

NO NET LOSS REPORT  
**DOE Preliminary Draft**

City of Spokane Valley  
Shoreline Master Program Update

May 31, 2013

Prepared for:

City of Spokane Valley  
Community Development Department  
Spokane Valley City Hall  
11707 E. Sprague Ave., Suite 106  
Spokane Valley, Washington 99206

Prepared by:

URS Corporation  
111 S.W. Columbia, Suite 1500  
Portland, Oregon 97201-5814  
URS Project Number 36298174

# TABLE OF CONTENTS

---

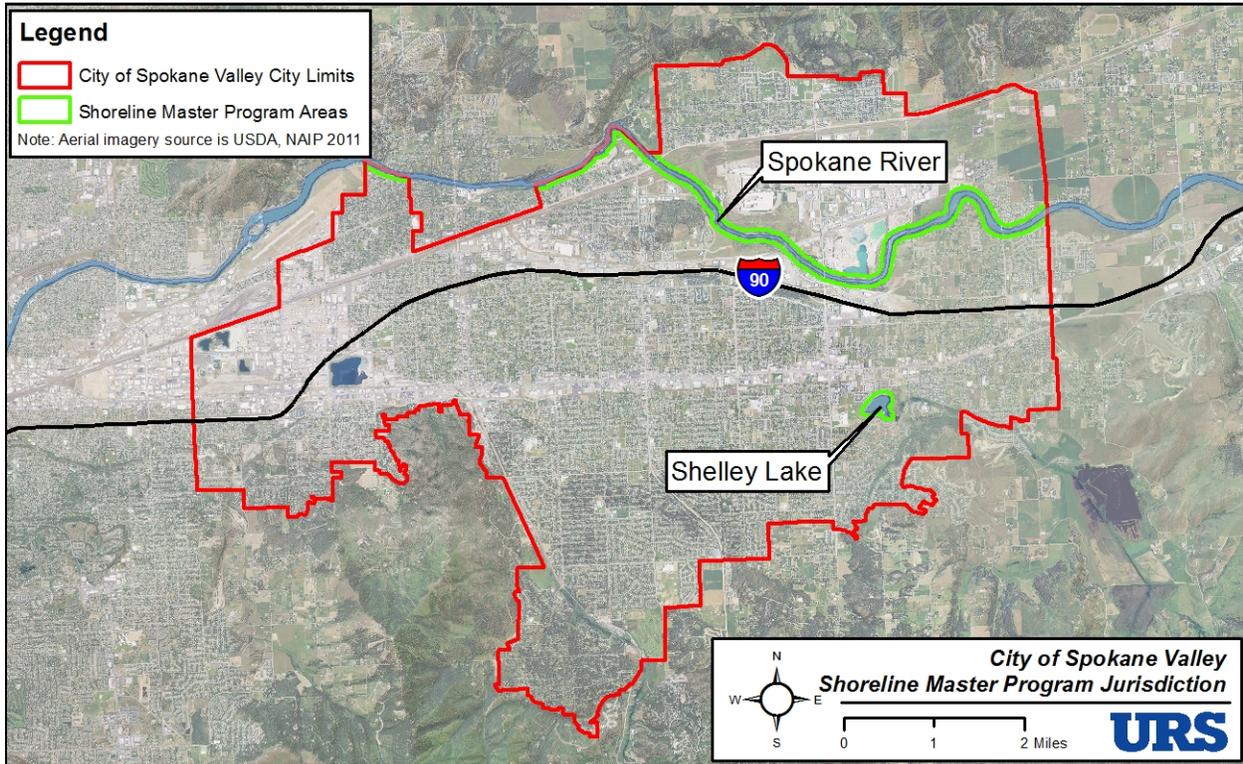
Section 1	Introduction.....	1
Section 2	Summary of SMP Update Elements .....	2
	2.1 Inventory and Characterization Report.....	2
	2.2 Shoreline Environmental Designations.....	3
	2.3 Shoreline Policies and Regulations.....	4
	2.4 Cumulative Impacts Analysis... ..	5
	2.5 Shoreline Restoration Plan.....	5
Section 3	Conclusion.....	6
Section 4	References .....	7

Washington Administrative Code (WAC) 173-26-186(8) directs that shoreline master programs (SMPs) include policies and regulations designed to achieve no “net loss of ecological functions of the shoreline”. Generally, ecological functions of the shoreline include interrelated fish and wildlife habitat, water quality, and hydrologic (water/flood storage) functions.

