THE CRITICAL AREAS ORDINANCE

Department of Development and Environmental Services

King County

OVERVIEW OF THE CAO PACKAGE

Harry Reinert, Special Projects Manager,
DDES Director's Office

King County

2004 CRITICAL AREAS ORDINANCE PACKAGE

- Three ordinances
  - K.C.C. 21A - zoning code (Ordinance 15051)
  - K.C.C. 16.82 - clearing and grading (Ordinance 15053)
  - K.C.C. Title 9 - stormwater (Ordinance 15052)
- Effective date: January 1, 2005

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MAJOR CHANGES IN K.C.C. 21A.24: CRITICAL AREAS

- New definitions
- New critical areas
- New alteration table
- New alteration exception replaces PAUE and variance
- New wetland and aquatic area classification systems and buffer widths
- Critical area designation required prior to septic system and well approval
- New alternative methods for approval: farm and rural stewardship plans

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NEW CRITICAL AREAS

- Channel migration hazard areas (component of flood hazard area)
- Critical Aquifer Recharge Area - (CARA) moved from K.C.C. 20.70
- Wildlife habitat network - moved from K.C.C. 21A.14
- Wildlife Habitat Conservation Area
- Aquatic areas (streams, lakes, and marine shorelines)

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ALTERATIONS DEFINED

- Any human activity that results or is likely to result in an impact upon the existing condition of a critical area
- Includes: grading, clearing, applying pesticides, grazing domestic animals, cutting, pruning, topping
- Does not include: passive recreation

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ALTERATIONS ALLOWED

- Must comply with critical area development standards
- If in a “limited alteration” critical area, must also comply with alteration conditions
- May need a permit

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ALL ALTERATIONS CRITICAL AREAS

- All alterations, subject to development standards, are allowed in:
  - Critical aquifer recharge area
  - Coal mine hazard area
  - Erosion hazard area
  - Flood hazard area (except severe channel migration hazard area)
  - Landside hazard area under 40% slope
  - Seismic hazard area
  - Volcanic hazard area

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LIMITED ALTERATIONS CRITICAL AREAS

- Only alterations on alterations table are allowed in:
  - Severe channel migration hazard area
  - Landslide hazard area over 40% slope
  - Steep slope hazard area
  - Wetlands
  - Aquatic area
  - Wildlife habitat conservation area
  - Wildlife habitat network

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ALLOWED ALTERATIONS TABLE

- New alterations table for those critical areas where alterations are limited
- Replaces complete and partial exemptions sections of SAO
- Supplemented with a new table in K.C.C. 16.82 for grading permits

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Letter "A" in a cell means alteration is allowed A number in a cell means the corresponding numbered condition in subsection D. applies "Wildlife area and network" column applies to both Wildlife Habitat Conservation Area and Wildlife Habitat Network	LANDSLIDE HAZARD	OVER 40% AND BUFFER	STEEP SLOPE HAZARD	AND BUFFER	WETLAND AND	BUFFER	AQUATIC AREA AND	BUFFER	CHANNEL MIGRATION ZONE	WILDLIFE AREA	AND WETLAND WORK
ACTIVITY											
Structures											
Construction of new single detached dwelling unit					A 1		A 2				
Construction of nonresidential structure					A 3		A 3			A 3, 4	
Maintenance or repair of existing structure	A 5		A		A		A			A 4	
Expansion or replacement of existing structure	A 5, 7		A 5, 7		A 7, 8		A 6, 7, 8			A 4, 7	
Interior remodeling	A		A		A		A			A	

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ALLOWED ALTERATIONS: SAMPLE CONDITIONS

1. Limited to farm residences in grazed or tilled wet meadows and subject to the limitations of subsection D.3. of this section.
4. Allowed if no clearing, external construction or other disturbance in a wildlife habitat conservation area occurs during breeding seasons established under section 198 of this ordinance.

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EXAMPLES
ALLOWED ALTERATIONS

- Permit may be required, for example building, clearing or grading

- Fire safety
  - Follow Fire Marshal BMPs in wetlands, aquatic areas, and wildlife areas
  - Not allowed in land slide hazard areas and steep slopes
  - Allowed without restriction in other critical areas

- Firewood collection
  - In wetlands, aquatic areas, steep slopes, allowed for personal use
  - Not allowed in wildlife areas
  - Allowed without restriction in other critical areas

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EXAMPLES
ALLOWED ALTERATIONS

- Expansion or replacement of existing structures
  - Maintained SAO allowances
  - Residence – In buffers of most critical areas, including wetlands, aquatic areas and wildlife areas, replace or expand by up to 1,000 square feet
  - Other structures – can replace, but generally cannot expand
- Docks and piers
  - Construction of new docks and piers generally limited to seasonal structures
  - Repair and replacement generally allowed

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EXCEPTIONS

- Director's modification, public agency and utility exception (PAUE) and sensitive areas variance repealed
- Linear and non-linear exception replace PAUE and variance
- Reasonable use exception is modified slightly

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LINEAR EXCEPTIONS

- Infrastructure that supports development that is linear in nature and includes, public and private roadways, public trails, private driveways, railroads, utility corridors and utility facilities
- Allows alterations to critical areas and critical area buffers
- May alter a condition on the table but not a development standard
- Must meet approval standards including:
  - it connects to or is a public roadway, public trail, utility corridor or utility facility owned or operated by a public utility or
  - required to overcome limitations due to gravity

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NON-LINEAR EXCEPTIONS

- Only allows alterations to buffers of wetlands, aquatic areas and wildlife habitat conservation areas; not to the critical area itself
- Exception for category II, III or IV wetland for a public school facility
- May alter a condition on the table but not a development standard

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CHANNEL MIGRATION HAZARD AREAS

- A component of the flood hazard area
- Four areas already mapped – three additional areas in process

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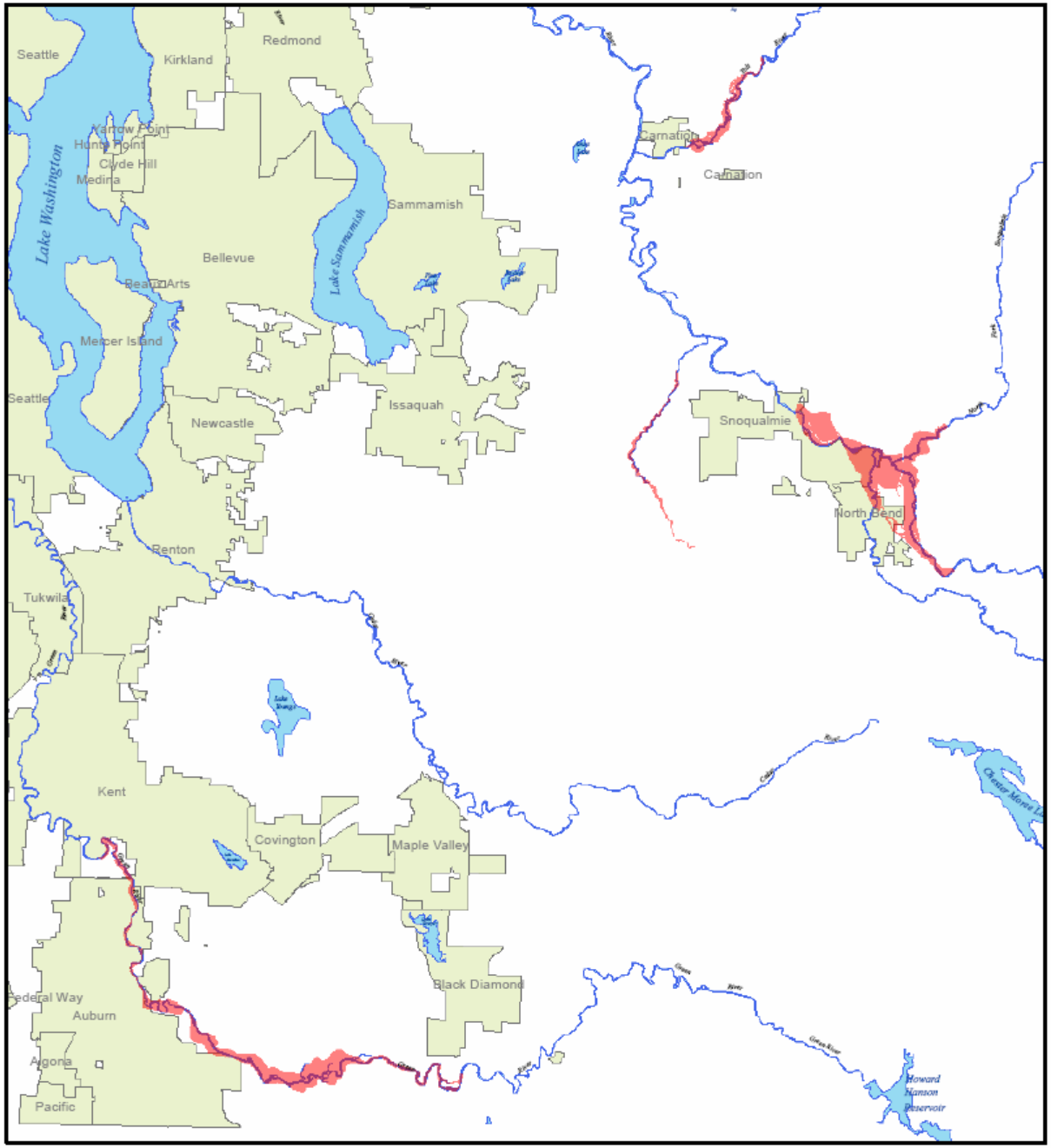
Channel Migration Hazard Areas



