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**Attachment J**  
Version 5 Guidance

# **SEPA Project Review Form**

## **Guidance Document**

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WASHINGTON STATE  
DEPARTMENT OF  
E C O L O G Y

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## **Purpose of the SEPA Project Review Form**

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires state and local agencies within Washington State to consider the environmental impacts of a proposal before making decisions. The purpose of the form is to provide information to identify likely environmental impacts from proposals and to reduce or avoid these impacts, if possible. The agency will also use this information to decide whether the likely environmental impacts of the project need further study, have been adequately addressed by existing regulations, or can be mitigated.

## **Instructions for the Applicant**

The form asks you to describe the proposed project, the project site and surrounding area, and the likely changes to the environment that would result from the project. The 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.

You must answer each question accurately and carefully, to the best of your knowledge. Complete answers to the questions now may avoid unnecessary delays later. Looking over the form before you begin will help you know what information is required. Although most questions can be answered with a familiarity of the project, the site, and the surrounding area, some information will have to be obtained from other sources, such as the city or county in which your project will occur. This guide will provide you help in answering the questions and locating the information you'll need.

The information you provide will help the agencies analyze your project and decide whether additional studies are needed. This information will also be used by the agencies when deciding whether to issue the necessary permits or approvals. The form is designed to help you think about the possible environmental consequences of your proposal. You are encouraged to consider ways to eliminate or reduce these impacts through changes in your proposal, restoration efforts, etc.

## **Instructions for the Lead Agency**

As the lead agency, you are responsible for conducting the environmental impact analysis for this project. The information in the form and your environmental analysis will be used by other agencies in their decision making process and may be used as the basis for conditioning or denying a proposal.

Either the applicant or you, as the lead agency, may complete the form. If completed by the applicant, you must review the answers and ensure that they are complete and accurate. You are encouraged to note additional information or changes on the form itself. Whether the information is noted on the form or attached as supplemental information, the intent is to provide reviewers with sufficient information to understand the proposal and its potential environmental impacts.

The form and this guidance document take you through the environmental review process. The questions ask for information about the proposed project, compliance with local, state, and federal regulations, likely environmental impacts, and possible mitigation for the proposal.

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## Instructions for Part 1

### 1.4 Location

If multiple addresses and/or parcel numbers apply to the project, you may identify the primary address and parcel number(s) and refer to an attachment with the map or written description that will provide sufficient information for the reviewer to understand the precise location of the project. This alternative information may be incorporated into the site plan and/or vicinity map that is requested later in the checklist. Remember to note where the information can be found.

**WRIA #:** The Water Resource Inventory Area number identifies the watershed your project is in. A WRIA map is included on the last page of this guide. More detailed maps can be found at <http://www.wa.gov/ecology/gis/maps/wria/wria.htm>, or you may consult your local jurisdiction or Washington State Dept. of Fish and Wildlife.

### 1.5 Project Description

**Name:** Many projects have names but not all. Residential developments, commercial, and industrial ventures are often named.

**Description:** In the project description, provide a description of the type of project (e.g. retail, land clearing, commercial timber thinning, warehouse), and the actions which would occur (e.g. grade, fill, clear, construct, operate, close, demolish, mine). Provide sizes and/or quantities if known.

### 1.6 Schedule/Phasing

Include information on when any construction is expected to begin and end, initiation of use or operation, expected end of use, and the timing of closure or reclamation.

The second question addresses “**phasing**”, where one portion of a proposal is completed or undergoes review prior to later stages. Phases may involve projects (where typically on-the-ground changes occur) or they may be nonproject (such as divisions of land, zoning changes, or conceptual plans).

“**Planned Actions**” are specific types of proposal defined by local ordinance or resolution for which the environmental review under SEPA has been completed prior to permit applications being submitted. If you are not already aware that you have a planned action, it is unlikely the term applies to your proposal. [See RCW 43.21C.031(2) and WAC 197-11-172.]

### 1.7 Special Reports

Include reports, studies, or other environmental documents that have been, are being, or will be prepared that provide relevant environmental information about your project, the site, or the area. They may be created to support your project proposal, for a similar or related project, or have been developed during local planning by the city or county, etc.

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Special reports, studies or plans would include those required by development regulations or submitted with project applications. Examples might be:

- Wetland Report
- Traffic Study
- Geotechnical Study
- Archaeological Report
- Stormwater Pollution Prevention Plan (SWPPP)

## 1.8 Permit Information

List all approvals or permits from any governmental entity that will be needed for your proposal, if known, whether from the agency requesting the checklist or from other governmental entities. Governmental entities include: cities, counties, state agencies, districts, ports, and federal agencies. Include any required certificates or letters of availability for public services or utilities.

