

Exhibit 14. Per Acre Cost of Regional Facilities, by Phase

Source: ECONorthwest.

	Total	Total per Net Acre
Phase 1 Regional Costs		
Lump Sum	\$808,000	\$26,862
Annual Payment	\$113,300	\$3,767
Total Amortized Cost	\$1,133,000	\$37,666
Phase 3 Regional Costs		
Lump Sum	\$2,828,000	\$122,637
Annual Payment	\$396,600	\$17,199
Total Amortized Cost	\$3,966,000	\$171,986

Note 1: Phase 1 costs represent Sewer Pump Station and Pressure Line A. Phase 3 costs represent Sewer Pump Station and Pressure Line B, plus the Regional Stormwater Facility. The per net acre statistic uses 30.08 net acres in the Phase 1 cost impact calculation and 27.01 net acres in the Phase 3 cost impact calculation.

Note 2: Amortization assumptions: 10-year term, 1% issuance costs, 5% interest rate, 1.07 coverage factor.

(see Exhibit 7) would average \$104,702 per net acre. Amortized over 10 years, those costs would amount to about \$146,835 per net acre—or about \$14,683 per net acre per year for 10 years.

If the City wishes pursue a district approach to catalyze funding for these regional facilities up front, then this analysis recommends that the City seek issuance of a revenue bond, backed by a Local Improvement District (LID) or existing revenues from TIF to cover these costs. This financing strategy would allow the City to develop these facilities up front, as LID/TIF revenues accrue over time. The use of an LID would require existing property owners to opt into an additional tax assessment (described on a per acre basis above), while the use of TIF would not place an added cost on property owners in the area.

If an LID-backed revenue bond is pursued, the City would have the option to “buy down” land for users to offset LID costs by selling land at below market rates. In this sense, the City would indirectly be leveraging a portion of the value of the land to support infrastructure development.

Appendix A. SHIBP Cost Estimates

Appendix A presents conceptual cost estimates, prepared by 3J Consulting, for the St. Helens Industrial Business Park. Overall, estimated costs for site construction and general conditions amount to \$21,115,200. The following general notes and assumptions refer to the cost estimates presented in Exhibit 15:

- These quantities and prices are assumed based on high level conceptual design and should not be used for actual construction costs, but as a guide for order of magnitude cost for improvements.
- Prices are shown 2020 dollars.
- See Exhibit 7 for assumed location of Stormwater Regional Facility and Sewer Pump Station.
- Permitting costs are not included.
- Cost for private utilities and private roadways are not included, as they are assumed to be installed by each property developer.
- Wetland mitigation allowance is estimated at \$100,000 for each phase.
- It is assumed Sewer Pump Station and Pressure Line A shall serve all parcels, while Sewer Pump Station and Pressure Line B shall serve parcels in Phases 3 and 4, and shall pump to Sewer Pump Station and Pressure Line A.
- Rock excavation assumed to only be within utility trenches.

Exhibit 15. Conceptual Cost Estimates by Phase (2020 dollars), the SHIBP

Source: 3J Consulting (October 2020). Note: "G" is General Conditions (soft costs) and "SC" is Site Conditions (hard costs).

