

72235-2

72235-2

No. 72235-2-1

**COURT OF APPEALS, DIVISION 1
OF THE STATE OF WASHINGTON**

**COMMON SENSE ALLIANCE, P.J. TAGGARES COMPANY, AND
FRIENDS OF THE SAN JUANS,**

Appellants,

v.

**GROWTH MANAGEMENT HEARINGS BOARD, WESTERN
WASHINGTON REGION, AND SAN JUAN COUNTY,**

Respondents.

**BRIEF OF APPELLANTS
COMMON SENSE ALLIANCE &
P.J. TAGGARES COMPANY ET AL.**

Alexander W. Mackie, WSBA #6404
AMackie@perkinscoie.com
Paul Graves, WSBA #39410
PGraves@perkinscoie.com
PERKINS COIE LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: 206.359.8000
Facsimile: 206.359.9000

Attorneys for Appellants
COMMON SENSE ALLIANCE and P.J.
TAGGARES COMPANY

2014 NOV -5 PM 4:01
COURT OF APPEALS DIV 1
STATE OF WASHINGTON

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. ASSIGNMENT OF ERROR	2
III. ISSUES PERTAINING TO ASSIGNMENT OF ERROR	4
IV. STATEMENT OF THE CASE	6
A. The County’s Process	6
B. The County’s Regulations With a Focus on FWHCAs Affecting Shorelines of the State	7
1. The Classification and Designation Process	8
2. The Protection Requirements	11
C. Procedural History of the Cases Below	12
V. STANDARD OF REVIEW	12
VI. ARGUMENT	14
A. The Imposition of Critical Area Buffers to Properties Proximate to Listed Habitats Without Regard to the Impact of the Project Under Review to That Critical Area Is Unlawful and Requires Reversal of the Decision Below	14
1. The Water Quality Buffers and Tree Protection Requirements as Applied to Aquatic FWHCA Imposed Without Regard to Project-Related Impacts Are Unlawful as a Prohibited Tax or Fee Under RCW 82.02.020	18
2. The Superior Court Erred in Concluding the Constitutional Challenge Was Not Ripe for Adjudication Until a Specific Project Could Be Reviewed “as applied”	22
B. The County FWHCA Ordinance as Applied to Shorelines of the State (Aquatic FWHCA’s) as Drafted Is in Violation of the Mandates in RCW 37.70A.480(4), (5) and WAC 365-190-030(6).....	27

TABLE OF CONTENTS
(continued)

	Page
C. The San Juan County Fish and Wildlife Habitat Conservation Ordinance Fails to Comply with the Requirements Definition of FWHCA Provided in WAC 365-190-030(6).....	29
D. The Best Available Science Adopted by the County Does Not Support the Universal Application of Buffers to All Properly Designated Shorelines as Required by San Juan County.....	31
E. Other Issues	41
VII. SUMMARY AND CONCLUSIONS	43
VIII. REQUESTED RELIEF	45

APPENDIX A – KEY ORDINANCE PROVISIONS

1. 18.30.160(B) Habitat List
2. 18.30.160(E) Aquatic FWHCA List
3. Revised Buffer Tables (as amended 2013)
SJCC 18.30.150(E) Table 3.3
SJCC 18.30.160(E) Table 3.6

APPENDIX B – CRITICAL AREA MAPS (3)

APPENDIX C – SUPERSEDED REGULATIONS

- WAC 365-190-030, Definitions
- WAC 365-190-040, Process
- WAC 365-190-080, Critical Areas

APPENDIX D – BEST AVAILABLE SCIENCE SYNTHESIS
CHAPTER 3 EXCERPTS

- Habitat – Shellfish, pp. 7-13
- Vegetation and Buffers, pp. 61-69

TABLE OF AUTHORITIES

	Page(s)
CASES	
<i>Benchmark v. Battleground</i> , 146 Wn.2d 685 (2002).....	19
<i>Citizens' Alliance for Prop. Rights v. Sims</i> , 145 Wn. App. 649 (2008).....	passim
<i>Congregational Rabbinical College of Tartikov, Inc. v. Village of Pomona</i> , 915 F. Supp. 2d 574 (S.D.N.Y. 2013)	23
<i>Dolan v. City of Tigard</i> , 512 U.S. 374 (1994).....	16, 24
<i>Everett Citizens Coalition, et al. v. City of Everett et al.</i> , No. CWGMHB 02-3-0096c (FDO January 2003)	27, 30
<i>First United Methodist Church of Seattle v. Hearing Exam'r</i> , 129 Wn.2d 238 (1996).....	1, 23
<i>Honesty in Envtl. Analysis & Legislation (HEAL) v. Cent. Puget Sound Growth Mgmt. Hearings Bd.</i> , 96 Wn. App. 522 (1999).....	32, 39, 40
<i>Jafar v. Webb</i> , 177 Wn.2d 520 (2013).....	23
<i>Nollan v. California Coastal Commission</i> , 483 U.S. 825 (1987).....	15
<i>Olympic Stewardship Found. v. W. Washington Growth Mgmt. Hearings Bd.</i> , 166 Wn. App. 172 (2012).....	13, 19, 34, 35
<i>Presbytery of Seattle v. King County</i> , 114 Wn.2d 320 (1990).....	26

<i>State v. Bahl</i> , 164 Wn.2d 739 (2008).....	23
<i>Tahoma Audubon Society v. Pierce County</i> , CPSGMHB No. 05-3-0004(c) (FDO 2005).....	28, 31
<i>Thurston County v. W. Wash. Growth Mgmt. Hearings Bd.</i> , 164 Wn.2d 329 (2008).....	13

STATUTES

Administrative Procedure Act, Chapter 34.05 RCW.....	13
Growth Management Act, Chapter 36.70A RCW.....	passim
RCW 34.05.570(3).....	2, 13, 14
RCW 34.05.570(3)(a).....	passim
RCW 34.05.570(3)(d).....	passim
RCW 34.05.570(3)(e).....	passim
RCW 36.70A.....	passim
RCW 64.34.440.....	19
RCW 82.02.020.....	passim
RCW 82.02.050.....	19
RCW 82.02.090.....	19
RCW 87.20.020.....	25
RCW 89.09.020.....	21
RCW 90.58.020.....	31
RCW 336.70A.060(2).....	13
RCW 336.70A.480(5).....	41
Shoreline Management Act, Chapter 90.58 RCW.....	passim

SJCC 18.10.040(D).....	7
SJCC 18.20.010-18.20.230.....	7
SJCC 18.20.230	42
SJCC 18.30.110	8, 9, 42
SJCC 18.30.110-18.30.160.....	7
SJCC 18.30.150	passim
SJCC 18.30.160	passim
SJCC 18.80.010(A).....	7
SJCC 18.80.020(C)(11)(a-c).....	7
SJCC 18.80.070(C).....	9

REGULATIONS

San Juan County Fish and Wildlife Habitat Conservation Ordinance, WAC 365-190-030(6)	passim
WAC 365-190-030	29
WAC 365-190-030(6)(a)	30, 43
WAC 365-190-040(4)(5)	8
WAC 365-190-040(5)(b)	28
WAC 365-190-080(5).....	30
WAC 365-190-130	8
WAC 365-195-900(2).....	31
WAC 365.190.030(5)	43

I. INTRODUCTION

This case involves the limits on the discretion of local governments, in this Case San Juan County, to adopt critical regulations to protect critical areas required by RCW 36.70A.060(2) under the state's Growth Management Act, Chapter 36.70A RCW (GMA).

San Juan County was exercising authority under the requirements to update its Critical area program and adopted a program which:

1. Imposed buffers on properties without the requirement to demonstrate reasonable necessity under the circumstances.
2. Delegated the responsibility to designate both specific critical areas to be protected to staff contrary to specific legislative mandates.
3. Adopted a definition of critical area based on the fact of habitat without the qualifications required by both legislative and regulatory changes.
4. Adopted a synthesis of best available science which did not support either the designation or protect the measures adopted.

The case calls for the Court to address three significant issues:

first, the ability of a county to ignore the requirements of nexus and proportionality in the application of buffers in response to development related activities, particularly on marine shorelines, in the protection of critical areas. *Second*, the ability of a county to ignore legislative and regulatory changes in the GMA dealing with fish and wildlife habitat

conservation buffers on the states shorelines. And *third*, the ability to address these issues as written as opposed to forcing local residents to wait for resolution on a case by case basis.

II. ASSIGNMENT OF ERROR

These assignments of error apply to the decision of the Growth Board because this Court reviews that decision directly under RCW 34.05.570(3) (although the errors also apply equally to the Superior Court's failure to reverse on the grounds stated).