### Commonly required permits include but are not limited to:

#### Local City or County Permits:

- Building
- Preliminary plat
- Grading
- Water system
- Shoreline
- Right of way
- Utility
- Site plan review
- Land use
- Septic system
- Floodplain development
- Variance (zoning, shoreline, etc.)

#### State Permits:

- ❖ *Dept. of Fish and Wildlife*
  - Hydraulics Project Approval
- ❖ *Dept. of Natural Resources*
  - Forest Practices
  - Aquatic lease
  - Burning (forest slash)
  - Reclamation
- ❖ *Dept. of Ecology*
  - Water rights
  - NPDES
  - Water quality certification
  - Stormwater
- ❖ *Dept. of Ecology or local air authority*
  - New Source Review (for a business or industry)
  - Notice of Intent for demolition projects

If you do not know the permits that might be required, the agency requesting this checklist or the state permit assistance center (Department of Ecology, Olympia, 360-407-7564 or <http://www.wa.gov/ecology/>) can help you.

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## Instructions for Part 2

### 2.1 Planning, Zoning, and Other Designations

Much of the information requested in this section can be acquired from your local jurisdiction (the city or county). Sources for the exceptions are included below.

**Current Zoning:** Include the allowable density.

**Proposed Zoning:** If a rezone is not part of the proposal, answer “same.”

**Planning Area:** Identify if the site is located within a designated Urban Growth Area (UGA) or Subarea Plan as designated by the city or county.

**Shoreline Master Plan Designation:** If the site includes a shoreline of statewide significance provide, the shoreline designation.

**Flood Zone:** Zone designations are found on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). FEMA maps are available through the local jurisdiction or by contacting Dept. of Ecology's regional floodplain staff.

**Critical Areas:** Critical Areas are formally identified in an ordinance adopted by a city and county. Categories include wetlands, streams and surface water bodies, aquifer recharge areas, frequently flooded areas, geologic hazards, and fish and wildlife habitat conservation areas. It is the ordinance of the city or county where the project is located which applies regardless of whether a permit is needed from that city or county.

**Natural Resource Lands:** Natural Resource Lands are formally identified in an ordinance adopted by a city and county. These include forest, mineral, and agricultural lands. You should check with the jurisdiction (city or county) where your project is located to find out the criteria for identifying a natural resource land. These may be available on maps or at their Internet site.

**Historic Register:** Identify whether places or objects on or adjacent to the project site are listed or proposed for listing on a historic register. Contact the local jurisdiction or the State Office for Archaeological and Historic Preservation for information.

**Cultural Site:** Identify if there are any places or objects on or adjacent to the project site that are of archeological, scientific or cultural importance. Contact the local jurisdiction, the State Office for Archaeological and Historic Preservation, the TRAX system (regional DNR offices), or tribal sources for information.

**Other applicable plans/designations:** Identify any plans or designations that may affect/regulate your proposal. They may include:

- Local subarea plan or overlay zones
- State designated harbor
- Air quality non-attainment area
- Watershed management plan
- Habitat conservation plan
- Wild and Scenic River designation
- State or national park, monument, wilderness, wildlife refuge, marine sanctuary, scenic area

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## 2.2 Acreage

**Total Acreage:** Include the total area of the parcel(s) or rights-of-way where the project will occur. (43,560 square feet equals 1 acre.)

**Project Site:** Identify the portion of the total acreage that will be used or changed by the project. For example: include areas of timber harvest, clearing, grading, material storage, parking, landscaping, and roads, as well as the area of new structures. The entire parcel should be included if division is proposed.

## 2.3 Land Uses and Character

**Land Uses (Existing, Past, and Adjacent):** Examples: agriculture, forest, residential development, commercial, freeway, park, open space, offices, light industry, dairy farm, school, parking lot or (although rare) no use.

**Character:** Character refers to qualities such as density of development (rural, urban, or suburban) and style (50's era, high-tech/modern, Bavarian village, Old West town, etc.). Character would define the differences between a park consisting primarily of playground equipment and ball fields, one presenting formal landscaping and gardens, or one featuring uncultivated nature trails.

## 2.4 Site Changes

**Roads, buildings and other impervious surface:** Includes building footprints, asphalt and concrete areas, covered or capped ground, lined ditches or ponds; any square foot where rain cannot percolate into the ground.

**Wetland area** should not be included a second time under **Water surface area**.

**Demolition:** Includes demolition of roads, structures, walls, and other things that will produce a non-biodegradable waste.