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CHANNEL MIGRATION HAZARD AREAS

- Aquatic area buffer extends to outer edge of severe channel migration hazard area
- Limits on new structures, roads, etc. within the severe CMZ

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CRITICAL AQUIFER RECHARGE AREA (CARA)

- Three categories based on:
  - Groundwater susceptibility to contamination
  - Well-head protection area or sole source aquifer
  - Saltwater intrusion
- Generally, if any part of parcel is in CARA, entire parcel is subject to regulations

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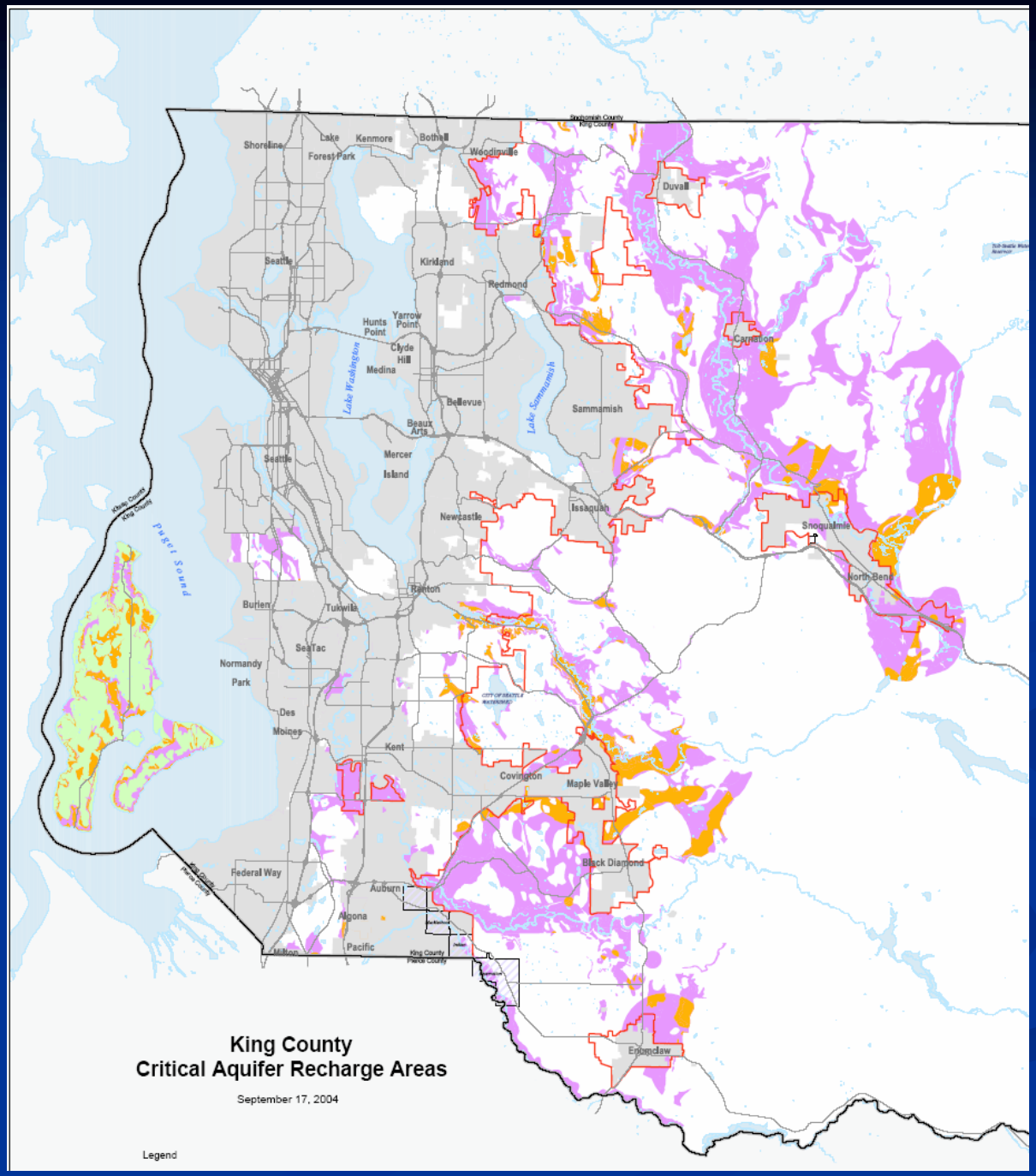
Shoreline
Lake Forest Park
Kenmore
Bothell
Woodinville
Duvall
Seattle
Kirkland
Redmond
Hunts Point
Yarrow Point
Clyde Hill
Medina
Lake Washington
Lake Sammamish
Carnation
Bellevue
Sammamish
Beaux Arts
Mercer Island
Seattle
Issaquah
Newcastle
Snoqualmie
North Bend
Puget Sound
Renton
Burien
Tukwila
SeaTac
Normandy Park
Des Moines
Kent
Covington
Maple Valley
Black Diamond
Federal Way
Auburn
Algona
Pacific
Enumclaw
King County
Critical Aquifer Recharge Areas
September 17, 2004
Legend

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CRITICAL AQUIFER RECHARGE AREA (CARA)

- Development standards limit types of activities allowed. For example:
  - Hazardous waste disposal facilities not allowed in any CARA
  - Underground storage tanks with hazardous substances in category I CARAs and on Vashon Island, including exempt tanks, must meet state and federal standards
  - In category 1 and 2 CARAs, lots less than 1 acre must use special on-site septic systems
  - New wells on Vashon Island must test for chloride

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WILDLIFE HABITAT CONSERVATION AREA

- Protect breeding sites of species covered by the Comprehensive Plan
- Some species protected county-wide; others protected only in rural areas
  - 10 species with specific development standards
  - Other species handled on a case by case basis
- Protects breeding habitat, not foraging habitat

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WILDLIFE HABITAT CONSERVATION AREA

- Protect everywhere
  - Bald eagle
  - Great blue heron
  - Marbled murrelet
  - Spotted owl
  - Osprey
  - Peregrine Falcon
- Protect outside UGA
  - Northern goshawk
  - Townsend's big-eared bat
  - Vaux's swift
  - Red tailed hawk

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WILDLIFE HABITAT CONSERVATION AREAS: BREEDING SITE PROTECTION

Bald eagle

Bald eagles typically nest in a large tree with stout upper branches within a stand of large trees close to a lake, river, or marine shoreline.

If a bald eagle nest is identified on the property, the following protections will apply:
- No alterations within 800 feet from March 15 through April 30 (incubation and first three weeks of brooding).
- Maintain a 400 foot radius around nest trees.
- Prohibit use of land-clearing machinery within 800 feet from January 1 through August 31.

Great blue heron

Great blue herons nest in rookeries (communal groups of nests) typically found in a mature forest stand with an uneven canopy of trees at least 50 feet high, within 0.6 miles of water.

If a great blue heron rookery is identified on the property, the following protections will apply:
- No clearing or grading disturbance from January 1 through July 31 within 924 feet around existing rookeries.
- Maintain 820 foot radius around existing rookeries that are known to be stable; buffer may be increased by 164 feet if population of rookery is declining.

Marbled murrelet

Marbled murrelets nest in large Douglas-fir, Sitka spruce, western hemlock, or western redcedar in old-growth forest. They nest in trees containing platforms or deformities such as large or forked limbs, broken tops, dwarf mistletoe infections, or witches' brooms. The parents take turns every 24 hours incubating the egg or flying up to 12 miles out to sea to feed.

If a marbled murrelet nest site is identified on the property, the following protections will apply:
- Protect area within 0.5 mile of nest trees.

Northern goshawk

Northern goshawks typically nest in large, contiguous tracts of old-growth or mature forest with large trees, a closed canopy, and an open understory of shrubs and herbs, generally near the base of north-facing slopes. The goshawk is very protective of its nest and will attack anyone who ventures too close.

If a northern goshawk nest is identified on the property, the following protections will apply:
- Maintain 1,500 foot radius around active nest sites located outside the urban growth area.

Red-tailed hawk

Red tailed hawks are one of the earliest breeders in the Pacific Northwest. Nest characteristics vary widely with vegetation and topography. Common characteristics include an unobstructed access to nests from above and a commanding view of the adjacent environment. Nest sites are tall trees, in open areas and often close to water.

If a red-tailed hawk nest is identified on the property, the following protections will apply:
- Maintain an area with a radius of 325 feet from an active nest located outside the urban growth area.
- Clearing and grading is not allowed within 660 feet of an active nest located outside of the urban growth area from March 1-July 31

Osprey

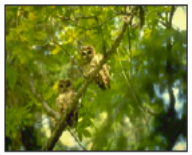
Ospreys typically nest in snags that are 10-130 feet tall, with a broken top or strong side limbs, and surrounded by water or within 330 feet of water.

