

# CLARK COUNTY COALITION SMP UPDATE

BATTLE GROUND | CAMAS | CLARK COUNTY | LA CENTER  
RIDGEFIELD | VANCOUVER | WASHOUGAL | YACOLT



## CLARK COUNTY SHORELINE MASTER PROGRAM UPDATE

Clark County  
Cumulative Impacts Analysis

Prepared for  
Clark County

February 2012





## 1.0 INTRODUCTION

The intent of this document is to summarize the evaluation of potential cumulative impacts to shoreline ecological functions that may occur as a result of implementing the Clark County Draft Shoreline Master Program (SMP) as it is currently proposed. This summary is based on the Clark County Coalition Draft Cumulative Impacts Analysis (Coalition Analysis), dated February 2012 and is integral to this analysis. This report first introduces the shorelines of the state that are located in unincorporated Clark County including its urban growth areas (UGA). Based on existing conditions, as documented in the Clark County Coalition Shoreline Inventory and Characterization Report (Coalition ICR) (ESA Adolfson, 2010), the ecological functions most at risk are identified. As part of this analysis “reasonable foreseeable development” is projected for unincorporated Clark County using assumptions from the Coalition Cumulative Impacts Analysis. The conclusion discusses potential cumulative impacts, if any, of the County’s Draft SMP on shoreline ecological functions.

## 2.0 INVENTORY AND CHARACTERIZATION

The Coalition ICR (ESA Adolfson, 2010) identifies existing conditions and assesses the ecological functions and processes in the County’s shoreline jurisdiction. The inventory includes all shoreline areas; both incorporated and unincorporated areas within Clark County.

### 2.1 Shorelines of the State

The SMA shorelines of Clark County span the mountainous regions and foothills, through the broad terraces, and down into the floodplain of the lower Columbia River. The ICR identifies existing conditions and evaluates the ecological functions and processes within the County’s shoreline jurisdiction. There are a total of 283 miles of shoreline within unincorporated Clark County (excluding cities and urban growth areas). These shoreline miles include 214 stream miles and 70 miles of lakeshore. Of these, approximately 66 miles of county shorelines are identified as shorelines of statewide significance. Shorelines of statewide significance include the Columbia and Lewis Rivers; portions of the East Fork Lewis and Washougal Rivers, and Merwin and Yale Lakes.

### 2.2 Ecological Functions

Based on the findings of the Coalition ICR (ESA Adolfson, 2010), ecological functions most at risk due to land disturbing activities in the County’s shorelines include:

- Riparian and shoreline habitat;
- Associated wetlands;
- Priority habitats and species in the Columbia River and its floodplain;
- River/floodplain connectivity; and
- Salmon spawning and rearing habitat.
- Salmonid passage and migration;

## **2.3 Management Recommendations**

During the development of the Coalition ICR, an initial set of general management recommendations were generated in response to the findings about shoreline functions for each of the SMA waterbodies in the County. These management recommendations provided guidance to the Coalition as they moved forward in their SMP update process of developing goals, policies, and regulations. For Clark County waterbodies, these general recommendations are summarized below. For additional discussion and detail please refer to the Coalition ICR.

### **2.3.1 Vegetation Management**

- Riparian areas and vegetation conservation zones should be restored to remove non-native and invasive plant species. Native trees and shrubs should then be planted. Salmon habitat is supported by riparian zones that contain native trees and shrubs, which provide food sources, shading and large woody debris to lakes, rivers and streams.
- Vegetation conservation measures and setbacks and buffers from the ordinary high water mark should be required for all future development along shorelines.
- Prevent the introduction of non-native invasive species and encourage rapid eradication. Develop an invasive plant inventory to track changes and prioritize areas for eradication.

### **2.3.2 Program Considerations**

- Consider the importance of confluence areas (areas where tributaries join the mainstem Columbia River) for juvenile salmonid rearing when developing goals, policies, and regulations.
- Regulatory language should be written in a manner that is easy to understand and provides options for compliance.
- Develop an implementation, monitoring and adaptive management plan at the county level in order to track changes in the shoreline jurisdiction and determine successes, failures and corrective actions.
- Consider improving the shoreline permitting process to ensure adequate review of impacts, public noticing, compliance with regulations and agency coordination.
- Consider developing an inventory of archaeological sites that contribute to the history and understanding of past human activities in Clark County.

### **2.3.3 Development Regulations – Hard Armoring**

- Consider regulations that encourage and facilitate levee setback projects (e.g., pulling back an existing levee to allow for a larger floodplain area contiguous to a waterbody) and other shoreline enhancement projects.

