

State Environmental Policy Act (SEPA) WAC 197-11-340(4) Threshold Determination of Non-Significance (DNS)

Project Name: Okanogan County Shoreline Master Program

Project Summary:

Proponents: Okanogan County Planning **Agent:** N/A
123 5th Ave N. Suite 130
Okanogan, WA 98840

Project Description:

Okanogan County Department of Planning & Development has prepared an environmental checklist for proposed revisions to the Okanogan County Shoreline Master Program. A 30 day comment period on the proposed revisions and environmental documents has been ordered as noted below.

Having reviewed the revised Shoreline Master Program and comparing it with the old program, it is the determination of the SEPA Responsible Official that the changes in the new program do not create a reasonable probability of more impact on the environment. For that reason the Determination of Significance issued on January 14, 2009 was withdrawn by the SEPA responsible official on May 14, 2014 and has been replaced with this Determination of Non-Significance in accordance with WAC 197-11-360(4).

A copy of the Draft Shoreline Master Program and amended checklist supporting the determination can be found at www.okanogancounty.org/planning/index.html.

Threshold Determination:

DNS - The Okanogan County Office of Planning & Development issued a Threshold Determination of Non-Significance in accordance with WAC 197-11-340(4), identifying the proposal would not have a probable significant, and adverse environmental impact..

MDNS - The Okanogan County Office of Planning & Development issued a Threshold Mitigated Determination of Non-Significance in accordance with WAC 197-11-350, identifying this proposal would not have probable, significant, and adverse environmental impact if mitigation measures are imposed.

DS - The Okanogan County Office of Planning & Development made a Threshold Determination of Significance in accordance with WAC 197-11-360, identifying this proposal would have a probable, significant, and adverse environmental impact.

Comments must be made in writing or electronically to the Okanogan County Office of Planning & Development, 123 5th Ave N Ste. 130, Okanogan, WA 98840, or phuston@co.okanogan.wa.us no later than **March 5, 2015**. The date of publication in Okanogan County's legal periodical of record is February 04, 2015.

Administrative Approval:

Lead Agency: Okanogan County
Responsible Official: Perry Huston
Position/Title: Planning Director
Phone: (509) 422-7160
Address: 123 5th Avenue North, Suite 130
Okanogan, Washington 98840

Signature:

 1-28-15
Perry Huston, Director Date

SEPA ENVIRONMENTAL CHECKLIST

UPDATED 2014

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants: [\[help\]](#)

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. background

1. Name of proposed project, if applicable:
Okanogan County Shoreline Master Program update
2. Name of applicant:
Okanogan county

3. Address and phone number of applicant and contact person

Okanogan county,
Angela Hubbard
Office of Planning and Development
123 5th ave N. suite 130
Okanogan, Washington 98840
509-422-7160

4. Date checklist prepared:

January 5, 2015

5. Agency requesting checklist:

Okanogan County

6. Proposed timing or schedule (including phasing, if applicable)

SEPA Review and planning Commission Review-February 2015
Board of County Commissioner Review March/April 2015
WDOE review -June 2015.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

This checklist, the supplementary non project materials attached and referenced studies.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain

10. List any government approvals or permits that will be needed for your proposal, if known.
Board of County Commissioner adoption and WDOE approval are required to put the program in place.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The shoreline Master program is a legislative program regulating shorelines of the state in Okanogan County under Chapter 90.58 RCW and Chapters 173-26 WAC.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or

boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.]

SHORELINE REGULATORY MAPS ARE FOUND AT APPENDIX D AND ARE ATTACHED TO THE PROPOSED MASTER PROGRAM.

B. ENVIRONMENTAL ELEMENTS

Because the program is legislative and affecting all shorelines in the county parcel specific are not pertinent. See supplemental information for nonproject actions attached.

1. Earth

See supplemental information for nonproject actions attached.

a. General description of the site

(circle one): Flat, rolling, hilly, steep slopes, mountainous,
other _____

b. What is the steepest slope on the site (approximate percent slope)?

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

2. Air

See supplemental information for nonproject actions attached.

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

3. Water

See shoreline regulatory maps as part of the proposed master program and supplemental information for nonproject actions attached.

a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the

number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
- 2) Could waste materials enter ground or surface waters? If so, generally describe.
- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

4. Plants]

See supplemental information for nonproject actions attached.

a.

Check the types of vegetation found on the site:

- ___deciduous tree: alder, maple, aspen, other
- ___evergreen tree: fir, cedar, pine, other
- ___shrubs
- ___grass
- ___pasture
- ___crop or grain
- ___ Orchards, vineyards or other permanent crops.
- ___ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ___water plants: water lily, eelgrass, milfoil, other
- ___other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

c. List threatened and endangered species known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

e. List all noxious weeds and invasive species known to be on or near the site.

5. Animals

See supplemental information for nonproject actions attached.

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

- b. List any threatened and endangered species known to be on or near the site.

- c. Is the site part of a migration route? If so, explain.

- d. Proposed measures to preserve or enhance wildlife, if any:

- e. List any invasive animal species known to be on or near the site.

6. Energy and natural resources

See supplemental information for nonproject actions attached.

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

7. Environmental health

See supplemental information for nonproject actions attached.

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

- 1) Describe any known or possible contamination at the site from present or past uses.
- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.
- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

- 4) Describe special emergency services that might be required.
- 5) Proposed measures to reduce or control environmental health hazards, if any:

b. Noise

See supplemental information for nonproject actions attached.

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site
- 3) Proposed measures to reduce or control noise impacts, if any:

8. Land and shoreline use

See supplemental information for nonproject actions attached.

