

October 25, 2011 Draft

Ordinance No. _____ - 2012

**AN ORDINANCE REGARDING CRITICAL AREA REGULATIONS FOR WETLANDS;
AMENDING SAN JUAN COUNTY CODE SECTIONS 18.10.040, 18.20, 18.30.150, AND 18.60.170;
AND REPEALING APPENDICES A-C OF SJCC 18.30.150**

BACKGROUND

- A. The County was scheduled to review, and where necessary, update its development regulations regarding critical areas by December 1, 2006, to ensure consistency with RCW 36.70A (the Growth Management Act, or GMA). A review of the County's critical areas regulations, including regulations regarding Wetlands, was adopted in Resolution 98-2005. Although some updates to critical areas regulations were adopted in Ordinance 15-2005, further action was reserved for a later time.
- B. Wetlands are defined in RCW 36.70a.030, RCW 36.70a.175, and WAC 365-190-090.
- C. San Juan County adopted a public participation plan for the revision of its development regulations regarding critical areas in Resolution 56-2006; the plan was most recently updated in Resolution 32-2011.
- D. The applicable science related to Wetlands and stormwater management was reviewed and is summarized in Chapters 2 and 7 of the *Best Available Science Synthesis for San Juan County, May 2011*; which was adopted in Resolution 22-2011.
- E. Additional review of the County's critical areas regulations was undertaken and is described in the documents "Analysis of Existing San Juan County Regulations Pertaining to Wetlands" prepared by Dr. Paul Adamus, and letters provided by the WA State Department of Ecology on June 9, 2011 and September 14, 2011.
- F. The County now desires to complete the review and update of its development regulations regarding Wetlands previously due in 2006 as required by RCW 36.70A.130.
- G. An environmental checklist was prepared evaluating potential effects of the proposed Wetland protection amendments and a notice of Determination of Nonsignificance was issued on August 30, 2011 and published on August 31, 2011. The notice was provided to federal, state and local agencies in accordance with San Juan County Code 18.80.050 and WAC 197-11-340.
- H. The 60-day notice on the proposed amendments to the Wetland protection regulations, as required by RCW 36.70A.106, was provided to the Washington State Department of Commerce on August 24, 2011, and was assigned Material ID No. 17298.
- I. Efforts to involve and inform the public included:
 - I. Request for Best Available Science (BAS) submittals from the public in June-July 2010.
 - II. Public workshops on San Juan Island, Orcas Island, and Lopez Island in September 2010, to address "hot button" issues.
 - III. Joint Planning Commission/County Council public workshops in February 2011, to review and discuss the first draft Best Available Science Synthesis and County Council workshops in May 2011 to discuss the second draft. Public comment was accepted at all meetings.

- IV. Public workshops in June 2011 to discuss the review of existing regulations and determine policy direction for the revision of regulations.
- V. During September 2011, town hall meetings to discuss the regulations were held on San Juan, Orcas and Lopez Islands, and a field trip was held on Orcas Island.
- VI. Advertisements of Planning Commission and County Council meetings in local papers, including online media.
- VII. Notice of the availability of the proposed ordinance and staff report was e-mailed to residents, property owners, and interested parties who requested to be kept informed prior to the Planning Commission and County Council hearings.

J. The Planning Commission conducted duly advertised public hearings on September 16 and 28, 2011, and November 10, 2011.

K. The County Council conducted a duly advertised public hearing on December 6, 2011.

L. The County Council makes the following findings:

- I. The Best Available Science was included in developing the proposed amendments, which will protect Wetlands in conformance with the requirements of the Growth Management Act.
- II. Implementing a site-specific approach to sizing wetland buffers will effectively protect wetlands, while minimizing costs and maximizing the allowable use of property.
- III. Agriculture in San Juan County is a vital part of our heritage and an integral part of the county's landscape, culture and economy. Our quality of life depends on the successful integration of sustainable agriculture and ecological health.
- IV. Of the scientific documents that were reviewed, the following four references were the most important in development of the proposed site-specific buffer sizing procedure:

Booth, D.B., D. Hartley, and R. Jackson. 2002. Forest cover, impervious-surface area, and the mitigation of storm water impacts. Journal of American Water Resources Association 38:835-845.

Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2007. Meta-analysis of nitrogen removal in riparian buffers. J. Environ. Qual. 36(4):1172-80.

National Research Council. 2008. Urban Stormwater Management in the United States. National Academies Press, Washington, DC.

Semlitsch, R.D., B.D. Todd, S.M. Blomquist, A.J.K. Calhoun, J.W. Gibbons, J.P. Gibbs, G.J. Graeter, E.G. Harper, D.J. Hocking, M.L. Hunter Jr., D.A. Patrick, T.A.G. Rittenhouse, and B.B. Rothemel, 2009. Effects of Timber Harvest on Amphibian Populations: Understanding Mechanisms from Forest Experiments. BioScience, Vol.59 No. 10.

V. Following is a summary of the scientific principles and assumptions used in developing the site-specific buffer sizing procedure:

a. Based on the Feb. 4, 2011 comments from Dr. Tom Hruby, WA State Dept. of Ecology, and the professional opinion of Dr. Paul Adamus, the proposed approach to sizing wetland buffers is a medium risk alternative that should be adequate to protect the functions and values of wetlands, including those related to water quantity, water quality and habitat. The risk associated with this alternative is low enough that a monitoring and adaptive management program is not necessary.

The proposed approach is based on the premise that there is clear and convincing proof, and a

high probability that wetland functions and values will be protected. The standard for evidence needed to meet this criterion is less than that needed for “beyond a reasonable doubt”, but higher than that needed for a “preponderance of the evidence”. The probability that the proposed buffers will not be adequate is relatively low; more than 5% but less than 50%. According to Dr. Hruby the WA State Dept. of Ecology and a group of wetland experts determined that this level of risk is acceptable and will adequately protect wetland functions.

b. For situations with low intensity development and pollutant transport factors, most runoff flows below the ground surface and within the root zone.

c. For situations with high intensity development and pollutant transport factors, a significant portion of the runoff flows above ground.

d. As discussed in the *Best Available Science Synthesis for San Juan County, May 2011*, runoff from areas influenced by human development can be contaminated with any array of pollutants including those from lawn and garden chemicals (both the active ingredient and surfactants); fertilizers; rodent poisons; termite spray and other insecticides; moss control products including those applied to areas susceptible to growth of moss as well as zinc and copper impregnated shingles and/or roofing strips; deicers; and contaminants associated with automobiles including oil, antifreeze, and rubber and metals from the wear of tires, brakes and other parts.

e. Dissolved contaminants and those associated with fine sediment are the most difficult constituents to remove from runoff.

f. There is natural variation in the pollutant removal capabilities of vegetative buffers. In general, vegetative buffers are more effective at removing contaminants in runoff when the flow is primarily below the ground surface and within the root zone.

g. The factors influencing the effectiveness of buffers where flow is primarily subsurface are more complex than those for surface flow. These factors include soil texture, permeability and chemical composition; carbon content; depth of root zone; saturated vs. unsaturated soils; and type of chemical pollutants present.

h. Saturated soils are better at removing some contaminants such as nitrogen. Unsaturated soils are better at removing other contaminants, such as the break down products associated with surfactants. Soils in buffers and wetlands will experience both saturated and unsaturated conditions, resulting in varying levels of treatment depending on the pollutant and time of year.

i. High intensity development with more smooth, graded, compacted, and impervious surfaces and fewer trees provides poorer quality habitat for pond breeding amphibians, more runoff, and higher export of pollutants. References that discuss these principles include Booth et al. 2002, National Research Council 2008, and Semlitsch et al. 2009. The proposed development intensity factors are based on these references.

j. For habitat purposes, some wetland animals prefer dense vegetation around wetlands, while others prefer more open vegetation with sunnier/warmer microclimates and better visibility of predators.

k. While other documents referenced in the *BAS Synthesis* were considered, the primary scientific basis for the proposed buffer procedure is Mayer et al., 2007. This paper presents information on the size of buffers needed to remove nitrogen under varying conditions. For situations with low development intensity/transport factors, the buffers are approximately based

on the “subsurface” line on Figure 1 of that paper, those with high development intensity/transport factors are approximately based on the “surface” line of that figure, and those with intermediate intensity/transport factors are approximately based on the “all data” line.

l. Buffers that can effectively remove nitrogen will also be effective at removing other contaminants.

m. In the proposed buffer sizing protocol, in addition to considering development intensity/transport factors (discussed above in item k.), the size of the buffer and the associated pollutant removal percentages also vary based on the importance and sensitivity of the wetland and whether the wetland is located inside or outside an urban growth area (UGA). Outside UGAs, wetlands with low importance/sensitivity (with low habitat function) have buffers which are estimated to remove at least 50% of the pollutants. Because of their important habitat functions, removal of pollutants is more important in the buffers of medium and high importance/sensitivity wetlands, and the projected removal efficiencies for their buffers are approximately 65% and 75-80%. In all cases it is assumed that additional pollutant removal occurs within the wetland itself. Inside UGAs some buffers are reduced if mitigation is provided.

n. If adequate habitat buffers are protected upslope from wetlands, then downslope buffers can be reduced to, in some cases, as little as 15 feet (ref. August 12, 2011 paper by Dr. Paul Adamus entitled “Rationale for Reducing the Buffer Width Downslope of a Wetland and Still Providing a Minimum 15 foot Buffer on all Sides of a Wetland”).

o. In the professional opinion of Dr. Paul Adamus, in most cases buffers that are sized using the above protocols will also be adequate to protect habitat functions. Where this is not the case (e.g. situations with low development intensity/transport factors and medium importance/sensitivity wetlands) the proposed buffers were increased to adequately protect habitat functions.

p. Minimum buffer widths to protect wetland habitat functions are based in part on the need to protect forested wetlands from excessive blowdown of their trees and other microclimate-related impacts to wetland vegetation and wildlife.

- VI. The proposed changes will replace the existing rating and prescriptive buffer system (which was modeled after the WA State Dept. of Ecology’s rating system) with a site-specific buffer sizing procedure that factors in both the natural characteristics of the wetland as well as the proposed intensity of development. The proposed ordinance also: reduces the minimum sizes of regulated wetlands; allows for the reduction of buffer width for areas downslope of wetlands; outlines activities that are allowed in wetlands and their buffers; and establishes requirements for the delineation of wetlands and for the content of wetland reports. Compensatory mitigation procedures have been relocated to the general section (SJCC 18.30.110). Additionally, changes have been made to the County’s list of maps and the County lighting standards, to increase consistency with these regulations. Measures have been taken throughout the update of these provisions in order to minimize the costs associated with compliance, for both the property owner and the County, while still meeting the legal requirements of the Growth Management Act.
- VII. To allow for reasonable and cost effective application of the regulations, it is necessary to establish a minimum size under which wetlands will not be regulated. As proposed, this should have a negligible impact on the functions and values of wetlands.
- VIII. These amendments are consistent with the applicable goals and policies of the San Juan County Comprehensive Plan.