- Consider requirements for soft-shore bioengineering techniques where new armoring or retrofits cannot be avoided.
- Consider alternatives to new armoring such as setbacks and vegetated riparian zones. New developments should be located on the property in such a manner as to not require shoreline armoring in order to protect the primary structures.

### **2.3.4 Development Regulations – Overwater Structures**

- Consider size limitations for overwater structures, including new docks, piers or floats.
- Consider joint-use docks prior to construction of single-use residential docks to minimize dock proliferation and shading impacts.

### **2.3.5 Development Regulations – Mitigation**

- Consider requirements for new development to provide an analysis during permit approval of existing and newly proposed impacts to the site-specific ecological functions and values in order to focus and improve the effectiveness of any required mitigation.
- Require mitigation sequencing according to the shoreline guidelines. Project designs should demonstrate avoidance and minimization, prior to compensatory mitigation or replacement of functions.
- The goal of mitigation is no net loss of shoreline ecological functions from the baseline condition established in the ICR.
- Consider requiring public access that is commensurate with the scale and character of future development and avoids adverse effects on the natural shoreline character and functions.

## **2.4 Shoreline Use Analysis**

Agriculture occurs throughout the central and western portions of the county. Agricultural uses are concentrated in the floodplain areas surrounding Vancouver Lake, in the Lacamas Creek and Fifth Plain Creek area and along the East Fork Lewis River, Salmon Creek and their tributaries. Forestry occurs in the upper watershed generally in the foothills. Land uses within the unincorporated shoreline planning areas in Water Resource Inventory Area (WRIA) 27 are mainly vacant lands (30 percent), managed forest resource lands (28 percent), and single-family residential (27 percent). Land uses within shoreline planning areas in WRIA 28 are mainly vacant lands (35 percent) and single-family residential (30 percent), along with mobile homes (11 percent). Commercial and industrial uses are concentrated in the port areas near the cities and represent two percent of land use in shoreline planning areas of WRIA 27 and six percent in WRIA 28.

Parcels identified as vacant generally indicate that no structural improvements have been made or assessed for taxes on the property. “Vacant” parcels may not always accurately reflect current

conditions (such as properties developed for vehicle parking or material storage, or properties that are protected open space).

### 3.0 SHORELINE DESIGNATIONS

Shoreline Designations (SDs) were developed based on a review of the Coalition ICR, biological and physical characteristics of the shoreline, existing development patterns, and the goals and aspirations of the community as expressed through the Clark County Comprehensive Growth Management Plan. The County was also directed by the definitions in Washington State's Shoreline Guidelines (WAC 173-26-211). The specific methodology by which the designations were established is described in the Coalition Draft Cumulative Impacts Analysis report as well as the Shoreline Designation Rationale Memo, Appendix B of the County's Draft SMP. The seven designations that are proposed in the County Draft SMP include the following:

1. **Aquatic** – The purpose of this designation is to protect, restore, and manage the unique characteristics and resources of in-water areas and submerged lands. This designation is applied to all lands waterward of the OHWM.
2. **Natural** – The purpose of this designation is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use.
3. **Urban Conservancy** – The purpose of this designation is to protect and restore ecological functions of open space, floodplains, and other sensitive lands, where they exist in urban and developed settings, while allowing a variety of compatible uses. This designation is applied in UGA areas only.
4. **Medium Intensity** – The purpose of this designation is to accommodate primarily residential development and appurtenant structures as well as provision of appropriate public access and recreational uses. This designation is applied in UGA areas only.
5. **High Intensity** – The purpose of this designation is to provide for high-intensity water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded. This designation is applied in UGA areas only.
6. **Rural Conservancy – Resource Lands** – The purpose of this designation is to protect ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain processes, and provide recreational opportunities. Examples of uses that are appropriate in a Rural Conservancy Resource Lands shoreline designation include low-impact outdoor recreation uses, timber harvesting on a sustained-yield basis, agricultural uses, and other natural resource-based uses.
7. **Rural Conservancy – Residential** – The purpose of this designation is to protect ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain

processes, and provide recreational opportunities. Examples of uses that are appropriate in a Rural Conservancy Residential shoreline designation include low-impact passive recreation uses, water-oriented commercial development, and low-intensity residential development where one single-family house is allowed on lots ranging from 2.5 to 20 acres in size.