Assignments 1-4¹: In the first five assignments, the Growth Board erred in denying the CSA/Taggares' appeal concerning the adopted critical area regulations and finding the matters under appeal compliant with GMA under RCW 36.70A.300(1), for the following reasons:

1. The regulations impose restrictive easements in the form of buffers on private property in response to development related activity without any requirement that the conditions be reasonably necessary by reason of the development or activity on the property at the time the buffer is imposed. Such ordinances are unenforceable under doctrines of unconstitutional conditions and violation of RCW 82.02.020 and as such

¹ A fifth issue addressed below went to the procedure for adopting critical area ordinances without proper public participation. On remand after the Growth Board decision under appeal the County adopted a new table of distances rendering the lack of public participation issue moot.

are not protective of critical areas as required by RCW 36.70A.060(2).

This error merits reversal under RCW 34.05.570(3)(a), (d), and (e).

2. The regulation was adopted without the specific shoreline designation by the governmental authority in accordance with adopted definitions required by RCW 36.70A.480(5). This error merits reversal under RCW 34.05.570(3)(d).

3. The regulation failed to limit designation of listed habitats to those warranting protection by the limitations imposed by the definitions found in WAC 365-190-030(6). This error merits reversal under RCW 34.05.570(3)(d) and (e).

4. The regulation imposed mandatory water quality buffers in all cases and tree protection zones where one or more trees were present when a listed habitat was within 200 feet of the habitat to be protected. Those requirements are not supported by the best available science adopted by the county. This error merits reversal under RCW 34.05.570(3)(d) and (e).

Assignment 5: The Superior Court erred in ruling that the validity of the county critical area ordinances under RCW 82.02.020 or unconstitutional conditions cases may not be determined as written under the facts of this case and that a specific project must be considered before such determination may be made as applied.

III. ISSUES PERTAINING TO ASSIGNMENT OF ERROR

1. Whether a local government must include a limitation which imposes considerations of nexus, proportionality, and reasonable necessity based on the impacts of a project under review before a critical area buffer imposing significant limitations may be imposed. Assignment of Error 1.

2. A provision of the GMA provides that a regulated shoreline under the Shoreline Management Act is “not” a critical area “except to the extent that specific areas located within shorelines of the state qualify for critical area designation based on the definition of critical areas provided by RCW 36.70A.030(5) and have been designated as such by a local government pursuant to RCW 36.70A.060(2)” RCW 36.70A.480(5) (emphasis added). The question before the Court is whether, in light of that provision, the Growth Board erred in finding compliance with GMA under circumstances where San Juan County delegated the responsibility for designation of specific shoreline critical areas to the planning department at the time of development. Assignment of Error 2.

3. RCW 36.70A.480(5) limits shoreline critical area to those designated by local government based on adopted definitions. In 2010 the Department of Commerce updated its regulations dealing with the designation and protection of such critical areas, including a new

definition of Fish and Wildlife habitat conservation areas. WAC 365-190-030(6). The County did not include that new definition in identifying criteria for its staff to use in determining whether a habitat listed in the ordinance met the required test for designation as a critical area. The issue before this Court is whether that omission requires reversal of the Growth Board finding of compliance with the requirements of GMA. Assignment of Error 3.

4. GMA requires the critical area ordinances adoption process to include best available science. The County adopted a best available science synthesis which identified a variety of Fish and Wildlife Habitat Conservation habitats for protection listed in the ordinance. The science adopted does not support either the designation process or the universal application of water quality and tree protection buffers in all cases where a listed habitat is found. The question before the Court is whether the Growth Board erred in finding compliance when designation process and protective mechanisms were not supported by best available science. Assignment of Error 4.

5. The County critical area ordinance, as written, requires the application of water quality buffers in all cases and tree protection buffers when any trees are found proximate to a listed critical habitat. No discretion is given in the code to modify the requirements based on

considerations of nexus, proportionality or reasonable necessity. The issue on appeal is whether the Superior Court erred in declining to address the validity of such ordinance as written. Assignment of Error 5.

IV. STATEMENT OF THE CASE

A. The County's Process

Between 2006 and 2012 San Juan County entered into a comprehensive update of its critical area ordinance designed to protect critical areas as required by RCW 36.70A.060(2). The county consulted a series of experts and adopted San Juan County Best Available Science Synthesis (herein referred to as the "Synthesis" program) in May 2011 as the technical basis for its proposed regulatory program. (AR 003467-3997).

In April 2012 the County published drafts of four ordinances dealing with the designation and protections of critical areas, ultimately denominated General, 26-2012, Geologic hazard, 27-2012, Wetlands, 28-2012, and Fish and Wildlife Habitat Conservation Areas, 29-2012. (26-2012: AR 000008-77, 27-2012: AR 000087-94; 28-2012: AR 000106-144; 29-2012: AR 000151-194). After review and public hearings by the planning commission and the county council, the four ordinances referenced were adopted by the county in December 2012 as the updated critical area ordinances for San Juan County.

The General Ordinance provided the regulatory critical area maps, SJCC 18.10.040(D), and definitions for the program, SJCC 18.20.010-18.20.230 (AR 000013-48). It also provided procedures for identifying critical areas at the time of regulated development activity, whether or not a permit is required. SJCC 18.80.010(A) (AR 000057). In particular, it outlined “the process for reviewing projects to identify Critical Area requirements that apply under SJCC 18.30.110 through 18.30.160 (Critical Area regulations).” SJCC 18.80.020(C)(11)(a-c). (AR 000059-60).

The wetland ordinance SJCC 18.30.150 and the Fish and Wildlife Habitat Conservation ordinance SJCC 18.30.160 “FWHCA’s” set out the specific requirements for designation and protection of critical areas in the county. This brief will focus on the mechanics of designation and protection of FWHCA affecting shorelines of the state as that is where the defects are most evident. The principles, discussed however, apply to the wetlands ordinance as well and will be addressed in the final section.

B. The County’s Regulations With a Focus on FWHCAs Affecting Shorelines of the State

To understand the issues in this case it is important for the Court to understand the specific requirements leading to the designation of a property as FWHCA, and then the burdens imposed on such properties by reason of that designation. The FWHCA Ordinance deals with, among

other things, the requirements for the designation and protection of identified critical habitats that are also within the jurisdiction of state's Shoreline Management Act, Chapter 90.58. RCW.

Two elements are initially required under GMA as part of the duty to protect critical areas. First is the classification and designation of the areas which are to be given critical area protection, RCW 36.70A.170, WAC 365-190-040(4)(5), and then the means by which protection is to be achieved, RCW 36.70A.060(2); WAC 365-190-130.

In the matter under review the classification and designation requirements for FWHCA's in San Juan County are set out in SJCC 198.30.160(A), (B) and the first portion of (E) (Aquatic FWHCA list). The protection requirements are spelled out under SJCC 18.30.160 (E) dealing with the means of protection (buffers and tree protection areas for purposes of this appeal), and (F) limitations and prohibitions on uses and activities in buffer and tree protection areas.

1. The Classification and Designation Process

Classification and designation are the first steps in a critical area regulatory process WAC 365-190-040(4)(5), and define the proportions to which the regulations will apply. The applicable provisions here provide:

- A. Applicability. Unless exempted or otherwise allowed under SJCC 18.30.110, the provisions of this section apply to uses and activities in or within 200 feet of

fish and wildlife habitat conservation areas as defined in SJCC Title 18 (the Unified Development Code).

(AR 000164). The regulated habitats are listed in section B: “types of fish and wildlife habitat conservation areas protected by these regulations.” SJCC 18.30.160(B), pp. 9-11, SJCC 18.30.160(B) (AR 000165-167). A more specific list addresses “Aquatic FWHCA’s” which include all marine shorelines and “those that contain or are inundated with water at some time during a normal year,” including areas as different from one another as streams, shellfish areas, kelp and eelgrass beds, and mudflats. SJCC 18.30.160E, pp. 14. *See* copies as Appendix A “Key Ordinance Provisions.” (AR 000170)

To facilitate the designation process the county commissioners adopted critical area maps, indicating where habitat may be found based on a variety of inputs.² (AR 000013) The maps were for reference purposes only. SJCC 18.30.160(C). It was up to the County Community Development and Planning Department (the “Department”) during the permit process to determine whether a property was subject to critical area requirements are set forth in 18.80.070(C)³. (AR 000064)

² The maps are included in Appendix B “Critical Area Maps.”

³ C. Critical Areas. This section outlines the process for reviewing projects to identify Critical Area requirements that apply under SJCC 18.30.110 through 18.30.160 (Critical Area regulations). Unless exempt under SJCC 18.30.110, prior to removal of vegetation or site disturbance, all development activities and vegetation removal requiring a project permit or development permit, review or approval under other sections of County Code, must undergo this review. 18.80.070(C).

Under that section, the Department is to:

review the application, available maps, and information and if requested by the property owner, shall conduct a site inspection prior to determining whether the proposed project may affect or be affected by a wetland, fish and wildlife habitat conservation area, frequently flooded area, or geologically hazardous area. If the area proposed for development or vegetation removal is not in a frequently flooded area; is more than 200 feet from a geologically hazardous area; is more than 205 feet from a wetland, or fish and wildlife habitat conservation area;... the Department shall rule that the Critical Area review is complete with regard to those types of critical areas. Otherwise, the Department will notify the applicant and provide them with a list of any report(s) or application materials required by SJCC 18.30.110-160.