- IX. This ordinance completes the update to the County’s development regulations regarding Wetlands as required by RCW 36.70A.130.
- X. The County Council agrees with the findings and recommendations of the Planning Commission, but finds that some modifications are needed for clarity. These changes are included in this ordinance.
- XI. After considering the evidence in the record, the County Council approved the ordinance.

NOW, THEREFORE BE IT ORDAINED by the County Council of San Juan County, State of Washington, as follows:

Section 1. SJCC 18.10.040 and Ord. 52-2008 § 16 shall be amended to read as follows:

18.10.040 Establishment of land use districts and official maps.

A. Land Use Districts. This Unified Development Code applies to the land use designations and map symbols in Table 1.1, below, that are established by the San Juan County Comprehensive Plan and official maps.

Table 1.1. Comprehensive Plan Land Use District Designations

Abbreviation	Land Use District
Growth Areas	
FH UGA	Friday Harbor Urban Growth Area
ES UGA	Eastsound Urban Growth Area
LV UGA	Lopez Village Urban Growth Area
Activity Centers	
VC	Village commercial
VI	Village industrial
VR	Village residential
HC	Hamlet commercial
HI	Hamlet industrial
HR	Hamlet residential
IC	Island center
MPR	Master planned resort
Rural Lands	
RGU	Rural general use
RR	Rural residential
RFF	Rural farm-forest
RI	Rural industrial
RC	Rural commercial
Resource Lands	

AG	Agricultural resource lands
FOR	Forest resource lands
Special Lands	
C	Conservancy
N	Natural
Overlay Designations	
MRL	Mineral resource lands
ESA	Environmentally sensitive areas
OSC	Open space conservation
A	Airport

Areas subject to subarea plans fall under the guidelines of those particular ordinances (see SJCC 18.30.050(D) and 18.30.190). The boundaries of the various land use districts and subarea plans are shown on the San Juan County Comprehensive Plan official maps (see subsection (B) of this section).

B. Official Maps.

1. There is hereby made a part of this Unified Development Code a series of maps which shall be known officially as the "San Juan County Comprehensive Plan Official Maps" (hereafter, "the official maps"). The official maps shall show all those areas of San Juan County which fall under the jurisdiction of this code and the designated land use classes and districts for all areas of San Juan County.
2. There shall be only one official copy of the official maps, which shall reside in the custody of the San Juan County community development and planning department. Whenever any portion of the official maps is legally amended, the official copy shall be altered promptly to reflect the amendment.
3. At the time of adoption of this Unified Development Code, one copy of the official maps shall be filed with the San Juan County auditor. In addition, at least once every 12 months following the filing of the initial official maps with the auditor, the community development and planning department shall make an additional copy of the official maps and file it with the initial official maps in the auditor's office. If the official maps have not been amended during the 12-month period, the planning department may file with the auditor a notice to that effect, signed by the planning director, in lieu of a copy of the official maps. The purpose of these annual filings is to maintain an official record of the changes occurring over time to the land use classes and districts. At no time shall the copies of the official maps filed with the auditor be altered in any way.
4. Where questions arise regarding the precise boundaries of any designated environment, the administrator shall make the final determination, subject to the provisions of SJCC 18.80.140(B), open-record appeals. Unofficial copies of the official maps may be prepared for administrative purposes and for sale to the public.

C. Land Use District Boundaries.

1. Land use district boundaries, unless otherwise indicated by natural land forms, shall follow lot lines or the centerline of streets and alleys as shown on the official maps. Where the street layout on the ground varies from that shown on the official maps, the districts shown on the official maps shall be applied to the streets as actually laid out so as to carry out the intent and purpose of this code.

2. Land use district boundary lines shall extend parallel from their landward location to a point of intersection at the center of all bodies of water. Bodies of water include all saltwater bodies, streams, and lakes.

D. Critical Areas Maps. Critical areas maps are provided only as a general guide to alert the viewer to the possible location and extent of critical areas. The maps should not be relied upon to establish the existence or boundaries of a critical area nor to establish whether all of the elements necessary to identify an area as a critical area actually exist. However, the maps may be relied upon by the administrator as a basis for requiring field investigation and special reports. In the event of a conflict between information shown on the maps and information shown as a result of field investigation, the latter shall prevail. At the request of an applicant, the administrator will conduct a site visit before requiring field investigations or special reports.

The definitions and classifications provided in this code are the controlling factors in determining the actual presence and extent of a critical area. Sources for mapped information include, but are not limited to, those listed in subsection (E) of this section.

E. Summary of Map and Data Sources by Topic.

1. Geologically Hazardous Areas (SJCC 18.30.120).
 - a. United States Geographical Survey (USGS), Topographic Maps.
 - b. United States Department of Agriculture (USDA), ~~San Juan County Soil Survey~~ Soil Survey of San Juan County, Washington.
 - c. Washington State Department of Ecology (WDOE), Coastal Zone Atlas.
2. Frequently Flooded Areas (SJCC 18.30.130).
 - a. Federal Emergency Management Agency (FEMA), National Flood Insurance Program Flood Insurance Rate Maps (FIRM).
 - b. WDOE, Coastal Zone Atlas.
3. Critical Aquifer Recharge Areas (SJCC 18.30.140).
 - a. "Water Resource Assessment Technical Report," San Juan County Comprehensive Water Plan.
 - b. San Juan County Water Resource Management Plan, as adopted by the board of County commissioners in October 2004.
 - c. "San Juan County Critical Aquifer Recharge Area, Critical Area/Environmentally Sensitive Area Overlay District Map," October 2008. This map shall be in effect until December 2, 2010.
 - d. San Juan County Summary of Best Available Science for Critical Areas, September 2008, Chapters 1, 2, 7 and References.
4. Wetlands (SJCC 18.30.150).
 - a. U.S. Department of the Interior, National Wetlands ~~Survey~~ Inventory.
 - b. San Juan County ~~Wetlands Survey~~ Possible Wetlands Map
5. Fish and Wildlife Habitat Conservation Areas (SJCC 18.30.160).
 - a. Washington Department of Fish and Wildlife (WDFW), species and habitat data.
 - b. Washington Department of Natural Resources (WDNR), Water Type Reference Maps.
 - c. WDNR, Natural Habitat Program data.
 - d. WDOE, Coastal Zone Atlas.
 - e. WDFW data.
 - f. Puget Sound Water Quality Authority (PSWQA), Puget Sound Environmental Atlas.

SECTION 2. Chapter 18.20 of the San Juan County Code (SJCC) (Definitions) shall be amended to read as follows:

Section 18.20.010. "A" Definitions.

"Agricultural activities" means land preparation and the use of land for agricultural purposes, such as clearing; grading; contouring; ditching; fencing; plowing; tilling; planting; fallowing; cultivating; fertilizing; weed, pest and disease control; spraying; pruning; trimming; harvesting; processing; packing; agricultural sales; livestock management, such as breeding, birthing, housing, feeding, grazing, pasturing, and care of animals, birds, honeybees, shellfish and fish; and construction of farm and stock ponds, irrigation ditches and systems; livestock management, such as breeding, birthing, feeding and care of animals, birds, honeybees, and fish; structures for the repair and maintenance of equipment, structures, and machinery used to perform agricultural or husbandry operations; and the storage of agricultural products and machinery.

"Aspen or cottonwood wetland" means a wetland with at least 5 black cottonwood (*Populus balsamifera*) or trembling aspen (*Populus tremuloides*) trees, with trees of those species mostly located within two crown-diameters of each other.

Section 18.20.020. "B" Definitions.

"Bog" means a wetland within which some portion has a deep layer of accumulated moss (rooted or floating on water) that forms peat soils, or which has more than 30% canopy cover of Sitka Spruce, Western Red Cedar, Western Hemlock, or Lodgepole Pine. The area must also contain one or more plant species characteristic of acidic conditions (pH <5.0) as listed in Table 3 of the Washington State Department of Ecology's Wetland Rating System for Western Washington (2004).

"Buffer zone, strip, or area" (existing UDC definition) means an area designed to separate incompatible uses or activities.

Section 18.20.040. "D" Definitions.

"Development" means the division of a parcel into two or more parcels; a permanent, manmade change to the land, including but not limited to the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure; any grading, clearing, draining, dredging, drilling, filling, paving, excavation, mining, landfill; or any extension of the use of land. (See also "Shoreline development.") Division of a parcel into two or more parcels is also considered development.

"Development area" means the area that will be permanently altered as a result of development. This includes but is not limited to the area containing structures, driveways, landscaped areas, waste treatment facilities, and any grading, excavation, fill, or clearing. Development area does not include forest meeting the following conditions: a) the forest provides more than 60% canopy cover and includes trees of all size and age classes including mature trees; b) the ground surface has not been graded, smoothed, compacted or covered with impervious surfaces; c) all stumps and most leaf litter and organic material are retained; and d) existing native plant communities are retained. For this definition, permanent means a change with a duration exceeding 24 months, unless the Director approves an extension of this time for a good cause.

Staff note: The above definition does not include areas of mature forest where a few trees have been removed, but which are likely to retain the characteristics that result in good water quality, water quantity, and habitat functions.

This is supported by the following scientific references:

Booth, D.B., D. Hartley, and R. Jackson. 2002. Forest cover, impervious-surface area, and the mitigation of storm water impacts. Journal of American Water Resources Association 38:835-845.

Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2007. Meta-analysis of nitrogen removal in riparian buffers. J. Environ. Qual. 36(4):1172-80.

National Research Council. 2008. Urban Stormwater Management in the United States. National Academies Press, Washington, DC.

Semlitsch, R.D., B.D. Todd, S.M. Blomquist, A.J.K. Calhoun, J.W. Gibbons, J.P. Gibbs, G.J. Graeter, E.G. Harper, D.J. Hocking, M.L. Hunter Jr., D.A. Patrick, T.A.G. Rittenhouse, and B.B. Rothermel, 2009. Effects of Timber Harvest on Amphibian Populations: Understanding Mechanisms from Forest Experiments. BioScience, Vol.59 No. 10.

“Development parcel” means the parcel in which the development area is located.

“Diameter at breast height (dbh)” means the outside bark diameter of a tree trunk measured at breast height, 4.5 feet above the ground surface on the uphill side of a tree.

“Drainageway” (existing UDC definition) means any natural or artificial watercourse, trench, ditch, swale, or other similar depression ~~into~~ within which surface water flows. In determining the existence or location of a drainageway, when there is a conflict between a map and conditions in the field, conditions in the field shall control.

Section 18.20.080. “H” Definitions.

“Herbaceous vegetation ” means non-woody vascular plants.

