

# CITY OF TOLEDO

LEWIS COUNTY

WASHINGTON

## SHORELINE RESTORATION PLAN



**ECOLOGY GRANT G1200045**

**G&O #11254**

**DECEMBER 2014**



**Gray & Osborne, Inc.**

CONSULTING ENGINEERS

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## **ACKNOWLEDGMENTS**

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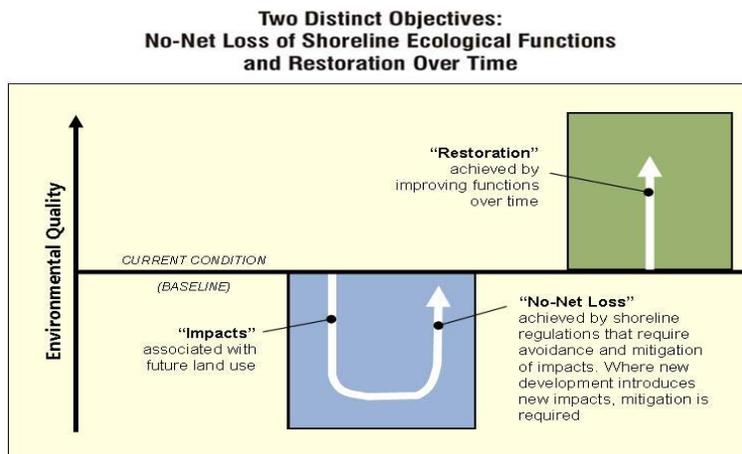
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# INTRODUCTION

## BACKGROUND

This report is the proposed restoration plan for the City of Toledo. The document has been prepared to comply with the state’s Shoreline Master Program guidelines for restoration planning (WAC 173-26-201(2)(f)) and is meant to provide a planning-level framework for understanding how and where shoreline ecological functions can be restored<sup>1</sup> in the City and its urban growth area. The plan is not a regulatory document or a set of regulatory requirements, and is only meant to be used as a resource for future shoreline restoration efforts.

Guidelines for the creation of Shoreline Master Programs require that master programs contain goals, policies and actions for restoration of impaired ecological functions. Beyond preventing further loss of ecological functions, master programs provisions should be designed to “...achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program.”<sup>2</sup> A visual depiction of this overall improvement or restoration of shoreline ecological functions is displayed within Figure 1.



**FIGURE 1**

### Conceptual view of the Objectives of the Shoreline Management Act

(Source, WA Department of Ecology)

<sup>1</sup> Restoration is defined under the shoreline guidelines as “reestablishment or upgrading of impaired ecological shoreline processes or functions.” It is important to note that, for the purposes of shoreline management, the term does not imply returning shoreline areas to aboriginal or pre-European settlement conditions.

<sup>2</sup> The mandate to improve ecological functions over time provides the basis for restoration planning and creates the distinction between project-related mitigation and environmental restoration in the context of the SMP. Under the Shoreline Management Act, applicants for shoreline permits must fully mitigate new impacts caused by their proposed development, but are not required to restore past ecosystem damages as a condition of permit approval. Project applicants are also not required to implement the restoration measures identified in this plan as mitigation for project-related impacts, except in those instances where restoration is deemed appropriate. The two white arrows within Figure 1 display this distinction: the upward portion of the left white arrow represents project-related mitigation, while the right white arrow displays restoration.

To achieve this overall improvement, the guidelines recommend that restoration plans:

- Identify degraded areas, impaired ecological functions, and sites with potential for restoration;
- Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;
- Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;
- Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies, including identifying prospective funding sources for those projects and programs;
- Identify timelines and benchmarks for implementing restoration projects and achieving local restoration goals; and
- Provide mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

## CONTEXT

This restoration plan has been created as part of the Shoreline Master Program update for the City of Toledo and is included in Phase 4 of the overall update. A timeline for the update is shown below:

**TABLE 1**

**Timeline for the Shoreline Master Program Update for the City of Toledo**

Phase	Update Schedule	Timeline
1	<ul style="list-style-type: none"> <li>• Prepare Jurisdiction Maps</li> <li>• Prepare a Public Participation Plan</li> </ul>	Fall 2012
2	<ul style="list-style-type: none"> <li>• Analyze and characterize shoreline conditions</li> </ul>	Winter 2012
3	<ul style="list-style-type: none"> <li>• Complete Draft Shoreline Master Program Update</li> <li>• Complete Cumulative Impact Analysis Report</li> </ul>	Spring 2013
4	<ul style="list-style-type: none"> <li>• Complete Draft Restoration plan and Implimentation Strategy</li> <li>• Complete No Net Loss Report</li> </ul>	Winter 2013 Spring 2014
5	<ul style="list-style-type: none"> <li>• Conduct public hearings</li> <li>• Planning Commission Recommendation</li> <li>• City Council Action</li> </ul>	Spring - Summer 2014
6	<ul style="list-style-type: none"> <li>• Ecology Review</li> <li>• Ecology Action</li> <li>• Final Adoption by Ecology and the City Council</li> </ul>	Winter 2014/2015

## **RESTORATION GOALS, POLICIES AND DEVELOPMENT STANDARDS**

This restoration plan builds upon the identification of degraded areas, impaired ecological functions, and sites with the potential for ecological restoration as identified in the *Shoreline Inventory and Characterization for Toledo* (2013) conducted in Phase 2 of the update and is based on the following restoration goals found within section 5 of the *Proposed Shoreline Master Program*:

1. Improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs and actions that are consistent with the Shoreline Master Program and other approved restoration plans.
2. Provide fundamental support to restoration work by various organizations by identifying shoreline restoration priorities, and by organizing information on available funding sources for restoration opportunities.
3. Target restoration and enhancement towards improving habitat requirements of priority and/or locally important wildlife species.

The plan also builds on the priorities for restoration projects identified in subsection E of the Restoration and Enhancement Policies in Section 8 of the *Shoreline Master Program*. This policy states that restoration actions and stand alone projects are prioritized in the following order:

1. Create dynamic and sustainable ecosystems.
2. Preserve and restore connectivity between side channels, floodplains and hyporheic zones.
3. Restore natural channel-forming geomorphologic processes.
4. Replant native vegetation, particularly native conifers, in riparian areas to restore functions. Native conifers help reduce sediment delivery to streams, provide shade and reduce water temperatures, and represent a future supply of large woody material.
5. Reduce sediment input to streams and rivers and associated impacts.
6. Improve water quality.
7. Restore native vegetation and natural hydrologic functions of degraded and former wetlands.

8. Remove obsolete and no longer needed shoreline modifications.

## RESTORATION OPPORTUNITIES

Sites with the potential for restoration, along with a short description of potential restoration projects on the site, and the restoration priority that the projects would address are presented within Table 2. The location of these projects is shown in Map 1 (found at the back of this document).<sup>3</sup>

**TABLE 2**

### Potential Restoration Projects in Toledo

Shoreline	Opportunity Site	Potential Project Description	Restoration Priority
Cowlitz River	Site A	Replant riparian vegetation and trees along the river. Evaluate WSDOT storm drain discharge to determine additional treatment options.	<ul style="list-style-type: none"> <li>• Reduce sediment input into the River (Priority 5)</li> <li>• Restore native vegetation and natural hydrologic functions of degraded riparian areas (Priorities 4 through 7)</li> </ul>
	Site B	Evaluate shoreline vegetation for replanting additional conifers, Create a potential outdoor classroom with viewing area and informational placards or kiosks for the elementary, middle and high school students.	<ul style="list-style-type: none"> <li>• Create dynamic and sustainable ecosystems (Priority 1)</li> <li>• Restore natural channel forming processes (Priority 3)</li> <li>• Restore native vegetation and natural hydrologic functions of degraded and former wetlands and riparian areas (Priorities 2, 4 and 7)</li> </ul>
	Site C	Evaluate shoreline vegetation for replanting additional conifers. Create a potential outdoor classroom with viewing area and informational placards or kiosks for the elementary, middle and high school students.	<ul style="list-style-type: none"> <li>• Create dynamic and sustainable ecosystems (Priority 1)</li> <li>• Restore natural channel forming processes (Priority 3)</li> <li>• Restore native vegetation and natural hydrologic functions of degraded and former wetlands and riparian areas (Priorities 2, 4 and 7)</li> </ul>