(AR 000064) The Department's determination is based on the mere presence of a listed habitat under SJCC 18.39.160(B) or (E). There is no requirement for the Department to make a qualitative assessment about whether the habitat to be protected meets the second element of the regulatory FWHCA definition, that the listed habitat near the site "if altered, may reduce the likelihood that the species will persist over the long term." WAC 365-190-030(6).

If one or more of the listed habitats is within 200 feet of a proposed development activity or use, the Department places the label "critical area" on the property under review and the protective measures automatically apply. SJCC 18.30.160(A), (E).

2. The Protection Requirements

Once development on a parcel is determined to be within 200 feet of a listed critical area and the designation FWHCA is attached to the property, the protection elements of SJCC 18.30.160(E) are used to determine the mandatory buffers and tree protection zones applicable to that property and development.

1. “Sizing Procedures for Buffers and Tree Protection Zones.”

This subsection provides a site specific procedure for determining the size of vegetative buffers and Tree Protection Zones necessary to protect aquatic FWHCAs. Three separate components are considered: a water quality buffer that applies in all cases, Tree Protection Zones that apply to areas with trees, and a coastal geologic buffer that applies to areas subject to erosion caused by currents, tidal action, or waves.

SJCC 18.30.160(E)(1). The ordinance then takes the Department through a set of steps and tables outlining the buffers to be imposed on the property as a part of the development review process. SJCC 18.30.160(E)(1), pp 14-18. (AR 000170-174).

Significantly, a water quality buffer is applicable “in all cases.” (See SJCC 18.30.160(E)(1) step 3 and tables cited.) There is no provision made for the evaluation of the impact of the project under review or to modify or eliminate buffers based on the degree or lack of impact. The tree protection zone requirements provide that for areas with trees,

including individual trees, the Department must identify tree protection zones and impose a tree protection buffer on any land between a tree and 110 feet from ordinary high water on waters also under the jurisdiction the Shoreline Management Act. SJCC 18.30.160(E)(1) step 4.

Under the code the protective buffer is imposed merely by the presence of a tree within 110 feet of a marine shoreline on a designated critical area tract without regard to whether the tree or the area before it was modified by reason of the project under review or whether the listed habitat benefits from trees to be protected.

C. Procedural History of the Cases Below

After the ordinances were adopted, CSA/Tagares challenged them before the Growth Board. The Growth Board issued a lengthy opinion upholding certain parts of the challenge and rejecting others (it also considered other challenges from other entities). (AR 006243-6351) CSA/Tagares appealed to the San Juan County Superior Court. That Court upheld the Growth Board against the challenges raised by CSA/Tagares in a lengthy memorandum opinion (Clerk's Papers 001045-1073) and this appeal followed.

V. STANDARD OF REVIEW

This case involves an appeal by CSA/Tagares from the legislative decision of San Juan County to adopt three ordinances (General, Wetland,

and FWHCA) in response to the Legislative mandate to designate and protect critical areas and to include best available science in the process. RCW 336.70A.060(2), .170, .172. Once the Growth Board has made a decision the appeal is under the Administrative Procedure Act, Chapter 34.05 RCW.

The Growth Board proceedings are considered adjudicative proceedings under that chapter. *Thurston County v. W. Wash. Growth Mgmt. Hearings Bd.*, 164 Wn.2d 329, 340–41 (2008). “The Board adjudicates compliance with the GMA and must find compliance unless a county’s action is clearly erroneous.” *Olympic Stewardship Found. v. W. Washington Growth Mgmt. Hearings Bd.*, 166 Wn. App. 172, 186-87 (2012). A county’s action is clearly erroneous if the Growth Board has a firm and definite conviction that the county made a mistake. *Thurston County*, 164 Wn.2d at 340–41. This Court on appeal sits in the same position as the trial court, and applies the APA standards directly to the administrative record before the Growth Board. *Olympic Stewardship*, 166 Wn. App. at 186. Thus, like the Growth Board, this Court considers whether the county’s actions were clearly erroneous. *Id.*

The APA grounds for reversal in adjudicative cases are set forth in RCW 34.05.570(3) and those applicable to the present case area listed below:

- (a) The order, or the statute or rule on which the order is based, is in violation of constitutional provisions on its face or as applied;
- (d) The agency has erroneously interpreted or applied the law;
- (e) The order is not supported by evidence that is substantial when viewed in light of the whole record before the court, which includes the agency record for judicial review, supplemented by any additional evidence received by the court under this chapter.

RCW 34.05.570(3). Each of these issues will be addressed in turn below and the evident failure of the Growth Board, and subsequent trial court decision to properly rule under each, requires reversal of the Growth Board decision and remand with instructions to proceed in compliance with this Court's decision.

VI. ARGUMENT

The facts set forth above demonstrate several fatal flaws in the critical area ordinance as drafted by San Juan County and upheld by the Growth Board.

A. The Imposition of Critical Area Buffers to Properties Proximate to Listed Habitats Without Regard to the Impact of the Project Under Review to That Critical Area Is Unlawful and Requires Reversal of the Decision Below

The fatal flaw in the County code is the absence of any requirement to assess the connection between the project under review and the magnitude of the buffer imposed. This argument may be addressed

both as a violation of constitutional rights unlawful under RCW 34.05.570(3)(a) (unconstitutional as written) as an erroneous application of the law to the facts of the case (RCW 34.05.570(3)(d)) and as a violation of the statutory codification of those rights in RCW 82.02.020.

1. The absence of any mechanism for assessing either nexus or rough proportionality in the imposition of buffers under the requirements of the ordinance under review must be reversed in violation of the “unconstitutional” conditions doctrine dealing with land use exactions.

The failure of the protective mechanisms in San Juan County ordinances under review pertaining to FWHCA’s, SJCC 18.30.160(E), to make any allowance for the nature or impact of a project on a critical area to be protected violates the “unconstitutional conditions” requirements dealing with regulatory exactions identified by the US Supreme Court and the Courts of the State of Washington. The essential criteria for a valid regulatory conditions on property due to development are referred to generally as “nexus” and “proportionality,” defined through two well-known cases.

Under *Nollan v. California Coastal Commission*, 483 U.S. 825, 840-42 (1987) there is a requirement for a nexus or a direct link between the project under review and problem to be solved by the proposed mitigation. 483 U.S. at 837. Absent that connection the condition is

unlawful and must be rejected. Under *Dolan v. City of Tigard*, 512 U.S. 374, 388, (1994), the Court added the requirement that the mitigation required be roughly proportional to the problem caused by the project under review stating:

The second part of our analysis requires us to determine whether the degree of the exactions demanded by the city's permit conditions bears the required relationship to the projected impact of petitioner's proposed development... [A] use restriction may constitute a "taking" if not reasonably necessary to the effectuation of a substantial government purpose. "

Id. (citations omitted). Further, the Court made it very clear that the burden of proving reasonable necessity is on the government imposing the condition:

No precise mathematical calculation is required, but the city must make some effort to quantify its findings support of the dedication...."

Id.

In the case before the Court, once the Department has identified the presence of one of the listed FWHCA habitats within 200 feet of the project under review the property on which the project is located is subject to FWHCA requirements and all discretion vanishes:

The water quality buffer applies in all cases, and the tree protection requirements apply to areas with trees.

See SJCC 18.30.160(E) steps 2-4. (AR 000173)

There is no provision for the Department to modify or eliminate the required buffer based on the nature impact (or lack thereof) of the project undertaken, the needs of the critical area to be protected, or the benefit the required buffer may provide to the habitat giving rise to the condition. The water quality buffer is to be imposed regardless of whether or not (1) the proposed development increases, decreases, or makes no change to the water quantity discharged to the shoreline, or (2) the buffer is “reasonably necessary” to achieve “no net loss” of habitat function and value as provided by RCW 36.70A.480(4). *See* SJCC 18.30.160(E)(1) step 3.⁴

If the proposed development on a property is within 200 feet from of an area containing listed habitat, any tree on that property within 110 feet of the shoreline is subject to the tree protection requirements, regardless of whether or not (1) the tree on surrounding area is modified (2) the development increases, decreases, or has no effect on the functionality of the tree for environmental purposes, or (3) the tree in that location is considered a benefit to the habitat to be protected. *See* SJCC 18.30.160(E)(1) step 4.

⁴ Step 3. Determine the size of the water quality buffer for 60 % pollutant removal using the procedures in SJCC 18.30.150 (Wetlands) and Table 3.6. The water quality buffer extends landward horizontally from the ... the OHWM of lakes, ponds, and marine shorelines. [Table 3.6 was modified on remand, but the mandatory nature of the required buffers there is still present. *See* new table at Appendix A-3.]