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
PHASE 1					
SITE CONSTRUCTION (SC)					
SC-1	Roadway Improvements (Collector)	1,800	LF	\$730	\$1,314,000
SC-2	Roadway Improvements (Local)	700	LF	\$645	\$451,500
SC-3	Utilities Within Roadway	2,500	LF	\$355	\$887,500
SC-4b	Sewer Pump Station and Pressure Line A (30,000 gal/day)	1	LS	\$400,000	\$400,000
SC-4e	Wetland Mitigation (Allowance)	1	LS	\$100,000	\$100,000
TOTAL SITE CONSTRUCTION (SC)					\$3,153,000
GENERAL CONDITIONS (G)					
G	General Conditions	102% of		Site Construction	\$3,216,200
TOTAL COST (PHASE 1)					\$6,369,200
PHASE 2					
SITE CONSTRUCTION (SC)					
SC-1	Roadway Improvements (Collector)	0	LF	\$730	\$0
SC-2	Roadway Improvements (Local)	2,200	LF	\$645	\$1,419,000
SC-3	Utilities Within Roadway	2,200	LF	\$355	\$781,000
SC-4e	Wetland Mitigation (Allowance)	1	LS	\$100,000	\$100,000
TOTAL SITE CONSTRUCTION (SC)					\$2,300,000
GENERAL CONDITIONS (G)					
G	General Conditions	102% of		Site Construction	\$2,346,000
TOTAL COST (PHASE 2)					\$4,646,000
PHASE 3					
SITE CONSTRUCTION (SC)					
SC-1	Roadway Improvements (Collector)	0	LF	\$730	\$0
SC-2	Roadway Improvements (Local)	3,100	LF	\$645	\$1,999,500
SC-3	Utilities Within Roadway	3,100	LF	\$355	\$1,100,500
SC-4a	Regional Stormwater Facility (rain garden-860,000 ft ³ volume)	1	LS	\$1,200,000	\$1,200,000
SC-4d	Intersection (Signal Only)	1	LS	\$200,000	\$200,000
SC-4c	Sewer Pump Station and Pressure Line B (15,000 gal/day)	1	LS	\$200,000	\$200,000
SC-4e	Wetland Mitigation (Allowance)	1	LS	\$100,000	\$100,000
SC-4f	Wetland Delineation (Allowance)	1	LS	\$100,000	\$100,000
TOTAL SITE CONSTRUCTION (SC)					\$4,900,000
GENERAL CONDITIONS (G)					
G	General Conditions	102% of		Site Construction	\$4,998,000
TOTAL COST (PHASE 3)					\$9,898,000
PHASE 4					
SITE CONSTRUCTION (SC)					
SC-1	Roadway Improvements (Collector)	0	LF	\$730	\$0
SC-2	Roadway Improvements (Local)	0	LF	\$645	\$0
SC-3	Utilities Within Roadway	0	LF	\$355	\$0
SC-4e	Wetland Mitigation (Allowance)	1	LS	\$100,000	\$100,000
TOTAL SITE CONSTRUCTION (SC)					\$100,000
GENERAL CONDITIONS (G)					
G	General Conditions	102% of		Site Construction	\$102,000
TOTAL COST (PHASE 4)					\$202,000
TOTAL CONCEPTUAL COST ESTIMATE					\$21,115,200

Exhibit 16. Conceptual Cost Estimates Overall (2020 dollars), the SHIBP

Source: 3J Consulting (October 2020). Note: "G" is General Conditions (soft costs) and "SC" is Site Conditions (hard costs).