<sup>3</sup> In addition to these opportunity sites, additional private riparian restoration efforts have a similar potential to enhance the shoreline habitat along the Cowlitz River. Private restoration opportunities would be consistent with Restoration Goal 1 of the Shoreline Master Program, which seeks to improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs, but these types of projects were not specifically analyzed in Table 2 due to the large number and variety of potential restoration efforts that could occur. If the city was interested in facilitating private restoration efforts among landowners, the City could coordinate with land owners and a non-profit organization to conduct a project such as the planting of riparian vegetation (trees and shrubs) along the shore.

Currently, there are no restoration projects planned and no funding currently available for restoration projects within the City's corporate limits. The priority restoration projects listed in the following sections are identified as opportunities that could be performed on City owned property with moderate funding and would contribute to the restoration goals outlined in the SMP.

Of these potential restoration projects, the potential priority rankings are: Opportunity Sites B and C, then Opportunity Site A.

### **PRIORITY 1: OPPORTUNITY SITES B AND C**

Opportunity Sites B and C provide the potential to enhance habitat along the river, create an environment for outdoor education in collaboration with the Toledo School District, and potentially create a viewing area that could be usable by the general public. The sites have low to moderate quality riparian habitat, including small stands of fir and alder trees adjacent to a side channel and large gravel bars; however, the ecological functions of the upper sites are minimized due to the previous clearing and scrub brush/invasive species growth. Restoration of these areas would enhance ecological functions and could provide educational opportunities for the adjacent school districts.

To achieve these projects a habitat restoration effort would be undertaken between the river and S. First Street. The restoration efforts could focus solely on the area along the river, or could include some additional upland habitat enhancement. At minimum, the project would involve planting trees along the river. When considering the WRIA 26 limiting factors report, focusing revegetation along the river on planting and encouraging the recruitment of conifers would help provide large wood to the system. Larger projects that included restoration efforts in the upland areas could include removing and replacing invasive species with native vegetation and creating a viewing area with informational placards or kiosks. Upland restoration opportunities at both sites may be limited by the presence of the road, which is generally within 20 feet of the shoreline.



**Opportunity Site B – Looking North from Adjacent Private Property just Outside the South City Limits**



**Opportunity Site C – Looking South Across River**

## **PRIORITY 2: OPPORTUNITY SITE A**

Opportunity Site A provides an additional opportunity to plant riparian vegetation along the river. The restoration project would include planting native trees and vegetation. Evaluating the WSDOT storm drain discharge for providing additional treatment opportunities may also determine a method of reducing sediment discharge into the river at that location.



**Opportunity Site A – Looking South from SR 505 Bridge**

## **IMPLEMENTATION STRATEGIES**

These restoration projects could be implemented in a number of ways, but the most likely method will be a close collaboration between the City of Toledo and a non-profit organization. Recognizing this likely collaboration, the identification of potential partners and the nature of their work is essential.

### **PRIMARY RESTORATION PARTNERS**

Of all the potential restoration partners that could assist the City of Toledo with these projects, the most likely partner is the Lewis County Conservation District.

**Lewis County Conservation District** – Works to administer programs to conserve natural resources and promote voluntary stewardship among private landowners in Lewis

County. The Conservation District restores riparian habitats; provides technical assistance to landowners in conservation planning; and conducts, oversees and participates in various restoration projects throughout the county.

**TABLE 3**

**Primary Restoration Partner**

<b>Group</b>	<b>Description</b>	<b>Restoration Activities</b>
Lewis County Conservation District	The Lewis County Conservation District (LCCD) promotes voluntary stewardship among private landowners in Lewis County. Conservation Districts are governmental entities that administer programs to conserve or restore natural resources.	The LCCD oversees and participates in various restoration projects throughout Lewis County. The conservation district works to restore riparian habitats; and is involved with agricultural assessments, education and outreach.