Once a listed habitat is identified within 200 feet, the ordinance as written eschews any notion of project related nexus and proportionality as a condition of implementation of water quality, buffer and tree protection zone. There is no burden on the local government, nor any discretion authorized for the Department, to make some rational link demonstrating nexus proportionality or reasonable necessity under the specific circumstances between the project and the condition to be imposed. The imposition of water quality and tree protection buffers on a developing property do pose significant limitations on the use and further development of the affected properties. *See* SJCC 18.30.160(E)(2), pp. 18-22 (AR 000174-178). The imposition of such limitation on the use and further development of the property under review is a violation of the prohibition against unconstitutional conditions. Approval of such ordinance below is a violation of the constitutional rights of affected property owners and must be reversed. RCW 34.05.570 (3)(a).

1. The Water Quality Buffers and Tree Protection Requirements as Applied to Aquatic FWHCA Imposed Without Regard to Project-Related Impacts Are Unlawful as a Prohibited Tax or Fee Under RCW 82.02.020

CSA/Taggares also raised the issue of failure to comply with the minimum standards of RCW 82.02.020 in connection with the protection standards noted above. That section provided in pertinent part:

no county, town, or other municipal subdivision shall have the right to impose taxes of that nature. Except as provided in RCW 64.34.440 and 82.02.050 through 82.02.090, no county, city, town, or other municipal corporation shall impose any tax, fee, or charge, either direct or indirect, on the construction or reconstruction of residential buildings, commercial buildings, industrial buildings, or on any other building or building space or appurtenance thereto, or on the development, subdivision, classification, or reclassification of land. However, this section does not preclude dedications of land or easements within the proposed development or plat which the county, city, town, or other municipal corporation can demonstrate are reasonably necessary as a direct result of the proposed development or plat to which the dedication of land or easement is to apply.

RCW 82.02.020.⁵

This resolution of the issues in this case also fall under the auspices of the statutory prohibition against taxes fees in land development cases, RCW 82.02.020, and resolution of this case should first be viewed under the requirements of that statute. Both the Supreme Court and this Court have held that where cases may be resolved on statutory rather than constitutional grounds, statutory grounds are to be preferred.

Benchmark v. Battleground, 146 Wn.2d 685, 691 (2002); *Citizens'*

Alliance for Prop. Rights v. Sims, 145 Wn. App. 649, 658 (2008).

⁵ The Growth Board declined to rule on this question for want of jurisdiction to resolve matters under RCW 82.02.020 and the court below. While acknowledging that the matter had been properly preserved, declined to rule on this issue, citing *Olympic Stewardship* and concluding that the matter was not ripe. Superior Court Order at 6-7.

This Court has ruled that the requirements of RCW 82.02.020 are not to be lightly regarded and failure to comply is fatal to any ordinance under review:

RCW 82.02.020 mandates that a government imposing requirements such as the clearing limits here demonstrate that the restriction is “reasonably necessary as a direct result of the proposed development or plat.” Our Supreme Court has repeatedly held that this statute requires “that development conditions must be tied to a specific, identified impact of a development on a community.” **The plain language of the statute does not permit conditions that are reasonably necessary for all development, or any potential development. Rather, the statute specifically requires that a condition be “reasonably necessary as a direct result of the proposed development.”**

Sims, 145 Wn. App. at 665, 187 P.3d 786, 794 (2008) (footnote omitted).

The key part of the statute, and the provision controlling in the present case, deals with the burden (precondition) on local governments to justify development conditions based on project impact before a development condition such as the buffer may be imposed:

There are exceptions to this general prohibition. RCW 82.02.020 “does not preclude **dedications of land or easements** within the proposed development or plat **which the county, city, town, or other municipal corporation can demonstrate are reasonably necessary as a direct result of the proposed development or plat to which the dedication of land or easement is to apply.**”

RCW 89.09.020 (emphasis added). The statutory requirements, with their constitutional underpinnings, are not to be lightly undertaken as this Court has noted:

RCW 82.02.020 requires strict compliance with its terms. A tax, fee, or charge, either direct or indirect, imposed on development is invalid unless it falls within one of the exceptions specified in the statute.

Sims, 145 Wn. App. at 656-57.

The water quality, habitat protection, and tree protection zones imposed by the ordinances under review do not require the Department to demonstrate the mandatory buffer for all properties within specified distances of a listed critical area is “reasonably necessary as a direct result of the proposed development or plat to which the dedication of land or easement is to apply,” and for that reason alone must be rejected as a violation of RCW 82.02.020 as part of the regulatory conditioning process.

By imposing the buffer requirement by ordinance based on proximity alone, the county removes any discretion to base the requirement for a buffer and the size of the buffer on local circumstances and a record demonstrating the “reasonable necessity” required for a valid program. *Sims*, 145 Wn. App. at 670. The inflexibility of the ordinances on this point is the fatal flaw in the whole county program since the county

makes no provision for assessment of need or reasonable necessity as required by RCW 82.02.020.

By failing to meet the minimum requirements for a valid regulatory exaction under the statutory criteria of RCW 82.02.020, this Court must rule that the ordinances adopted by the county are in violation of statutory requirements and the Growth Board and Superior Court decisions denying the CSA/Taggares appeal and upholding such ordinances must be reversed as the clearly erroneous application of the law to the facts of this case. RCW 34.05.570(3)(d).

2. The Superior Court Erred in Concluding the Constitutional Challenge Was Not Ripe for Adjudication Until a Specific Project Could Be Reviewed “as applied”

The court below held that the constitutional challenge was not ripe for adjudication. (Superior Court Decision at 3-6.) In its view, a specific decision about a specific parcel of land is required before a court can conclude that the ordinances fail under the unconstitutional conditions doctrine. (*Id.*) That decision is in error. CSA/Taggares submits that the footnote dicta cited by the court below is not persuasive and should not be followed. *Id.* at 6. Instead, the better view to be found in *Sims*, 145 Wn. App. at 660 which provides full authority for this Court to reverse the decision of the Growth Board on the grounds that the regulations under

review do not meet the required tests and that the regulations may be evaluated in this case as written and must be reversed.

Ripeness turns on whether “the issues raised are primarily legal, and do not require further factual development, and if the challenged action is final.” *Jafar v. Webb*, 177 Wn.2d 520, 525 (2013). The “more a question is purely legal and the less that any additional facts would aid in the court’s inquiry, the more likely the issue is to be ripe.” *State v. Bahl*, 164 Wn.2d 739, 748 (2008). For those reasons, court after court has held that facial constitutional challenges to land use regulations are ripe at the moment of enactment. *See Congregational Rabbinical College of Tartikov, Inc. v. Village of Pomona*, 915 F. Supp. 2d 574, 595 (S.D.N.Y. 2013) (collecting cases).

In addition, courts must “consider the hardship to the parties of withholding court consideration.” *Jafar*, 177 Wn.2d at 525. A government regulation or decision presents a hardship for ripeness purposes when its impacts are felt by the regulated even before enforcement. *See First United Methodist Church of Seattle v. Hearing Examiner*, 129 Wn.2d 238, 245 (1996) (allowing pre-designation challenge to a Landmarks Preservation Ordinance because “nomination alone carries with it severe restrictions”); *see also Bahl*, 164 Wn.2d at 748-49 (allowing immediate challenge to post-conviction sentencing conditions because

“the fact that a party may be forced to alter his behavior so as to avoid penalties under a potentially illegal regulation is, in itself, a hardship”) (citation omitted).

The case before the Court is ripe for review. CSA/Taggares are making an “unconstitutional conditions” challenge to an ordinance which admits of no discretion, which fails to require any “nexus” and “rough proportionality” connection between a government’s demand on a landowner and the effects of proposed land use. Such an ordinance as written is unenforceable. *Dolan*, 512 U.S. at 391. And a corresponding violation of the state’s statutory corollary while those requirements are constitutionally-based, they have also been adopted by the Legislature in RCW 82.02.020. *Sims*, 145 Wn. App. at 665.

Ripeness in this case arrives, as it did in *Sims*, based on the automatic imposition of significant buffer conditions without regard to impact (nexus) or need (rough proportionality).

That legislative adoption of the unconstitutional conditions doctrine shows why the court below was incorrect in attempting to distinguish *Sims*, 145 Wn. App. 649, and concluding that the issue is not ripe. The *Sims* plaintiffs facially challenged the regulations there—which precluded clearing a percentage of every rural parcel, regardless of impact—under both RCW 82.02.020 and Substantive Due Process. *Id.* at

654. The County raised ripeness as an affirmative defense, but this Court considered the merits of the dispute nevertheless. It held that the trial court erred by failing to consider whether the regulations—as written, not as applied—met the rough proportionality requirement. *Sims*, 145 Wn. App. at 665.

That is precisely CSA’s argument here. Under the FWHCA Ordinances, we are focusing on mandatory buffers based on proximity and development activity not impact. The only discretion allowed by the ordinance involves proximity—if the Department determines the project or activity is more than a set distance away from the critical area (200 ft.) the buffers are not required. But absent such a finding the buffers are mandatory. Because the regulations do not provide for relief from mandatory buffers based on unconstitutional conditions limitations or RCW 87.20.020 limitations they are ripe for review.