**Waste use or disposal site:** If excess and/or waste materials will be recycled or reused, please describe. Otherwise, list disposal site or method.

## 2.5 Surface Waters/Wetlands

If there are no surface waters or wetlands within 300 feet of the project site, it is only necessary to list the nearest surface water body and the distance from the site. Otherwise describe the surface water(s)/wetlands and briefly describe what activities/structures will occur within the 300-foot distance. Reference may also be made to the site map(s) required in Section 3.1.

## 2.6 Plants & 2.7 Fish and Wildlife

**Other Information Sources:** The city or county, local WA Dept of Fish and Wildlife office, TRAX system through the regional DNR office, Puget Sound Environmental Atlas for spawning habitat

**Unique Habitat:** Habitat refers to where plants and animals live or could live, including areas used by fish, birds or other species while migrating. Examples of rare or unique habitat include the grass steppe habitat in Eastern Washington, Old-growth forests, stands

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containing certain species of oak in Western Washington, the prairie fields in the Mina Mounds area, canary reed grass in Puget Sound, etc.

**Threatened and Endangered Species:** A list of threatened and endangered plant and animal species within Washington State is available at [http://ecos.fws.gov/webpage/webpage\\_usa\\_lists.html?](http://ecos.fws.gov/webpage/webpage_usa_lists.html?) or by contacting the U.S. Fish and Wildlife Service.

## 2.8 Hazardous Materials

Knowledge of past uses, such as auto repair or wrecking facilities, gasoline dispensing facilities, dry cleaning, municipal dump site, radioactive waste, industrial site, log yard, agricultural uses (fertilizers and/or pesticides), etc. are indicators of possible site contamination.

Contact the Dept of Ecology's Toxic Cleanup Program staff in the local regional office or headquarters for additional information or assistance in identifying potential or verified contaminated sites, and the type of contamination likely at a site.

The use, storage, and/or transport of minor quantities of cleaning supplies, such as to maintain an office building or for residential needs may be listed as a class rather than individual products. Substances used in large quantities, such as in industrial or agricultural processes, should be identified by name.

## 2.9 Solid Waste

Consider all phases of the project such as site preparation, construction, operation or use, etc. Demolition/renovation waste and uncontaminated earth described in Section 2.4 need not be included in this section.

## 2.10 Air

Dust should be considered a potential air emission if upland vegetation will be removed, or there will be grading, fill, excavation, rock crushing, demolition, etc. Methods that will be used to reduce or eliminate dust or other air emissions should be described in Part 5.

Some types of activities that generate either indoor or outdoor air pollution emissions or the potential to produce an odor nuisance include:

- Abrasive blasting
- Asphalt preparation
- Coffee roasting
- Composting
- Concrete batching
- Dry cleaners
- Fuel dispensing or storage
- Fuel-fired equipment
- Landfill
- Manure application and storage
- Painting or surface coating
- Plating/Anodizing
- Printing
- Rock or material crushing, grinding, or transport
- Soil or groundwater remediation
- Solvent or other volatile liquid use or storage
- Sterilization processes
- Welding
- Wood processing

If the amount of the emission cannot be quantified (such as from agricultural practices, wastewater facilities, or municipal landfills), describe the source(s), including quantities known or assumed. For example: Liquid manure from X dairy cows will be sprayed on

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X acres during the months May through September, and will be collected on-site in a X-gallon capacity dairy lagoon.

## **2.11 Light, Glare and Aesthetics**

**Views:** Include both scenic and non-scenic views. Answer “none” if the appearance of the site will remain unchanged.

**Light and glare:** Consider indoor lighting that may be seen through windows, as well as outdoor lighting such as street lights, signage, parking lots, etc. For glare, mirrored and unmirrored glass, and unpainted metal surfaces

## **2.12 Noise and Vibration**

Consider traffic/transportation as well as construction or industrial processes. Truck traffic should be quantified by number and by size or load. Construction noise should be described so that the reviewer can understand whether hammering will be the norm or heavy machinery will be used, etc.

## **2.13 Transportation**

**Public Transit:** Include details as to the type (bus, subway, train, etc.) and frequency. (I.e. two bus routes that run hourly from 7 am to 9 pm run Monday through Friday within three blocks of the site.)

**Major arterials** listed need not directly access the site but are the major roads or highways likely to be used by employees or residents and for the transport of materials or goods on or off the project site.

**Trips per day:** Peak hour trips/day is the measure of vehicle trips to or from the project site during peak week day traffic hours within a given 24-hour weekday. Only traffic generated by the project need be included. The availability of public transportation, encouragement of car or van pooling, the use of flex-shifts or telecommuting, as well as other traffic mitigation measures may be used to decrease the estimates of traffic generated by the project, but should be detailed in Section 5.