“Hydric soil” means soil map units that are dominantly or partially comprised of soils that are recognized as being hydric by the *Soil Survey of San Juan County, Washington* (USDA, 2009). Those that are dominantly hydric are: Coveland loam 0-5 percent slopes, Coupeville loam 0-5 percent slopes, Limepoint-Sholander complex 0-8 percent slopes, Shalcar muck 0-2 percent slopes, Semiahmoo muck 0-2 percent slopes, Coveland-Mitchellbay complex 2-15 percent slopes, Bazal-Mitchellbay complex 0-5 percent slopes, Orcas peat 0-2 percent slopes, Dugualla muck 0-2 percent slopes. Those that are partially hydric are: Sholander-Spieden complex 0-5 percent slopes, Deadmanbay-Morancreek complex 2-15 percent slopes, Beaches-Endoaquents, Deadmanbay-Bazal-Cady complex 2-20 percent slopes, Mitchellbay gravelly sandy loam 0-5 percent slopes, Mitchellbay-Sholander-Bazal complex 0-5 percent slopes, Limepoint-Alderwood warm-Sholander complex 2-12 percent slopes, Xerorthents-Endoaquents, Sucia-Sholander complex 5-20 percent slopes, Mitchellbay-Rock outcrop-Killebrew complex 3-13 percent slopes. When there is a conflict between a map and conditions in the field, conditions in the field, as determined by a qualified soil scientist or wetland professional, shall control.

Section 18.20.090. "I" Definitions.

"Impervious surface" (existing UDC definition) means a surface area that creates a barrier to the entry of water into the soil in comparison with natural conditions prior to development, or that causes water to run off the surface in greater quantities or at an increased rate of flow in comparison with the flow prior to development. ~~Common impervious surfaces~~ This includes roofs, driveways, patios, packed earth, and oiled surfaces; however, open, uncovered retention/ detention facilities are not considered as impervious surfaces. This definition does not include permeable concrete, permeable pavement or sod roofs.

"Invasive plant" means any species listed as a noxious weed (any Class) by the Washington State Noxious Weed Control Board, or the listed "Unregulated weeds of special concern in San Juan County" in the current version of the San Juan County Noxious Weed List.

Section 18.20.120. "L" Definitions.

"Lakeside wetland" means a wetland that is within or contiguous to and within 100 feet of a ponded water body larger than 20 acres, and whose water levels fluctuate in near synchrony with those of the water body.

"Large pond wetland" means a wetland that is within, or contiguous to and within 100 feet of, a body of standing surface water that is between 5 and 19 acres in size and is present for all or most of a normal year, or a wetland which collectively contains patches of standing water that cover between 5 and 19 acres during all or most of a normal year.

Section 18.20.130. "M" Definitions.

"Mature forested wetland" means a wetland of at least 0.25 acre within which more than half of the individuals of the following tree species have a dbh exceeding 18 inches: Sitka Spruce, Western Red Cedar, Western Hemlock, Red Alder, Black Cottonwood, Lodgepole Pine.

Section 18.20.170. "Q" Definitions.

"Qualified professional" means a person with training and experience in the pertinent scientific discipline. With regard to Critical Areas, a person who is a qualified scientific expert in accordance with WAC 365-195-905. A qualified professional must be licensed and/or certified where such licensing or certification are required, and must be working within their areas of expertise. When certification is not required the professional must have: (1) obtained a B.S., B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and (2) have at least five years of related work experience.

1. Wetlands. A qualified wetlands professional is a person who has an understanding of hydrology and advanced skills in plant identification and soils classification, has been trained in the procedures of the 1987 (federal) Wetland Delineation Manual and its updated Regional Supplement, has used those procedures to delineate a wetland in a report subsequently considered complete by the WA

State Department of Ecology, and has the qualifications to conduct wetland studies and make recommendations for wetland mitigation. These qualifications include specialization in wetland soils, botany, or hydrology, with appropriate education and experience.

2. Fish and Wildlife Habitat Conservation Areas. A qualified professional for habitat must have a degree in biology or a related degree and professional experience related to the subject species.
3. Geologically Hazardous Areas. A qualified professional for a geological hazard is: (1) a geotechnical engineer, qualified civil engineer, or certified engineering geologist; (2) with experience analyzing geologic, hydrologic, and ground water flow systems; and (3) is licensed to practice in the state of Washington. When the proposed development is located in an area subject to wave attack, beach processes, and littoral drift, the professional should also have demonstrated experience in assessing and providing management recommendations on sites with active coastal processes.
4. Critical Aquifer Recharge Areas. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

~~“Qualified Wetlands Consultant” means a person who has the qualifications to conduct wetland studies and make recommendations for wetland mitigation. These qualifications include specialization in wetland biology, botany, and hydrology, with appropriate education and experience.~~

Section 18.20.180. “R” Definitions.

“Rare species wetland” means a wetland that contains, at any time during two of the last five years, any of the following:

- (a) a plant species listed as Threatened, Endangered, or Sensitive, as shown in Appendix 4-C of Chapter 4 of the *Best Available Science Synthesis, San Juan County, May 2011*;
- (b) bighead sedge (*Carex macrocephala*);
- (c) individuals of any of the following animal species: Sharp-tailed Snake, Rubber Boa, Western Fence Lizard, Western Toad, Northwestern Salamander, Taylor’s Checkerspot butterfly, Island Marble butterfly, Great Arctic butterfly, Valley Silverspot butterfly, Sand Verbena Moth;
- (d) an active nest of any of the following birds: Golden Eagle, Northern Harrier, Merlin, Northern Goshawk, Black Oystercatcher, Marbled Murrelet, Wilson’s Snipe, Short-eared Owl, Long-eared Owl, Northern Pygmy-Owl, Sooty Grouse, Common Nighthawk, American Dipper, Western Bluebird, Chipping Sparrow, Vesper Sparrow, Horned Lark, Western Meadowlark, Fox Sparrow, Golden-crowned Sparrow.

Section 18.20.190. “S” Definitions.

“Salmonid watershed wetland” means a wetland that is in or within 300 feet of, and in the same watershed as, marine or fresh waters which are known or reasonably assumed to be physically accessible for any length of time during most years to coastal cutthroat trout or other salmonid species native to the Pacific Northwest. The wetland itself need not be accessible to such fish, as its primary purposes are to help protect the water quality of nearby salmonid habitat and to provide support for the food chain in such habitat.

“Salmonid wetland” means a wetland known or reasonably assumed to be physically accessible during most years, for any length of time, to coastal cutthroat trout or other salmonid species native to the Pacific Northwest. These may include but are not limited to: all tidal wetlands, plus natural or artificial ponds intersected by Cascade Creek, False Bay Creek, Doe Bay Stream, West Beach Stream, and the stream complex in the Garrison Bay-Mitchell Hill area.

“Stream” means a watercourse with a defined bed and banks, not including irrigation ditches, canals, stormwater runoff devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans (see WAC 220-110-020). Streams are classified in WAC 222-16-030 and 031. In identifying streams, conditions in the field shall control.

“Structurally diverse wetland” means a wetland that (a) contains three habitat structural forms: woody vegetation, herbaceous vegetation, and open water (surface water without emergent vegetation, present during all or most of a normal year, that is within or contiguous to the wetland), and (b) has each form well-distributed in multiple patches, and (c) has nearly equal proportions of the three forms (no more than 50% of the area being comprised of any one, measured cumulatively at any time of a normal year).

Section 18.20.200. “T” Definitions.

“Tidal wetland” means a wetland or part of a wetland that receives a tide-driven influx of marine surface water at least once during an average year. This includes but is not limited to salt marshes and parts of tidal lagoons. Salinity can range from fresh to hypersaline.

“Tidally contiguous wetland” means a non-tidal wetland that is contiguous to and within 100 feet of a tidal wetland. A surface water feature may or may not connect the wetland with a tidal wetland. Some such wetlands were originally salt marshes, but were diked off and/or tidedegated to create pastures and haylands that currently qualify as wetlands. These wetlands do not receive an annual tide-driven influx of marine water.

Section 18.20.230. “W” Definitions.

“Water supply watershed wetland” means a wetland that is in the same watershed and in or within 300 feet of a surface water body (lake, pond, stream) which is used at some time during most years for domestic water supply. The wetland need not have a surface water connection to that water body.

“Wet prairie wetland” means a wetland in flat terrain that:

- (a) has less than 20% cover of shrubs and other woody plants, and
- (b) is not currently subject to annual or semi-annual plowing, and
- (c) lacks surface water during most of a normal year, and
- (d) is dominated by characteristic native grasses such as *Danthonia californica* or others which are listed as wetland indicators by federal wetland regulatory agencies.

“Wetland” (existing UDC definition) means an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including but not limited to, irrigation and drainage

ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate the conversion of wetlands.

Staff note: Where needed, State wetland definitions will be used for the following wetland terms.

~~“Wetland Alteration” (existing UDC definition) means any human-induced action which impacts the existing condition of a wetland or its buffer. Alterations include but are not limited to: grading; filling; dredging; draining; channelizing; installing drainage tiles; cutting, pruning, limbing or topping, clearing, relocating, planting or removing vegetation; applying herbicides or pesticides or any hazardous or toxic substance; discharging pollutants excepting stormwater; grazing domestic animals; paving, construction, application of gravel; modifying for surface water management purposes; or any other human activity that impacts the existing vegetation, hydrology, wildlife or wildlife habitat. Alteration does not include walking, passive recreation, fishing, or other similar activities.~~

~~“Wetland Buffer” (existing UDC definition) means the area immediately adjoining and contiguous with a wetland.~~

~~“Wetland Compensation Projects” (existing UDC definition) means projects specifically designed to replace a loss of a wetland or its buffer induced by a development action. (See “wetlands compensatory mitigation.”)~~

~~“Wetland Compensatory Mitigation” (existing UDC definition) means the action of replacing project-induced losses or impacts on a wetland and its buffer. (See “off-site compensation”, “on-site compensation”, “wetland, in-kind compensation” and “out-of-kind compensation, wetland.”)~~

“Wetland Contiguous to Extensive Forest” means a wetland that is contiguous to or is situated within a block or corridor of upland trees and shrubs whose canopy cover exceeds 70% and whose interrupted size exceeds 100 acres. If a wetland is separated from such an extensive wooded upland by paved roads or by an unwooded space wider than 100 feet, the wetland shall not be considered to meet this definition.

~~“Wetland Creation” (existing UDC definition) means the action performed to intentionally establish a wetland or a portion of a wetland where one did not formerly exist.~~

“Wetland delineation” (existing UDC definition) means the technical process of determining the edge of the wetland in the field, consistent with the definitions and methods prescribed in the 1987 U.S. Army Corps of Engineers “Corps of Engineers Wetlands Delineation Manual,” Technical Report Y-87-1, including any applicable regional supplements. (Note: RCW 36.70A.175 and WAC 173-22-035 require the use of this manual).