## **4.0 SHORELINE MASTER PROGRAM**

### **4.1 Goals and Policies**

The County Draft SMP has goal statements and policies for general and specific shoreline developments, modifications and uses (see Chapter 3 of the Draft SMP). Goals and policies were developed based on the state's shoreline guidelines, the Shoreline ICR, Clark County Coalition SMP Update Management Strategy, input from the general public, and Clark County's Comprehensive Plan. New policies were developed that are unique to the Draft SMP. Policies that were included based on the Coalition ICR are intended to address the management recommendations and to ensure no net loss from baseline conditions.

### **4.2 Regulations**

The Clark County Draft SMP establishes regulations for general and specific shoreline developments, modifications and uses. The regulations are generally designed to improve protection of shoreline ecological functions and management of the resources identified in the Coalition ICR. Protective regulations in the draft SMP include, but are not limited to:

#### **4.2.1 Critical Areas**

- Reasonable use exceptions must be processed as a shoreline variance.
- If shoreline critical area impacts cannot be avoided, then mitigation must occur such that no net loss of shoreline ecological function is achieved.

#### **4.2.2 Water Quality**

- New development must meet current stormwater management standards; Best Management Practices must be used to control treatment and release of surface runoff; and erosion control methods must be used during construction and operation.
- Other regulations prohibit the use of herbicides, fungicides, fertilizers, and pesticides within 25 feet of a waterbody, except by a qualified professional in accordance with state and federal laws. In-water structures must be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term.

#### **4.2.3 Vegetation Conservation**

- Existing vegetation within shoreline jurisdiction must be retained in the riparian area closest to the waterbody landward from the OHWM within one hundred and fifty (150)

feet for Type S waters in rural areas and one hundred and fifteen (115) feet for Type S waters in urban growth areas.

- Removal of native vegetation must be avoided.
- Where removal of vegetation cannot be avoided, it must be minimized or mitigated at a minimum ratio of 1:1.
- There cannot be a net loss in ecological function of existing vegetated riparian areas.
- Topping trees is prohibited and pruning is only allowed in limited amounts.
- Developments must be located to avoid clearing and grading mature or multi-storied plant communities and to retain habitat connectivity.
- Habitat that cannot be replaced or restored within 20 years must be preserved.
- When restoring or enhancing vegetation, native species must be used.

#### **4.2.4 Structural Shoreline Stabilization**

- New hard armoring must obtain a conditional use permit and prove that soft-shore stabilization is not feasible.
- Proposed designs for new or expanded shore stabilization must be designed in accordance with applicable Ecology and WDFW guidelines; must use best available science; must document that alternative solutions are not feasible or do not provide sufficient protection; must demonstrate that future stabilization measures would not be required on the project site or adjacent properties; and be certified by a qualified professional.
- Subdivisions must be designed to assure that future development of newly-created lots will not require structural stabilization.
- Replacement of existing stabilization structures must demonstrate a need to protect existing primary structures or public facilities caused by stream undercutting or wave action. The existing structure must be removed from the shoreline and the new structure cannot encroach waterward of the ordinary high water mark.

## **5.0 RESTORATION PLAN**

A Clark County Coalition Draft Shoreline Restoration Plan was developed as part of the SMP update process (ESA Adolfson, 2011). Restoration opportunities were identified for all Coalition shorelines. The general priorities for shoreline restoration in the County have been consolidated in the Salmon-Washougal & Lewis Watershed Management Plan (LCFRB, 2006) and are supported in various other County plans. The priorities are:

1. Restore water quality in rivers and lakes. This will occur through implementation of Total Maximum Daily Load (TMDL) plans, point-source pollutant control, improved

stormwater management, and use of best management practices. Clark County's new Stormwater Management Plan (2010) states that reducing pollutants and contaminants in surface waters is one of the County's major objectives.

2. Manage stormwater runoff to protect stream flow and salmonid habitat. This restoration can be implemented through retrofits, low impact development measures, improvements to stormwater facilities, and other means. Where needed to protect key habitat, implement programs that exceed minimum requirements.
3. Protect floodplains from modification that would impair hydrologic functions or habitat.
4. Restore floodplain functions that have been degraded or damaged, where feasible, to improve hydrologic functions or habitat.
5. Restore wetlands in the shoreline jurisdiction to improve hydrologic conditions and enhance habitat.
6. Protect and restore important habitats for key salmonid species and support regional efforts for salmonid recovery. This includes protection and restoration for Tier 1 and 2 streams as identified by EDT modeling.
7. Restore and revegetate lake, river and stream riparian zones to improve habitat conditions for fish and wildlife and eliminate non-native invasive plants.