The hardship is real as the County maps show “possible” habitat areas surrounding and adjacent to all of the islands. (AR 006358-6360; *see also* maps attached at Appendix B). Unless this Court reverses the Court and Growth Board below concerning the enforceability of the ordinances under review, the risk of designation and the mandatory buffers hang like the sword of Damocles with the threat of the mandatory unlawful conditions of most if not all shorelines in San Juan County. That

hardship will exist even if a landowner never applies for a permit because identification of habitat means that buffers will be imposed upon any requested activity—a chilling prospect indeed. It counsels toward reaching the constitutional issues now.

The court below nonetheless concluded the constitutional and statutory challenge were not ripe, relying largely on *Presbytery of Seattle v. King County*, 114 Wn.2d 320, 330-33 (1990). *Presbytery* established the general three-part test for considering Substantive Due Process challenges to land use regulations: “(1) whether the regulation is aimed at achieving a legitimate public purpose; (2) whether it uses means that are reasonably necessary to achieve that purpose; and (3) whether it is unduly oppressive on the landowner.” *Id.* at 331. “The third inquiry will usually be the difficult and determinative one,” *Id.*, and will occasionally require the facts that can only come from an as-applied challenged. But not always. When—as in *Sims* and here—a regulation on its face does not provide for and discretion or considerations of nexus and proportionality but mandates a buffer without regard to nexus or proportionality, the second and third inquiry point conclusively toward unconstitutionality and the need for timely review. There is thus no need to delay decision until an application is filed. The constitutional challenge is ripe.

B. The County FWHCA Ordinance as Applied to Shorelines of the State (Aquatic FWHCA's) as Drafted Is in Violation of the Mandates in RCW 37.70A.480(4), (5) and WAC 365-190-030(6)

A wholly statutory grounds for evaluating the validity of the FWHCA ordinance arises under RCW 36.70A.480(5), the statutory provision of the GMA integrating the GMA, Chapter 36.70A RCW, and the states Shoreline Management Act Chapter 90.58. RCW.

The 2003 amendments to RCW 37.70A.480 were adopted in response to a decision of the *Central Washington Growth Management Hearings Board in Everett Citizens Coalition v. City of Everett* (CWGMHB 02-3-0096) in which that Board declared all shorelines of statewide significance as critical areas for purposes of GMA.

The decision was issued in January 2003 and by June 2003 the Legislature had acted to correct the erroneous conclusion by adding RCW 36.70A.480 (5) (ESB 1933) specifically requiring a series of actions before a shoreline of statewide significance may be designated and protected as a critical area by local governments.

Shorelines of the state shall not be considered critical areas under this chapter except to the extent that specific areas located within shorelines of the state qualify for critical area designation based on the definition of critical areas provided by RCW 36.70A.030(5) and have been designated as such by a local government pursuant to RCW 36.70A.060(2).

RCW 36.70A.480(5).

No longer could counties merely point to scientific journals discussing the importance of near-shore habitat to protected species and demand unrelated protection. The new statute required qualitative consideration of the habitat based on both definition and specific area designation.

In San Juan County, the critical area ordinance did not specifically designate any of the marine or other shorelines regulated under the Shoreline Management Act as critical areas. Rather, it left designation to county administrative staff without any reference to the definition and without any justification for why a specific area qualifies under that definition. A Growth Board case arising shortly after the 2003 amendment ruled specifically that leaving the designation to the time of development violated RCW 36.70A.480(5) and could no longer be accepted. *Tahoma Audubon Society v. Pierce County*, CPSGMHB No. 05-3-0004c, Order Finding Compliance, pp. 49-50 (1/12/06).

The Growth Board justified this outcome by referring to a 1991 regulation in effect through 2009. WAC 365-190-040(5)(b), pointing to the ability to use criteria for designation purposes when the critical area was “difficult to identify,” thus allowing the final determination to be made at the time of development. The purpose of legislative interpretation is to give meaning to a legislative change when change is made and to

give meaning to all of the words used. The County did not specifically designate any shoreline areas as FWHCAs nor did they make any reference to the definition the statute required to be considered. On this basis the County failed to follow the new legislative mandate and the Growth Board approval must be reversed.

C. The San Juan County Fish and Wildlife Habitat Conservation Ordinance Fails to Comply with the Requirements Definition of FWHCA Provided in WAC 365-190-030(6)

The 2003 amendments to RCW 36.70A.480(5) specifically required that an area regulated by the Shoreline Management Act not be considered a critical area unless it “qualif[ies] for critical area designation based on the **definition** of critical areas provided by RCW 36.70A.030(5).” RCW 36.70A.480(5) (emphasis added).

In 2003 there was no specific definition of an FWHCA in the pertinent regulations. WAC 365-190-030 (definitions). Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands and Critical Areas. *See* definitions at WAC 365-190-030 (2009 ed.). (*See* text Appendix C).

The minimum guidelines were first adopted in 1991 regulations, which continued in effect until the 2010 amendments. Until 2010 the closest the regulations came to a definition was as follows:

Fish and Wildlife habitat conservation areas: fish and wildlife habitat conservation areas means land management for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created.

WAC 365-190-080(5). (1991-2009).

In 2010, however, the Department of Commerce published an updated set of regulations for GMA, including an update of the Minimum Guidelines dealing with critical areas. The new guidelines created a specific definition for FWHCAs as:

areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, **and** which, if altered, may reduce the *likelihood* that the species will persist over the long term. These areas **may include**, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness.

WAC 365-190-030(6)(a) (emphasis added).

The new definition makes particularly good sense on the state's shorelines, which can be a particularly sensitive habitat as a general matter as found by the Growth Board in the *Everett Shoreline Coalition* case. Yet the Shoreline Management Act calls for a multitude of uses on the shorelines—from the very protected natural areas to the heavily utilized urban areas (which may include terminals and a host of water dependent, water oriented and water enjoyment uses). If all shorelines were

designated critical areas with mandatory buffers, the state would be unable to achieve its legislative policy for shorelines:

to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses.

RCW 90.58.020.

In *Tahoma v. Pierce County*, *supra*, the Growth Board made it clear that “blanket designation of shorelines and critical habitat was prohibited by reason of RCW 36.70A.480 (5). *Id.* at 49.

The San Juan County critical area ordinance did not even pay lip service to the regulatory definition. As such, the Growth Board rejection of the appeal and upholding the ordinance is not supported by substantial evidence and is a clearly erroneous application of the law to the facts of the case and must be reversed. RCW 34.05.570(3)(d), (e).

D. The Best Available Science Adopted by the County Does Not Support the Universal Application of Buffers to All Properly Designated Shorelines as Required by San Juan County

A final test of validity for any regulatory ordinance of the type before the Court is whether the regulatory burden place on properties under growth management critical area regulations is supported by best available science included by the county in its regulatory development.

WAC 365-195-900(2).

The best available science requirement was addressed by this Court in *Honesty in Env'tl. Analysis & Legislation (HEAL) v. Cent. Puget Sound Growth Mgmt. Hearings Bd.*, 96 Wn. App. 522 (1999), in which the issue was the regulation of steep slopes in King County. This Court reemphasized the regulatory limits of nexus and proportionality in developing a valid ordinance and then went to provide an illustration:

For example, if the City proposed a policy prohibiting development on slopes steeper than a 40 percent grade or requiring expensive engineering conditions for any permitted project, only the best available science could provide its policy-makers with facts supporting those policies and regulations which, when applied to an application, will assure that the nexus and rough proportionality tests are met. If the City failed to use the best available science here in making its policy decision and adopting regulations, the permit decisions it bases on those regulations may not pass constitutional muster under *Nollan* and *Dolan*. The science the legislative body relies on must in fact be the best available to support its policy decisions. Under the cases and statutes cited above, it cannot ignore the best available science in favor of the science it prefers simply because the latter supports the decision it wants to make. If it does so, that decision will violate either the nexus or rough proportionality rules or both.

Id. at 534.

A more recent case in this Court addressing the same issue was *Sims*, where the Court was faced with a King County ordinance imposing a 35-50% open space requirement in rural areas to protect fish life. While

the County's voluminous record spoke to the sensitivity of fish and the need to protect fish bearing waters from the effects of stormwater, the scientific record failed to demonstrate that all rural properties had to have the mandatory open space within a given range regardless of location or impact. *Sims*, 145 Wn. App. at 665.

The *Sims* Court noted that RCW 82.02.020 did apply to open space and buffer requirements under GMA and that the penultimate question was "whether the County bore its burden to show that these clearing requirements fall within any exception stated in RCW 82.02.020." *Id.* The court "conclude[d] that the County has failed to do so." *Id.*

In evaluating that charge this Court found the substantial evidence about the need for clean water and the problems of excessive clearing were well established—but that was not sufficient for the County to prevail:

Here, the trial court correctly determined that the record establishes the required nexus. As the trial court stated, the County has submitted a wealth of unchallenged evidence that shows a nexus between excessive clearing and the proposed solution limiting clearing.