**ADDITIONAL POTENTIAL RESTORATION PARTNERS**

Additional restoration partners beyond these primary partners include a number of government and non-profit groups that provide funding for restoration projects. Several of these groups are listed in Table 4.

**TABLE 4**

**Additional Potential Restoration Partners**

<b>Group</b>	<b>Description</b>	<b>Restoration Activities</b>
American Rivers	American Rivers has been involved in the discussion and conservation activities in the Pacific Northwest for over 20 years. Their Northwest offices are located in Seattle Washington and Portland Oregon.	American Rivers is working with Volcano Country Wild and Scenic Rivers Coalition to protect 200 miles of rivers and streams in Southwest Washington under the federal wild and Scenic rivers Act.

**TABLE 4 – (continued)**

**Additional Potential Restoration Partners**

<b>Group</b>	<b>Description</b>	<b>Restoration Activities</b>
The Volcano Country Wild River Coalition	The Volcano Country Wild River Coalition is working to build support for their proposal to protect 200 miles of rivers and streams in Southwest Washington. The coalition includes 11 other organizations interested in protecting and restoring shorelines.	Developed proposal to protect 200 miles of rivers and streams in Southwest Washington under the federal wild and Scenic rivers Act. Unfortunately the proposal does not include the lower reaches of the Cowliz River and the Toledo area but does include portions of the following rivers: Cispus, Green, Lewis and White Salmon. The proposal also covers portions of the following creeks: Clear, Pine, Quarit, Rush, Siouxon, Smith and yellowjacket.
Forterra	The Forterra group’s mission is to protect, enhance and steward communities and landscapes. As one of the largest conservation organizations in Washington State, Forterra has successfully led efforts over the last 20 years to conserve nearly 234,000 acres of forests, farms, shorelines, parks and natural areas and restore critical landscapes. Forterra offices are located in seattle, Tacoma and Ellensburg.	<p>Forterra works with private landowners, local governments and non-profits to help them become more effective managers and stewards of their natural areas. Specific services include partnering with municipalities to develop volunteer-based stewardship programs for forested parklands and other green infrastructure; creating and implementing restoration and management plans; developing and delivering training programs, best management practices and forest and natural area stewardship guides and outreach publications; and convening a wide variety of stakeholders to help solve complex landscape problems.</p> <p><b>Ecological Restoration</b>                      Forterra partners with multiple stakeholders to identify ecological restoration priorities, create restoration plans and designs, coordinate project planning and implementation, manage project contractors and oversee project monitoring to help ensure restoration results are maintained over time.</p>

These partners have their own distinct capacities (whether fundraising, land acquisition or habitat enhancement) and could be asked to provide technical assistance or support to any of the projects identified. Additionally, individuals that live within the City or the surrounding area that possess these or similar capacities could also be identified and solicited to support restoration efforts.

**FUNDING OPPORTUNITIES**

Opportunities for funding these or other restoration projects within the City’s shoreline area are limited. The most relevant funding sources have been listed in Table 5.

**TABLE 5**

**Potential Funding Opportunities**

Funding Source	Description	Restoration Activities
Salmon Recovery Funding Board (SRFB)	Created in 1999 by the Washington State Legislature, the Salmon Recovery Funding Board (SRFB) provides grant funds to protect or restore salmon habitat and assist in related activities. These funds are administered through the Recreation and Conservation Office (RCO) formerly Interagency Committee for Outdoor Recreation (IAC). The RCO works closely with local watershed groups known as lead entities. The SRFB board is composed of five citizens appointed by the Governor and five state agency directors.	The SRFB Board supports salmon recovery by funding habitat protection and restoration projects. It also supports programs and activities that produce sustainable and measurable benefits for fish and their habitat. The SRFB has helped finance over 900 projects. The SRFB has funded one project in the vicinity of Toledo – the Lower Columbia River Fisheries Enhancement Group’s Lower Cowlitz RM 37.5 side channel rehabilitation project (3.5 miles upstream of Toledo).
Aquatic Lands Enhancement Account (ALEA)	The Aquatic Lands Enhancement Account funds are handled through the WA Department of Natural Resources (WDNR).	There are no known ALEA funded projects within Toledo; portions of the Lewis County Regional Park located on the Cowlitz River across from Toledo were developed using ALEA funds.
Washington Wildlife and Recreation Program (WWRP)	The Washington Wildlife and Recreation Program is a state grant program that provides funding to protect habitat, preserve working farms and create new local and state parks. It is administered by the Recreation and Conservation Office (RCO). WWRP is funded by the legislature in the state’s capital construction budget.	WWRP grants were used for a portion of the development of the Lewis County Regional Park, located on the Cowlitz River across from Toledo.