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.
- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?
 - 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:
- c. Describe any structures on the site.
- d. Will any structures be demolished? If so, what?
- e. What is the current zoning classification of the site?

See current Comprehensive plan update maps and proposed interim zones.
- f. What is the current comprehensive plan designation of the site?
- g. If applicable, what is the current shoreline master program designation of the site?

See current Master program and related maps.
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
- i. Approximately how many people would reside or work in the completed project?

- j. Approximately how many people would the completed project displace?
- k. Proposed measures to avoid or reduce displacement impacts, if any
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

9. Housing

See supplemental information for nonproject actions attached.

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
- c. Proposed measures to reduce or control housing impacts, if any:

10. Aesthetics

See supplemental information for nonproject actions attached.

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
- b. What views in the immediate vicinity would be altered or obstructed?
- c. Proposed measures to reduce or control aesthetic impacts, if any:

11. Light and glare

See supplemental information for nonproject actions attached.

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
- c. What existing off-site sources of light or glare may affect your proposal?
- d. Proposed measures to reduce or control light and glare impacts, if any:

12. Recreation

See supplemental information for nonproject actions attached.

- a. What designated and informal recreational opportunities are in the immediate vicinity?
- b. Would the proposed project displace any existing recreational uses? If so, describe.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

13. Historic and cultural preservation

See supplemental information for nonproject actions attached.

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.
- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

14. Transportation

See supplemental information for nonproject actions attached.

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.
- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?
- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.
- h. Proposed measures to reduce or control transportation impacts, if any:

15. Public services

See supplemental information for nonproject actions attached.

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.
- b. Proposed measures to reduce or control direct impacts on public services, if any.

16. Utilities

See supplemental information for nonproject actions attached.

- a. Circle utilities currently available at the site:
 electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
 other _____
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Angela Hubbard

Name of signee Angela Hubbard

Position and Agency/Organization Natural Resource Planner II Okanogan County

Date Submitted: 01/28/15

D. supplemental sheet for nonproject actions [\[help\]](#)

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

See attached Part II

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

PART II – IMPACT ANALYSIS AND ALTERNATIVES

I. Natural Environment

a. Earth Geology, Soils,

Topography, Unique physical features, Erosion/enlargement of land area

Considerations

i. character and quality of ecosystem,

The county had extensive analysis of existing conditions and the character and quality of the ecosystem. These studies are provided in the volume entitled Okanogan County Shoreline Characterization (ENTRIX, November 20, 2008) Incorporated as an appendix to this assessment. The studies were used to identify natural areas deserving of significant protection and a series of other alternative designation based on location and condition allowing appropriate use of the County shorelines, all subject to the overarching “No Net Loss” requirements of RCW 336.70A.480(4) which is a requirement for all new shoreline development or redevelopment.

ii. existing trends,

The County Comprehensive plan, chapter II identifies a very slow growth pattern for the County. As such there has been very slow demand for shoreline substantial development permits in the County (__ 18 __ in the past five years).

Water resources are used for agriculture which is a significant economic activity and important to preserve for the valley; and for recreation which is another growing economic activity in the county. Both the Methow River system and the Okanogan river system are under WRIA controls adopted by WDOE in chapters 173-548 and 549 WAC. .

iii. infrastructure,

Many State and County Roads abut river and some lake shorelines which may be repaired or modified with appropriate controls under the planned program. Public and private access to shorelines, where appropriate are controlled by permits relating to docks and shoreline protection and relating activities.

iv. service levels,

No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to education and health) are anticipated to be adversely affected by the changes in this plan.

b. Air

Air quality, Odor, Climate

i. character and quality of ecosystem,

Okanogan County generally has good air quality except when there are large fires which bring smoke to the Valleys, or when temperature inversions warrant temporary limits on burning and wood stoves. The master program changes are not expected to change air quality.

ii. existing trends,

Due to the very slow growth in the county and on county shorelines no significant changes are anticipated in air quality odor or climate. .

iii. infrastructure,

The proposed master program does not impose any identifiable significant impact to existing infrastructure. New infrastructure affecting shorelines requires review and consistency with the master program whether or not a permit is required.

iv. service levels,

No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to education and health) are anticipated to be adversely affected by the changes in this plan

c. Water

Surface water movement/quantity/quality, Runoff/absorption, Floods

i. character and quality of ecosystem,

The character and quality of the county shoreline systems has been characterized in the Entrix study (Appendix A) Due to the very slow growth in the county and on county shorelines no significant changes are anticipated in water quality or quantity as a result of shoreline related development due to the "no net loss" tests for compliance, whether or not a permit is required.

ii. existing trends,

Recent fires and the resulting loss of Ground cover over more than four hundred square miles in the Carlton complex and Hoot and Holler fires has resulted in and will likely continue to result in slides and mud flows into related rivers and streams, particularly in the Methow river system WRIA 48. Efforts are underway to support stabilization, particularly on highways 20 and 153, as well as planning programs to promote regrowth of damaged understory. The master program allows for restoration work in the shorelines where necessary (Section 14.15.240) The no net loss

requirement for all shoreline related development is designed to address water quantity and quality issues during any shoreline related development.