Nevertheless, RCW 82.02.020 requires both a nexus and rough proportionality for a dedication to fall within the exception. Because both are not present in this case, the ordinance violates the state statute.

Id. at 669-70. The lesson from *Sims* is that while habitat may be important to the protection of a species, habitat cannot be blanket-determined to be critical without also showing best available science included in the record to demonstrate that such blanket-determination and the accompanying buffers and open space are required in all cases. Where the science fails to make such a link, the regulations are not supported by evidence which is substantial in the record, providing grounds for reversal under RCW 82.02.020 and the underlying unconstitutional conditions limitations on government actions. *Heal and Sims, supra.*

A third case addressing the adequacy of the best available science record to support an open space or buffer requirement is *Olympic Stewardship*, 166 Wn. App. 172. In that case, the Growth Board was faced with a regulation which purported to prohibit all vegetation removal on properties abutting a stream with “channel migration” tendencies. The county, recognizing that channel migration zones (“CMZs”) could pose a hazard, prohibited all clearing within the channel migration zone areas, or possibly on the entirety of the parcel. This effort was rejected by the Growth Board as not supported by the best available science, as stated by the Court of Appeals:

The Board partly agreed with the Foundation on issue six, noting that although the Department of Ecology’s study (publication 03–06–027) and

Perkins Geosciences's "Lower Hoh River Channel Migration Study" addressed the importance of vegetation in the river environment, the "best available science" did not support former JCC 18.22.170(4)'s blanket restriction on vegetation removal throughout the entirety of the designated CMZs. In the Board's view, the County should have limited vegetation removal only to the high-risk portions of CMZs.

Id. at 181-82.

On remand, the County corrected the defect by limiting the buffer requirements to the high risk portion of the CMZ. On appeal of those conditions the regulations were upheld because the conclusion that the vegetation protection conditions were "reasonably necessary" within the entirety of the high hazard area was supported by science.

In the San Juan County Synthesis, the science in support of the County program is much like the boilerplate fish science in the *Sims* case. The Synthesis establishes that marine habitats are important, but utterly fails to demonstrate which buffers were necessary to mitigate which impacts on which critical areas under which circumstances, or include any measure associating the buffer required with the impact (or lack thereof) of the specific project.

As in *Sims* and the initial county ordinance in *Olympic Stewardship*, the San Juan County science supported the importance of the marine habitat on and near the shorelines. But the Synthesis made no

demonstration that the required buffers were “reasonably necessary” in all cases and under all facts based on the mere fact of development (regardless of impact) and physical proximity up to 200 feet.

The relevant chapter of the Synthesis applied to marine shorelines is more than 100 pages in length and describes a variety of species to be protected and their various habitat needs.⁶ (See excerpts AT Appendix D, pp. 6-43.) That section includes a host of comments on habitats, threats, and potential protection. That was certainly sufficient to satisfy the nexus test for habitat in general. But it does not contain any description or criteria to segregate habitat in general from that which requires designation and protection under the two part test of WAC 365-190-030(6) discussed above.

Further, nothing in the synthesis provides the County or the administrative department with any objective basis for distinguishing which habitat areas would qualify as protected habitat under both elements of the regulatory definition requirement for FWHCA found in WAC 365-190-030(6).

The Synthesis notes that riparian vegetation is important to protection of marine habitat and that “[t]he degree of impact to the aquatic

⁶ Sections on habitat needs for shellfish (pp.7-13) and vegetation and buffers (pp. 61-69) are attached for reference purposes. Chapter 3 Marine Fish and Wildlife Habitat Conservation Areas: Review of the Scientific Literature. See Appendix D.

environment depends upon the magnitude of the vegetation removal or alteration (such as size and number of trees affected and total area cleared of vegetation).” Synthesis at Ch. 3 p. 60. (AR 003704) So the Synthesis adopted by the County does reflect the importance the degree of change to habitat and result of development makes on the potential need to protect that habitat . Yet the resulting county regulations do not take any of these limitations into account in determining the need for a specific buffer. Mere proximity gives rise to the requirement for a buffer, derived from a table regardless of impact, habitat conditions, location, condition or need. In short, the Synthesis adopted by the County, provides no justification whatsoever for imposing buffers based on a cookbook formula rather than an assessment of site conditions.

Another glaring gap in the science is the lack of evidence that the buffer imposed on an upland property (measured upland from ordinary high water), would be useful or beneficial at all to any of the listed habitats found up to 200 feet away from the development under review, particularly where that gap happens to be over open water. The description of buffers and the role that buffers can play assume the importance of buffers independent of project impact. For example, a discussion between the role of setbacks and buffers is spelled out in detail:

Due to the importance of riparian vegetation in freshwater and marine systems, the establishment of buffers is commonly regarded as having a key role in protecting aquatic habitat. In general, the term buffers refers to terrestrial areas surrounding a wetland, stream, water body or other area of high ecological, geological, or hydrological importance, and whose purpose is to reduce or prevent impacts to the functions of the protected resource, such as may occur from adjacent land uses. In comparison, setbacks are regulatory tools used to protect land from encroachment by structures, but do not generally specify how the setback area must be managed. Like setbacks, buffers are measured a specified distance between a development and the resource being protected. Unlike setbacks, buffers usually are considered off-limits to some activities and land uses which themselves may impact the functions of the resource being protected. Buffers are often (but not necessarily) configured to completely encircle a wetland, lake or other resource, whereas setbacks are confined to just a direct path between the development and the resource being protected.

(Synthesis Ch. 3 p. 64.) The Synthesis discusses the dearth of literature on buffers and marine waters but notes that good scientific opinion has concluded that:

Although information on the application and effectiveness of marine buffers is more limited than for freshwater systems, many of the same physical processes occur, particularly with regard to transport of pollutants, organic material, and food and nutrients from the land to the water (Lemieux et al. 2004). Because riparian buffers in both stream and marine environments can have implications for water quality in the marine ecosystem, some

references to fresh water buffers are included in this section.

(Synthesis Ch. 3, p. 64.) The Court will find a detailed discussion of the functions of freshwater buffers in riparian areas and how those functions might serve to ameliorate the impacts of development. (Synthesis Ch. 3, p. 64 *et seq.*)

What the Court and property owners will not find is any statement that a buffer on upland property is reasonably necessary in all cases to protect habitat found in marine waters up to 200 feet from shore regardless of conditions.

In sum, the science provides some discussion of the habitat and benefits of that habitat found in the vicinity of the San Juan Islands but provides no basis for concluding which of the listed habitats are critical under the two part definition of WAC 365-190-030(6) and no basis for concluding why every protected habitat identified gets the same buffer, or the efficiency of such buffers when the habitat is from up to 200 feet away from the shoreline.

This Court in *HEAL* warned local governments that failure to support their open space buffer requirements with sound science would result in the rejection of those conditions for failure to meet the threshold tests for validity:

If the City failed to use the best available science here in making its policy decision and adopting regulations, the permit decisions it bases on those regulations may not pass constitutional muster under Nollan and Dolan. The science the legislative body relies on must in fact be the best available to support its policy decisions.

HEAL, 96 Wn. App. at 534. Here, there is no science to support the imposition of buffers on all shoreline properties with some link to listed habitat within 200 feet of the development under review—often across open waters and regardless of the nature of the development.

Quite simply, the county buffer program is without support in the Best Available Science record. As a result, the Growth Board approval of the FWHCA buffers—particularly for shorelines regulated under RCW 36.70A.480(5)—is not supported by substantial evidence in the record, is an erroneous application to the law under the facts of this case under RCW 82.02.020, and permits a public acquisition of a buffer on private property without adequate justification and in violation of the property owners constitutional rights. As such, the Growth Board approval of that regulation must be reversed and the matter returned to the Growth Board and county for action consistent with the Court's decision. RCW 34.05.570(3)(a), (d), and (e).

E. Other Issues

Because of the scope and complexity of the ordinances involved, CSA/Taggares focused on the FWHCA regulations as applied to Marine Waters to illustrate to defects in the county Critical area ordinances under review. The same problems found there apply to numerous other elements of the code which are briefly addressed here and which also require reversal:

1. The blanket designation for shoreline lakes in violation of RCW 36.70A.480(5)....
- B. Types of Fish and Wildlife Habitat Conservation Areas (FWHCAs).

Following are the types of fish and wildlife habitat conservation areas protected by these regulation....

6. The following waters of the State: lakes and streams; SJCC 18.30.160(B)(6), pp. 9-10, AR 000165-166.

To the extent the lake is covered by the jurisdiction of the Shoreline Management Act (20 acres) the designation of all lake shorelines are critical areas, without more. is a patent violation of RCW 336.70A.480(5) and the definition found at WAC 365-190-030(6) and must be reversed. RCW 34.05.570(d), (e).