**On-site parking:** Single-family residential construction projects, need not respond.

## **2.14 Service Providers**

**School District:** Information not required if the proposal does not involve residences.

**Other Emergency Services:** Emergency aid vehicle services or other types of emergency services that may be needed for your project, including spill response, coast guard, etc.

## **2.15 Utility Needs**

**Water:** Do not include existing water consumption unless the proposal includes a change of use or source. For a single-family residence, peak water use is approximately 800 gallons per day (gpd) for each residence in Western Washington and 1,500 gpd for each residence in Eastern Washington, or the local water utility can supply specific information about typical consumption in your community.

**Energy:** If no new, changed, or increased use is proposed, this information is not required.

**Sanitary Waste:** Do not include existing discharges. Average wastewater discharges per household can vary significantly by the type and integrity of the sewer collection system and seasonal variation. For residential development you may assume an average of 225 gallons per day for each household, or contact your local sewer district for the typical quantity for the area.

**Industrial Wastewater:** Existing unchanged discharges should not be included unless necessary to describe the new discharge.

**Stormwater:** Gallons per day = (average annual rainfall) x (square footage of surface area drained) x (0.0017). [See below for a chart of average annual rainfall for many cities.]

Average Annual Rainfall* (Inches)					
Aberdeen	68	Federal Way	39	Pullman	21
Auburn	38	Forks	121	Quinault	140
Bellingham	36	Gig Harbor	37	Seattle	38
Blaine	36	Hoquiam	60	Sequim	16
Cheney	17	H. Hanson Dam	88	Snoqualmie	80
Chewelah	20	Kelso	45	Snoqualmie Pass	104
Colville	17	Moses Lake	8	Spokane	17
Cosmopolis	84	Olympia	46	Stampede Pass	80
Darrington	77	Pasco	13	Tri-Cities	7
Deer Park	17	Port Angeles	25	Vancouver	40
Edmonds	37	Port Ludlow	20	Whidbey Island	35
Everett	35	Port Townsend	16	Yakima	8

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\*These numbers may vary with other sources, dependant on the number of years averaged, and should be used for estimates only. We apologize that more locations at the time of printing were not available.

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## Instructions for Part 3

### 3.1 Site Map

**Sources of information:** The city and/or county (Critical Area and Natural Resource Area ordinance/maps, etc.), local road atlas, area topographical maps, USGS Soil Conservation Survey from the National Resource Conservation Service or local library, and site visits.

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## Instructions for Part 4 - Identification of Impacts

### 4.1 Existing Conditions

Surface waters/Wetlands/Frequently flooded area, etc. need not be designated under the Shoreline Management Act, local Critical Areas ordinance, etc to be included as a Natural Environment element of the project site and surrounding area.

**Surface waters:** Surface waters collect stormwater runoff (and collected sediment and other contaminants); are fed by groundwater; are receivers of wastewater discharge; and provide drinking and irrigation waters, fish and wildlife habitat, recreational opportunities, scenic views, transportation routes, etc. Surface waters are effected by weather, seasons and the rate and quantity of snow melt in our mountains. They are also effected by human actions within their banks and far upland. Those water bodies whose waters provide the most values—such as those described above—or that barely or no longer meet water quality standards (see below) are particularly sensitive to further adverse effects.

**Water Quality Standards:** Information on Washington State’s water quality standards can be found on Ecology’s Water Quality Program’s website:

[www.ecy.wa.gov/programs/wq/wqhome.html](http://www.ecy.wa.gov/programs/wq/wqhome.html). The 303.D list, that can also be found at this site, is the current listing of Washington’s polluted water bodies that are not expected to improve to meet water quality standards within the given two-year period between listings. The following information describes many of the causes of water quality impacts and the resulting effects on human health and other resources. If you are uncertain whether there are existing water quality issues for a nearby waterbody, contact your local jurisdiction, Washington Dept of Fish and Wildlife, or the Water Quality Program staff at your regional Dept of Ecology office.