ITEM	DESCRIPTION	QTY UNIT	UNIT PRICE	TOTAL
SITE CONSTRUCTION (SC)				
SC-1	Roadway Improvements (Collector)	1,800 LF	\$ 730	\$1,314,000
SC-1a	Travel Lanes (16.5-ft width each side)	1,800 LF	\$ 160	\$288,000
SC-1b	Curb and Gutter (2-ft each side)	1,800 LF	\$ 25	\$45,000
SC-1c	Sidewalk (6-ft width each side)	1,800 LF	\$ 50	\$90,000
SC-1d	Landscape Buffer (5-ft each side)	1,800 LF	\$ 30	\$54,000
SC-1e	Clear Zone (0.5-ft each side)	1,800 LF	\$ 5	\$9,000
SC-1f	Grading and Erosion Control	1,800 LF	\$ 30	\$54,000
SC-1g	Rock Excavation	1,800 LF	\$ 430	\$774,000
SC-2	Roadway Improvements (Local)	6,000 LF	\$ 645	\$3,870,000
SC-2a	Travel Lanes (15.5-ft width each side)	6,000 LF	\$ 110	\$660,000
SC-2b	Curb and Gutter (2-ft each side)	6,000 LF	\$ 25	\$150,000
SC-2c	Sidewalk (5-ft width each side)	6,000 LF	\$ 40	\$240,000
SC-2d	Landscape Buffer (2.5-ft each side)	6,000 LF	\$ 15	\$90,000
SC-2e	Grading and Erosion Control	6,000 LF	\$ 25	\$150,000
SC-2f	Rock Excavation	6,000 LF	\$ 430	\$2,580,000
SC-3	Utilities Within Roadway	7,800 LF	\$ 355	\$2,769,000
SC-3a	Storm (18" main, manholes, laterals, inlets)	7,800 LF	\$ 125	\$975,000
SC-3b	Water (10" and 8" mains, valves, bends, hydrants)	7,800 LF	\$ 100	\$780,000
SC-3c	Sewer (8" main, manholes, laterals)	7,800 LF	\$ 130	\$1,014,000
SC-4	Other			\$2,500,000
SC-4a	Regional Stormwater Facility (rain garden-860,000 ft ³ volume)	1 LS	\$1,200,000	\$1,200,000
SC-4b	Sewer Pump Station and Pressure Line A (30,000 gal/day)	1 LS	\$400,000	\$400,000
SC-4c	Sewer Pump Station and Pressure Line B (15,000 gal/day)	1 LS	\$200,000	\$200,000
SC-4d	Kaster Road Intersection (Intersection Signal Only)	1 EA	\$200,000	\$200,000
SC-4e	Wetland Mitigation (Allowance)	1 LS	\$400,000	\$400,000
SC-4f	Wetland Delineation (Allowance)	1 LS	\$100,000	\$100,000
TOTAL SITE CONSTRUCTION (SC)				\$10,453,000
GENERAL CONDITIONS (G)				
G-1	Mobilization	5.0% of	Site Construction	\$522,700
G-2	Contingency	50.0% of	Site Construction	\$5,226,500
G-3	Design	30.0% of	Site Construction	\$3,135,900
G-4	Prevailing Wage	15.0% of	Site Construction	\$1,568,000
G-4	Traffic Control	2.0% of	Site Construction	\$209,100
TOTAL GENERAL CONDITIONS				\$10,662,200
TOTAL CONCEPTUAL COST ESTIMATE				\$21,115,200

Appendix B. Federal and State Capital Funding Grants and Low-Interest Loans

To manage the details of various federal and state funding programs, this Appendix identifies several grant and loan programs that the City may consider applying to, to fund specific infrastructure projects.

Transportation Programs

The State of Oregon manages two primary transportation funding programs:

- **ConnectOregon.** ConnectOregon focuses on improving connections and supporting local economies throughout the state. Dedicated to multimodal, non-highway projects, ConnectOregon was first approved by the Oregon legislature in 2005 to fund marine/ports, aviation, public transit, bicycle/pedestrian, and rail connection projects around the state. However, the passage of HB 2017 and HB 2592 changed the program—today, only aviation, rail, and marine/port improvements are eligible. ConnectOregon is a grant that may cover up to 70% of project costs. A minimum 30% match is required, except for Class 1 Railroads where a 50% match is required. In the most recent funding cycle, 39 projects were funded, with awards ranging from \$25m to \$8.3m. The average award was \$1.3m.
- **Statewide Transportation Improvement Program (STIP).** STIP is Oregon’s four-year transportation capital improvement program for state and federally funded projects. Funding is distributed to system enhancement, preservation, safety, non-highway, and local roads projects. ODOT expects to complete the 2021-2024 STIP in 2020.

Other, relevant transportation programs that the State of Oregon manages include:

- **Immediate Opportunity Fund (IOF).** IOF supports primary economic development in Oregon through the construction and improvement of streets and roads. Access to this fund is discretionary and the fund may only be used when other sources of financial support are unavailable or insufficient. The fund will not pay for more than 50% of the transportation improvement costs—the remainder must be matched. The applicant must involve Business Oregon and ODOT early on in the process. Project cost limits range from \$250,000 to \$1m per project (depending on the project type).
- **Multimodal Active Transportation (MAT) Fund.** MAT funds bicycle and pedestrian capital projects previously funded by the ConnectOregon program. Eligible projects include the development, construction, reconstruction, major resurfacing, or other capital improvements of multiuse paths, bicycle paths, and footpaths. This is a competitive grant program that may not exceed 70% of eligible project costs (i.e., 30% match required). This program was recently created; recommended rulemaking stated

that “grants will be awarded only when there are sufficient funds available in the [MAT] Fund to cover the costs of the grants.”