## **OTHER RESTORATION MEASURES**

Beyond the restoration opportunities listed above, the restoration of shoreline ecological functions could also occur as a result of mitigation of impacts from new development and the creation and observation of standards that are based on the environmental characteristics of the shoreline environment.

Mitigation and mitigation sequencing requirements can be found throughout the *Proposed Shoreline Master Program*, with compensatory mitigation being required where an impact to the shoreline environment is anticipated as a result of development. In most instances this mitigation is meant to alleviate the impacts of development, however in some instances mitigation and the consideration of mitigation sequencing will allow the overall functioning of the environment to improve. For instance, water oriented uses may be authorized within critical area buffers if applicable criteria are met. Ecological restoration or enhancement is required as mitigation for impacts to shoreline resources resulting from such uses or development. If a situation like this occurred, most of the impacts are likely to occur away from the immediate shoreline (where less impact to shoreline functions is likely) and most of the mitigation would occur near the the shoreline (where a higher level of shoreline ecological function is possible). If the project was completed in this manner, the mitigation would mitigate the potential impacts of the new or expanded use or development, and potentially provide some additional restoration value as previously depicted in Figure 1.

Required setback standards and vegetation retention standards within the *Proposed Shoreline Master Program* further provide the opportunity for shoreline functions to be enhanced over time. As plants grow, age and die, they naturally improve shoreline ecological functions by creating habitats and vegetation layers that vary in age, shading the river, and eventually create large wood that provides shoreline habitat. Vegetation retention standards also may, over time, contribute to a more diverse vertical habitat structure in the shoreline environment. Critical area buffers and setbacks will ensure these areas are preserved to the extent feasible so that vegetative growth and regeneration are given the opportunity to occur.

## **CONCLUSION**

When considering current conditions, the standards articulated within the *Proposed Shoreline Master Program*, and the potential restoration partners and projects that are available for the Toledo shoreline, it is possible that the enhancement of shoreline functions compared with the current ecological conditions could occur. The City of Toledo has several areas that could see some small scale habitat restoration, as well as some larger projects that could contribute to the overall quality and functions of the Cowlitz River shoreline environment. This plan has sought to articulate the key pieces of property on which these various types of restoration could occur, and has articulated some of the partners that could be utilized to assist in the process. The completion of the

projects will not be easy but, with the strength of the potential partners and the benefits of the potential projects, the successful implementation of the efforts is promising.