iii. infrastructure,

The proposed master program does not impose any identifiable significant impact to existing infrastructure. New infrastructure affecting shorelines requires review and consistency with the master program whether or not a permit is required

iv. service levels,

No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to education and health) are anticipated to be adversely affected by the changes in this plan

d. Plants and animals

Habitat for and numbers or diversity of species of plants, fish, or other wildlife, unique species, Fish or wildlife migration routes

i. character and quality of ecosystem,

The character and quality of the county shoreline systems has been characterized in the Entrix study (Appendix I) The county has identified "Natural Areas" where unique environmental conditions exist and conservancy designations where special care is warranted to protect the regulated shorelines. The Shoreline rivers in the County are home to endangered species (See Salmon recovery reports incorporated at Appendix II to this report.)

ii. existing trends,

Fish and wildlife reports show that salmon recovery projects are successful in the County shoreline streams and more habitat and habitat related projects are underway. The Master Program enables such programs to continue.

iii. infrastructure,

(See existing trends)

iv. service levels,

No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to education and health) are anticipated to be adversely affected by the changes in this plan. Hatcheries will continue to operate and may expand as necessary under this plan consistent with other regulations.

e. Energy and natural resources

Amount required/rate of use/efficiency, Source/availability, Nonrenewable resources, Conservation and renewable resources, Scenic resources

.i. character and quality of ecosystem,

The character and quality of the county shoreline systems has been characterized in the Entrix study (Appendix A) Due to the very slow growth in the county and on county shorelines no significant changes are anticipated in water quality or quantity as a result of shoreline related development due to the "no net loss" tests for compliance, whether or not a permit is required. Dams on the Columbia River are a dominant energy source. Okanogan County is affected by the pool behind Wells Dam. The master program does not indicate any material change in energy use by reason of the amended master p program, facilities to serve the dams or related transmission facilities are enabled in the master program consistent with compliance with other regulations. The PUD is seeking alternate lines to service the Methow and as utilities seek to expand services permits may be needed and are authorized with appropriate conditions where shorelines are entered or crossed.

ii. existing trends,

Very little energy growth or natural resource consumption is occurring in the shoreline area, and that is not expected to change by reason of the adoption of the new master program.

iii. infrastructure,

Very little energy growth or natural resource consumption is occurring in the shoreline area, and that is not expected to change by reason of the adoption of the new master program.

iv. service levels,

No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to education and health) are anticipated to be adversely affected by the changes in this plan.

Built Environment

a. Environmental health

Noise, Risk of explosion, Releases or potential releases to the environment affecting public health

Noise Risks and Releases are items which may arise during a project related review. The updated master program addresses trash, groundwater and stormwater discharge issues. The program provides regulatory controls sufficient to address these issues at the project level.

b. Land and shoreline use

Relationship to existing land use plans and to estimated population, Housing, Light and glare, Aesthetics, Agricultural crops

.,i. character and quality of ecosystem,

The character and quality of the county shoreline systems has been characterized in the Entrix study (Appendix A) this study was used to integrate the Shoreline master program designations with the County comprehensive plan. Where the shoreline master program is more restrictive the Master program will control.

ii. existing trends,

Population growth is expected to be very slow county wide with recreational use growing faster than full rime residential use with respect to shoreline areas. The designation system and permit requirements are in place to address development pressure which does arise. The Amended master program does permit subdivision in the shorelines which addresses housing related issues, (as allowed in all other counties) which is new for Okanogan County. The primary change is to promote individual ownership rather than group ownership of shorelines where responsibility is often difficult to assess, Setback/buffer, channel migration, flood hazard and no net loss requirements still apply and all development whether a permit is required or not must still meet all objectives of the master program so no material impact is anticipated by reason of the change. Agriculture is a priority use in the county and is permitted to continue in the shorelines, but expanded activities require review. Critical area issues are addressed through the Voluntary Stewardship program which the county has adopted.

There is very little new housing demand in the shorelines outside of the Suburban Residential district where the bulk of the existing county shoreline residential uses are accommodated.

Light and Glare, and Aesthetics have not been considered material issues in the County shorelines and may be addressed at the project level where one or the other may interfere with Critical areas or other program policies. A stand-alone new policy is not required at this time.

.iii. infrastructure,

Roads and bridges, utility infrastructure, boat launch, park and picnic areas and residential yards are the primary infrastructure on or near shoreline areas. No material increase in use are anticipated to result from the plan amendments and new facilities are encouraged to accommodate public access where appropriate, Any modifications to these areas and any increase to these areas must meet the requirements of the new plan.

iv. service levels,

New shoreline development is spread throughout the County and is viewed as within the range of overall anticipated growth for the county. No change to the levels of service for public service facilities and activities (from Sheriff and public safety, to public utility to education and health) are anticipated to be adversely affected by the changes in this plan.

c. Transportation

Transportation systems, Vehicular traffic, Waterborne, rail, and air traffic, Parking, Movement/circulation of people and goods, Traffic hazards

.The county transportation network is identified in the County Comprehensive plan. The proposed shoreline master program does not alter the County plan but does require permits and compliance when facilities on that plan are expanded or added in shoreline areas. No impact on Road rail or air traffic and related traffic accommodation issues anticipated by reason of the adopted master program. New roads are encouraged to be out of the shoreline where such alternate routes are feasible, but the Program recognized that major rail and highway corridors do parallel and or cross the Columbia, Okanogan and Methow Rivers and other water bodies in the County. . .

.Water borne commerce is primarily recreational as barges and commercial vessels do not come up the Columbia above the Hanford Reach and the Port of Benton County. Recreational use, from "floating" the smaller rivers, to fishing and boating on the larger rivers and lakes are all part of popular recreational uses. The purpose of the master program is to foster all appropriate access to shorelines for water dependent, water oriented and water enjoyment uses, consistent with environmental protection, and navigational interest. The amended Master program is designed to achieve that balance in Okanogan County.

d. Public services and utilities

Fire, Police, Schools, Parks and other recreational facilities, Maintenance, Communications, Water/storm water, Sewer/solid waste, other governmental services or utilities

Public and private Parks and recreational facilities frequently abut the shorelines of the state and are an integral part of the County public access program.