- **Oregon Transportation Infrastructure Bank (OTIB).** OTIB is a low interest revolving loan fund that can help to pay for highway, transit, and other transportation capital projects. These low-interest loans can be repaid with TIF, general fund, or local improvement district revenues. They provide up front monies (planning, engineering) as well as implementation funds which means cities do not need to wait for TIF build up.

Water, Wastewater, and Stormwater Programs

Business Oregon manages several infrastructure funding programs:

- **Safe Drinking Water Revolving Fund (SDWRLF).** SDWRLF is a low-interest loan to fund the design and construction of water system infrastructure (including but not limited to treatment, transmission/distribution mains, finished water reservoirs, water sources, pumping, aquifer storage and recovery projects, seismic improvements, redundancy/reliability infrastructure, instrumentation, telemetry and metering). Loans at \$3m are available with Board approval and loans of \$6m are available with Water Advisory Board approval. Principle forgiveness is available.
- **Drinking Water Source Protection (DWSP).** DWSP is a low-interest, forgivable loan of up to \$30,000 per water system. Project receiving funding include those that protect drinking water sources or that lead to risk reduction within a delineated source water area.
- **Water Wastewater Fund (W/W).** W/W is a program offering both loans and grants for the planning and construction of water, stormwater, and wastewater collection, treatment, and distribution projects. The maximum loan amount is \$10m per project (typically repaid with utility revenues or voter approved bonds). The typical grant amount is up to \$750,000 per project.

Other Infrastructure Programs

Funding programs not directly tied to a single, or specific infrastructure type include:

- **Special Public Works Fund (SPWF).** Municipalities and Districts may apply for SPWF funds for various construction projects including utilities, emergency projects, levees, telecom, energy systems, transportation, railroad, road, marine & other public facilities. The program, administered by Business Oregon, offers low-interest loans ranging from less than \$100,000 to \$10m; the program offers grants for construction projects that create or retain traded-sector jobs. Grants are limited to \$500,000 or 85% of the project cost (whichever is less) and are based on eligible jobs created or retained.

- **U.S. Economic Development Association (EDA) Public Works Program.** EDA’s Public Works program helps distressed communities revitalize, expand, and upgrade their physical infrastructure. This program enables communities to attract new industry; encourage business expansion; diversify local economies; and generate or retain long-term, private-sector jobs and investment through the acquisition or development of land and infrastructure improvements needed for the successful establishment or expansion of industrial or commercial enterprises.
 - EDA Public Works program investments help facilitate the transition of communities from being distressed to becoming competitive by developing key public infrastructure, such as technology-based facilities that utilize distance learning networks, smart rooms, and smart buildings; multitenant manufacturing and other facilities; business and industrial parks with fiber optic cable; and telecommunications and development facilities. In addition, EDA invests in traditional public works projects, including water and sewer systems improvements, industrial parks, business incubator facilities, expansion of port and harbor facilities, skill-training facilities, and brownfields redevelopment.⁷
 - As part of the 2020 Coronavirus Aid, Relief, and Economic Security Act (CARES), the EDA received \$1.5 billion in funding to expand and enhance its Economic Adjustment Assistance (EAA) programs. In response to the COVID-19 pandemic, the EDA loosened its criteria of economic distress. These grants are competitive and will be distributed until the funds are exhausted.

⁷ U.S. Economic Development Association: <https://www.eda.gov/pdf/about/Public-Works-Program-1-Page.pdf>

Appendix C. Revenue Projection Details

ECONorthwest worked with City staff and 3J Consulting to project infrastructure revenues that could be available from existing funding sources over the 2021-2045 planning horizon. The forecast, on the next page (Exhibit 17), displays projections of existing revenue sources which are available to fund infrastructure in the SHIBP. One way of thinking about these projections is that they estimate the amount of revenue available for implementation if nothing changes in the future (e.g. no new funding tools, rates of existing tools remain unchanged, etc.). In summary, existing funding tools are forecast to generate approximately \$45.5 million over the planning period.

Exhibit 18 presents an estimate of potential land transaction revenue, in total and on a parcel by parcel basis. To estimate financial capacity, the analysis assumes an average land sale price of \$17,000 to \$20,000 per net acre.⁸ In addition, this analysis relies on actual parcel net acreage in the SHIBP (excluding parcels 18, 21, 22, 23, 24, and 28). In summary, industrial land transactions in the SHIBP has the potential to generate approximately \$1,471,520 to \$1,731,200.