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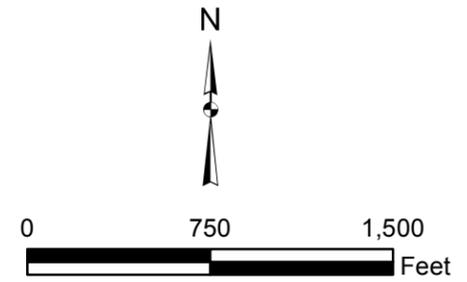
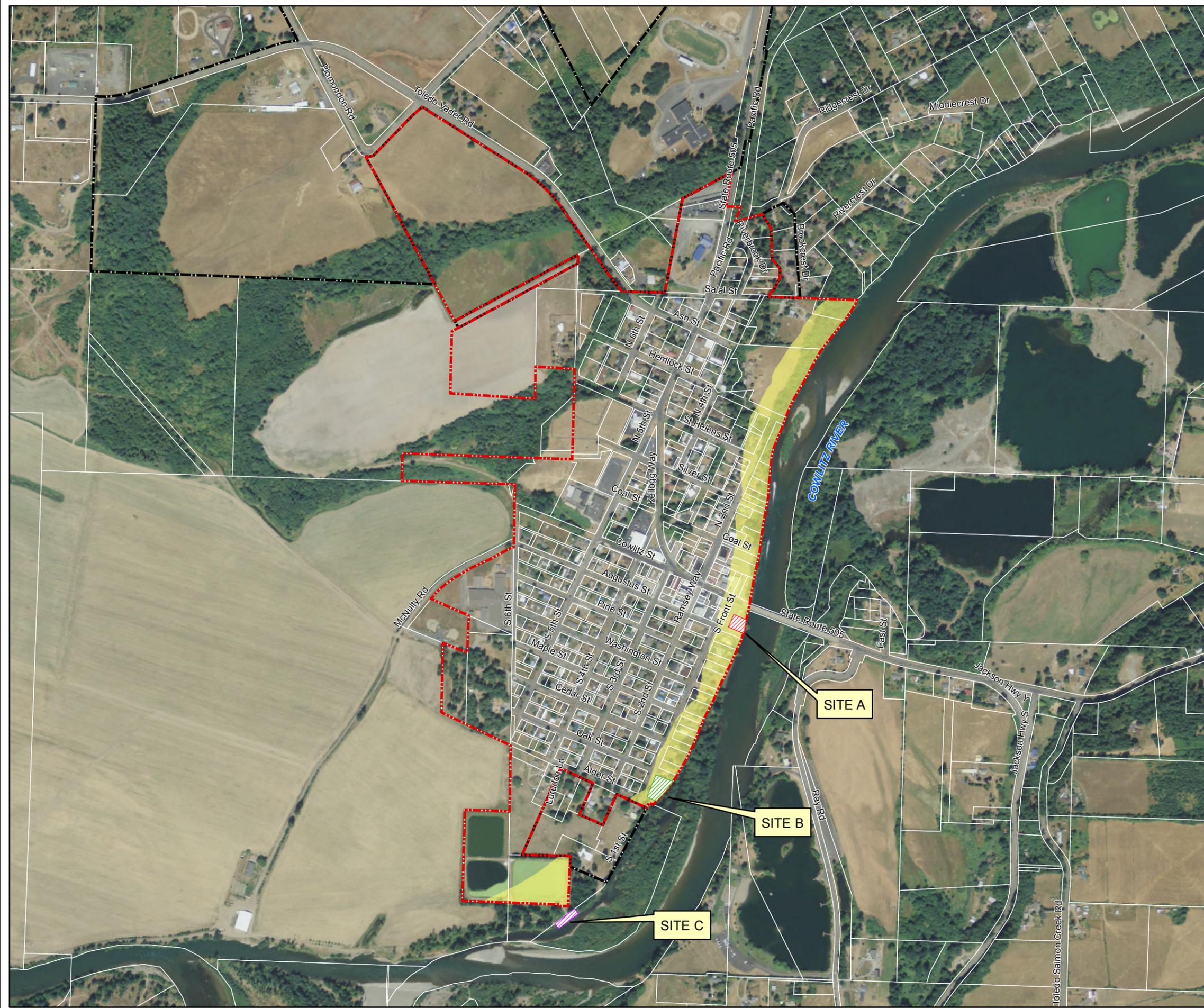
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**Legend**

- URBAN CONSERVANCY ENVIRONMENT\*
- RESTORATION OPPORTUNITIES ON PRIVATE PROPERTIES
- SITE A (CITY PROPERTY)
- SITE B (CITY PROPERTY)
- SITE C (CITY PROPERTY)
- CITY LIMITS
- UGA LIMITS

\*INCLUDES PROPERTIES THAT INTERSECT THE 200' FLOODWAY BUFFER, THE 100 YEAR FLOODPLAIN AND THE 200' OHW BUFFER

**CITY OF TOLEDO**  
 MAP 1  
 POTENTIAL SHORELINE RESTORATION  
 PROJECTS

**Gray & Osborne, Inc.**