~~“Wetland Edge” (existing UDC definition) means the boundary of a wetland as identified using the required wetland delineation procedure.~~

~~“Wetland, Emergent” (existing UDC definition) means a regulated wetland, or portion thereof, with at least 30 percent of the surface area covered by erect, rooted, herbaceous vegetation as the uppermost vegetative strata.~~

~~“Wetland Enhancement” (existing UDC definition) means alteration of an existing wetland or habitat to improve or increase its characteristics and processes without degrading other existing functions. Enhancements are to be distinguished from wetland or habitat creation or restoration projects.~~

~~“Wetland, Forested” (existing UDC definition) means a regulated wetland, or portion thereof, with at least 20 percent of the surface area covered by woody vegetation greater than 20 feet in height.~~

~~“Wetland functions and values” (existing UDC definition) means the beneficial roles performed by wetlands that include, but are not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage, conveyance and attenuation; groundwater recharge and discharge; erosion control; wave attenuation; historical and archaeological and aesthetic value; and recreation.~~

~~“Wetland, In-Kind Compensation” (existing UDC definition) means the replacement of a wetland with a substitute wetland whose characteristics closely approximate those destroyed or degraded by a regulated activity. (See “off-site compensation,” “on-site compensation,” “wetland, compensatory mitigation” and “out-of-kind compensation, wetland.”)~~

~~“Wetland, Isolated” (existing UDC definition) means those regulated wetlands which:~~

- ~~1. Are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream;~~
- ~~2. Have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water; and~~
- ~~3. Have no surface water connection to a lake, river, or stream during any part of the year.~~

~~“Wetland, Maintenance and Repair” (existing UDC definition) means activities that change the size or scope of a use or structure beyond its original nature; or which drain, dredge, fill, flood, or otherwise alter additional regulated environmentally sensitive areas.~~

~~“Wetland, Regulated” means a wetland that meets the criteria of SJCC ~~18.30.150(B)~~ and Table 3.3 in SJCC ~~18.30.150~~. However, a wetland that does not meet the criteria in Table 3.3 may still be regulated under the federal Clean Water Act.~~

~~“Wetland Restoration” (existing UDC definition) means the actions performed to reestablish a wetland in an area which was historically wetland but which does not now provide or contain the necessary functional characteristics.~~

Section 3. SJCC Section 18.30.150 and Ord. 2-1998, Ex. B § 3.6.8 shall be amended to read as follows:

18.30.150 Wetlands.

~~**A. Wetland Rating.** The San Juan County wetland rating system (on file with the administrator) is designed to differentiate between wetlands based on their sensitivity to disturbance, rarity, irreplaceability, and the functions and values they provide. Rating categories apply to the regulated wetland as it exists on the effective date of this code, as the regulated wetland may naturally change thereafter, and as the regulated wetland may change in accordance with permitted activities. Ratings shall not be based on illegal modifications to a wetland. The categories are summarized in subsections (A)(1) through (A)(4) of this section.~~

1. **Category I.** These wetlands are the “best of the best.” These are wetlands that:
 - a. Contain a particular rare species;
 - b. Represent a high quality example of a rare wetland type as defined in Appendix A*;
 - c. Are regionally rare; or
 - d. Provide irreplaceable functions and values.
2. **Category II.** These are wetlands that:
 - a. Contain very sensitive or important wildlife or plants on a seasonal or annual basis;
 - b. Are difficult to replace, as defined in Appendix A*;
 - c. Provide very high functions and values, particularly for wildlife habitat.
3. **Category III.** These wetlands provide important functions and values. They provide habitat for a variety of flora and fauna and occur more commonly throughout the County than either Category I or II wetlands.
4. **Category IV.** These are wetlands that are smaller, isolated, and have less diverse vegetation than Categories I, II, and III but still provide important functions and values.

A. Applicability. Unless exempted or allowed under SJCC 18.30.110, the provisions of this section apply to areas in or within 300 feet of wetlands as defined in this code. Many wetlands are depicted on the *San Juan County Possible Wetlands Map*; however, this map is only a guide and in all cases conditions in the field shall control.

In addition to County regulations, in some cases wetlands may be regulated under the federal Clean Water Act administered by the U.S. Army Corps of Engineers, or by the Washington Water Pollution Control Act and/or Shoreline Management Act, administered by the WA State Department of Ecology. Compliance with County regulations does not relieve the property owner of the responsibility to comply with state and federal requirements.

B. Classification.

1. Wetlands are defined in SJCC 18.20.220. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites including but not limited to irrigation and drainage ditches, grass-lined swales, canals, detention facilities, waste water treatment facilities, farm ponds, and landscape amenities. However, wetlands may include artificial wetlands created intentionally from nonwetland areas to mitigate conversion of wetlands if permitted by the County.
2. **Regulated Wetlands.** Not all “wetlands” as defined in SJCC 18.20.220 are “regulated wetlands.” Regulation of a wetland by this section is determined by the size and category of the wetland. Wetland sizes are determined in accordance with subsection (G) of this section, and are not limited by parcel boundaries. For the purposes of this section, “regulated wetlands” shall include those wetlands that meet the criteria in Table 3.3:

Table 3.3 Threshold size above which a wetland is regulated under SJCC 18.30.150.

Wetland Category	Threshold Size ^{1, 2}
I	{All Category I wetlands are regulated}
II	Greater than 2,500 sq. ft.
III	Greater than 5,000 sq. ft.
IV	Greater than 10,000 sq. ft.

Notes:

- ~~1. Wetland sizes are determined in accordance with SJCC 18.30.150(G) and are not limited by parcel boundaries.~~
- ~~2. Wetlands smaller than the threshold size for the category are not regulated by the County under SJCC 18.30.150. However, wetlands that do not meet the size criteria in Table 3.3 may be regulated under the federal Clean Water Act.~~

~~The general location and extent of wetlands in San Juan County are shown in the National Wetlands Inventory (U.S. Department of the Interior) and the San Juan County Wetlands Inventory.~~

B. Minimum Size Thresholds for Regulated Wetlands. To allow for the reasonable administration of these regulations, some wetlands are exempted from the requirements of this section based on their size and Importance/Sensitivity Rating (see subsection (C) of this section).

Wetlands exceeding the following size thresholds are regulated under SJCC 18.30.150:

1. High Importance/Sensitivity wetlands: 250 square feet
2. Medium Importance/Sensitivity wetlands: 1,000 square feet
3. Low Importance/Sensitivity wetlands: 2,500 square feet

~~**C. Regulated Activities.** Any land use or development activity which is subject to development permit or approval requirements of the San Juan County Code shall be subject to the provisions of this section, including but not limited to the following activities which are directly undertaken or originate in a regulated wetland or its buffer, unless exempted under SJCC 18.30.110(D) or subsection (D) of this section:~~

- ~~1. The removal, excavation, grading, or dredging of material of any kind, including the construction of ponds and trails;~~
- ~~2. The dumping, discharging, or filling of any material;~~
- ~~3. The draining, flooding, or disturbing of the wetland water level or water table;~~
- ~~4. The driving of pilings;~~
- ~~5. The placing of obstructions;~~
- ~~6. The construction, reconstruction, demolition, or expansion of any structure;~~
- ~~7. The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, application of herbicides or pesticides, or planting of vegetation that would alter the character of a regulated wetland; provided, that these activities are not part of a forest practice governed under Chapter 76.09 RCW (Forest Practices Act) and its rules;~~
- ~~8. Activities that result in:

 - ~~a. A significant change of water temperature;~~
 - ~~b. A significant change of physical or chemical characteristics of wetlands water sources, including quantity; or~~
 - ~~c. The introduction of pollutants.~~~~

C. Wetland Classification and Rating. San Juan County wetland classifications (defined in Chapter 18.20 SJCC and described in the *Best Available Science Synthesis, San Juan County, May 2011*) differentiate between wetlands based on their sensitivity to disturbance and their importance as reflected by their hydrologic, water quality, and habitat characteristics and functions. In classifying a wetland that has been illegally modified, the classification that existed prior to the modification shall be used.

Wetland types are organized into the following Importance/Sensitivity ratings. For wetlands that include two or more wetland types, the rating shall be based on the wetland type that encompasses the largest

area.

1. **High Importance/Sensitivity.** These wetlands are the “best of the best,” including:
 - a. Tidal wetland ≥ 50 feet in length, with average width ≥ 10 ft.
 - b. Bog
 - c. Wet prairie wetland
 - d. Mature forested wetland ≥ one acre in size
 - e. Aspen/cottonwood wetland ≥ one acre in size
 - f. Lakeside wetland
 - g. Salmonid wetland
 - h. Rare species wetland
 - i. Medium Importance/Sensitivity wetland with no surface water outflow during most years.

2. **Medium Importance/Sensitivity.** These include:
 - a. All other tidal and tidally contiguous wetlands
 - b. Mature forest wetland .25 to 1 acre in size
 - c. Aspen/cottonwood wetland, .25 to 1 acre in size
 - d. Large pond wetland
 - e. Structurally diverse wetland
 - f. Wetland contiguous to extensive forest
 - g. Salmonid watershed wetland
 - h. Water supply watershed wetland
 - i. Low importance/Sensitivity wetland with no surface water outflow during most years.

3. **Low Importance/Sensitivity.**
All other wetland types not listed above.

D. Exempt Activities.

1. **Wetlands.** ~~The following uses shall be allowed within a regulated wetland without having to meet the protection standards, or requirements for wetland studies or mitigation set forth in subsections (E) through (H) of this section, if they are not prohibited by any other law. However, forest practices and conversions are governed by Chapter 76.09 RCW and its rules.~~
 - a. ~~Normal maintenance, repair, or operation of existing structures, facilities, or improved areas, such as lawns, landscaping, orchards, gardens, and driveways. Maintenance and repair do not include any modification that changes the character, scope, or size of the original structure, facility, or improved area, and do not include the construction of a maintenance road.~~
 - b. ~~Modification or expansion of existing uses and structures, pursuant to the requirements of the nonconforming use and structure provisions of SJC 18.40.310 and 18.80.120.~~
 - c. ~~Outdoor recreational activities, including hunting and fishing (pursuant to state law), birdwatching, hiking, boating, and swimming.~~
 - d. ~~The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling soil, planting crops, or changing existing topography, water conditions, or water sources.~~
 - e. ~~Existing and ongoing agricultural activities.~~
 - f. ~~Normal maintenance, but not construction, of drainage ditches.~~
 - g. ~~Use of existing nature trails.~~
 - h. ~~Installation of navigation aids and boundary markers.~~
 - i. ~~Site investigative work necessary for land use application submittal, such as surveys, soil logs,~~

percolation tests, and other related activities. In every case, wetland impacts shall be minimized and disturbed areas shall be immediately restored.

j. Drilling or digging and maintenance of wells; provided, that wetland impacts are minimized and disturbed areas are immediately restored.

2. ~~**Wetland Buffers.**~~ In addition to those activities allowed in subsection (D)(1) of this section, the following activities are allowed within wetland buffers without having to meet the protection standards, or requirements for wetland studies or mitigation set forth in subsections (E) through (H) of this section; provided, that impacts to buffers are minimized and that disturbed areas are immediately restored except as specifically allowed in subsection (D)(2)(a) of this section.

a. In association with a single-family residence only, the establishment and expansion of lawns, landscaping, orchards, gardens, and fences; provided, that:

i. Lawns, landscaping, orchards, and gardens shall be allowed within the outer 25 percent of the buffer width where no reasonable alternative is available. No structure other than fences nor any impervious surface shall be included in the above; and

ii. Fences shall be designed to allow the unimpeded passage of surface water beneath them.

b. Activities having minimal adverse impacts on buffers and no adverse impacts on regulated wetlands. These include low intensity, passive recreational activities, such as pervious trails, nonpermanent wildlife watching blinds, scientific or educational activities, and sports fishing or hunting. Trails within buffers shall be designed to minimize impacts to the wetland, shall be no wider than five feet, shall not include any impervious surfaces, and shall not totally circumnavigate the wetland perimeter.

c. Within the buffers of Category III and IV wetlands only, vegetation-lined swales designed for stormwater management or conveyance when topographic restraints determine there are no other upland alternative locations. Swales used for detention purposes may only be placed in the outer 25 percent of the buffer. Conveyance swales may be placed through the buffer, if necessary.

d. All legal parcels less than one acre in size as of the date of adoption of this code are exempt from the wetland buffer provisions.