⁸ This assumption derives from the Port of Columbia.

Exhibit 17. Forecast of Existing Revenues (2020 dollars) for Capital Projects, FY Ending 2021–2045

Source: ECONorthwest.

FYE	TIF (Low Estimate)	Timber	Site Prep & Grading	Ground Lease	Property Sales and Contract Payments	Total
2021	\$1,640,000	\$200,000	\$140,000	\$150,000	\$82,800	\$2,212,800
2022	\$1,640,000	\$200,000	\$210,000	\$150,000	\$82,800	\$2,282,800
2023	\$1,640,000	\$200,000	\$350,000	\$150,000	\$82,800	\$2,422,800
2024	\$1,640,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,352,800
2025	\$1,640,000	\$200,000	\$253,605	\$150,000	\$82,800	\$2,326,405
2026	\$1,260,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,972,800
2027	\$1,260,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,972,800
2028	\$1,260,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,972,800
2029	\$1,260,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,972,800
2030	\$1,260,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,972,800
2031	\$1,320,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,032,800
2032	\$1,320,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,032,800
2033	\$1,320,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,032,800
2034	\$1,320,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,032,800
2035	\$1,320,000	\$200,000	\$280,000	\$150,000	\$82,800	\$2,032,800
2036	\$820,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,532,800
2037	\$820,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,532,800
2038	\$820,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,532,800
2039	\$820,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,532,800
2040	\$820,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,532,800
2041	\$520,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,232,800
2042	\$520,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,232,800
2043	\$520,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,232,800
2044	\$520,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,232,800
2045	\$520,000	\$200,000	\$280,000	\$150,000	\$82,800	\$1,232,800
Total	\$27,800,000	\$5,000,000	\$6,833,605	\$3,750,000	\$2,070,000	\$45,453,605
Annual Avg.	\$1,112,000	\$200,000	\$273,344	\$150,000	\$82,800	\$1,818,144

Exhibit 18. Estimate of Land Transaction Sale Revenue (2020 dollars)

Source: ECONorthwest.

Parcel Number	Net Developable Acreage	Land Transaction Price	
		Low	High
1	1.95	\$33,150	\$39,000
2	1.91	\$32,470	\$38,200
3	1.95	\$33,150	\$39,000
4	2.34	\$39,780	\$46,800
5	2.32	\$39,440	\$46,400
6	2.67	\$45,390	\$53,400
7	2.95	\$50,150	\$59,000
8	2.94	\$49,980	\$58,800
9	2.88	\$48,960	\$57,600
9a	6.76	\$114,920	\$135,200
10	2.76	\$46,920	\$55,200
11	2.07	\$35,190	\$41,400
12	2.33	\$39,610	\$46,600
13	2.04	\$34,680	\$40,800
14	4.67	\$79,390	\$93,400
15	1.89	\$32,130	\$37,800
16	1.99	\$33,830	\$39,800
17	2.06	\$35,020	\$41,200
18	6.44	\$109,480	\$128,800
19	1.94	\$32,980	\$38,800
20	2.67	\$45,390	\$53,400
21	8.62	\$146,540	\$172,400
22	2.99	\$50,830	\$59,800
23	33.88	\$575,960	\$677,600
24	1.83	\$31,110	\$36,600
25	2.04	\$34,680	\$40,800
26	2.23	\$37,910	\$44,600
27	2.19	\$37,230	\$43,800
28	5.83	\$99,110	\$116,600
29	2.72	\$46,240	\$54,400
30	2.23	\$37,910	\$44,600
31	2.58	\$43,860	\$51,600
32	2.03	\$34,510	\$40,600
33	2.05	\$34,850	\$41,000
34	3.29	\$55,930	\$65,800
35	3.95	\$67,150	\$79,000
36	3.46	\$58,820	\$69,200
37	4.7	\$79,900	\$94,000
Total	146.15	\$2,484,550	\$2,923,000
Total Excluding Parcels 21, 23, 24, and 35	97.87	\$1,663,790	\$1,957,400