This No Net Loss report demonstrates how the updated City of Spokane Valley (City) SMP will meet this no net loss of ecological functions (NNL) requirement within shoreline areas under the jurisdiction of the Shoreline Management Act (SMA). Within the City municipal boundary, this includes the shorelines of the Spokane River and Shelley Lake (**Error! Reference source not found.** 1). This report is intended to summarize the following documents prepared throughout the current SMP update process to demonstrate how each supporting element combines to achieve NNL:

- Shoreline Inventory and Characterization
- Shoreline Use Analysis
- Shoreline Environmental Designations
- SMP policies, regulations, and their protection strategies
- Restoration Plan
- Cumulative Impacts Analysis

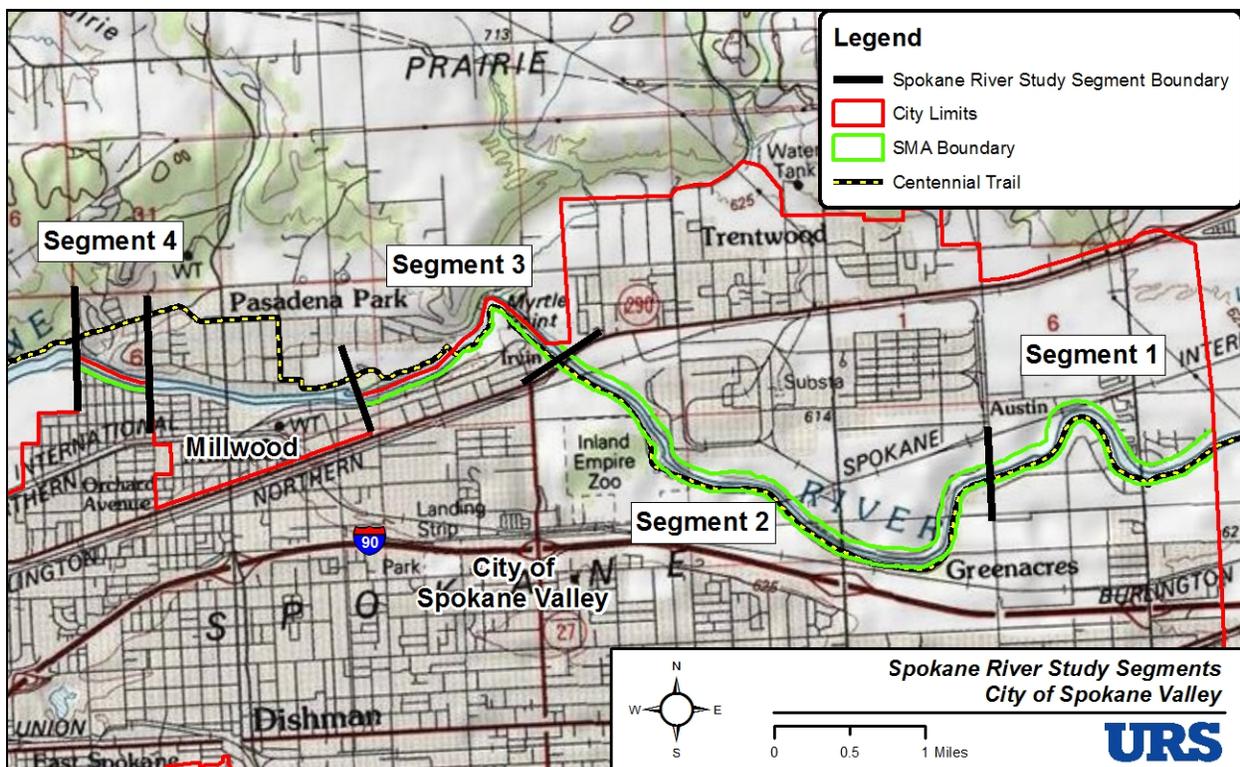
As a summary of these supporting documents, this report also provides a general chronology of the update with regard to the SMP checklist.



## 2.1 INVENTORY AND CHARACTERIZATION REPORT

For the SMP update, existing conditions are considered the baseline for measuring no net loss of ecological functions over the future, 20-year planning period. The Inventory and Characterization Report (URS 2010) describes the existing condition of shoreline areas along the Spokane River and Shelley Lake within City limits. The report divides the Spokane River into four study segments within the City based on unique factors including surrounding land uses, ecological characteristics, aquifer characteristics (gaining vs. losing), hydraulics, and substrate characteristics (Figure 2).

Within each segment, the report provides a detailed characterization of the land use, the physical and biological condition, as well as the ecological condition, stressors, and opportunities for restoration or conservation. To assess the current condition of shoreline ecological functions within each river segment and around Shelley Lake, information was gathered on rare plants, fish, impervious areas, degraded habitats, existing land uses, critical areas, soils, cultural/historic resources, sediment transport, vegetation, wildlife, and Priority Habitat and Species data.