D. Protection Standards. A development permit or land division may be conditioned to provide for the continued protection of the wetland resource and reasonable use of the property. Conditions may include, but are not limited to, wetland buffers, setbacks, limits on clearing and grading, conditions on the land title, best management practices for erosion control and maintenance of water quality, or other conditions appropriate to avoid or mitigate identified adverse impacts. The primary means of protecting wetland functions and values is to retain them in as natural a condition as possible. Vegetative buffers are an effective tool for protecting wetlands and associated species. This subsection establishes protection standards for wetlands, including a site-specific procedure for sizing appropriate wetland buffers, along with standards for activities in wetlands and their buffers.

1. ~~**Standard Buffer Zone Widths.**~~

a. The following buffers in Table 3.4 shall be required for wetlands based on the category of wetland as outlined in subsection (A) of this section:

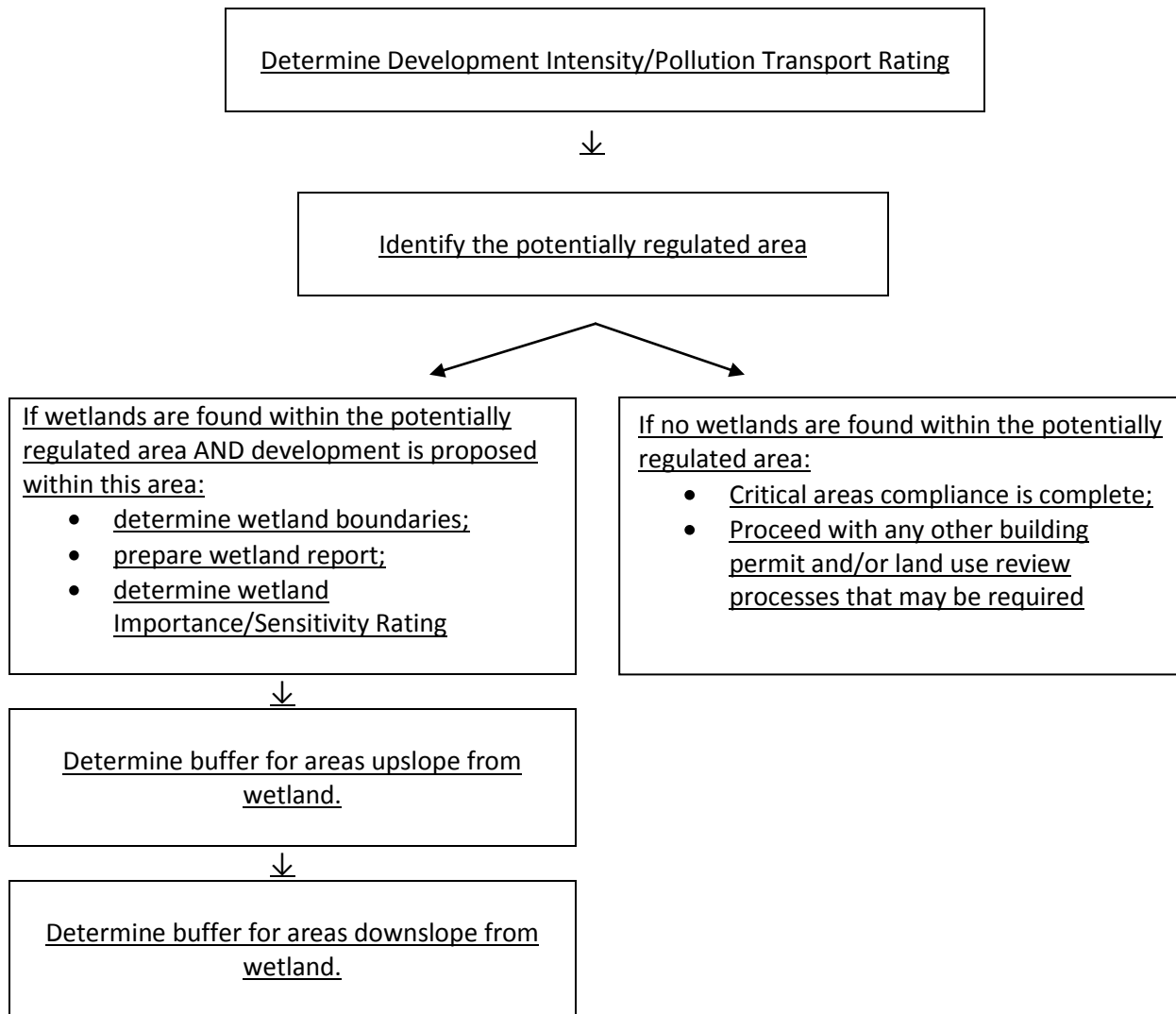
Table 3.4. Standard buffer widths for wetlands.

Wetland Category	Buffer Width (feet)¹
I	150
II	75
III	50

Note:

- 1. Measured as per subsection (E)(1)(b) of this section.
- b. All buffers shall be measured from the wetland boundary as delineated in the field pursuant to the requirements of subsection (G)(1) of this section.
- c. Except as otherwise specified in subsection (D) of this section, wetland buffers shall be retained in their natural condition.
- d. Where buffer disturbance or alteration has or will occur in conjunction with regulated activities, revegetation with native vegetation shall be required and completed within the next growing season.
- e. Any wetland created, restored, or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored, or enhanced wetland. Created wetlands will be deemed as Category II for the purposes of establishing a buffer.

1. **Buffer Sizing Procedure.** Following is a site-specific procedure for determining the width of vegetative buffers necessary to protect the water quality, water quantity and habitat functions of wetlands. This procedure is illustrated in the following flow chart:



Staff note: Scientific Basis for Proposed Buffers

The following general scientific principles are from the *Best Available Science Synthesis, San Juan County Washington, May 2011* and the underlying scientific documents adopted by the County Council to guide this review and update. Discussion of these principles and the associated citations can be found in Chapters 2, 3 and 7 of the BAS Synthesis (Wetlands, Marine Fish and Wildlife Habitat Conservation Areas, and Stormwater Management Alternatives).

Of the scientific documents that were reviewed, the following four references were the most important in the development of this site-specific approach to sizing vegetative buffers. These documents and others can be accessed from the County web site at http://www.sanjuanco.com./cao/cao_bas.aspx.

Booth, D.B., D. Hartley, and R. Jackson. 2002. Forest cover, impervious-surface area, and the mitigation of storm water impacts. Journal of American Water Resources Association 38:835-845.

Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2007. Meta-analysis of nitrogen removal in riparian buffers. J. Environ. Qual. 36(4):1172-80.

National Research Council. 2008. Urban Stormwater Management in the United States. National Academies Press, Washington, DC.

Semlitsch, R.D., B.D. Todd, S.M. Blomquist, A.J.K. Calhoun, J.W. Gibbons, J.P. Gibbs, G.J. Graeter, E.G. Harper, D.J. Hocking, M.L. Hunter Jr., D.A. Patrick, T.A.G. Rittenhouse, and B.B. Rothermel, 2009. Effects of Timber Harvest on Amphibian Populations: Understanding Mechanisms from Forest Experiments. BioScience, Vol.59 No. 10.

Scientific principles and assumptions:

a. Based on the Feb. 4, 2011 comments from Dr. Tom Hruby, WA State Dept. of Ecology, and the professional opinion of Dr. Paul Adamus, the proposed approach to sizing wetland buffers is a medium risk alternative that should be adequate to protect the functions and values of wetlands, including those related to water quantity, water quality and habitat. The risk associated with this alternative is low enough that a monitoring and adaptive management program is not necessary.

The proposed approach is based on the premise that there is clear and convincing proof, and a high probability that wetland functions and values will be protected. The standard for evidence needed to meet this criterion is less than that needed for “beyond a reasonable doubt”, but higher than that needed for a “preponderance of the evidence”. The probability that the proposed buffers will not be adequate is relatively low; more than 5% but less than 50%. According to Dr. Hruby the WA State Dept. of Ecology and a group of wetland experts determined that this level of risk is acceptable and will adequately protect wetland functions.

b. For situations with low intensity development and pollutant transport factors, most runoff flows below the ground surface and within the root zone.

c. For situations with high intensity development and pollutant transport factors, a significant portion of the runoff flows above ground.

d. As discussed in the *Best Available Science Synthesis for San Juan County, May 2011*, runoff from areas influenced by human development can be contaminated with any array of pollutants including those from lawn and garden chemicals (both the active ingredient and surfactants); fertilizers; rodent poisons; termite spray and other insecticides; moss control products including those applied to areas susceptible to growth of moss as well as zinc and copper impregnated shingles and/or roofing strips; deicers; and contaminants associated with automobiles including oil, antifreeze, and rubber and metals from the wear of tires, brakes and other parts.

e. Dissolved contaminants and those associated with fine sediment are the most difficult constituents to remove from runoff.

f. There is natural variation in the pollutant removal capabilities of vegetative buffers. In general, vegetative buffers are more effective at removing contaminants in runoff when the flow is primarily below the ground surface and within the root zone.

g. The factors influencing the effectiveness of buffers where flow is primarily subsurface are more complex than those for surface flow. These factors include soil texture, permeability and chemical composition; carbon content; depth of root zone; saturated vs. unsaturated soils; and type of chemical pollutants present.

h. Saturated soils are better at removing some contaminants such as nitrogen. Unsaturated soils are better at removing other contaminants, such as the break down products associated with surfactants. Soils in buffers and wetlands will experience both saturated and unsaturated conditions, resulting in varying levels of treatment depending on the pollutant and time of year.

i. High intensity development with more smooth, graded, compacted, and impervious surfaces and fewer trees provides poorer quality habitat for pond breeding amphibians, more runoff, and higher export of pollutants. References that discuss these principles include Booth et al. 2002, National Research Council 2008, and Semlitsch et al. 2009. The proposed development intensity factors are based on these references.

j. For habitat purposes, some wetland animals prefer dense vegetation around wetlands, while others prefer more open vegetation with sunnier/warmer microclimates and better visibility of predators.

k. While other documents referenced in the *BAS Synthesis* were considered, the primary scientific basis for the proposed buffer procedure is Mayer et al., 2007. This paper presents information on the size of buffers needed to remove nitrogen under varying conditions. For situations with low development intensity/transport factors, the buffers are approximately based on the "subsurface" line on Figure 1 of that paper, those with high development intensity /transport factors are approximately based on the "surface" line of that figure, and those with intermediate intensity/transport factors are approximately based on the "all data" line.

l. Buffers that can effectively remove nitrogen will also be effective at removing other contaminants.

m. In the proposed buffer sizing protocol, in addition to considering development intensity/ transport factors (discussed above in item k.), the size of the buffer and the associated pollutant removal percentages also vary based on the importance and sensitivity of the wetland and whether the wetland is located inside or outside an urban growth area (UGA). Outside UGAs, wetlands with low importance/sensitivity (with low habitat function) have buffers which are estimated to remove at least

50% of the pollutants. Because of their important habitat functions, removal of pollutants is more important in the buffers of medium and high importance/sensitivity wetlands, and the projected removal efficiencies for their buffers are approximately 65% and 75-80%. In all cases it is assumed that additional pollutant removal occurs within the wetland itself. Inside UGAs some buffers are reduced if mitigation is provided.

n. If adequate habitat buffers are protected upslope from wetlands, then downslope buffers can be reduced to, in some cases, as little as 15 feet (ref. August 12, 2011 paper by Dr. Paul Adamus entitled “Rationale for Reducing the Buffer Width Downslope of a Wetland and Still Providing a Minimum 15 foot Buffer on all Sides of a Wetland”).

o. In the professional opinion of Dr. Paul Adamus, in most cases buffers that are sized using the above protocols will also be adequate to protect habitat functions. Where this is not the case (e.g. situations with low development intensity/transport factors and medium importance/sensitivity wetlands) the proposed buffers were increased to adequately protect habitat functions.

p. Minimum buffer widths to protect wetland habitat functions are based in part on the need to protect forested wetlands from excessive blowdown of their trees and other microclimate-related impacts to wetland vegetation and wildlife.