The master program is not anticipated to create any significant impact on Police, fire and schools. Maintenance of public facilities in shoreline areas is allowed as is expansion or new facilities to support increased use subject to permit and other regulations. The current shoreline master program has been in place for more than 40 years and no overall material impact is anticipated by reason of the changes. .

SEPA Nonproject Review Form

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The Nonproject Review Form (NPRF) is an optional tool to help the lead agency evaluate the environmental consequences of a nonproject proposal and to provide information to decision-makers and the public.

The NPRF cannot be used as a substitute for the environmental checklist, but may be attached as supplemental analysis. Applicable information in the NPRF can be referenced in the environmental checklist without having to repeat the information.

The NPRF is intended to be used concurrently with the development of a nonproject proposal. To achieve maximum effectiveness and efficiency the initial use of the form should begin at the time a nonproject proposal is being contemplated, i.e. upon identification that a plan, policy or rule is likely to be needed or is mandated.

The information and analysis in the NPRF should be updated as the proposal is developed. The number of revisions will depend on the complexity of the proposal. If the proposal is minor, one iteration of the NPRF may be sufficient. For more complex proposals, the NPRF should be revised as analysis is completed or key issues resolved.

If you are unfamiliar with the form, you should review all of the questions before providing any answers. This will help familiarize you with the questions and should avoid duplication of information. Please note that when a nonproject proposal is first contemplated, it is often premature to respond to some questions in the NPRF. Answers may also change as the proposal is developed and analysis is completed.

NONPROJECT REVIEW FORM

DATE: January 5, 2015

COMPLETED BY: Angie Hubbard, Okanogan County Office of Planning & Development

PART I - FRAMEWORK

1) Background

a) Name of proposal, if any, and brief description.

Adopt update to County shoreline Master program--based on January 27, 2015 review draft.

b) Agency and contact name, address, telephone, fax, email

Okanogan County,
Angie Hubbard
Office of Planning and Development
123 5th Ave N. suite 130
Okanogan, Washington 98840

c) Designated responsible official

Perry Huston, Director of Planning

d) Describe the planning process schedule/timeline

SEPA determination released February 2015, Planning Commission hearings February/March 2015, Recommended Draft to WDOE by March 2015, final action June 2015

e) Location - Describe the jurisdiction or area where the proposal is applicable.

(Attach map(s) if appropriate)

The Shoreline Maps may be found at the Office of Planning and Development and on line at www.okanogancounty.org/planning.

f) What is the legal authority for the proposal?

Chapter 90.58 RCW and Chapter 173-26 WAC.

g) Identify any other future nonproject actions believed necessary to achieve the objectives of this action.

The shoreline Master program is a stand-alone regulation under the auspices of WDOE for the regulation of the shorelines of the state. WDOE approval is required before the changes can be put into formal effect.

2) Need and Objectives

- a) Describe the need for the action. (Whenever possible this should identify the broad or fundamental problem or opportunity that is to be addressed, rather than a legislative or other directive.)

Counties are required by state Law to conclude an update of its shoreline master program. By Grant Agreement G1500028 effective October 1, 2014, fully executed on November 18, 2014 and the County and WDOE agreed to have the program completed by July 1, 2015.

- b) Describe the objective(s) of the proposal, including any secondary objectives which may be used to shape or choose among alternatives.

Consistency with Chapter 90.58 RCW, WAC 173-26 Parts I-III, WAC 365-190-480, and Okanogan County Comprehensive plan.

- c) Identify any assumptions or constraints, including legal mandates, which limit the approach or strategy to be taken in pursuing the objective(s).

1. Regulations need to address the mandatory items of RCW 90.58 and WAC 173-26.

2. Any conditions imposed under the program must address legal constraints identified in WAC 173-26 186, and particularly WAC 173-26-186(5) incorporating RCW 82.02.020.

- d) If there is no legislative or other mandate that requires a particular approach, describe what approaches could reasonably achieve the objective(s).

See a, b and c above.

3) Environmental Overview

Describe in broad terms how achieving the objective(s) would direct or encourage physical changes to the environment. Include the type and degree of likely changes such as the likely changes in development and/or infrastructure, or changes to how an area will be managed.

Okanogan county shorelines (Lakes and Rivers above 20 acres and 20 CFS respectively) have provided historic transportation routes through the County and have seen significant development in some areas and are a primary source of recreation in the current environment.

The shoreline Management Act operates under the stated legislative Policy:

It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.

RCW 90.58.020

4) Regulatory Framework

- a) Describe the existing regulatory/planning framework as it may influence or direct the proposal.

_____ The County has an existing shoreline Master Program adopted July 7, 1987 and amended on May 20, 1996. In 2003 WDOE adopted amended regulations including chapter 173-26 WAC and in 2010 the state legislature adopted RCW 36.70A.480 dealing with shorelines and critical areas.

- b) Identify any potential impacts from the proposal that have been previously designated as acceptable under the Growth Management Act (GMA), chapter 36.70A RCW.

The use of shorelines for authorized purposes have been approved by the Legislature under RCW 36.70A.480(5) consistent with the no net loss requirements of RCW 36.70A.480(4) and the regulation of critical areas within shorelines as provided under RCW 36.70A.480(1)-(5).