If an osprey nest is identified on the property, the following protections will apply:
- No disturbance within 660 feet from April 1 through September 30.
- Maintain 230 foot radius around active nest.

Peregrine falcon

Peregrine falcons typically locate their nests (eyries) on cliffs at least 150 feet high.

If a peregrine falcon nest (eyrie) is identified on the property, the following protections will apply:
- No human activity along the nest cliff rim, immediately below nest cliffs, on on the cliff face within 1,000 feet at any time of year.
- No surface-disturbing activities that would produce loud noises (e.g. blasting, operation of chainsaws and heavy machinery) from March 1 through June 30 within .5 mile feet of nest.
- Route powerlines 1,000 feet from eyries.



Spotted owl

Spotted owls typically nest in cavities, broken tops, or other deformities in trees located in old-growth forest or other mature forest with a layered, closed canopy and a supply of large trees or snags with appropriate nest sites.

If a spotted owl nest is identified on the property, the following protections will apply:
- Protect 3,700 foot radius from nest tree.

Townsend's big-eared bat

Townsend's big-eared bats typically form nesting colonies and hibernate in caves or mines, or occasionally in buildings.

If a cave, mine or other structure containing a Townsend's big-eared bat colony is identified on the property, the following protections will apply:
- Maintain a minimum 450' radius in all directions from the entrance of a cave or mine of an active and alternate nursery sites located outside of the urban growth area from June 1-October 1
- Establish 450 foot radius around the entrance to the cave or mine serving as winter hibernacula November 1 - March 31 outside of the urban growth boundary
- A building, bridge or tunnel, or other structure used solely for day or night roosting shall not be altered from March 1-November 30
- The entrance to a cave or mine that is protected because of bat presence is protected from human entry May 1 - September 15
- Gate entrance to cave or mine that is protected because of bat presence must be designed to allow bats to enter and exit.

Vaux's swift

Vaux's swifts nest in hollow trees or cavities left by pileated woodpeckers within old-growth forest.

If a Vaux's swift nest is identified on the property, the following protections will apply:
- Maintain a 300 foot radius around active nest sites outside the urban growth area.
- No clearing or construction activities within 400 feet of active or potential nest trees from April 1 through October 31, unless potential nest tree is proved to contain no nests.

SPECIAL TIMING CONSIDERATIONS

- Vesting
  - Short plats: Critical areas, Stormwater, Clearing and grading in effect at time complete application submitted
  - CUPs - vested to regulations at time complete application submitted
  - Variances and reasonable use exceptions – vested to regulations in effect when anchor permit is vested
  - Septic system and wells approved prior to January 1, 2005 subject to regulations in effect at time of approval

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QUESTIONS

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NEW BUFFERS, WETLAND AND AQUATIC AREA CLASSIFICATIONS

Steve Bottheim, Supervisor
DDES Critical Areas

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INTRODUCTION

- Focus on wetlands and aquatic areas
- Outline categories, classification and associated buffers
- Provide resources to aid applicants in critical area assessments

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WETLANDS

2004 Wetland Rating System for Western Washington

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WETLAND DEFINITION

Wetlands are:

- Non-aquatic areas (for purposes of definition)
- Inundated or saturated by groundwater at a frequency and duration sufficient to support, and under normal circumstances that does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

- Does not include artificial features made from a non-wetland areas (except for intentionally constructed wetlands for the purpose of mitigation).

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TYPES OF WETLANDS

- Estuarine
- Natural Heritage Wetland (DNR)
- Bog
- Mature or Old Growth Forest
- Others:
  - Forest
  - Scrub-shrub
  - Emergent
  - Wet meadows

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WETLAND CLASS

(HGM – Hydrogeomorphic Classification)

- Wetlands are grouped based on landscape position and water regime
  - Depressional
  - Riverine
  - Lake fringe
  - Slope
  - Freshwater tidal

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Figure 14: A category III depressional wetland. Note the surface ponding in the low point of the wetland with the cattails. This wetland functions relatively well to remove pollutants and store floodwaters, but does not provide much habitat.

Figure 13: A riverine wetland being inundated by flood waters from North Creek. The creek is in the background.

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Figure 11: Lake-fringe wetland with an area of aquatic bed vegetation and a narrow band of wetland shrubs along the shore.

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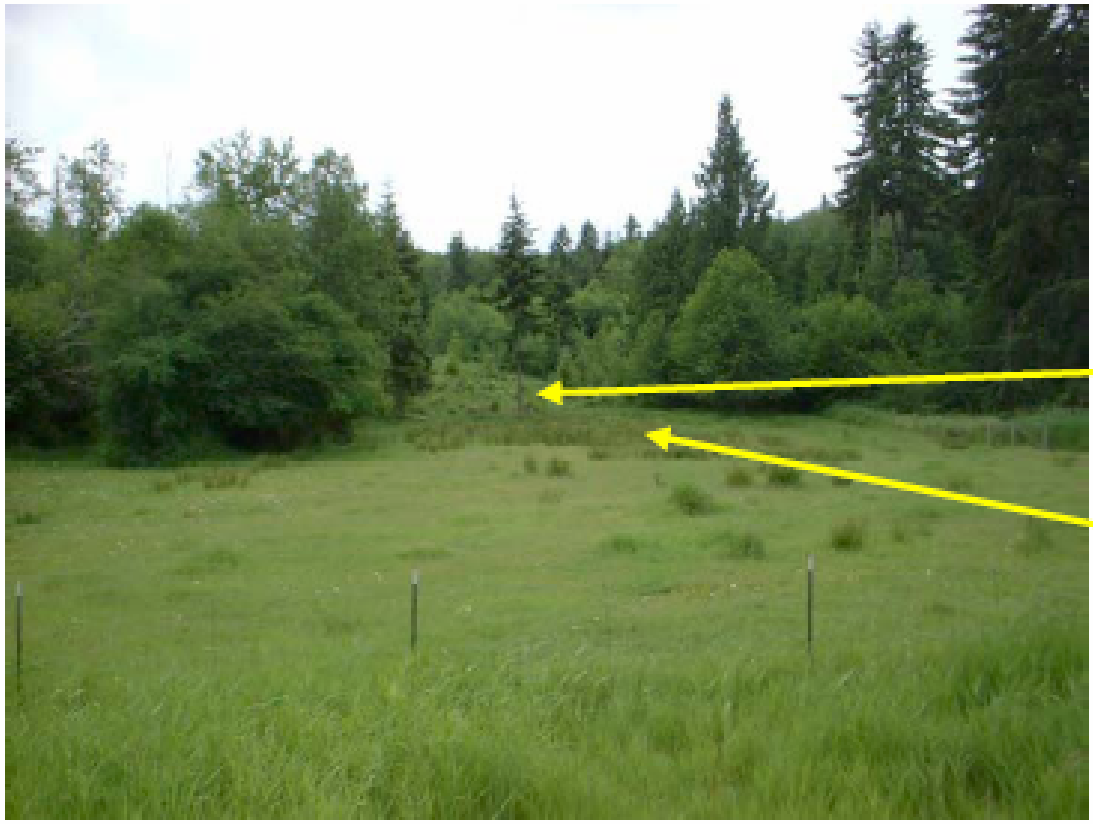

Figure 12: Slope wetland in Lewis County identified by the presence of wetland plants (*Carex sp. Juncus sp.*) Wetland occurs where there is a major break in this slope of the hillside.

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Figure 8: A wetland with two different levels of disturbance and separated by a fence. The entire wetland should be rated; not just the mowed part.

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WETLAND CATEGORIES

- CAO adopts the Department of Ecology's Wetland Rating and mitigation methodology
- Vetted through local, state and federal agencies to "harmonize" multi-agency reviews
- Wetlands are classified into four categories based on specific attributes such as rarity, sensitivity, and function.
- Functions include water quality, hydrologic, and habitat
- Wetland Rating Form – point system

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Category 1

- Unique or rare wetland
- Ecological attributes that are impossible to replace in a human lifetime
- Examples: estuarine, bogs, mature and old-growth forests, wetlands that perform many functions well
- Total score of 70 points (out of 100)

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Category 2

- Difficult but not impossible to replace
- Examples include smaller estuarine, mature forests, wetlands that perform functions well
- Score between 51 to 69 points

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Category 3

- Wetlands with functions that perform at a moderate level
- Disturbed in some way, less diverse and more isolated
- Scores between 30 to 50

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Category 4

- Wetlands with the lowest level of functions
- Heavily disturbed
- Wetlands that we should be able to replace or improve
- Scores less than 30

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WETLAND COMPLEX

- Important to decrease wetland isolation
- Urban “high condition” basins and rural areas
- Grouping of two or more wetlands
  - At least one Category 1 or 2; or
  - Three category 3 wetlands; or
  - Four category 4 wetlands
  - Within 500-feet of each other
  - Connected by a vegetated corridor
  - No barriers present