- ❖ **Bacteria:** Fecal coliform bacteria poses a health risk to people who come into contact with contaminated water while fishing, swimming or wading and has been responsible for closing shellfish beds from commercial or recreational harvest. Failing septic systems, inadequately treated wastewater discharges, waterfowl, agricultural runoff, and poorly managed livestock are typical sources of this bacterial pollutant.
- ❖ **Temperature:** High water temperatures reduce the quantity of dissolved oxygen and impair or kill fish and other aquatic species. Lack of shading vegetation, shallow and/or slow-moving waterbodies, and discharges of heated process or cooling waters from industrial facilities are typical contributing factors.
- ❖ **Metals:** Metals contamination may occur naturally, or result from runoff or discharges from mining or other past and present industrial and agricultural operations. Metal toxicity can affect the brain function, health, life span, or reproductive capability of fish and other aquatic species, as well as humans and wildlife if the water or resident species are consumed.
- ❖ **Turbidity:** Turbidity is the measure of water clarity, although a high turbidity score means clarity is low. High turbidity often means there is large amount of algae or suspended solids. Algae in turn results from high nutrient loading from fertilizers, industrial discharges, human or animal waste, decomposing plant or animal matter,

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etc. Suspended solids are often a sign of uncontrolled erosion upland or within the waterbody, nutrient loaded runoff, or inadequately treated wastewater discharges.

- ❖ **Sedimentation:** Although sediment transport can be an important and natural stream, river, and marine water function, sedimentation from severe upland and shoreline erosion can impair the functions of all types of waterbodies. Impacts to vegetation, fish, and spawning beds; increased turbidity, and changes to bed and bank topography (temperature, flooding, etc) may result.
- ❖ **Excess nutrient loading:** Excess organic nutrients (septic, wastewater, fertilizers, animal waste, etc) results in rapid growth of algae and other vegetation. This can impair water functions, including recreation, as well as deplete dissolved oxygen in slow-moving waterbodies. If algae growth becomes so dense sunlight cannot penetrate to lower depths, even the algae and plants will die—adding further nutrient loading—and anaerobic bacteria becomes the only resident life form below a shallow margin at the surface.
- ❖ **Dissolved oxygen:** Dissolved oxygen is necessary for both fish and aquatic plant life, and is principally gained by contact with the atmosphere. Wave action, water falls, riffles, etc. are effective in increasing dissolved oxygen. Although vegetation produces oxygen during photosynthesis, plants depend on oxygen themselves when sunlight isn't available. This can cause a serious drop in dissolved oxygen during the night in slow-moving waterbodies, endangering fish life. Under severe conditions, such as result from excessive nutrient loading, anaerobic conditions may occur. Conversely, hydroelectric dams, turbines, etc. may cause excessive amounts of dissolved oxygen that has also been proven to be harmful to fish.

**Wetlands:** Wetlands provide valued water quality functions, wildlife habitat, flood control, groundwater recharge, etc. Actions upland from or particularly within wetlands or their buffers can hamper or eliminate their functions.

**Wellhead protection area/Aquifer recharge area:** These areas are sensitive to impacts that would affect groundwater quality (excessive use of fertilizers or pesticides, tank leakage or spills, landfills, etc.) and groundwater quantity (impervious surfaces, changes in vegetation, etc.).

**Unstable soils/Geologic hazards:** Signs of unstable soils include evidence of past landslides, mass wasting, erosion (including wind erosion), subsidence, tilting structures, uneven floors, cracked paving, etc. Areas of past fill (landfills, filled wetlands or tidal areas, reclaimed surface mines, etc.), destabilization from vegetation removal, evidence or knowledge of high groundwater or concentrated stormwater infiltration, etc. are further indicators of potential soil instability. Water, wind, earthquakes, and other pressures can add further risks from unstable soils—jeopardizing roads and structures built on these soils—as well as the land and soils themselves.

- ❖ **Landslides** are typically associated with steep slopes. Even if an area appears to currently be stable, 50 and 100-year storm events may radically alter the picture. Activities that increase or concentrate water flow, particularly below ground, loss or lack of deep-rooted vegetation, and/or placement of fill can further destabilize these areas. In determining potential impacts the applicant should consider questions such as: How will stormwater be managed? Will a vegetated buffer be maintained, including mature trees? Will significant grading or fill be required? Will the proposal involve on-going disturbance on or near the steep slope?
- ❖ **Mass wasting erosion** is where wind, water, or ice combined with unstable soils results in erosion severe enough to change the shape of the land's surface. In upland

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areas, key factors to consider are the appropriate management of stormwater and the use of soil stabilization methods such as maintaining a vegetation cover (preferably with deep root systems). Wetting disturbed soils or covering them with various types of material can reduce wind erosion until a vegetative cover can be established. Within the banks of water bodies and in tidal areas erosion control is a complex problem, but can be reduced to how might water energy be defused? Smooth hard surfaces do nothing to defuse water energy, but only redirect it. Vegetation within the water body and along the eroding shoreline, sediment transport, and the use of rough surfaces are a few of the more effective answers.