Site-Specific Buffer Sizing Procedure

Step 1. Development Intensity/Pollution Transport Rating. Using Table 3.3, determine the Development Intensity/Pollution Transport Rating. County maps are available showing the probable location of streams and drainageways; however, conditions in the field shall control.

Table 3.3. Development Intensity/Pollution Transport Rating

Assign a rating of HIGH Development Intensity/Pollution Transport if any of the following are true:

- a. The proposed development area comprises >35% of the parcel; or
- b. Within the parcel, more than 10% of the area draining to a downslope wetland will be impervious; or
- c. Within the parcel, slopes between the upper edge of the development area and a downslope wetland exceed 30%; or
- d. There is a stream or drainageway (including those that flow only intermittently) connecting the proposed development area to a downslope wetland.

Assign a rating of MEDIUM Development Intensity/Pollution Transport if the site and development do not meet the criteria of either the High or Low ratings.

Assign a rating of LOW Development Intensity/Pollution Transport if all of the following are true:

- a. The proposed development area comprises <25% of the parcel; and
- b. Within the parcel, less than 5% of the area draining to a downslope wetland will be impervious; and
- c. Within the parcel, slopes between the upper edge of the development area and a downslope wetland

do not exceed 15%; and

d. There are no streams or drainageways connecting the proposed development area to a downslope wetland.

Staff note: To simplify this procedure, requirements associated with infiltrating discharge from foundation and curtain drains will be integrated into the stormwater section of the code, and requirements associated with specific animals will be considered in the section on Fish and Wildlife Habitat Conservation Areas.

Step 2. Potentially Regulated Area. Determine if there may be wetlands within the following distances of the development area (see Table 3.4). Possible wetlands include areas where there is standing surface water for more than 14 consecutive days during a normal year (based on available information) and/or wetlands shown on the *San Juan County Possible Wetlands Map*. If there are no possible wetlands within the distances shown in Table 3.4, no additional action is required. If development is proposed within this area, then continue with this procedure to determine the wetland and buffer boundaries.

Table 3.4. Potentially Regulated Area

<u>Development Intensity / Pollution Transport Factor</u>	<u>Potentially Regulated Area</u>
<u>High</u>	<u>300 feet</u>
<u>Medium</u>	<u>200 feet</u>
<u>Low</u>	<u>115 feet</u>

Step 3. Determine wetland boundaries, prepare wetland report, and determine wetland Importance/Sensitivity Rating in accordance with subsection (E) of this section.

Step 4. Determine Buffer for Land Upslope From Wetland. Using Table 3.5, determine the upslope buffer necessary to protect the functions and values of the wetland.

Table 3.5. Site-Specific Widths for Buffers Upslope From Wetlands

<u>Development Intensity/Pollutant Transport</u>	<u>Wetland Importance/Sensitivity</u>	<u>Buffer Width Outside UGAs (ft)</u>	<u>Buffer Width Inside UGAs, With Mitigation (ft)</u>
<u>High</u>	<u>High</u>	<u>300</u>	<u>300</u>
	<u>Medium</u>	<u>200</u>	<u>200</u>
	<u>Low</u>	<u>90</u>	<u>90</u>
<u>Medium</u>	<u>High</u>	<u>200</u>	<u>150</u>
	<u>Medium</u>	<u>80</u>	<u>60</u>
	<u>Low</u>	<u>15</u>	<u>15</u>
<u>Low</u>	<u>High</u>	<u>115</u>	<u>60</u>
	<u>Medium</u>	<u>50</u>	<u>25</u>
	<u>Low</u>	<u>15</u>	<u>15</u>

Notes:

Roads and driveways do not count toward buffer requirements (e.g., if there is a 15-foot-wide road in a buffer, the exterior edge of the buffer is extended by 15 feet).

Reduced buffer widths in UGAs are only available when anticipated adverse impacts are identified and mitigated in accordance with the requirements of 18.30.110.

Step 5. Determine Buffer for Areas Downslope From Wetland. Buffers downslope of wetlands may be reduced provided that habitat functions are protected.

For wetlands with a Medium or High Importance/Sensitivity Rating, the buffer need not extend beyond the point where the land begins sloping away from the wetland, provided that a habitat buffer of at least 50 feet is retained.

For wetlands with a Low Importance/Sensitivity Rating, the buffer need not extend beyond the point where the land begins sloping away from the wetland, provided that a habitat buffer of at least 15 feet is retained.

2. Activities Allowed in Wetlands and Wetland Buffers. Unless allowed under the provisions for reasonable use exceptions or the optional public agency and utility procedures found in SJCC 18.30.110, alterations that impair wetland functions and values are not allowed.

Following are activities that are allowed in wetlands and/or their buffers if not prohibited by state or federal requirements.

Table 3.6
Activities Allowed in Wetlands and Wetland Buffers

<u>Activity</u>	<u>Wetland Buffer</u>	<u>Wetland</u>
<u>a. Outdoor recreational activities including hunting and fishing (pursuant to state law), bird watching, hiking, boating, and swimming.</u>	<u>YES</u>	<u>YES</u>
<u>b. The harvesting of wild plants and foods in a manner that is not injurious to the natural reproduction of wetland plants and provided the harvesting does not require tilling soil, planting, or changing existing topography, water conditions, or water sources.</u>	<u>YES</u>	<u>YES</u>
<u>c. Removal of invasive plants, planting of native wetland plants, vegetation management activities intended to preserve and maintain specific habitats for rare species listed in the "Rare Species Wetland" definition, and vegetation management activities implemented as part of a habitat management plan approved by a local, state or federal agency.</u>	<u>YES</u>	<u>YES</u>
<u>d. Agricultural activities existing on the effective date of these regulations, provided they do not result in additional adverse impacts to the functions and values of wetlands. This can include changing the type of farming within a given area already in use, such as in the rotational management of farmland, as long as the change in use does not result in additional adverse impacts to wetland functions and values.</u>	<u>YES</u>	<u>YES</u>

<p><u>e. New and expanded agricultural activities (with the exception of new structures), provided they are consistent with a farm plan that includes best management practices (BMPs) that will protect the functions and values of wetlands. New agricultural structures are subject to the same provisions as other structures including provisions for reasonable use exceptions.</u></p>	<p><u>YES</u></p>	<p><u>YES</u></p>
<p><u>f. Agricultural activities conducted in accordance with a voluntary agricultural stewardship program developed pursuant to RCW 36.70a.705.</u></p>	<p><u>YES</u></p>	<p><u>YES</u></p>
<p><u>g. Wetland restoration or enhancement activities not required as project mitigation, provided the activity is approved by the U.S. Fish and Wildlife Service, the Washington State Department of Ecology, Washington State Department Fish and Wildlife, or other responsible local, state, federal, or tribal jurisdiction.</u></p>	<p><u>YES</u></p>	<p><u>YES</u></p>
<p><u>h. Construction of new ponds in wetlands with an Importance/Sensitivity Rating of Low, as part of a wetland mitigation or noncompensatory enhancement project approved by the County or other responsible state, federal or tribal jurisdiction. (Note: Construction of new ponds is not allowed in Medium or High Importance/Sensitivity wetlands).</u></p>	<p><u>YES</u></p>	<p><u>YES</u></p>
<p><u>i. The establishment and expansion of lawns, landscaping, orchards, gardens, and fences in Low and Medium Importance/Sensitivity wetlands, provided that:</u> <u>i. They will not occupy more than 10% of the buffer or more than 1000 square feet (whichever is less);</u> <u>ii. They are installed at the outer edge of the buffer;</u> <u>iii. Other than fences, no structures or impervious surfaces are constructed;</u> <u>and</u> <u>iv. Fences shall be designed to allow the unimpeded passage of surface water beneath them.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p><u>j. The construction of trails, stairs, or raised walkways, provided that the improvement:</u> <u>i. Is designed to direct sheet flow runoff into adjacent vegetation and to prevent negative impacts to the wetland from runoff and eroding soil; and</u> <u>ii. Does not exceed five feet in width; and</u> <u>iii. Is constructed of non-toxic materials; and</u> <u>iv. Does not totally circumnavigate the wetland perimeter.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p><u>k. Nonpermanent wildlife watching blinds.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p><u>l. Drilling, digging and maintenance of wells, provided they are located at the outer edge of the buffer, that impacts to adjoining wetlands are unlikely, and that disturbed areas are immediately restored.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p><u>m. If there is little or no existing soil erosion, limited tree removal to allow for a filtered view from the primary structure, provided:</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>

<p>i. <u>Stumps are retained and disturbance of the soil and duff layer is minimized;</u> ii. <u>The infiltration capacity of the soil is retained;</u> iii. <u>All trees over 12 inches dbh are retained;</u> iv. <u>The remaining forest consists of trees that are multi-aged and well distributed across the buffer and the canopy cover for the remaining forest is at least 75%, except directly between the primary structure and the wetland, where the canopy cover may be reduced to not less than 50%; and</u> v. <u>All vegetation overhanging streams and marine waters is retained.</u></p>		
<p>n. <u>To allow for a view or fire hazard reduction, trimming and pruning of up to 20% of the foliage of trees and shrubs per year, provided that trees are not topped.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p>o. <u>In Low and Medium Importance/Sensitivity wetland buffers, stormwater infiltration facilities, provided they are installed in the outer 25% of the buffer, are installed without removing trees greater than 6" dbh and otherwise meet state and local standards.</u></p>	<p><u>YES</u></p>	<p><u>NO</u></p>
<p>p. <u>Other uses that will not impair wetland functions and values, considering the Best Available Science.</u></p>	<p><u>CUP</u></p>	<p><u>CUP</u></p>

Notes:

"CUP" means Conditional Use Permit.