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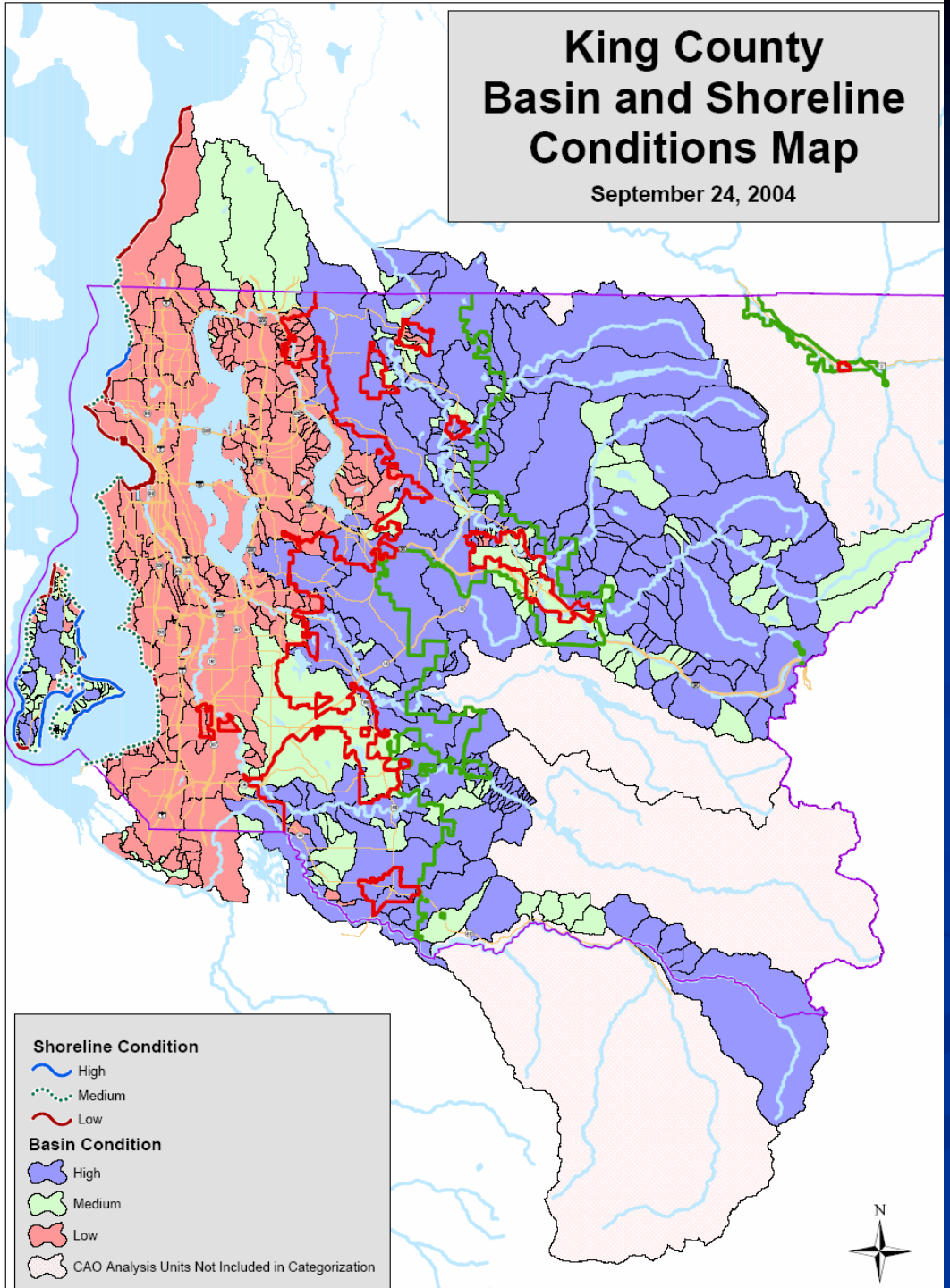
King County Basin and Shoreline Conditions Map

September 24, 2004



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These questions apply to wetlands of all HGM classes.	Points
HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat	
H 1. Does the wetland have the potential to provide habitat for many species?	
H 1.1 Vegetation structure *(see p. 72)* *Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.* ____Aquatic bed ____Emergent plants ____Scrub/shrub (areas where shrubs have >30% cover) ____Forested (areas where trees have >30% cover) ____Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) *Add the number of vegetation types that qualify. If you have:* 4 types or more points = 4 3 types points = 2 2 types points = 1 1 type points = 0	
H 1.2. Hydroperiods *(see p. 73)* *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ____Permanently flooded or inundated — 4 or more types present — points = 3 ____Seasonally flooded or inundated — 3 types present — points = 2 ____Occasionally flooded or inundated — 2 types present — point = 1 ____Saturated only ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ ***Lake-fringe wetland* = 2 points** ____***Freshwater tidal wetland* = 2 points**	
H 1.3. Richness of Plant Species *(see p. 75)* Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species points = 2 *List species below if you want to:* 5 - 19 species points = 1 < 5 species points = 0	

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the <u>potential</u> to improve water quality?** *(see p. 38)*	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet — points = 3 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland has an unconstricted surface outlet — points = 1 Wetland is flat and has no obvious outlet and/or outlet is a ditch — points = 1	
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES — points = 4 NO — points = 0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest class): Wetland has persistent, ungrazed, vegetation > = 95% of area — points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area — points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area — points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area — points = 0	
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland — points = 4 Area seasonally ponded is > ¼ total area of wetland — points = 2 Area seasonally ponded is < ¼ total area of wetland — points = 0 NOTE: *See text for indicators of seasonal and permanent inundation..*	
D	**Total for D 1** *Add the points in the boxes above*	
D	**D 2. Does the wetland have the <u>opportunity</u> to improve water quality?** *(see p. 44)* Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.* — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	multiplier _____
D	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	

URBAN WETLAND BUFFERS

- Urban buffers may be decreased by 25 feet if:
  - the applicant implements all applicable mitigation measures identified in Table 2, or
  - the applicant proposes alternate mitigation to reduce the impacts of the development and the department determines the alternative provides equivalent mitigation (buffer averaging, enhancement)

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Wetland Buffer Reduction Options

Buffer Width Averaging

- Decrease the buffer in one area and increase the buffer in another area of the wetland
- The new buffer will provide additional protection to wetlands or enhance their functions
- The total area contained in the buffer on the development proposal site does not decrease
- The additional buffer is contiguous with the standard buffer

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WETLAND BUFFER REDUCTION OPTIONS

Rural Stewardship Plan

- Applicable to sites zoned rural residential
- A commitment to provide better management of critical areas and natural resources than would otherwise be achieved through the CAO
- In exchange for increased stewardship an applicant may be eligible for buffer flexibility
- PBRS (Public Benefit Rating System)

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WETLAND BUFFER REDUCTION OPTIONS

Farm Management Plan

- Applicable for properties that are or will be predominantly used for agriculture
- Use best management practices developed for agriculture by the Natural Resource Conservation Service
- Farm Management Plan will protect critical areas and also support the viability of farm operations

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WETLAND MITIGATION

- Prior to an alteration an applicant must apply the sequential measures
- Seven measures listed in order of priority
- First Measure is avoiding impacts altogether
- Second measure is minimize the impacts

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SPECIFIC MITIGATION REQUIREMENTS

On-site

- Based on ratios of mitigation to impact
- Re-establishment (restoration) – return historic functions - remove fill
- Rehabilitation – (restoration) – return historic functions – breaching dike
- Enhancement – Improve a specific function – planting native vegetation
- Creation – establish wetland on upland site

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SPECIFIC MITIGATION REQUIREMENTS

Off-site

- Mitigation off the proposal site
- Off-site mitigation will achieve equal or greater functions
- DDES in process of developing a resource mitigation reserve