Ecological condition was assessed for each shoreline study area and recommendations to achieve NNL were provided based on localized conditions. The ecological condition was based upon data gathered through literature review, communications with local experts, discussions with agency biologists, and field assessments conducted by URS in 2009 and 2010.

### Shoreline Use Analysis

The Inventory and Characterization Report also contains the Shoreline Use Analysis. This analysis discusses current shoreline uses within SMP jurisdictional areas. It estimates future demand for shoreline space, identifies potential land use conflicts, and provides management recommendations for the shoreline areas. The analysis also discusses the preferred shoreline uses (Water Dependent, Water Related, Water Enjoyment) identified in the SMP Guidelines (WAC 173-26-201(2)(d)).

Based on the estimate of projected shoreline uses and current land availability, the analysis concludes that the City should be able to accommodate future demand for shoreline development and recreational uses. In addition, because of the widespread state park land along the inner riparian areas, it appears that a balance of shoreline land uses (including recreation, residential, mixed use, and industrial) are adequate to meet current and future demands while maintaining valuable shoreline ecosystem functions.

A balance between future uses and ecological functions would occur by issuing shoreline substantial development or conditional use permits. Shoreline permits must meet SMP regulations designed to assure NNL and can impose conditions requiring native plant establishment or other ecological function enhancements. Similarly, future capital improvement projects undertaken by the City in shoreline zones can be tailored to fit the goals of public access, restoration of degraded shoreline habitats, and avoidance of high-quality riparian areas.

Finally, the Shoreline Use Analysis provides a discussion and recommendations for implementing the “preferential uses” for shorelines as outlined in RCW 90.58.020.

## 2.2 SHORELINE ENVIRONMENTAL DESIGNATIONS

Based on data gathered during the shoreline inventory, shoreline areas with similar characteristics are assigned a common Shoreline Environmental Designation (SED) that reflects unique land management goals and policies that are appropriate for the area. The SED is used during the shoreline planning review process as a zoning overlay, which provides additional land use approval considerations above those associated with the underlying zoning category.

The five SED categories are Urban-Conservancy-High Quality (UC-HQ), Urban Conservancy (UC), Shoreline Residential-Waterfront (SR-W), Shoreline Residential-Upland (SR-U), and Aquatic (AQ). The AQ SED applies to those areas below the ordinary high water mark for Waters of the State. Most of the Spokane River shoreline is designated as UC, including state park lands. The UC designation allows for conservation of near-shore habitat while allowing limited commercial and mixed use development within the outer portion of the SMP jurisdiction. Areas specifically identified as proposed conservation areas in the 2010 inventory were designated as UC-HQ. The AQ and UC-HQ designations allow for the least amount of habitat

alteration and generally focus on preservation and management of existing, high-quality riparian and aquatic habitat.

There are two Shoreline Residential designations. Each was developed to provide a means for allowing appropriate residential uses with regard to the proximity of the residential area to the waterline. For areas directly adjacent to the water, the SR-W designation addresses land uses along the water line that are not applicable to upland residential areas (SR-U).

These five SEDs protect, maintain, or restore ecological functions in higher quality shoreline habitat areas, while allowing certain appropriate uses in other shoreline areas.

## 2.3 SHORELINE POLICIES AND REGULATIONS

The updated SMP will include new shoreline policies and regulations that allow for a combination of appropriate development, conservation, and restoration activities. The SEDs would allow development at the outer periphery of the SMP jurisdiction within the Urban Conservancy and Residential SEDs while promoting the maintenance and enhancement of shoreline ecological functions within the inner, more sensitive shoreline areas in these SEDs, and within all areas designated as UC-HQ or AQ. Shoreline regulations are in addition to other state and federal environmental protection laws and locally adopted ordinances and rules, including the Spokane Valley Municipal Code, Spokane Valley Comprehensive Plan, and the Spokane Regional Stormwater Manual, as amended. Where conflicts exist between local regulations, those that provide more substantive protection to the shoreline area shall apply.

Updated SMP regulations include the following protections to shoreline ecological functions:

Shoreline Critical Areas Regulations – Additional regulations for uses and development within wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, and geologically hazardous areas provide protection over especially sensitive/vulnerable areas.

Mitigation Sequencing – Measures to avoid, minimize and, lastly, to mitigate impacts must be demonstrated prior to approval of a shoreline use.

Shoreline Vegetation Conservation Measures – For most projects proposing vegetation removal, vegetation conservation measures ensure that vegetation within the shoreline jurisdiction is protected and/or restored when damaged or removed by development activities.