- ❖ **Faulting** occurs when there is a break in the continuity of a rock formation caused by a shifting in the earth's crust where adjacent areas are displaced unevenly.
- ❖ **Subsidence** occurs when the soils compress over time, lowering the surface level. When subsidence occurs unevenly, structures and paved areas become unevenly supported and may lean or crack, and piping can develop fissures and gaps.
- ❖ **Liquefaction** occurs during earthquakes in large areas of unstable soils, such as when construction is done on fill sites. The loose adhesions in the soil are broken and it behaves similar to a slurry of sand in the bottom of a shaken glass, causing much greater damage than occurs in adjacent areas with more stable soil structure.

**Fish and wildlife habitat/Wildlife corridor:** These areas are impacted by direct loss and degradation (reduced quality), but also by activities in the surrounding area. The presence of pesticides and other pollutants, domestic animal predators, roads (road kill), light and glare, and noise, as well as changed stream flows, loss of water quality, loss of water availability, and human intrusion can all adversely impact these areas, even if native vegetation, etc. is left intact. Unique habitat and/or the presence of threatened or endangered species makes these areas more sensitive to impact.

**Threatened or endangered plant species:** The presence of threatened or endangered plant species on or near the project site will make the area more sensitive to adverse impact.

**Scenic views:** Views valued by travelers and/or area residents should be considered in the design and review of the project to garner public acceptance.

**Hazardous material contamination:** Areas that have been contaminated by hazardous substances (leaking fuel tank, chemical spill, many past industrial practices, illegal drug lab, etc.) may require cleanup under the Model Toxics Control Act, or may be at a level where additional cleanup is not required, but some uses would result in environmental or human health risks. These circumstances must be kept in mind when planning for further actions on the site. If cleanup is required, the applicant and reviewers should consider potential impacts on and off site (groundwater quality, runoff, transport of materials, treatment and/or disposal impacts, etc.) as well as the potential impacts from any restriction on future uses of the site.

**Air quality issues:** Identify any regional air quality limitations (such as an air quality designated non-attainment area). For information of this type, contact your local Air Quality Authority or the Air Quality Program staff at the local Dept of Ecology regional office. Areas with existing air quality issues (smoke and other particulate matter, ozone, carbon monoxide, odor, etc.) are more sensitive to impact and may adversely impact some project activities.

**Water availability issues:** If you are uncertain whether about existing water availability issues on or off site, contact your local jurisdiction or Washington Dept of Fish and Wildlife.

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**Light and glare & Noise and vibration:** Existing problems with light, glare, or noise and vibration may adversely affect the project uses, or they may magnify the significance of the project's impacts. Impacts to humans on and off site should be considered as well as any potential impacts to fish and wildlife in the area.

**Road/Traffic/Parking & Transportation & Safety:** Traffic congestion, inadequate or failing roads,

**Safety hazards:** These may include increased risks to or from all types of vehicles (air, land, and aquatic) and non-vehicular traffic (pedestrians, bicycles, canoes, etc.), as well as to public and private property. Storage, use, or transport of hazardous materials. Construction and operational risks involving the use of equipment, heights, lifting, etc. Consider how existing hazards may provide increased project risks or the project may increase hazards.

**Site Planning/Zoning/Designations & Land Uses and Character:** Consider all project activities, including construction and long term operation (e.g. physical alteration of site, traffic generated, etc.) and future development that is likely to occur as a result of the proposal. How these will be effected by existing or past site uses and will affect existing or planned adjacent uses, as well as consistency with adopted plans and ordinances.

Examples:

- ❖ Shorelines and local shoreline master plans
- ❖ Natural resource lands (e.g. agriculture, aquaculture, forestry, mining)
- ❖ Open space, scenic and recreation areas (e.g. parks, trails, green belts, wilderness)
- ❖ Special districts, whether in urban rural, or natural areas (e.g. areas that have been designated for special uses or purposes such as
  - -- Open space areas/green belts
  - -- Historical districts
  - -- Community plans
  - -- Airport overlay
  - -- State designated harbor area
  - -- Watershed management plan
  - -- Habitat conservation plan
  - -- Wild and scenic river designation
  - -- State or national park, monument, wilderness, wildlife refuge
- ❖ Zoning or comprehensive plan designations of adjacent areas or variance in development regulations between areas

**Removal or degradation of vegetation:** Trees, shrubs, vines, and grasses treat (remove nutrients), absorb, and slow stormwater runoff and stabilize soils, thereby reducing erosion to varying levels dependent on their root systems, growth rates, and rate of transpo-evaporation. Reducing the plant hierarchy—or denuding an area completely—can have a considerable effect on the quantity (and quality) of stormwater runoff.