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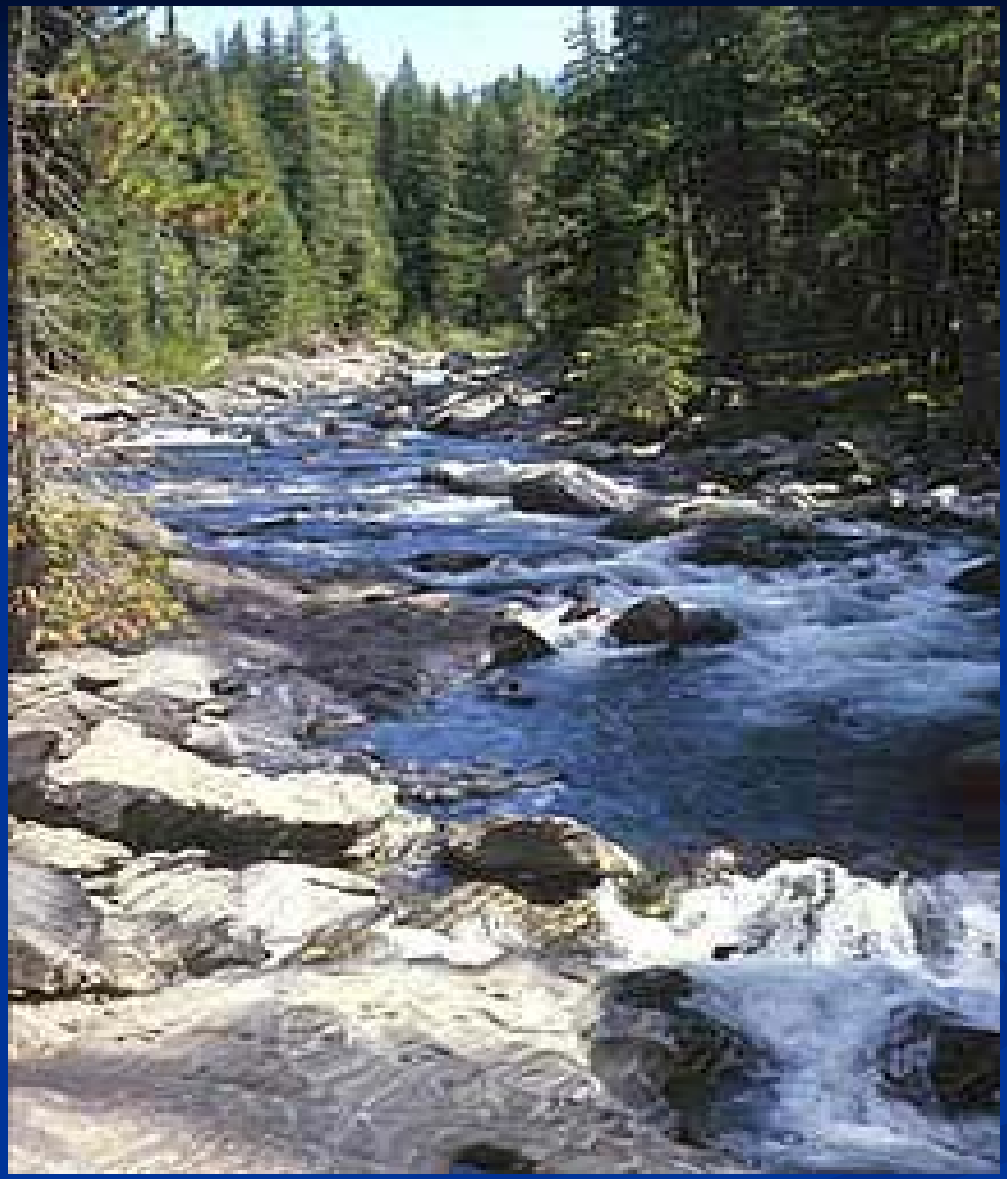

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AQUATIC AREAS

- Includes existing stream regulations and adds lakes and marine shorelines – excludes wetlands
- Buffers will apply to large lakes and marine shorelines, which will pre-empt shoreline regulations
- New buffer widths

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Aquatic Area Types and Buffers

Aquatic Area Types *(Includes creeks, streams, lakes, rivers and shorelines)*		**Urban Area Buffers**	**Rural and Resource Buffers**
S Waters:	Aquatic areas inventoried as shorelines of the state, including segments of streams with mean annual flow > 20 cubic ft./second, marine shorelines and lakes ≥ 20 acres.	115 feet	165 feet
F Waters:	All segments of aquatic areas that are not Type S and contain fish or fish habitat, including waters for use for fish hatchery.	115 feet	165 feet
S or F Waters in basins designated as "high" on basin conditions map:	See description below	165 feet	N/A
N Waters:	All segments of aquatic areas that are not Type S or F waters and that are physically connected by an above ground channel system, stream or wetland to Type S or F waters.	65 feet	65 feet
O Waters:	All segments of aquatic areas that are not Type S, F or N and not physically connected by an above ground channel system, stream or wetland to type S or F waters	25 feet	25 feet

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TYPE S EXAMPLES

- Puget Sound
- Snoqualmie River
- Ames Lake
- Issaquah Creek

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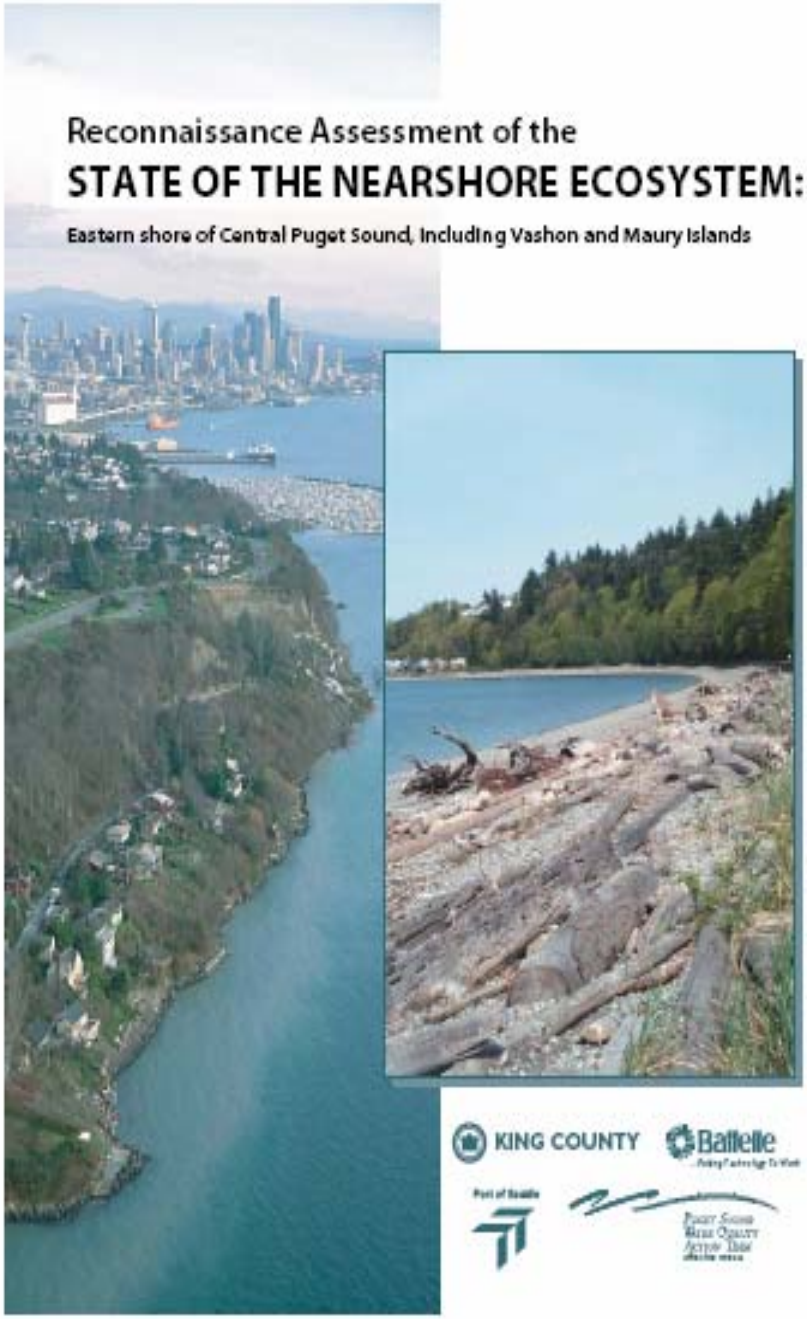
Reconnaissance Assessment of the

STATE OF THE NEARSHORE ECOSYSTEM:

Eastern shore of Central Puget Sound, Including Vashon and Maury Islands



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Battelle

Port of Seattle

Puget Sound Water Quality Action Team

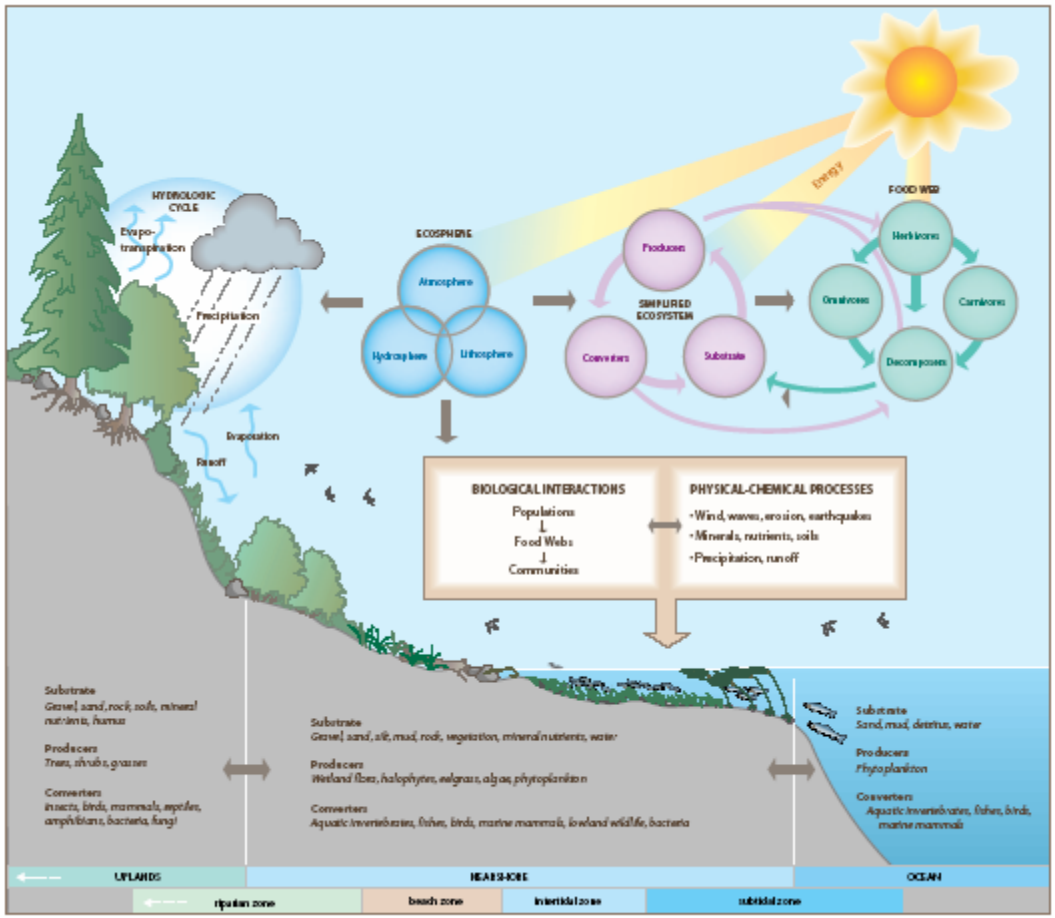

Figure 4

Simplified Conceptual Model of the Puget Sound Nearshore Ecosystem

(after Proctor et al. 1980)

State of the Nearshore Report

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TYPE F EXAMPLES

- Tuck Creek
- Mill Creek, Rock Creek
- All lakes and ponds smaller than 20 acres that contain fish or fish habitat.

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TYPE N EXAMPLES

- The steep upper reaches (often seasonal and un-named) of other wetlands or fish bearing streams.

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Type O

Type O waters include all segments of aquatic areas that are not Type S, F or N waters and that are not physically connected to Type S, F or N waters by an above-ground channel system, stream or wetland.

Examples include: springs from hillsides that then infiltrate with no known surface connection; ephemeral streams with no fish-bearing potential or associated wetlands; or an isolated pond or closed depression that dries out or is too acidic or too shallow for fish to live.

AQUATIC AREA MITIGATION

- Prior to an alteration an applicant must apply the sequential measures
- Seven measures listed in order of priority
- First measure is avoiding impacts altogether
- Second measure is minimize the impacts

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AQUATIC BUFFER REDUCTION OPTIONS

- Buffer Width Averaging
- Farm Plan
- Rural Stewardship Plan
- Alteration exception
- Reasonable use exception

King County

RESOURCES

- Internet:

  www.metrokc.gov/ddes/cao

  www.ecy.wa.gov/programs/sea/shorelan

- Critical Areas Manual
- Rules for rural stewardship and farm plans
- Dedicated staff at DDES to assist rural landowners without charge
- Codified ordinance now available

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QUESTIONS

King County

BREAK

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NEW CLEARING REGULATIONS

Harry Reinert, Special Projects Manager,
DDES Director's Office

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MAJOR CHANGES IN K.C.C. 16.82: CLEARING AND GRADING

- New permit exception table that tracks the new critical area alteration table
- New programmatic permits for activities that are repeated
- Seasonal clearing limits
- Soil retention requirements
- Class IV-G Forest Practices – Creates a special category of Class IV-G forest practice that is not a conversion to a non-forestry use
- Expand clearing limits to all rural residential areas
- Tree retention standards apply in all urban areas

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DEFINITIONS

- Clearing – the cutting, killing, grubbing, or removing of vegetation or other organic material by physical, mechanical, or any other similar means
- Grading – any excavating, filling or removing of the duffer layer

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CLEARING AND GRADING PERMITS

- Clearing and grading:
  - Must meet requirements of clearing and grading code, even if permit not required
  - If is proposed for a critical area or critical area buffer, must also meet critical area development standards
- Clearing and grading permit required, unless:
  - Exception included on permit exception table
  - Clearing and grading reviewed and approved by DDES as part of another development proposal
- Permits valid for up to two years, programmatic permits valid for up to five years

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CLEARING AND GRADING PERMIT EXCEPTION TABLE

- New exception table describes when a clearing and grading permit is not required
- Tied to allowed alteration table in the critical areas ordinance

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KEY

"NP" in a cell means no permit required if conditions are met. A number in a cell means the numbered condition in subsection C. applies. "Wildlife area and network" column applies to both Wildlife Habitat Conservation Area and Wildlife Habitat Network

ACTIVITY	OUTSIDE OF CRITICAL AREA	COAL MINE HAZARD	EROSION HAZARD	FLOOD HAZARD	CHANNEL MIGRATION	LANDSLIDE HAZARD AND BUFFER	SEISMIC HAZARD	VOLCANIC HAZARD	STEEP SLOPE HAZARD AND BUFFER	CRITICAL AQUIFER RECHARGE AREA	WETLANDS AND BUFFER	AQUATIC AREA AND BUFFER	WILDLIFE AREA AND NETWORK
Grading and Clearing													
Grading	NP 1, 2	NP 1, 2	NP 1, 2				NP 1, 2	NP 1, 2		NP 1, 2			
Clearing	NP 3 NP 24	NP 3	NP 3	NP 3			NP 3	NP 3		NP 3	NP 4 NP 23	NP 4 NP 23	
Removal of noxious weeds	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Removal of invasive vegetation	NP 7	NP 7	NP 7	NP 7	NP 7		NP 7	NP 7		NP 7	NP 8	NP 8	NP 8
Non conversion Class I, II, III, IV-S forest practice	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9	NP 9
Roads													
Grading within the roadway	NP 11	NP 11	NP 11	NP 11	NP 11	NP 11	NP 11	NP 11	NP 11	NP 11			NP 11
Clearing within the roadway	NP	NP 12	NP 12	NP 12	NP 12	NP 12	NP 12	NP 12	NP 12	NP	NP 12	NP 12	NP 12

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SAMPLE CONDITIONS

1. Excavation less than five feet in vertical depth, or fill less than three feet in vertical depth that, cumulatively over time, does not involve more than one hundred cubic yards on a single site.

2. Grading that produces less than two thousand square feet of new impervious surface on a single site added after the effective date of this section. For purposes of this subsection C.2., "new impervious surface" is defined in K.C.C. 9.04.020.

3. Cumulative clearing of less than seven thousand square feet including, but not limited to, collection of firewood and removal of vegetation for fire safety. This exception shall not apply to development proposals:

   a. regulated as a Class IV forest practice under chapter 76.09 RCW;

   b. in a critical drainage area established by administrative rule;

   c. subject to clearing limits included in property-specific development standards and special district overlays under K.C.C. chapter 21A.38; or

   d. subject to urban growth area significant tree retention standards under section 17 of this ordinance and K.C.C. 21A.38.230.

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Examples

- No clearing and grading permit is required to:
  - remove noxious weeds
  - remove downed trees outside of critical areas
  - cut firewood for personal use in wetlands and aquatic areas

King County

Examples

- No clearing and grading permit is required to:
  - Clear for fire safety
    - Up to 7,000 square feet of clearing in most areas
    - In wetlands and aquatic areas, clearing following Fire Marshal BMPs
  - Graze livestock
  - Horticulture
  - Maintain agricultural ditches (with a farm plan)
  - Forest practices
  - Maintain lawns, landscaping, and gardens

King County

PROGRAMMATIC PERMITS

- Available for
  - Clearing or grading that:
    - is repetitive and part of a maintenance program;
    - has the similar identifiable impacts; and
    - standard permit conditions can be applied
  - Forest practices under a county approved forest management plan
- DDES and applicant develop standard permit conditions
- Activities subject to inspection

King County

EMERGENCY ACTIONS

- Notify department prior to taking action, or within 48 hours after, if prior notice not possible
- Requires imminent danger or risk to public health, safety and welfare of persons or property
- Permits, corrective action, and mitigation required following a pre-application meeting

King County

EROSION AND SEDIMENT CONTROL

- Erosion and sediment control measures
  - All clearing and grading requires erosion and sediment control, even if permit is not required
  - Standards included in surface water design manual

- Seasonal clearing limits
  - Applies county-wide
  - From October 1 through April 30, clearing and grading allowed only if applicant demonstrates ability to comply with SWDM standards
  - Director may modify the limitation period based on weather conditions
  - Water quality violation results in a stop work order
  - Does not apply to some routine maintenance activities, typical residential activities that do not require a permit, or emergencies

King County

GRADING STANDARDS

- New requirements:
  - Limits on type of fill material allowed
  - Duff layer and topsoil retained if possible
  - Cleared and graded areas must have soil moisture holding capacity restored to native site conditions