## **6.0 CUMULATIVE IMPACTS ASSESSMENT**

A preliminary cumulative impact assessment was developed on the March 2011 version of the Clark County Coalition Draft SMP. A preliminary finding of potential net loss was determined. In response, the Coalition staff with input from citizens and advised by the Shoreline Stakeholder Advisory Committee, Technical Advisory Committee and Independent Science Review Panel, re-examined and changed several of the designations placed on specific shoreline reaches, revised regulations associated with specific use allowances, dimensional standards, such as structure setbacks, and vegetation conservation provisions for each of their individual Programs.

Subsequently, cumulative impact assessments were conducted on the June 2011 versions of Coalition member's individual Draft SMPs. The June 2011 Coalition Draft Cumulative Impacts Analysis concluded that cumulative impacts would be minimal to moderate and identified several areas with potential for loss of shoreline ecological function. The document provided four concepts for re-evaluation to help offset the potential for loss.

In response, Clark County revised several provisions in their Draft SMP which was locally adopted on November 22, 2011. Modification to the shoreline designation maps to finalize the County's shoreline jurisdiction were approved on February 14, 2012. Following the changes to Clark County's SMP, the Coalition Draft Cumulative Impacts Analysis (now dated February, 2012) was updated to reflect Coalition member changes to date. It provides additional detail by waterbody and shoreline designation on the following: current shoreline ecological functions, foreseeable development, SMP and other protective provisions, and assessment of future performance.

## 6.1 Reasonably Foreseeable Future Development

The table below shows the amount of shoreline properties (both in acres and percent) located in unincorporated Clark County, outside urban growth areas. Most shoreline properties are classified as *residential vacant*, *residential built*, *public lands* and *tax exempt*. There are no properties classified as commercial and very few classified as industrial. The numbers in acres and percentages presented in this document have been updated from the June 2011 version of this report due to changes in city UGA boundaries, revisions to shoreline designations maps, and other refinements to the data.

**Table 6-1. Distribution of Shoreline Properties in Clark County (Outside Urban Growth Areas)**

Cumulative Impact Analysis Categories		Acres	Percentage
Commercial	Built	0	0%
	Underutilized	5	0%
	Vacant	0	0%
Industrial	Built	0	0%
	Underutilized	0	0%
	Vacant	7	0%
Residential	Built	4,446	20%
	Underutilized	1,508	7%
	Vacant	7,865	36%
Public lands		3,660	17%
Tax Exempt lands		4,431	20%
<b>Total acres in shoreline jurisdiction</b>		<b>21,922</b>	<b>100%</b>

\*All values used in this table have been rounded up.

Based upon an analysis of reasonably foreseeable future development using a build-out scenario, it was determined that 99 percent of the vacant lands within the County's SMA shoreline jurisdiction outside UGAs are residential lands. A very small percentage (less than 1%) of the vacant shorelands in the County is industrial or commercial. Thirty-five percent of all shorelands in the County are vacant but designated residential. According to the density allowed by the underlying zoning, residential vacant lands have the potential to develop with an additional 394 units in unincorporated Clark County outside UGAs. However, this value does not take into account the percent of land that would be constrained by critical areas, the percent of land necessary to build supporting infrastructure (roads, stormwater ponds, septic drain

fields), and the likelihood of actual development in the next 20 years (typically referred to as the market factor). (As an example, in the 2007 Buildable Lands Report for King County and its cities, local governments deducted 20-25% of the gross available single family residentially zoned acres for critical areas, discounted 12-13% of the remaining acreage for infrastructure, and further discounted 14-18% of remaining acreage for market factor [properties unavailable for development]. This resulted in nearly half of the available gross acreage being deducted or discounted in order to forecast for buildable lands. These deductions had been validated by analysis of actual development since 2002.) Therefore, the number of potential future residential units depicted in this document for Clark County is higher than would likely occur. The purpose of over-estimating development on vacant lands in this manner is to determine impact on ecological functions under a high-impact scenario.

In addition to the reasonably foreseeable future development in Clark County, discussed above, development is more likely to occur in urban growth areas. The following table shows the distribution of shoreline properties in Clark County within the urban growth areas of Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal and Woodland.

**Table 6-2. Distribution of Shoreline Properties in Clark County (Urban Growth Areas Only)**

<b>Cumulative Impact Analysis Categories</b>		<b>Acres</b>	<b>Percentage</b>
Commercial	Built	3	0%
	Underutilized	28	1%
	Vacant	11	0%
Industrial	Built	4	0%
	Underutilized	17	1%
	Vacant	48	2%
Residential	Built	145	5%
	Underutilized	250	9%
	Vacant	200	7%
Public lands		1,942	72%
Tax exempt lands		66	2%
<b>Total acres in shoreline jurisdiction</b>		<b>2,714</b>	<b>100%</b>

\*All values used in this table have been rounded up.