Staff notes on the above sections:

Staff confirmed with Dr. Adamus that trees over 12" dbh provide important wildlife habitat. If necessary, this could be increased to 15" in wetlands or 21" in wetland buffers.

If item "e" is adopted, CD&P and the San Juan Island Conservation District will need to identify BMPs applicable to new and expanded agricultural activities in San Juan County.

3. Field Marking of Wetland and Wetland Buffer. Prior to building permit approval, the location of the outer extent of the wetland and wetland buffer shall be marked in the field, and the Director may require field approval prior to the commencement of permitted activities. Markings for wetlands and buffers shall be maintained throughout the duration of construction activities.

4. Lighting. Exterior lighting fixtures must be shielded and the light must be directed away from wetlands.

5. Final Inspections and Financial Guarantees. A final inspection is required to verify compliance with approved plans and these requirements. For projects that are not complete at the time that any associated building construction is completed, or for those that do not occur in conjunction with a permitted structure, the Director may require a financial guarantee and associated agreement.

~~**2. Buffer Width Averaging.** Buffer averaging allows limited reductions of buffer width in specified locations on the property proposed for development while requiring increases in others so that the total area of the buffer is unchanged. Averaging of required buffer widths will be allowed only if the applicant demonstrates that all of the following criteria are met:~~

- ~~a. Averaging is necessary to accomplish the purposes of the proposal, and no reasonable alternative is available;~~
- ~~b. The wetland contains variations in sensitivity due to existing physical characteristics and the reduction from standard buffer widths will occur only contiguous to the area of the wetland determined to be least sensitive;~~
- ~~c. Averaging width will not adversely affect the wetland functional values;~~
- ~~d. The total area contained within the wetland buffer after averaging is no less than that contained within the standard buffer prior to averaging. In no instance shall the buffer width be reduced by more than 25 percent of the standard buffer width; and~~
- ~~e. If a portion of the buffer is to be reduced, the remaining buffer area will be enhanced, using native vegetation and fencing where appropriate to improve the functional attributes of the buffer, to provide additional protection for wetland functions and values. A proposal to enhance a buffer shall not be used as justification to reduce an otherwise functional standard buffer width, unless such buffer reduction complies with all other criteria for buffer width averaging.~~

~~3. **Buffer Width Decreasing.** Decreasing of required buffer widths will be allowed only if the applicant demonstrates that all of the following criteria are met:~~

- ~~a. Buffer width averaging pursuant to subsection (E)(2) of this section is not possible due to site characteristics;~~
- ~~b. A decrease is necessary to accomplish the purposes of the proposal and no reasonable alternative is available;~~
- ~~c. The wetland contains variations in sensitivity due to existing physical characteristics, and reduction from standard buffer widths will occur only adjacent to the area of the wetland determined to be the least sensitive;~~
- ~~d. Decreasing width will not adversely affect the wetland functional values;~~
- ~~e. In no instance will the buffer width be reduced by more than 50 percent of the standard buffer width; and~~
- ~~f. If a portion of a buffer is to be reduced, the remaining buffer area will be enhanced, using native vegetation and fencing where appropriate to improve the functional attributes of the buffer and to provide additional protection for wetland functions and values. A proposal to enhance a buffer shall not be used as justification to reduce an otherwise functional standard buffer width, unless such buffer reduction complies with all other criteria for reducing buffer widths.~~

~~4. **Buffer Width Increasing.** Standard buffers may be increased by the County only upon a determination that:~~

- ~~a. The increase is recommended by a County employed qualified wetland consultant who has inspected the site and demonstrated that a larger buffer is necessary to:
 - ~~i. Maintain viable populations of existing species proposed or listed by the federal government or the state as rare, endangered, threatened, and sensitive, or species of local concern as defined in Chapter 18.20 SJCC;~~
 - ~~ii. Protect critical or outstanding potential habitat for those species listed in subsection (E)(4)(a)(i) of this section is present; or~~
 - ~~iii. Protect nesting sites such as heron rookeries or raptor nesting trees that are present in the wetland or its buffer.~~~~
- ~~b. If a Category I, II, or III wetland is located within 25 feet of the toe of slopes of 30 percent or more, buffers may be increased to include the tops of slopes determined to be "erosion hazard areas" as defined in Chapter 18.20 SJCC.~~

~~5. **Establishment of Limits of Clearing.** Prior to building permit approval, the location of the outer extent of the wetland buffer and the limits of the areas to be disturbed shall be marked in the field in accordance with a clearing and grading plan approved as part of a development permit or approval or for a single family residence in accordance with the provisions of subsection (G) of this section. Such field markings may be field approved by the County prior to the commencement of permitted activities. Markings shall be maintained throughout the duration of any construction activities.~~

~~6. **Regulation of Ponds Smaller than 20 Acres in Size.** (Note: lakes and ponds 20 acres or greater in size are regulated in SJCC 18.30.160 18.30.110(A) (5) and 18.30.160(A)(4), and by the Shoreline Master Program, Chapter 18.50 SJCC.)~~

~~a. Ponds created out of nonwetland areas are not subject to the provisions of this section.~~

~~b. Ponds previously excavated or created within wetlands, as indicated by a combination of topographic features, remaining vegetation, and mapped hydric soils, shall be subject to the provisions of this section.~~

~~c. A pond may only be constructed in a Category III or IV regulated wetland, and then only as part of an approved wetland mitigation or noncompensatory enhancement project. A wetland mitigation or enhancement plan shall be reviewed for consistency with the applicable sections of this code (e.g. Chapter 18.40 SJCC, Performance Standards, Chapter 18.50 SJCC, Shoreline Master Program, and Chapter 18.60 SJCC, Development Standards) and may only be approved by the decision maker if it has been found to meet the requirements set forth by this code. The enhancement or mitigation plan must be prepared pursuant to the requirements of subsections (F) and (H) of this section, and include the information required in Appendix B* (Mitigation/Enhancement Plan Contents) of this code.~~

~~7. **Trails for Public Education.** Trails that are specifically designed and built for public education purposes by a public agency or conservation organization may be located anywhere within a regulated wetland buffer. Such trails shall be reviewed for consistency with the applicable sections of this code (e.g., Chapter 18.40 SJCC, Performance Standards, Chapter 18.50 SJCC, Shoreline Master Program, and Chapter 18.60 SJCC, Development Standards) and may only be approved by the decision maker if it has been found to meet the requirements set forth by this code. Application for such trails must include a special report prepared in accordance with subsection (G)(2) of this section.~~

~~**F. Noncompensatory Enhancement.** Noncompensatory enhancements are those enhancement projects which are conducted solely to increase the functions and values of an existing wetland and which are not required to be conducted pursuant to the mitigation requirements of subsection (H) of this section There are two types of noncompensatory enhancement:~~

~~1. **Type 1 Noncompensatory Enhancement.** Type 1 noncompensatory enhancement projects involve the filling, draining, or excavating of a regulated wetland. All applications for Type 1 noncompensatory enhancement projects shall be accompanied by an enhancement plan prepared in accordance with subsections (F)(1)(a) through (c) of this section, which demonstrates that the proposed activities will result in an increase in wetland functions and values.~~

~~2. **Type 2 Noncompensatory Enhancement.** Type 2 noncompensatory enhancement projects involve wetland alterations that do not include the filling, draining, or excavating of a regulated wetland. Such projects might involve the removal of non native plant species or the planting of native plant species. All applications for Type 2 noncompensatory enhancement projects shall be accompanied by an enhancement plan prepared in accordance with subsections (F)(2)(a) through~~

~~(c) of this section, which demonstrates that the proposed activities will result in an increase in wetland functions and values.~~

~~a. The enhancement plan shall be submitted for administrative consistency review, pursuant to SJCC 18.80.070(E)(1), reviewed for consistency with the applicable sections of this code (e.g., Chapter 18.40 SJCC, Performance Standards, Chapter 18.50 SJCC, Shoreline Master Program, and Chapter 18.60 SJCC, Development Standards) and may only be approved by the decision maker if it has been found to meet the requirements set forth by this code.;~~

~~b. The enhancement plan must include a detailed description of the activity including the following information:~~

~~i. The goal of the enhancement project;~~

~~ii. What plants, if any, will be removed or planted;~~

~~iii. How the activity will be conducted, including the type(s) of tools or machinery to be used; and~~

~~iv. The qualifications of the individual who will be conducting the enhancement activity.~~

~~c. The enhancement plan must either be prepared by a qualified wetlands consultant as defined in Chapter 18.20 SJCC or accepted in writing by the U.S. Fish and Wildlife Service, the Washington Department of Fish and Wildlife, or the Washington Department of Ecology.~~

GE. Determination of Regulatory Wetland Boundary, and Wetland Importance/Sensitivity Rating, Buffer Edge and Requirements for Special-Wetland Reports.

1. **Determination of Wetland and Buffer Regulatory Boundaries.** The location of the wetland boundary and associated buffers shall be determined through a field investigation by a qualified wetlands professional consultant utilizing the currently accepted federal and state delineation procedures and manuals, as a part of a special report prepared in accordance with subsection (G)(2) of this section definitions and methods prescribed in the 1987 U.S. Army Corps of Engineers "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, including any applicable regional supplements. (Note: RCW 36.70A.175 and WAC 173-22-035 require the use of this manual). If development areas are proposed on only one side of a wetland, and do not encircle the wetland, a full delineation may not be necessary. In these cases, a wetland reconnaissance may be adequate to establish the edge of the wetland and the associated buffer adjacent to the development area. This requirement may be waived under the following circumstances:

~~a. **Single Family Residences.** The requirement for a wetland delineation and special report will be waived for construction of a single family residence on an existing lot of record if field investigation by County staff indicates the following:~~

~~i. Sufficient information exists for staff to estimate the boundaries of a wetland without a delineation; and~~

~~ii. The single family residence and all accessory structures and uses are not proposed to be located within the distances identified in Table 3.5, below, from the estimated wetland boundary.~~

~~b. **Simple Land Divisions.** The requirement for a wetland delineation and special report will be waived for a simple land division submitted in accordance with SJCC 18.70.040 if field investigation by County staff indicates the following:~~

~~i. Sufficient information exists for staff to estimate the boundaries of a wetland without delineation;~~

~~ii. Both parcels resulting will have buildable area outside the wetland and the wetland buffer~~

- identified in Table 3.5, below; and
- iii. The simple land division approval will be recorded in the County auditor’s file together with a statement that development on both described parcels is subject to the provisions of SJCC 18.30.110.
- c. ~~Subdivisions, Short Subdivisions and Binding Site Plans.~~ The requirement for a wetland delineation and special report will be waived for subdivisions, short subdivisions, and binding site plans of an existing lot of record if field investigation by County staff indicates the following:
 - i. Sufficient information exists for staff to estimate the boundaries of a wetland without a delineation; and
 - ii. Building envelopes or building setback lines are not proposed to be located within the distances identified in Table 3.5, below, from the estimated wetland boundary.