King County

RURAL RESIDENTIAL CLEARING LIMITS

- Apply to all rural residential zoned property
- Clearing limits
  - Lots less than 1.25 acres – greater of amount legally cleared prior to Jan. 1, 2005 or 50%. Does not include drain field and access
  - Lots less than 5 acres – greater of amount legally cleared prior to Jan. 1, 2005 or 50%
  - Lots 5 acres or larger – greater of amount legally cleared prior to Jan. 1, 2005 or 2.5 acres or 35%
  - Subdivisions and short subdivisions – 35%; if placed in separate tract, 50%
  - Bear Creek, Issaquah Creek, and May Creek Basins – 35% for lots greater than 1.25 acres

King County

ACTIVITIES ALLOWED IN RETAINED AREAS

- Activities that will not prevent long-term purpose of promoting forest cover, including:
  - Forest practices in accordance with a county-approved forest management plan;
  - Passive recreation uses and related facilities, including pedestrian, equestrian community and bicycle trails, nature viewing areas, fishing and camping areas, and other similar uses that do not require permanent structures,
  - Utilities and utility easements, including surface water facilities
  - Pruning or removing hazardous trees or removing downed trees;
  - Reducing the danger from wildfire by following best management practices approved by the King County fire marshal;
  - Removal of noxious or invasive vegetation

King County

SIGNIFICANT TREE RETENTION

- Applies inside urban growth area
- Defined as evergreens 8 inches in diameter and deciduous trees 12 inches in diameter
- Required to be retained
- If more than 25% of the site is in critical areas and buffers, provisions do not apply
- If retention on site is not possible, alternative off-site locations may be used

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SPECIAL TIMING CONSIDERATIONS

- Clearing and grading code - legal clearing includes:
  - Legal clearing before January 1, 2005
  - Clearing under a permit application complete by October 25, 2004

King County

QUESTIONS

King County

STEWARDSHIP AND INCENTIVE PROGRAMS

Bill Eckel, Manager,
Land and Water Stewardship Section,
Water and Land Resources Division,
Department of Natural Resources and Parks

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TOPICS COVERED

- Purpose and the “big idea” behind Rural Stewardship Planning
- What Rural Stewardship Plans accomplish
- How WLRD staff will work with rural property owners
- Benefits

King County

TOPICS NOT COVERED

Farm and Forestry planning, which will be covered at a later date…

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PURPOSE OF RURAL STEWARDSHIP PLANS

- Executive directed flexibility options; recognition that landowners are the best stewards of their land.
- Provide the same level of protection as regulatory standards – protections can be met with something other than uniform regulations.

King County

PURPOSE OF RURAL STEWARDSHIP PLANS, Cont'd.

- Flexibility in meeting regulatory requirements means homeowners taking responsibility for long-term care of critical resources and their buffers.

- Only applied in rural residential zones – intended for single family home sites.

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GOALS OF RURAL STEWARDSHIP

- Avoid critical areas where possible and protect the value they offer.
- Preserve the highest quality habitat first.
- Protect or improve the flow and absorption of water on site.
- Protect native plants and avoid fragmentation of corridors between wetlands, streams, etc.

King County

GOALS OF RURAL STEWARDSHIP, Cont'd.

- Use "best management practices" to reduce impacts of a development, e.g. restoring native plants.
- Monitor, over time, what is working and what is not.

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BENEFITS TO PROPERTY OWNERS

- Flexibility in meeting regulations
- Staff assistance
- Qualifying for property tax reduction

King County

FLEXIBILITY IN KEY AREAS

- Wetland buffers
- Buffers for creeks, streams, rivers
- Buffers for regulated wildlife habitat areas for priority species
- Clearing limits

King County

PUBLIC HEALTH AND SAFETY

- Standards are not flexible:
  - Stay away from flood prone areas
  - Stay off steep slopes, away from landslide hazards
  - Protect critical groundwater recharge areas
  - Building and sanitation code requirements

King County

STAFF ROLES

- Property owners receive assistance from WLRD staff, free of charge.
- Staff person acting as your partner in developing plan, advocate during pre-application process.
- Available aerial photos and natural resource maps.
- Onsite field visits to assess property, permit needs and stewardship opportunities.
- Assistance in developing the plan, which could reduce the overall cost of a DDES permit.

King County

PROPERTY OWNER ROLES

- Clearly state land use and stewardship goals for the property.
- Work with County staff in developing the plan.
- Coordinate any technical documents necessary to support the proposal.
- Submit final stewardship plan to DDES.
- Commit to long-term stewardship.

King County

CURRENT USE TAXATION

- Property owner may qualify for reduction in property tax.
- Current Use Taxation program available throughout the state since 1972.

King County

FOUR PROGRAMS IN KING COUNTY

- Forest land – timber forest greater than 20 acres (273,300 acres enrolled)
- Farm and agricultural land - livestock and farm products (30,900 acres enrolled)
- Timber land – 5-20 acres managed under forest stewardship plan (2,900 acres enrolled)
- Public Benefit Rating System (5,400 acres enrolled)

King County

PBRS AND STEWARDSHIP PLANS

- Property owners with an approved Stewardship Plan may apply for a tax reduction, application fees have been waived.
- Points awarded according to open space resources:
  - Natural resources
  - Aquifer protection
  - Forest and agriculture
  - Stewardship plans
  - Watershed protection areas

King County

PBRS AND STEWARDSHIP PLANS, Cont'd

- Point totals translate into percent reduction of assessed value of the land dedicated to open space. Can range from 50-90% reduction.
- Home and building sites, landscaped areas, driveways and personal use areas are not eligible for reduction.

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DECISIONS AND FACTORS

- Three criteria
  - Condition of the buffer
  - Health of the drainage basin
  - Location in the drainage basin
- Land owner objectives – what to do on property and where
- Site specific best management practices
  - Replanting natives
  - Removing invasive plants
  - More stormwater management
- Flexibility in clearing and with buffers

King County

AREA WIDE CRITERIA

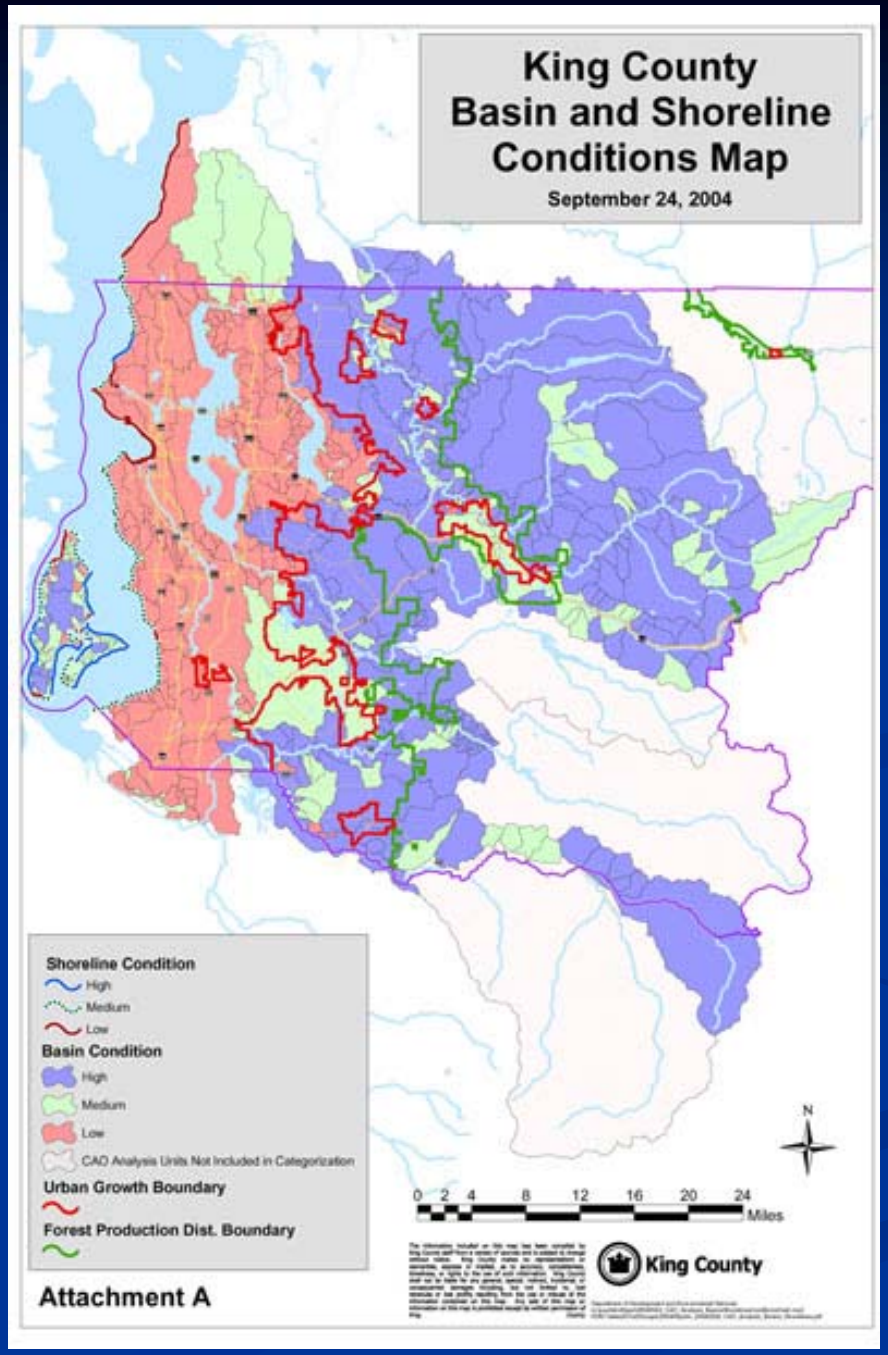
- Condition of the buffer
  - If good condition, one might stay away from it
  - Get greater flexibility in clearing
  - If poor condition, look for replanting

King County

AREA WIDE CRITERIA, Cont'd

- Location in the drainage basin
  - Higher up the basin, looking for less of a stream buffer, but increases in forest cover.
  - Lower in the basin, looking for improvements in the stream buffer and water quality.