Buffers and Setbacks – Shoreline buffers protect the shoreline environment by limiting development and use within a reasonable distance from the shoreline, ensuring no further degradation of the existing shoreline environment. Shoreline buffers are synonymous with the vegetation conservation boundary identified in the shoreline inventory. As such, building setbacks ensure that impacts to riparian habitat functions associated with development and maintenance activities near the vegetation conservation boundary are minimal.

Restrictions on Shoreline Stabilization Measures – Proposed regulations encourage the use of nonstructural shoreline stabilization measures instead of structural shoreline stabilization measures. New structural stabilization measures require a Shoreline Conditional Permit.

## 2.4 CUMULATIVE IMPACTS ANALYSIS

The intent of the Cumulative Impacts Analysis was to ensure that SEDs and proposed SMP regulations are protective of shoreline functions even when considering incremental actions that cumulatively have the potential to negatively impact those functions.

The initial draft of the analysis determined that draft regulations were generally protective of net shoreline ecological functions, but that opportunities for minor changes to the regulations would help ensure NNL of functions. As a result, the regulations were slightly altered to ensure adequate protections and the cumulative impacts analysis conclusions were revised to document NNL of ecological functions due to cumulative impacts.

## 2.5 SHORELINE RESTORATION PLAN

Based on shoreline observations, existing natural resource assessments, and watershed plans, a list of “limiting factors” were identified in the City’s shoreline Inventory and Characterization Report (URS 2010). Limiting factors are variables that impair ecosystem processes and limit the capacity of ecological functions. Limiting factors within the City include dissolved metals (contamination), high summer water temperature, areas lacking riparian cover, lack of lake-fringe vegetation, presence/spread of noxious vegetation, low dissolved oxygen, lack of fish passage, and low summer flows.

The Shoreline Restoration Plan (URS 2012) describes existing and ongoing projects and programs that can guide or support restoration efforts in the City to address these limiting factors and improve ecological functions. Additionally, 40 site-specific restoration opportunities were identified in the City’s shoreline areas. These restoration opportunities have the potential to increase ecological functions in specific shoreline areas. A priority scoring criteria was established and rated each restoration opportunity site on a scale from 0 to 25. The score illuminates restoration opportunities that are both practical to develop and result in the greatest benefit to shoreline functions. Each site’s impairments are also identified and a conceptual restoration approach is offered to correct the impairment.

The plan identifies many local organizations that could act as potential restoration partners to assist with restoration project funding, construction, and/or maintenance and monitoring. The plan also presents an implementation plan, which offers several potential funding sources, a timeline with benchmarks, as well as a monitoring and maintenance plan.

Upon review of the baseline conditions and ecological issues identified in the Inventory and Characterization Report, the current and projected future uses described in the Shoreline Use Analysis, the proposed shoreline environmental designations and protective regulations, and the opportunities for ecological improvements presented in the Restoration Plan, the City is expected to achieve NNL of ecological function in their SMP jurisdictional areas.

Measuring NNL in future years may be accomplished by focusing on specific factors that currently limit shoreline ecological functions, per the Inventory and Characterization Report and the Shoreline Restoration Plan. An example of metrics that can be used to monitor change is provided in Table 1 below.

**Table 1: Metrics for Measuring No Net Loss**

Limiting Factor	Data Source	Measurement
Dissolved metals	Water quality sample data from ongoing water testing	Various dissolved metal concentrations at fixed locations, especially known “hot spots” over time
High summer water temperature	Temperature/stream gauge	Change in monthly average or maximum temperature over time <u>or</u> increases in riparian cover
Areas lacking riparian cover	GIS mapping from Inventory and Characterization	Riparian cover measurements on aerial photographs relative to the current riparian area map layer
Lack of lake-fringe vegetation	Aerial photos/ direct estimates	Currently majority of lake draw-down zone is sparsely vegetated or un-vegetated so ocular estimates of cover in future years, from direct observation or aerial photo review, can be used to note increased cover over time
Presence/spread of noxious weeds	Weed maintenance records	Due to a lack of percent cover data for baseline conditions, cover and spread of noxious weeds can be estimated based upon the regularity of ongoing routine maintenance. Decreased efforts may infer an increase.

Spokane County Conservation District (SCCD). 2005. Spokane County Proper Functioning Condition Stream Inventory & Assessment. Spokane, WA.

URS Corporation. 2010. City of Spokane Valley Shoreline Master Program Update, Shoreline Inventory and Characterization Report. Spokane Valley, WA.

URS Corporation. 2012. City of Spokane Valley Shoreline Master Program Update, Shoreline Restoration Plan. Spokane Valley, WA.