5) Related Documentation

- a) Briefly describe any existing regulation, policy or plan that is expected to be replaced or amended as a result of the proposal. (Adequate descriptions in section 4.a may be referenced here, rather than repeated.)

The 1996 SMP as updated through WAC 173-26 will be replaced with the new master program once approved by WDOE.

- b) List any environmental documents (SEPA or NEPA) that have been prepared for items listed in 4.a. or that provide analysis relevant to this proposal. None that deal effectively with the current situation. **Note:** Impacts with previous adequate analysis need not be re-analyzed, but should be adopted or incorporated by reference into the NPRF. Identify the:

- i) Type of document
- ii) Lead agency and issue date
- iii) Where copies can be viewed or obtained
- iv) The portions of the document applicable to the current proposal and briefly explain relevancy. Summarize the relevant impact assessment or, provide reference to discussion(s) in Part II that includes this information.

- c) List other relevant environmental documents/studies/models which have been identified as necessary to support decision making for this proposal.

_____ *Entrix, Inc., 2008. Okanogan County Shoreline Characterization Report: 39Pp + App. Olympia, WA.*

Golder Associates Inc. 2007. Okanogan and Lower Similkameen Comprehensive Flood Hazard Management Plan. 122pp + App. Redmond, WA

Golder Associates Inc. 2006. Methow River Comprehensive Flood Hazard Management Plan. 137pp + App. Redmond, WA.

Methow Basin Planning Unit. 2005. Methow Basin (WRIA 48) Watershed Plan. 50pp + App. Okanogan County, WA.

Okanogan Watershed Planning Unit. 2009. Okanogan Watershed Plan. 58pp + App. Okanogan County, WA.

Upper Columbia Salmon Recovery Board. August 2007. Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. 307pp + App. Wenatchee, WA

6) Public Involvement (Optional)

a) Identify agencies with jurisdiction or expertise, affected tribes, and other known stakeholder groups whose input is likely to be specifically solicited in the development of this proposal.

The county proposal will be shared with Cities, affected tribes and be open for public comment both on the SEPA determination and the proposed changes.

b) Briefly describe the processes used or expected to be used for soliciting input from those listed.

A public hearing will be held with the Planning Commission on March 09, 2015. The draft will be circulated to commenting agencies and available to the public.

PART II – IMPACT ANALYSIS AND ALTERNATIVES

7) Affected Environment

Generally describe the existing environmental landscapes or elements (e.g., character and quality of ecosystem, existing trends, infrastructure, service levels, etc.) likely to be affected if the proposal is implemented. Include a description of the existing built and natural environment where future “on the ground” activities would occur that would be influenced by the nonproject proposal.

Note: When complete, this section needs to provide information on existing conditions for the elements of the environment discussed in sections 8 and 9. A list of both the built and the natural elements of the environment is found in WAC 197-11-444, and included at the end of this form.

See attached:

8) Key Issue Assessment

List the identified key issues or areas of controversy or concern and include a brief statement of why each is a key issue. For each item listed:

- Designations
- Allowed uses
- Public Access
- Critical areas
- Agriculture

a) Identify alternative options or solutions for the objective or concern.

I. Designation--Designation is the Land use category a property is placed in by reason of its environmental sensitivity, location and existing development. The County has followed the designation protocol in WAC 173-26.211 based on the ground detailed research from the Entrix study. The number of designation categories was simplified to better meet the WAC criteria--no material difference in operation results from the changes.

ii. Allowed uses. The County endeavored to allow uses within a particular designation sensitive to the environmental considerations in the area and the need for such uses even in possibly sensitive areas (e.g. road and utility crossings). The County has an overall objective of "no net loss" built into the permit program which is designed to allow the County and the property owner or utility to address site specific concerns

iii. Public Access: Public access is a material goal of Shoreline uses under Chapter 90.58.270 and chapter 173-26 WAC and particularly 173-26-221(4). The access must be provided in manners consistent with WAC 173.26.186(5). To meet these twin objectives, public access is promoted on a voluntary basis and may be required where a project creates additional demand for public access or interferes with existing public access.

iv. Critical areas--Critical areas within shoreline jurisdiction are to be regulated in the master program. RCW 36.70A.480(1-5) and subject to specific limits RCW 36.70A.480(5). The County has specifically designated FWHCA in the Shoreline area by the Natural designation and Channel migration and Flood hazard related issued by overlay zones. . Wetlands can move with the weather and climate (fires and floods) and as such are not practical to specifically designate in shoreline areas. For this reason designation criteria based on accepted objective wetland delineation standards put out by WDOE are used instead.

b) Describe the environmental considerations/impacts relevant to each of the alternatives identified in 8.a.

i. Designation The environmental considerations supporting the designations chosen are contained in the Entrix study and were field verified by planning staff.

ii allowed uses: Most projects in the shoreline require SEPA review which enable site specific considerations to be addressed. Whether a permit is required or not, the master program sets the minimum standards which must be met by all projects in the shoreline and all subject to the overriding "no net loss" criteria.

iii. Public Access--As with other uses, public access elements are required to be appropriate for the location chosen and meet the standards for shoreline related development.

iv. Critical areas: Critical areas are protected by designation limiting uses and by site specific limitations based on the location and nature of the critical area to be protected. The overall objective of the permit process is no net loss either by avoidance or mitigation designed to replace the functions and values affected. .

c) Describe reasonable mitigation of adverse impacts identified.

i. Designation--The purpose of Designations in accordance with detailed inventories and regulatory criteria in WAC 173.26-211 is to avoid adverse impacts while fostering all appropriate shoreline uses as provided in RCW 90.58.270..

ii Allowed uses. See b ii.

iii. Public Access See (b) iii

iv. Critical Areas see b iv.

d) Identify those alternatives to be carried forward for further analysis.

i. Designation--None at this time. However if a property owner believes their property has been improperly characterized they are able to bring a special study to the County using the same criteria as the Entrix study and seek correction.

ii. Allowed uses none anticipated at this time.

iii. Public access--none at this time.