King County


King County
Basin and Shoreline
Conditions Map
September 24, 2004
Shoreline Condition
High
Medium
Low
Basin Condition
High
Medium
Low
CAO Analysis Units Not Included in Categorization
Urban Growth Boundary
Forest Production Dist. Boundary
N
0 2 4 8 12 16 20 24
Miles
King County
Attachment A

King County

AREA WIDE CRITERIA, Cont'd

- Health of the drainage basin:
  - Ranges from good, medium and poor based on rate of development patterns.
  - Poor drainage basins will get greater flexibility with buffers, but increases in requirements to replant.

King County

QUESTIONS

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Rural Stewardship Program Coordinator
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PBRS Program Coordinator
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SEPTIC REVIEW REQUIREMENTS FOR SINGLE FAMILY PERMITS

Steve Bottheim, DDES Critical Areas Supervisor

King County

CRITICAL AREA DESIGNATION PROCESS

King County

WHAT IS A CRITICAL AREA DESIGNATION?

- Review that enables applicant/property owner to determine the conditions and constraints on future site development (King County Code 21A.24.500-510).
- Establishes a site plan with boundaries and classification of critical areas
- Allows development planning with confidence and predictability
- Streamlines future building permit process. See *Critical Areas Review* Bulletin 21, available on the DDES Web site at www.metrokc.gov/ddes.

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CHANGES WITH NEW ORDINANCE

- Required prior to health approval for new structures proposing to install on-site septic systems or wells
- Ability to include evaluation/interpretation of buffers, proposed alterations and mitigation
- Valid for five years
- Applies to existence, location and boundaries of Critical Aquifer Recharge Area as well as aquatic area, wetland , CARA, coal mine hazard, landslide and steep slope hazard
- Consolidated review option

King County

DESIGNATION SCOPE

- Scope can be adapted to meet the applicant's needs:
  - Limited Scope addresses only those issues and that portion of the property requested by the applicant
  - Comprehensive Scope addresses all critical areas in the proposed development area. (Required for projects that propose new on-site septic and/or wells.)
  - The consolidated review option adds review of residential fire access, addressing, and site engineering, allowing all site issues to be pre-certified and vested

King County

CONSOLIDATED SITE REVIEW

- "Permit in a box" for single family residential:
  - Critical areas review
  - Site engineering review
  - Fire flow review
  - Clearing limits
- Site requires no special exceptions
- Use preferred consultant
- $1,850 flat DDES review fee for critical areas, site engineering and fire flow

King County

APPLICATION SUBMITTAL

- Site plan drawn to an engineering scale, with a north arrow, location and dimensions of all property lines and easements, including any known native growth protection easement areas or special setback areas.
- If designation is targeted on the parcel, identify and give dimensions of the area to be evaluated on the site plan. Identify any existing improvements, including structures and roads, on the property
- Show any known rivers, streams, swales, springs, seeps, wetlands, ponds, steep slopes or areas of saturated ground on the property or within 300 feet.

King County

OPTIONAL REQUIREMENTS

- Topographic or boundary surveys
- Aerial photos
- Prior permits (building, grading, on-site septic or well etc.) or title notification of sensitive or critical areas,
- Special studies including: wetland reconnaissance reports, wetland delineations, aquatic area or stream reports, and geotechnical or soils reports
- Technical information reports or drainage studies
- A vicinity map showing the general location of the property. If the property is located in a difficult to find location, include driving directions.

King County

DDES REVIEW

- Determine the type, location, boundaries and classification of any critical area on site (includes buffers from *known* adjacent critical areas)
- Determine if a critical area report is required
- Review reports
- Document the designation process to establish the classification and location of the critical area
- Applicant can request that DDES do a critical area report for wetlands/aquatic areas

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DESIGNATION "PRODUCT"

- Letter with approved map documenting the location and classification of critical area and or buffer
- Project file established in DDES system for future permit reference
- Applicant records designation

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FEES

- Fee varies according to nature of the request and the size and complexity of the property
- Deposit of $796.95 covers 5.5 hours of review (average review time for designations in 2004)
- Total fee based on the hourly rate of $144.90 and the actual review time
- Consolidated review option fee fixed at $1,850

King County

QUESTIONS

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CHANGES TO THE KING COUNTY DRAINAGE MANUAL

Jim Chan, Supervisor, DDES Site Engineering and Planning

King County

DRAINAGE MANUAL ADOPTION

- Adopted by public rule pursuant to King County Council adoption of the Stormwater Ordinance on October 25, 2004.
- Guidance draft of Manual update is posted at http://dnr.metrokc.gov/wlr/dss/Manual-Draft.htm.
- Stormwater Ordinance effective January 1, 2005. Public rule for Manual update effective since January 24, 2005.
- Manual update is available for distribution and purchase.

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DRAINAGE MANUAL – AREAS OF SIGNIFICANT CHANGE

- Drainage Review Thresholds
- Best Management Practices (BMP)
- Erosion & Sediment Control (ESC)
- Special Requirements

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DRAINAGE REVIEW THRESHOLDS

- New impervious surface threshold reduced from 5,000 SF to 2,000 SF, to apply BMPs to smaller projects.
- New threshold added for 7,000 SF of “land-disturbing activity” to improve erosion control.

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DRAINAGE REVIEW THRESHOLDS, Cont'd.

- Threshold for large redevelopment projects changed per DOE Manual (i.e., ≥ 5,000 SF of new + replaced impervious area and project costs ≥ 50% of the assessed value. Transportation projects to be captured differently).

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DRAINAGE REVIEW THRESHOLDS

- Sensitive areas threshold changed to flood hazard areas only, due to new 2,000 SF threshold.
- Small Site Drainage Review becomes Small Project Drainage Review, has new threshold, is no longer optional, and includes agricultural projects.

King County

NEW FC BMP REQUIREMENTS

- FC BMPs (a.k.a. low impact development BMPs) required in addition to, and in the absence of, FC facilities on most developments.
- FC BMPs aim to prevent or reduce increased runoff at or near the source of that runoff.

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NEW FC BMP REQUIREMENTS, Cont'd.

- FC BMPs include measures for increasing retention and/or infiltration of rainwater and minimizing developed surfaces and runoff.
- Facility sizing credits given for FC BMPs.

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TYPES OF FC BMPs AND CREDITS

FLOW CONTROL BMP FACILITY SIZING CREDITS	
Flow Control BMP Type	**Facility Sizing Credit**
Full dispersion	Model fully dispersed surface as forest
Full infiltration	Subtract impervious area that is fully infiltrated
Limited infiltration	Model tributary impervious surface as 50% impervious, 50% grass
Basic dispersion	Model dispersed impervious surface as 50% impervious, 50% grass
Rain garden	Model tributary impervious surface as 50% impervious, 50% grass
Permeable pavement (non-grassed)	Model permeable pavement area as 50% impervious, 50% grass
Grassed modular grid pavement	Model permeable pavement as all grass
Rainwater harvesting	Subtract area that is fully controlled
Vegetated roof	Model vegetated roof area as 50% impervious, 50% grass
Reduced impervious surface credit	Model reduced footprint rather than standard assumed footprint
Native growth retention credit	None
Perforated pipe connection	None

King County

BMP IMPLEMENTATION REQUIREMENTS

- **Implementation responsibility and provisions:**
  - For single parcel projects, applicant is responsible.
  - For subdivision projects, lot-specific provisions must be made for future implementation by the home builder or lot owner.

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BMP IMPLEMENTATION REQUIREMENTS, CONT'D.

- **Declaration of covenant and grant of easement:**
  - Provide notice of BMPs & responsibility to maintain
  - Reference and attach approved drainage plan
  - Include operation and maintenance instructions
  - Grant KC right of entry for inspection purposes

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ESC CHANGES

- ESC supervisor certified and approved by the County.
- Sieve test replaced by turbidity test.
- Turbidity > 25 NTU requires additional action as deemed necessary by the ESC Supervisor.

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ESC CHANGES, Cont'd.

- Turbidity > 100 NTU requires additional action as deemed necessary by the County.
- Measures added for construction site flow control, source control, and dewatering.

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QUESTIONS

- Steve Foley: 206-296-1973
- Kate Rhoads (water quality): 206-296-8046

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THANK YOU