**Increased impervious surfaces:** Impervious surfaces can block stormwater from groundwater recharge (crucial for water supplies and maintaining summer stream flows) and dramatically reduce retention time of stormwater runoff (as well as impact water quality). To estimate the amount of stormwater that will fall on the new impervious surfaces, multiply the average yearly rainfall (inches) by the footprint (square feet) and divide by two to get gallons per year. Average annual rainfall for some communities is

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provided in the table below. Additional information may be available on the Washington Facts and city information Website at <http://www.pe.net/~rksnow/wa.htm> or from your local jurisdiction.

**Energy and Natural Resource consumption:** Rating the level of the adverse impact should take into consideration the scarcity and demand for the resource. Substantial quantities of rare substances, such as gold, uranium, peat or rare woods would be a smaller measure than the substantial consumption of less rare commodities such as gravel or natural gas—but all resources have a level that should be considered substantial. Questions to be considered include: Is the resource renewable? Does existing demand ever exceed the supply available? Will new sources for the commodity have to be developed? Will other current or future uses for the resource be restricted?

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## Instructions for Part 5 - Proposed Mitigation

**Mitigation is defined as :**

- ❖ avoiding,
- ❖ minimizing,
- ❖ repairing or restoring,
- ❖ reducing or eliminating over time,
- ❖ replacing, enhancing, or providing substitute resources; and/or
- ❖ monitoring the impact and taking appropriate corrective measures. For the purpose of the checklist it would be appropriate to generally describe what the corrective measures might be.

**Mitigation includes:**

- ❖ Measures explicitly required by agencies, applicable laws, or earlier approvals relating to the project
- ❖ Measures that implement, but are more specific than, an applicable regulation
- ❖ Measures an applicant proposes to take, regardless of whether they are required by law
- ❖ Measures that an agency requests and an applicant agrees to include in the project
- ❖ Monitoring to determine if additional mitigation, such as improvements or changes, might be needed in the future. Monitoring may be appropriate when an environmental change is predicted but the actual degree of change is uncertain or when the success of the proposed mitigation is uncertain.

**Consider all aspects of the proposal that may affect the built or natural environment (construction, operation, closure, etc.) as well as how existing conditions will increase risks.** Appropriate mitigation for existing conditions identified in Section 4.1 (that could adversely impact the project or may be aggravated or made worse as a result of the project) may consist of enhancement or corrective measures, and/or protective measures including avoidance. Mitigation for project actions identified in Section 4.2 may consist of enhancement or corrective measures, changing the nature or the magnitude of the action, as well as altering methods, location, or design

The applicant may wish to talk with agency staff, read applicable laws, and/or review any existing approvals for assistance to identify appropriate mitigation. Information in Part 4 of this guide and the project review form should assist in identifying the potential impacts of the project. Mitigation suggestions in the following pages may be of some help in identifying appropriate mitigation for the project, but should not be considered a comprehensive listing.

**“Possible” mitigation should be clearly identified.** Mitigation that is being considered or possible is appropriate to identify but must be clearly identified as “possible.” Otherwise, any mitigation you have described will be treated as commitments and conditions of the project.

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## Geologic Hazards/Unstable soils

**If a sediment and erosion control plan has been prepared, please reference.**

Although this section focuses on earth and geology, the stability of soils is affected not only by type and structure but by wind, water, vegetative cover, and land use. Rock is clearly more stable than recent fill consisting of soft organic material, but the applicant should also keep in mind:

- Erosion control methods to defray the potential effects of wind, water, and ice on disturbed soils;
- Stormwater management post-construction (Will stormwater drainage from large areas of impervious surface be discharged directly to the ground at focused locations, released slowly in a diffuse manner, retained on site and discharged directly to surface water, or will it be piped off site?):
- How the presence and type of vegetative cover affects soil stability, considering root structure, transpo-evaporation<sup>\*</sup>, and diffusion of wind and water energy; and
- Will proposed uses result in continued soil disturbance or prevent vegetation from establishing?

## Water Quality

Mitigation measures may include:

- Erosion control measures,
- Minimizing or avoiding activities within water bodies,
- Working in dry conditions where possible,
- Method choice for
- Providing adequate buffers,
- Planting and/or maintenance of native vegetation—including trees and shrubs,
- Replacement or compensation for lost functions,
- Avoiding or minimizing contamination of stormwater,
- Adequate treatment and retention of stormwater,
- Maintaining/replacing septic systems or using public sewer systems,
- Limiting use of fertilizers and pesticides,
- Optimum treatment of sanitary and/or industrial wastewater
- Location or manner of wastewater discharge (diffusion, area of rapid mixing and/or aeration, etc.)
- Recycle or treat and reuse wastewater.