IV. Critical areas --none at this time.

e) Briefly describe why those alternatives rejected from further consideration were not carried forward.

i. Riverine and lacustrine designations are not contained in WAC 173-26-211 and not well defined. From an objective point of view shrinking the number of designations and consolidating them based on the WAC 173-26-211 criteria did not materially alter the planned or anticipated uses, As such the name change was not deemed material.

ii. Allowed uses--there are nearly an unlimited combination of potential uses and potential mitigation when setting a shoreline master program covering a county the size of Okanogan. The program anticipated has built into it environmental considerations under both SEPA and Shoreline master program compliance and permit limitations. The plan is seen to meet the objectives of Chapter 173-26 WAC and chapter 90.58 RCW.

iii. Public Access--See e-ii.

iv. Critical areas. See e. ii

9) Proposed Nonproject Action or Alternative Actions

Describe a range of reasonable alternatives or the preferred alternative that will meet the objective(s).

The preferred alternative is the adoption of the proposed master program as approved by WDOE to meet the requirements of Chapter 90.58.RCW, Chapter 173-26 RCW and RCW 36.70A.480. There are nearly an unlimited combination of potential uses and potential mitigation when setting a shoreline master program covering a county the size of Okanogan. The program anticipated has built into it environmental considerations under both SEPA and Shoreline master program compliance and permit limitations consistent with applicable statutes and regulations. .

The plan is seen to meet the objectives of Chapter 173-26 WAC and chapter 90.58 RCW.

For this reason we believe section 9 Dealing with the range of potential Alternatives Actions” is not required at this juncture.

For each alternative, answer the following questions referring again to the list of the elements of the environment in WAC 197-11-444: See Attachment II to this report for a more detailed discussion.

- a) If this alternative were fully implemented (including full build-out development, redevelopment, changes in land use, density of uses, management practices, etc.), describe where and how it would direct or encourage demand on or changes within elements of the human or built environment, as well as the likely effects on the natural environment. Identify where the change or affect or increased demand constitutes a likely adverse impact, and describe any further or additional adverse impacts that are likely to occur as a result of those changes and affects. Due to the very slow pace of development and particularly shoreline development “full build out would be over hundreds of years and the specific impacts would be impossible to tabulate. The objective of the plan and any permit issued under the plan is to address environmental and other issues as they arise to promote the three objectives of the master program

Foster all appropriate shoreline uses

In a manner which is protective of the environment

In a manner protective of navigational interests.

- b) Identify potential mitigation measures for the adverse impacts identified in 9.a and describe how effective the mitigation is assumed to be, any adverse impacts that could result from the use of the mitigation, and any conflict or concern related to the proposal objectives and/or key issues identified.

Mitigation measures are built into the base designation program followed by the permit restrictions and the ability to condition a project to assure no net loss of shoreline functions and values.

- c) Identify unavoidable impacts and those that will be left to be addressed at the project level.

By necessity impacts tied to any specific development in a given location will have to be addressed through eh SEPA/permit related processes. That is what the shoreline substantial development program adopted by the state under chapter 90.58 RCW was designed to achieve. SEPA mitigation, Permit conditions and compliance requirements are designed to avoid impacts where possible and to mitigate such I pacts to a “no net loss” standard where they do occur.

- d) Describe how the proposal objectives will or will not be met if the impacts described in 9.c were to occur.

The Shoreline Mater program is established to foster and promote responsible shoreline use as described above. The designation /master program and permit process included in the proposed master program are designed to address such issues. As written and proposed to be

implemented the outcome would be that anticipated by the legislature under SEPA, GMA as applicable to non GMA counties, and the Shoreline Management Act.

Note: Alternatives may be rejected at any point in the process if: they have no environmental benefit, are not within existing authority, are determined unfeasible, or do not meet the core objectives.

PART III – IMPLEMENTATION CONSIDERATIONS

10) Consistency of the proposal with other plans, policies and laws.

- a) Internal consistency - If there are internal inconsistencies between this proposal and your agency's previously adopted or ongoing plans and regulations identify any strategies or ideas for resolving these inconsistencies.

The plan is coordinated with the Comprehensive plan with land uses tied both to comprehensive plan limitations and the SMA designation and permitting limitations. Consistency with the County comprehensive plan is one of the elements by which WDOE judges the propriety of an approved Master program.

- b) External consistency - If there are external inconsistencies between this proposal and adopted or ongoing plans and regulations of adjacent jurisdictions and/or other agencies, identify any strategies or ideas for resolving these inconsistencies.

The County consults with Cities and affected tribes on all new land use, legislative proposals, and addresses any identified problems through discussion and cooperation.

11) Monitoring and Follow-up

- a) Describe any monitoring that will occur to ensure the impacts were as predicted and that mitigation is effective, including responsible party, timing, and method(s) to be used.

The County reports its shoreline substantial development permits to the state and maintains its own records. Any issue of noncompliance and enforcement is also maintained by the County and may be the subject of further legislative action should a pattern appear which requires legislative correction.