2. The blanket application of buffers to wetlands “up to 200 feet from the development under review” without regard to any concern for nexus or proportionality or reasonable necessity is a violation of RCW 82.02.020 and the unconstitutional conditions limitations and

must be reversed RCW 34.05.570(3)(a), (d), (e). The buffers applicable to wetlands, water quality habitat and tree protection suffer from the same defects as the buffers imposed on FWHCAs....

- A. Applicability. Unless exempted or allowed under SJCC 18.30.110, the provisions of this section apply to areas in or within 205 feet of wetlands as defined in SJCC 18.20.230.

SJCC 18.30.150 (Wetlands), p. 11. AR 000116.

- 1. Site-Specific Buffer Sizing Procedure. The following is a site-specific procedure for determining the size of vegetative buffers and Tree Protection Zones necessary to protect the water quality, water quantity, and habitat functions of wetlands. Two separate buffer components, a water quality component, and habitat component, are considered in the procedure, and for some types of wetlands there is also a Tree Protection Zone. When determining the required buffer and Tree Protection Zone for a wetland, the stricter (i.e., wider) applies except where otherwise noted.

SJCC 18.30.150(E)(1), p. 19. AR 000124

The only exception to the wetland buffer requirements is that the developed area not drain to the wetland. Once drainage to the wetland is established the scheduled buffers established through the program set out in SJCC 18.30.150(E)(1), pp. 19-25, are mandatory without regard to nexus proportionality, or benefit to the identified wetland. While the ordinance permits much fiddling around the edges, a buffer will always be imposed without regard to impact or proportionality based on the specific project under review. This defect requires reversal under RCW 82.02.020

and the unconstitutional conditions provisions discussed above.⁷ Reversal here is also required. RCW 34.05.570(3)(d), (e).

VII. SUMMARY AND CONCLUSIONS

This case looks at errors below concerning both designation and protection of critical areas required under the state's Growth Management Act, and the need to include best available science in the process. RCW 36.70A.060(20).170 and .172.

The designation error below was in failing to specifically designate which Marine and other shorelines qualified as FWHCAs as required by RCW 36.70A.480(5) under the definition specified at WAC 365.190.030(5). The adoption of generic Habitat Maps, combined with a synthesis of Best Available Science which was only a listing of generic habitat benefits, did not satisfy the minimum requirements for designation of shoreline critical areas. Delegating the designation responsibility to the Department based solely on the presence of a listed habitat, without any consideration of the limiting criteria in WAC 365-190-030(6)(a), merely compounds the problem. The decision of the Growth Board approving the County regulations under challenge here is not supported by substantial

⁷ As with the FWHCA buffer, the precise size of the buffer was changed from the tables in SJCC to a different table based on low medium and high density development. *See* SJCC 18.30.150(E) table 3.3 in the current code). Appendix A-3.

evidence in the record and is a clearly erroneous application of the law to the facts of this case and must be reversed RCW 34.05.570(3)(d), (e).

The protection error below is the failure to take into consideration any of the elements of nexus, proportionality, or reasonable necessity in the application of a buffer to a property with mere proximity to a critical area (200 ft.) for both wetlands and FWHCA. Such a blanket imposition of buffers imposing a material restriction on the uses and activities allowed in the buffers without regard to nexus and proportionality is a violation of the statutory limitations in RCW 82.02.020 and the constitutional limitation reviewed under the “unconstitutional conditions” provisions discussed above. For this reason the decision of the Growth Board in approving the County protection requirements for wetlands and FWHCA buffers is violative of constitutional protections, is an erroneous application of the law to the facts of this case and is utterly without support in the record of this case, and must be reversed. RCW 34.05.570(3)(a), (d), & (e).

There is no discretion to be exercised which could save the ordinances by allowing staff to temper the buffer requirements based on field conditions. Nor is there any requirement or provision in the ordinance for the County to justify the burdens imposed based on the considerations of the impact of the project on the critical area to be

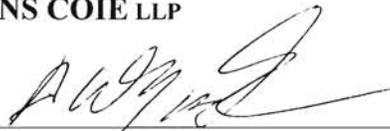
protected or the need for the required buffers under the facts of a specific case. The case is ripe for review and reversal.

VIII. REQUESTED RELIEF

Reverse the decision of the Growth Board approving the Designation of Marine and other shorelines as critical areas under the provisions of SJCC 18.30.160(A), (B) and (E) and their protective measures applied to those shorelines under SJCC 18.30.150(E) buffers and (F) limitation on activities in buffers and 18.30.160(E) buffers and (F) limitation of activities on buffers, and remand the matter back to the Board with instruction to issue a new decision consistent with the requirements of the Court's decision.

DATED: November 5, 2014

PERKINS COIE LLP

By: 

Alexander W. Mackie, WSBA No. 6404

AMackie@perkinscoie.com

Paul Graves, WSBA No. 39410

PGraves@perkinscoie.com

1201 Third Avenue, Suite 4900

Seattle, WA 98101-3099

Telephone: 206.359.8000

Facsimile: 206.359.9000

Attorneys for Appellant

COMMON SENSE ALLIANCE, and P.J.

TAGGARES COMPANY

Appendices

Appendix A - Key Ordinance Provisions

1. 18.30.160(B) Habitat List
2. 18.30.160(E) Aquatic FWHCA list
3. Revised Buffer Tables (as amended 2013)
 - SJCC 18.30.150(E) Table 3.3
 - SJCC 18.30.160(E) Table 3.6

Appendix B - Critical Area Maps (3)

Appendix C - Superseded Regulations

- WAC 365-190-030, Definitions
- WAC 365-190-040, Process
- WAC 365-190-080, Critical Areas

Appendix D - Best Available Science Synthesis Chapter 3 Excerpts

- Habitat- Shellfish, pp.7-13
- Vegetation and Buffers, pp. 61-69

Appendix A - Key Ordinance Provisions

1. 18.30.160(B) Habitat List
2. 18.30.160(E) Aquatic FWHCA list
3. Revised Buffer Tables (as amended 2013)
SJCC 18.30.150(E) Table 3.3
SJCC 18.30.160(E) Table 3.6

subsection, an agricultural activity that does not expand the area being used for the agricultural activity is not a redevelopment or modification. For purposes of this paragraph "agricultural activity" has the same meaning as defined in RCW 90.58.065.

In addition to County regulations, in some cases activities in fish and wildlife habitat conservation areas may be regulated by State and Federal agencies including the WA Department of Ecology, WA Department of Fish and Wildlife, WA Department of Natural Resources, and the U.S. Army Corps of Engineers. Compliance with County regulations does not relieve the property owner of the responsibility to comply with state and federal requirements.

A. Classification.

1. **Upland Category I.** Priority habitat areas as listed below:
 - a. ~~Areas having a primary association with bald eagles, which are protected under the Washington State Bald Eagle Protection Rules (WAC 232-12-292), as well as the federal Bald Eagle Protection Act and Endangered Species Act.~~
2. **Upland Category II.** Priority habitat areas as listed below, except those included in Upland Category I.
 - a. ~~Habitat areas associated with rare plants and priority species as identified by the Washington Department of Natural Resources, Natural Heritage Program.~~
3. **Upland Category III.** Important habitat areas which are not based on use by a specific species. These areas are protected by their conservation ownership or management status and are not subject to the protection standards within this section:
 - a. ~~Areas listed as national wildlife refuges, national parks, national estuary reserves, natural area preserves, or any preserve or reserve designated under WAC 332-30-151;~~
 - b. ~~State natural area preserves, or natural resource conservation areas identified by state law and managed by the Department of Natural Resources; and~~
 - c. ~~Areas with recognized wildlife habitat value owned by The Trust For Public Lands, The Nature Conservancy, The San Juan Preservation Trust, the Bureau of Land Management, or the San Juan County land bank.~~
4. **Freshwater Habitat Areas.** These areas include the following:
 - a. ~~Streams and riparian areas classified as Type 2 through 5 Waters of the State and any associated riparian areas within 50 feet of a Type 2 stream or 25 feet of a Type 3, 4, or 5 stream. (Stream types are as identified by the Department of Natural Resources, cf. Chapter 222-30 WAC); and~~
 - b. ~~Lakes and ponds 20 acres or larger, which are also subject to Chapter 18.50 SJC. (Wetlands and ponds smaller than 20 acres are regulated in SJC 18.30.110(D) and 18.30.150(E)(6).~~
5. **Marine Habitat Areas.** These areas include the following:
 - a. ~~All kelp and eelgrass beds;~~
 - b. ~~Priority shellfish areas as follows:~~
 - i. ~~All public and private tidelands or bedlands which are approved or conditionally approved by the Washington Department of Health for shellfish harvest;~~
 - ii. ~~Any shellfish protection districts created under Chapter 90.72 RCW; and~~
 - iii. ~~Areas with all of the following attributes: broad intertidal areas, bays with geographically restricted wave action and circulation, poor or limited flushing, warmer water temperatures, seasonally reduced salinities, and increased potential for algae bloom; and~~
 - c. ~~All identified smelt spawning areas.~~

B. Types of Fish and Wildlife Habitat Conservation Areas (FWHCAs).

Following are the types of fish and wildlife habitat conservation areas protected by these regulations. Fish and wildlife habitat conservation areas do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company.