## Water Availability

Mitigation measures to consider:

- Recycle or treat and reuse wastewater
- Use of equipment or methods to reduce water use
- Eliminate or minimize existing water consumption
- Use of alternate source where impact would be reduced.

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<sup>\*</sup> Transpo-evaporation is the process where water is taken up by the plant and eventually passes into the air.

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## **Flooding**

Consider if the project will displace or alter floodwater, increase erosion or other hazards to people and the environment or add to existing problems. Questions to consider might include:

- ❖ Will any culvert, channel, or bridge's capacity to allow water to flow through be affected?
- ❖ Will flooding or erosion potential increase at any location on or off site because of increased flow (rate or quantity), vegetation changes, or lost stormwater/flood water retention capacity?
- ❖ Will additional water diversions or withdrawals be required from an aquifer or waterbody with water right controversy and/or endangered species?

Mitigation measures may include:

- Minimizing footprint of impervious surfaces,
- Avoiding construction or fill within wetlands and/or floodplains,
- Replacement of lost wetlands,
- Retention of natural vegetation—including trees,
- Vegetation plantings, stormwater management and detention,
- Water reuse or recycling,
- Reduction of withdrawal,
- Groundwater recharge,
- Redesign of discharge,
- Soft-engineered bank protection.

## **Plants and Animals**

Mitigation may include:

- Habitat restoration
- Measures to preserve or restore fish and wildlife corridors.
- Monitoring or ongoing stewardship of habitat.

## **Air Quality**

Mitigation can include methods to contain, treat, or reduce odors and/or pollutant emissions, such as consistently covering material soon after deposit, placing covers over or aerating wastewater lagoons, use of bag houses or air scrubbers, wetting disturbed soils, “clean” fuel/power, recycling solid waste (rather than burning or landfill), etc.

## **Solid Waste**

Mitigation includes any measure that reduces waste, including reuse and recycling, composting, and methods to minimize waste generated. Reuse/recycling of building materials, paper products, glass, etc.; composting; use of natural landscaping, etc. should all be considered. The staff for Department of Ecology's Recycling Hotline, 1-800-RECYCLE (732-9253), can assist you in identifying options in your area.

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## **Energy & Natural Resource consumption**

Mitigation may include:

- Choosing materials or energy sources that have been recycled or are renewable and plentiful,
- Measures to reduce consumption
- Other provisions that will increase the availability of the resource now and/or in the future.

## **Historic or culturally significant site**

Mitigation may include:

- Avoidance,
- Maintaining, or restoring the integrity of the site or landmark to the extent possible,
- Relocating the structure or artifact, meeting tribal needs for the sanctity of the location..

## **Light, Glare, Aesthetics, & Noise and Vibration**

Mitigation may include:

- Maintenance or construction of berms and/or vegetated buffers;
- Limiting operational hours;
- Design of structures to absorb noise,
- Minimize view obstructions;
- Maintain the character of the area.

## **Hazardous material contamination**

Identify if an environmental site assessment has been prepared for the site (e.g. Phase I or II site investigation, remedial investigation/feasibility study, etc.). If so, briefly summarize any actions being taken for additional study or for development of a cleanup plan for contamination or hazardous waste. Otherwise, contact Ecology's toxic Cleanup Program and/or an environmental cleanup contractor for information on appropriate cleanup and/or containment methods.

## **Hazardous materials, storage, production, transport or use**

List any Spill Prevention, Containment and Control Plan (SPCC) or similar environmental, health and safety plans, or a remedial investigation/feasibility study, federal record of decision or state cleanup action plan. (Should also be included in Section 1.7.)

Summarize any plans to contain or address environmental impacts and potential releases, or to bypass normal processes or controls, if an upset, scheduled or unscheduled shut down, accident or contingency were to occur, of if project construction or operations are temporarily or permanently suspended. Mitigation may also include operation measures to reduce or eliminate the use or production of hazardous substances.

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## **Road/Traffic/Parking & Transportation issues**

Mitigation may include:

- Providing additional parking,
- Road improvements (road widening, added signs or signalization, turn-lanes, etc.)
- A transportation plan for reducing commute trips per day—particularly during peak hours. (Include in Section 1.7.)

## **High demand on service providers**

Mitigation may include:

- Donation of property (on or off-site) for public uses,
- Providing recreational facilities,
- Providing on-site security or other emergency services,
- Operational or design measures to reduce emergency risks,
- Impact fees.

## **Utility capacity**

Mitigation may include:

- Recycling, reuse, and other waste reduction efforts;
- Design and operational measures to reduce consumption needs;
- Measures to increase service capacity.