- b) Identify any plans or strategies for updating this proposed action based on deviation from impact projections or other criteria.

RCW 90.50.____ requires periodic updates of master programs to address this issue.

WAC 197-11-444, Elements of the Environment

Natural Environment

a. Earth

Geology, Soils, Topography, Unique physical features, Erosion/enlargement of land area

b. Air

Air quality, Odor, Climate

c. Water

Surface water movement/quantity/quality, Runoff/absorption, Floods

d. Plants and animals

Habitat for and numbers or diversity of species of plants, fish, or other wildlife, Unique species, Fish or wildlife migration routes

e. Energy and natural resources

Amount required/rate of use/efficiency, Source/availability, Nonrenewable resources, Conservation and renewable resources, Scenic resources

Built Environment

a. Environmental health

Noise, Risk of explosion, Releases or potential releases to the environment affecting public health

b. Land and shoreline use

Relationship to existing land use plans and to estimated population, Housing, Light and glare, Aesthetics, Agricultural crops

c. Transportation

Transportation systems, Vehicular traffic, Waterborne, rail, and air traffic, Parking, Movement/circulation of people and goods, Traffic hazards

d. Public services and utilities

Fire, Police, Schools, Parks and other recreational facilities, Maintenance, Communications, Water/storm water, Sewer/solid waste, other governmental services or utilities

Attachment I: Affected Environment Current Conditions

Streams

This Shoreline Master Program addresses streams with a mean annual flow (MAF) of 20 cubic feet per second (cfs) or greater, and lakes 20 acres or greater within Okanogan County as specified in the SMA. See Appendix B, Table 2 for coordinates/datum and elevations. (ft) Determinations for the 20 cfs MAF points were derived from the United States Geological Survey (USGS) (1998) publication for northeastern Washington streams.

Shorelines of Statewide Significance

There are six rivers of statewide significance in Okanogan County. The portion of the Pasayten River that is within the United States is located within the boundary of the Okanogan National Forest on land administered by the U.S. Forest Service and is subject to the provisions of this SMP.

Part of the West Fork of the Sanpoil River is a river of statewide significance. However, that part is located in Ferry County. The stretch of the West Fork of the Sanpoil River that is located in Okanogan County has a mean annual flow of less than 20 cfs.

Rivers of statewide significance subject to the provisions of this SMP are:

- Chewuch—from the Okanogan National Forest (NF) boundary downstream to the Chewuch River's confluence with the Methow River
- Methow—from the Okanogan NF boundary downstream to the Methow River's confluence with the Columbia River (Lake Pateros)
- Okanogan—from the Canadian border to the Okanogan River's confluence with the Columbia River (Lake Pateros—the entire length of the Okanogan River within the United States)
- Similkameen—from the Canadian border to the Similkameen River's confluence with the Okanogan River (the entire length of the Similkameen River within the United States)
- Twisp—from the Okanogan NF boundary downstream to the Twisp River's confluence with the Methow River

Columbia River Impoundments

The shorelines of the Columbia River are shorelines of state-wide significance. There are three impoundments on the Columbia River that are partially located within Okanogan County. One, Lake Pateros, is subject to the provisions of this SMP; the other two are not, as explained below. Columbia River impoundments that are not subject to the provisions of this SMP:

- Franklin D. Roosevelt Lake—Franklin D. Roosevelt Lake is that portion of the Columbia River that is impounded behind Coulee Dam. The lake forms the boundary between Okanogan County to the north and Grant and Lincoln counties to the south. That portion of the shoreline of Franklin D. Roosevelt Lake that is located within Okanogan County is also located within the boundary of the Colville Indian Reservation and so is not subject to the provisions of this SMP.
- Rufus Woods Lake—Rufus Woods Lake is the portion of the Columbia River that is impounded behind Chief Joseph Dam. The lake forms a portion of the boundary between Okanogan County to the north and Douglas County to the south. The portion of the shoreline of Rufus Woods Lake

that is located within Okanogan County is also located within the boundary of the Colville Indian Reservation and so is not subject to the provisions of this SMP.

Lakes

There are three lakes of statewide significance in Okanogan County. Two are subject to the provisions of this SMP. The third, Omak Lake, is located within the boundary of the Colville Indian Reservation and is not subject to the provisions of this SMP. Lakes of statewide significance subject to the provisions of this SMP are:

- Lake Osoyoos
- Palmer Lake

Climate

Okanogan County's climate is arid to semiarid, characterized by hot, dry summers and cold winters. The county is located directly east of the crest of the Cascade Range, a major mountain range extending from southern British Columbia to northern California. The range acts as a barrier to marine air moving eastward from the Pacific Ocean. It also exerts a rain-shadow effect, resulting in heavy precipitation at high elevations. Precipitation rates throughout the county are a function of elevation and of distance from the Cascade crest, and vary widely, from less than 10 inches along the Columbia River to 80-100 inches or more in the Cascades.

Most of the land subject to this SMP is at relatively low elevation; precipitation ranges from 8 to 35 inches per year, on average, with most falling from October through March. However, many of the county's rivers, streams, and lakes are fed by runoff from higher elevations, where much of the annual precipitation is retained as snowpack and released during the spring and summer months.

Topography

Okanogan County topography ranges from mountainous alpine and sub-alpine terrain to gently sloping valleys. Elevation varies from over 8,500 feet in the Cascade Range to approximately 750 feet where the Columbia River crosses the County line south of Pateros.