With the density allowed in accordance with the underlying zoning, there is the potential for an additional 773 units on vacant residential lands within the urban growth areas of Clark County. Table 6-3 shows the distribution of residential units by urban growth area. Due to its large size, Vancouver’s UGA contains 89% of the likely new residential development in the County’s UGA in the foreseeable future. Potential residential units are unlikely to occur in Ridgefield’s urban growth area since there are no shorelands classified as vacant residential lands. Similarly, Woodland’s urban growth area is unlikely to develop with new residences since the shorelands are classified as exempt lands.

**Table 6-3. Distribution of Shoreline Properties in Clark County (Urban Growth Areas only)**

Urban Growth Area	Potential Number of Residential Units	Percentage
Battle Ground UGA	29	4%
Camas UGA	21	3%
La Center UGA	26	3%
Ridgefield UGA	n/a	0%
Vancouver UGA	689	89%
Washougal UGA	9	1%
Woodland UGA	n/a	0%
<b>Total</b>	<b>773</b>	<b>100%</b>

\*All values used in this table have been rounded up.

For a more detailed discussion of reasonably foreseeable future development within urban growth boundaries and city limits and a summary of potential cumulative impacts on shoreline ecological functions, see the Draft Cumulative Impacts Analysis for each Coalition member city.

## 7.0 CONCLUSION

The baseline conditions of ecological functions and processes in the Coalition ICR were used as the basis for decisions made throughout the County’s SMP update process. The inventory was integral to the development of the shoreline designations, informed goal and policy development, led to the establishment of protective regulations, and shaped the conclusions of this cumulative impacts analysis. All components of the Coalition’s Cumulative Impacts Analysis (February 2012) are also applicable to this analysis of the County’s Draft SMP unless otherwise stated in this report.

Clark County responded to several of the recommendations from the June 2011 Cumulative Impacts Analysis to ensure that potential incremental impacts of exempt activities, illegal

actions, and ongoing degradation do not lead to loss of shoreline ecological functions. Specifically, the following actions identified in italics were recommended in the June 2011 Cumulative Impacts Analysis. The County's responses to these recommendations in the November 2011 SMP are summarized in the boxed text below:

- *Establish a standard review process for shoreline exemptions to assure that single-family residential and associated exempt activities meet the goals and standards of the program. Since the majority of development is anticipated to be single-family residential, a formal process for single-family residential development is needed to reduce cumulative impacts.*

**Response:** The County addressed this issue in the November 2011 SMP by requiring a Statement of Exemption for any project claiming exemption from the shoreline substantial development permit process. Language in the SMP clarifies that conditions or mitigating measures may be required for exempt development and activities to achieve consistency and compliance with the provision of this program and the SMA.

- *Establish a countywide shoreline restoration program to restore degraded habitats in the shoreline. Use of countywide shoreline restoration to offset cumulative impacts is allowed and encouraged by the shoreline guidelines. Incorporate opportunities identified in the Coalition Restoration Plan specifically focused on the following.*
  - *Revegetation of degraded riparian zones;*
  - *Enhancement of degraded wetlands; and*
  - *Preservation of associated wetlands and floodplains through purchase of lands.*

**Response:** The County continuously undertakes restoration projects on a countywide basis, particularly through its Stormwater Needs Assessment Program under the Department of Environmental Services. Education, monitoring, and enforcement are significant elements of the Department's mission. The County will continue to emphasize restoration actions in the shorelines as part of these existing programs.

Based on the existing ecological functions of County shorelines and the anticipated low levels of foreseeable future development along shorelines located outside urban growth areas, ESA has determined that cumulative impacts on shoreline ecological functions are not likely under Clark County's November 2011 locally adopted SMP. The combination of existing regulations; the protective measures outlined in the adopted SMP, including protections for critical areas, vegetation conservation areas, uses and modification standards; and continued commitment to the restoration plan, will all serve to maintain shoreline ecological functions in Clark County.

## 8.0 REFERENCES

LCFRB (Lower Columbia Fish Recovery Board). 2006. Salmon-Washougal and Lewis Watershed Management Plan.

Clark County Public Works Clean Water Program. 2010. Clark County Stormwater Management Plan 2010.