2. **Wetland Special Report Contents.** When a special wetland report is required, it must be completed by a qualified wetlands consultant professional as defined in Chapter 18.20 SJCC and must contain the following:

a. A map, at a scale appropriate for the functions and values being evaluated, no smaller than one inch equals 200 feet, showing the general location of the wetland within the potentially regulated area of the delineated regulated wetland boundary as determined by the criteria in this subsection (a professional survey of wetland boundaries is not required). In addition, the map shall show the general location of the ~~wetland boundary for all other wetlands located~~ within the potentially regulated area (see Table 3.4) on the property proposed for the use or development activity. When regulated wetlands do not occur on the subject property, but wetland buffers from offsite wetlands do occur, those wetland buffers must be indicated on the submitted maps.

Table 3.5. ~~Minimum wetland buffers necessary as part of qualifying for a waiver from delineation and special report requirements.~~^{1, 2, 3}

Wetland Category	Required Distance from Estimated Wetland Boundary (feet)⁴
I	200
II	125
III	75
IV	60

Notes:

1. ~~These buffers are one part of the complete requirements necessary to qualify for a waiver — see SJCC 18.30.150(G)(1).~~
2. ~~These are not standard wetland buffers: they are optional buffers for cases when a delineation is not made. If a single family residence, building envelope, or setback line in a subdivision is proposed to be closer to the wetland than the distance identified in the table, a wetland delineation must be performed.~~
3. ~~The same opportunities for exemption from delineation shall apply to uncategorized wetlands. Permit center staff shall either determine the wetland category or hire a qualified wetland consultant at the expense of the County.~~
4. ~~The following shall not be located within the distances identified in the table: (a) single family residences and all accessory structures and uses; (b) subdivision building envelopes and setback lines. For simple land divisions, both resulting parcels must have buildable area outside the wetland and the buffer distance in the table. See SJCC 18.50.130(G)(1).~~

b. ~~The~~ A site plan showing for the proposed project, use or development, the potentially regulated area, and the adjacent wetlands at the same scale as the wetland map. This plan must showing the extent of the proposed activity development area in relationship to the delineated, regulated

wetland edges and their buffers, as well as to the approximate boundaries of other regulated critical areas and their buffers if located on the development parcel. Site plans must also include the location of all roads, structures, and utilities including stormwater systems, sewage (sanitary or septic) systems, power, or any proposed installations within the regulated wetland or its buffer. (A professional survey of site features is not required).

~~c. Project cross sections, both before and after completion, in relation to the surface elevation of the wetland must be indicated for proposed activities which involve cutting or filling operations within the wetland or its proposed buffer.~~

~~dc. Classification—Wetland type, importance/sensitivity rating, and development intensity/pollutant transport rating of the wetland in accordance with subsections (C) and (D) of this section Appendix A* and a detailed written analysis of the existing regulated wetland including: the basis for conclusions regarding the wetland type and ratings; vegetation communities classified per the U.S. Fish and Wildlife Service *Classification of Wetland and Deepwater Habitats of the United States* (1979); species composition of vegetation communities, including presence the wetland indicator status code of all species as designated by federal agencies (1988 National Wetland Plant List or, when available, subsequent legally-adopted revisions by the U.S. Army Corps of Engineers) and percent cover ; existing soils (including descriptions of presence or absence of indicators of hydric conditions); and existing hydrologic conditions including inflow/outflow, sources of water within the system, relative water quality, and seasonal changes in hydrology, if applicable.~~

~~ed. A detailed analysis description of wildlife species' use of the wetland and its buffer including existing records of species and, if available, approximate date of observations.~~

~~fe. A description of the existing vegetation in the wetland buffer including dominant species composition and percent coverage, whether the buffer is disturbed or not, and the functional value of the buffer in relation to the regulated wetland.~~

~~gf. If required by this code, the development activity would eliminate all or part of a regulated wetland then a detailed compensatory mitigation plan as outlined in subsection (G)(3) of this section meeting the requirements of Section 18.30.110 SJCC must be provided.~~

~~g. If the applicant wishes to have the delineation entered into the County's Geographic Information System (GIS) for future wetland mapping, the delineation must submitted to the County in a compatible electronic format.~~

~~h. Expiration of wetland report. Wetland reports are valid for a period of five (5) years.~~

~~3. **Mitigation Plan Contents.** All wetland restoration, creation, and enhancement projects required by this code, either as a condition of project approval or as the result of an enforcement action, shall follow a mitigation plan prepared by a qualified wetland specialist as defined herein and conducted in accordance with the requirements described in Appendix B*. The applicant or violator must receive written approval of the mitigation plan by the administrator prior to commencement of any wetland restoration, creation, or enhancement activity.~~

~~**H. Mitigation.** The overall goal of mitigation shall be no net loss of wetland function, value, and acreage.~~

~~1. **Mitigation Sequence.** Mitigation includes avoiding, minimizing, or compensating for adverse impacts to regulated wetlands or their buffers. When a proposed use or development activity poses potentially significant adverse impacts to a regulated wetland or its buffer, the preferred sequence of mitigation as defined below shall be followed unless the applicant demonstrates that an overriding public benefit would warrant an exception to this preferred sequence.~~

~~a. Avoiding the impact altogether by not taking a certain action or parts of actions on that portion of the site which contains the regulated wetland or its buffer;~~

~~b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;~~

- c. ~~Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;~~
- d. ~~Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or~~
- e. ~~Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.~~

~~2. **Compensatory Mitigation – General Requirements.** As a condition of any permit or other approval allowing alteration which results in the loss or degradation of the functions and values of regulated wetlands, or as an enforcement action pursuant to Chapter 18.100 SJCC, compensatory mitigation shall be required to offset impacts resulting from the actions of the applicant or any code violator.~~

- a. ~~Except persons exempt under SJCC 18.30.110(E), any person who alters or proposes to alter regulated wetlands shall restore or create areas of wetland equivalent to or larger than those altered in order to compensate for wetland losses. The following Table 3.6 specifies the ratios that apply to creation or restoration which is in-kind, on-site, and is accomplished prior to or concurrently with alteration:~~

Table 3.6. Required replacement ratios for compensatory wetland mitigation.

Wetland Category	Replacement Ratio¹
I	6:1
II or III	
• Forested	3:1
• Scrub Shrub	2:1
• Emergent	1.5:1
IV	1.25:1

Note:

- 1. ~~The first number in the ratio specifies the acreage of wetlands to be created, and the second number specifies the acreage of wetlands proposed to be altered or lost.~~
 - b. ~~Enhancement of existing wetlands, other than Category I and Category II wetlands, may be considered as compensation; but above ratios must then be doubled.~~
 - c. ~~Compensation must be completed prior to wetland destruction, where possible.~~
 - d. ~~Compensatory mitigation must follow an approved compensatory mitigation plan pursuant to subsection (G)(3) of this section, with the replacement ratios as specified above.~~
 - e. ~~Compensatory mitigation must be conducted on property which will be protected and managed to avoid further development or degradation. The applicant or code violator must provide for long-term preservation of the compensation area.~~
 - f. ~~The applicant shall demonstrate sufficient scientific expertise, supervisory capability, and financial resources, including bonding in accordance with Appendix C* (Performance and Maintenance Bonding for Wetlands), to carry out the project. The applicant must demonstrate the capability for monitoring the site and making corrections if the project fails to meet projected goals.~~

~~3. **Compensatory Mitigation – Type, Location, and Timing.**~~

- a. ~~Priority will be given to in-kind, on-site compensation if feasible and if the wetland to be lost has a moderate to high functional value.~~
- b. ~~When the wetland to be impacted is of a limited functional value and is degraded, compensation may be of the wetland community type most likely to succeed with the highest functional value possible.~~
- c. ~~Out-of-kind compensation may be allowed when out-of-kind replacement will best meet identified goals (for example, replacement of historically diminished wetland types). Where out-of-kind replacement is accepted, greater acreage replacement ratios may be required to compensate for lost functional values.~~

- ~~d. Off-site compensation can be allowed only if:~~
- ~~i. On-site compensation is not feasible due to hydrology, soils, waves, or other factors;~~
 - ~~ii. On-site compensation is not practical due to probable adverse impacts from surrounding land uses;~~
 - ~~iii. Potential functional values at the site of the proposed restoration are significantly greater than the lost wetland functional values; or~~
 - ~~iv. Off-site compensation will be conducted in accordance with subsection (H)(4) of this section, cooperative compensation projects.~~
- ~~e. Except in the case of cooperative compensation projects, off site compensation must occur within the same watershed where the wetland loss occurs; provided, that Category IV wetlands may be replaced outside of the watershed if there is no reasonable technical alternative. The stormwater storage function provided by Category IV wetlands must be provided for within the design of the development project.~~
- ~~f. Except in the case of cooperative compensation projects, in selecting compensation sites applicants must pursue locations in the following order of preference:~~
- ~~i. Filled, drained, or cleared sites which were formerly wetlands and where appropriate hydrology exists; and~~
 - ~~ii. Upland sites, adjacent to wetlands, if the upland is significantly disturbed and does not contain a mature forested or shrub community of native species, and where the appropriate natural hydrology exists.~~
- ~~g. Construction of compensation projects must be timed to reduce impacts to existing wildlife and flora. Construction must be timed to assure that grading and soil movement occurs during the dry season. Planting of vegetation must be specifically timed to the needs of the target species.~~

- ~~4. **Cooperative Compensation Projects.** The County may encourage, facilitate, and approve cooperative projects where one or more applicants, or an organization with demonstrated capability, may undertake a compensation project if it is demonstrated that:~~
- ~~a. Creation of one or several larger wetlands may be preferable to many small wetlands;~~
 - ~~b. The group demonstrates the organizational and fiscal capability to act cooperatively;~~
 - ~~c. The group demonstrates that long term management of the compensation area can and will be provided; and~~
 - ~~d. There is a clear potential for success of the proposed compensation at the identified compensation site. Conducting compensation as part of a cooperative process does not reduce or eliminate the required replacement ratios outlined in subsection (H)(2) of this section. (Ord. 7-2005, § 6, 7 and 8; Ord. 14-2000 § 7 (CCC); Ord. 11-2000 § 4; Ord. 2-1998 Exh. B § 3.6.8)~~

~~* Appendices referenced in this section are attached to Ord. 2-1998 and are on file in the office of the clerk of the board.~~

Section 4. SJCC Section 18.60.170 and Ord. 2-1998, Exh. B § 6.15 shall be amended to read as follows:

18.60.170 Lighting.

A. Exterior Lighting. Exterior lighting shall be energy-efficient and shielded or recessed so that direct glare and reflections are contained within the boundaries of the parcel. Exterior lighting shall be directed downward and away from adjoining properties and public rights-of-way. No lighting shall blink, flash, or be of unusually high intensity or brightness. Exterior lighting fixtures must be shielded and the light must be directed away from wetlands and the habitat of any species listed as endangered, threatened, sensitive, or a San Juan County species of special importance. All lighting fixtures shall be appropriate in scale, intensity,

and height to the use they are serving. Any lighting installed in parking areas shall be of direct cutoff design so that the source is not visible from adjacent property. Decorative lighting shall be limited to incandescent lamps with a maximum of 25 watts per bulb and 500 watts overall.

B. Street Lighting. Street lighting shall not be provided by the County except, at its option, in activity centers.