The landscape below 5,000 feet was sculpted by glaciers about 10,000 years ago. Large areas remain covered with rocks and other sediments deposited by glaciers or by rivers and lakes that formed when the glaciers began to melt. While most soils are coarsely textured and fast draining, volcanic ash and fine-textured sediments have contributed to less permeable soils in some places.

Where impermeable soil layers occur, they have sometimes created perched aquifers—areas of groundwater that are not connected to rivers and streams. However, in most parts of Okanogan County, groundwater is connected to rivers and streams. Groundwater flows into those water bodies during periods when soil moisture is high (generally during the spring snow-melt season). When moisture levels are low, water moves out of rivers and streams to replenish groundwater.

Because soils are generally coarse (which means water moves through them quickly and easily), and because most water is available for a short period every year, river and stream levels tend to fluctuate a great deal, rising and even overtopping streambanks in the spring, and dropping so low in the summer and fall that some stream segments become completely dry. Healthy riparian areas can help retain water so that it is more available during the dry season. Water that is held in floodplains and wetlands can seep into soils far from streams and lakes, helping to keep wells productive year round, as well as feeding the water bodies themselves.

Hydrology

The *Soil Survey of Okanogan County Area* provides a good introduction to Okanogan County's hydrology:

[Okanogan County] is drained by two principal streams—the Okanogan river and the Methow River. All the drainage water ultimately flows into the Columbia River. The Okanogan is a slow flowing, meandering stream that drains the eastern part of the Area. A considerable part of its flow originates in Canada. The Methow River is a clear, fast flowing stream that drains the western part of the Area.... Okanogan County is well supplied with lakes at all elevations.

As noted above, river and stream flows and some lake levels vary seasonally. Flow rates are highest in the spring when snow is melting fast. Snow melt continues to supply rivers and streams with water through much of the year. (Even after most of the snow is gone, melted snow continues to percolate through the soil to the groundwater and perched aquifers, supplying rivers, streams, lakes, and wells with water.)

Shoreline ecological health is very important because it determines how much water stays in local watersheds and for how long. Shoreline vegetation and wetlands help hold water and allow it to seep gradually into water bodies.

Because Okanogan County is arid, availability of water is very important. Both the economy and the ecosystem are dependent on water resources. Agriculture, an important component of the local economy, depends on irrigation. Sources of irrigation water include groundwater, rivers and streams, and lakes and impoundments.

Vegetation

Okanogan County is generally forested at higher elevations, with shrub-steppe habitat dominating the landscape at lower elevations. Shoreline areas and other wet areas support riparian and wetland vegetation.

As noted above, most of the land subject to this SMP is at relatively low elevation; however, this SMP does apply to some forested areas. In those areas, ponderosa pine (*Pinus ponderosa*) generally dominates at lower elevations, where annual precipitation ranges from 14-16"; Douglas-fir (*Pseudotsuga menziesii*) is dominant in areas with higher levels of precipitation.

Forested areas are subject to fire, and years of fire suppression have resulted in heavy fuel loads. Severe fires have been relatively common in recent years. Forest fires affect runoff and sedimentation patterns and may have significant effects on shoreline areas.

Sagebrush, rabbitbrush, and bitterbrush are the dominant native plant species in much of the county's shrub steppe. In the driest areas, where annual precipitation is below 15", grasses (including Idaho fescue, bluebunch wheatgrass, and wild rye) become more important.

Trees common to riparian areas are cottonwood, aspen, water birch, and alder; shrubs include willows, dogwood, spirea, hawthorne, rose, and snowberry. Grasses, forbs, and other herbaceous plants (cattails, for instance) dominate many wetlands. Wetland and riparian vegetation is often quite dense; it helps to retain water in shoreline areas and provides food and cover for wildlife.

Invasive plant species are a problem in some areas, competing with native species and diminishing habitat value.

Geology

The geology of the area is complex, developed from marine invasions, volcanic deposits, and glaciations. The area consists of four differing geologic provinces. The Cascade Range, to the west, was created by ancient seabed uplift. Both the Okanogan highlands on the east and the Columbia basalt plateau to the south were created by volcanic activity. Finally, the oldest is the ridge of ancient seabed rocks that were folded and then carved by erosion into its present forms. During the ice age, ice spread over these dissimilar landforms and when receded, left valleys, canyons, waterfalls, benches, and cliffs (Widel, 1973).

Landuses

Okanogan County is the largest county in Washington, comprising 5,821 square miles—almost 8% of the state's land mass. Development in Okanogan County is concentrated in the Methow and Okanogan valleys and along the Columbia River. The mountainous areas to the west of the Methow valley and between the Methow and Okanogan valleys are mostly federally-owned. Mining, forestry, agriculture, and recreation are the major land-use activities. Residential development is also significant. Much of that development is attributable to non-resident landowners building vacation houses, and so is not reflected in population statistics.

Current Shoreline Designations Table

ZONE	SumOfACRES
CONSERVANCY ENVIRONMENT	4639.99
NATURAL ENVIRONMENT	58.342
RURAL ENVIRONMENT	18203.389
SUBURBAN ENVIRONMENT	553.469
URBAN ENVIRONMENT	101.092

Proposed Buildable Shoreline Acres by Designation

Row Labels	Sum of New_AC
CONSERVANCY	18859.42
NO	11078.64
YES	7780.78
NATURAL	8994.69
NO	8940.59
YES	54.1
RURAL	11747.36
NO	3060.99
YES	8686.37
SHORELINE RESIDENTIAL	1695.74
NO	1060.22
YES	635.52
URBAN CONSERVANCY	7.32
NO	3.58
YES	3.74
Grand Total	41304.53