1. Areas with which endangered, threatened and sensitive species have a primary association:

a. Animal species listed under the State or Federal Endangered Species Acts as of the adoption date of this ordinance are identified below.

Birds¹

Brown pelican
Common loon
Marbled murrelet
Peregrine falcon

Marine Mammals

Southern resident orca
Steller sea lion
Humpback whale
Gray whale
Sea otter

Insects

Taylor's Checker-spot butterfly

Fish

Salmon
Chinook - Puget Sound ESU²
Chum - Hood Canal Summer Run ESU²

Steelhead - Puget Sound DPS³

Rockfish

Bocaccio - Georgia Basin DPS³
Canary - Georgia Basin DPS³
Yelloweye - Georgia Basin DPS³

¹The bald eagle has been delisted but continues to be protected under other statutes.

²Evolutionary Significance Unit.

³Distinct Population Segment.

b. Plants listed under the State or Federal Endangered Species Acts as of the adoption date of this ordinance are identified below.

- Adder's-tongue (Ophioglossum pusillum)
- Arctic Aster (Eurybia merita)
- Blunt-leaved Pondweed (Potamogeton obtusifolius)
- California Buttercup (Ranunculus californicus)
- Coast Microseris (Microseris bigelovii)
- Erect Pygmy-weed (Crassula connata)
- Few-flowered Sedge (Carex pauciflora)
- Golden Paintbrush (Castilleja levisecta)

- Lesser Bladderwort (Utricularia minor)
- Nuttall's Quillwort (Isoetes nuttallii)
- Slender Crazy Weed (Oxytropis campestris var. gracilis)
- Rosy Owl-clover (Orthocarpus bracteosus)
- Rush Aster (Symphyotrichum boreale)
- Sharpfruted Peppergrass (Lepidium oxycarpum)
- Twayblade (Liparis loeselii)
- Water Lobelia (Lobelia dortmanna)
- White Meconella (Meconella oregana)
- White-top Aster (Sericocarpus rigidus)

2. Shellfish areas;

3. Kelp and eelgrass beds;

4. Herring, smelt, sand lance and other forage fish spawning areas;

5. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;

6. The following waters of the State: lakes and streams;

7. State natural area preserves, natural resource conservation areas and state wildlife areas;

8. Habitats of Local Importance;

- a. Critical salt water habitats. These habitats include all kelp beds; eelgrass beds; spawning and holding

areas for forage fish, such as herring, smelt and sandlance; subsistence, commercial and recreational shellfish beds; mudflats; intertidal habitats with vascular plants; and areas with which priority species have a primary association.

- b. West Side Prairie.
- c. Herbaceous Balds and Bluffs.
- d. Garry oak (*Quercus garryana*) woodlands and savannas.
- e. Pocket beaches.
- f. Bluff backed beaches.

9. Areas with which the following species of local importance have a primary association.

- a. Black oystercatcher.
- b. Golden eagle.
- c. Great blue heron.
- d. Island marble butterfly.
- e. Pigeon guillemot.
- f. Townsend's big eared bat.
- g. Flying squirrel.
- h. Sharp-tailed snake.
- i. Western toad.
- j. Taylor's checkerspot butterfly.
- k. Great arctic butterfly.
- l. Valley silverspot butterfly.
- m. Sand verbena moth.
- n. Areas with roosting concentrations of bats (all species).
- o. Active nests of any of the following birds: golden eagle, northern harrier, merlin, black oystercatcher, 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, western screech owl, lazuli bunting, and American kestrel.
- p. Brittle prickly pear cactus (*Opuntia fragilis*).
- q. Alaska alkaligrass (*Puccinellia nutkaensis*)

B. — Protection Standards.

~~1. General Habitat Protection Standards. The following performance standards shall be met for development permits or approvals located inside of or within 300 feet of a habitat classified in this section, except for Upland Category III:~~

- ~~a. The proposal must mitigate to the maximum extent feasible any significant adverse impacts to habitat functions and values and to habitat buffers. Mitigation actions by an applicant or property owner shall occur in the following preferred sequence, unless the applicant demonstrates that an overriding public benefit would warrant an exception:~~
 - ~~i. Avoiding the impact by not taking a certain action or parts of actions on that portion of the site which contains the habitat area or its buffer;~~
 - ~~ii. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;~~
 - ~~iii. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;~~
 - ~~iv. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or~~
 - ~~v. Compensating for the impact by replacing or providing substitute resources or environments. This may require preparation of a habitat management plan in accordance with subsection (D) of this section.~~
- ~~b. Where impacts cannot be avoided, the applicant must seek to implement other appropriate mitigation actions in compliance with the intent, standards, and criteria of this section. In an individual case, these actions may include consideration of alternative site plans and layouts and reductions in the density or scope of the proposal.~~

- A. A complete and accurate legal description and the total acreage of the parcel;
 - B. Title, scale and north arrow;
 - C. Date, including revision dates if applicable; and
 - D. Certificates, by a professional biologist as appropriate.
- vi. Existing structures and landscape features, including the name and location of all water courses, ponds, and other bodies of water.
- b. A report which contains:
- i. A description of the nature, density, and intensity of the proposed development in sufficient detail to allow analysis of the impact of such land use change on the habitat;
 - ii. An analysis of the effect of the proposed development, activity, or land use change on the classified habitat;
 - iii. A plan for the mitigation of any adverse impacts to wildlife habitats classified in this section posed by the project; and
 - iv. An evaluation by the Washington Department of Fish and Wildlife, the Washington Department of Natural Resources, Natural Heritage Program, or a qualified wildlife expert regarding the effectiveness of any proposed mitigating measures or programs, including recommendations as appropriate.
3. Possible mitigation measures may include the following:
- a. Establishment of buffer zones;
 - b. Preservation of critically important vegetation;
 - c. Limitation of access to the habitat area;
 - d. Seasonal restriction of construction activities; and
 - e. Establishment of a timetable for periodic review of the plan and performance or maintenance bonding in accordance with Appendix C*.
4. This plan will be prepared by a wildlife biologist, habitat management consultant, marine biologist, or botanist, with a combination of relevant education and experience sufficient to perform the tasks described above.

E. Protection Standards for Aquatic Fish and Wildlife Habitat Conservation Areas (FWHCAs). This subsection establishes protection standards for aquatic FWHCAs including a site specific procedure for sizing buffers and Tree Protection Zones.

Aquatic FWHCAs are those that contain or are inundated with water at some time during a normal year as follows:

- o Streams.
 - o Lakes.
 - o Naturally occurring ponds that provide fish and wildlife habitat.
 - o Shellfish areas.
 - o Kelp and eelgrass beds.
 - o Spawning and holding areas for forage fish.
 - o Mudflats.
 - o Intertidal habitats with vascular plants.
 - o Pocket beaches.
 - o Bluff backed beaches including associated feeder bluffs.
 - o Areas with which the following have a primary association: brown pelican; common loon; marbled murrelet; peregrine falcon; southern resident orca; Steller sea lion; humpback whale; gray whale; sea otter; designated stocks of steelhead and chinook and chum salmon; bocaccio rockfish; canary rockfish; yelloweye rockfish; black oystercatcher; great blue heron; and pigeon guillemot.
1. **Sizing Procedures for Buffers and Tree Protection Zones.** This subsection provides a site specific procedure for determining the size of vegetative buffers and Tree Protection Zones necessary to protect

Table 3.3 Water Quality Buffers³

Water Quality Buffers			
Wetland Rating	Land Use Intensity¹		
	Low	Medium	High
Category I Bogs and Natural Heritage Wetlands²	125 feet	190 feet	250 feet
Categories I and II	50 feet	75 feet	100 feet
Category III	40 feet	60 feet	80 feet
Category IV	25 feet	40 feet	50 feet

¹ See Table 3.3A for a list of land uses that are considered low, medium, or high land use intensity.

² If the bog is located within another wetland category, the bog buffer only applies to the area immediately adjacent to the bog, and not to the surrounding wetland. Buffers are measured horizontally from the edge of the wetland.

³ Buffers shall be increased by 50 percent on slopes greater than 30 percent.

SJCC 18.30.150(E) as amended

Table 3.6 Aquatic FWHCA Water Quality Buffers²

Land Use Intensity¹		
Low	Medium	High
50 feet	75 feet	100 feet

¹ See Table 3.3A for a list of land uses that are considered low, medium or high land use intensity.

² Buffers shall be increased by 50 percent on slopes greater than 30 percent.

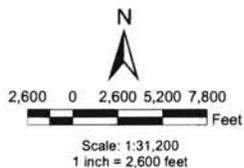
FWHCA SJCC 18.30.160(E) as amended

Appendix B - Critical Area Maps (3)

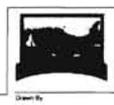


Legend

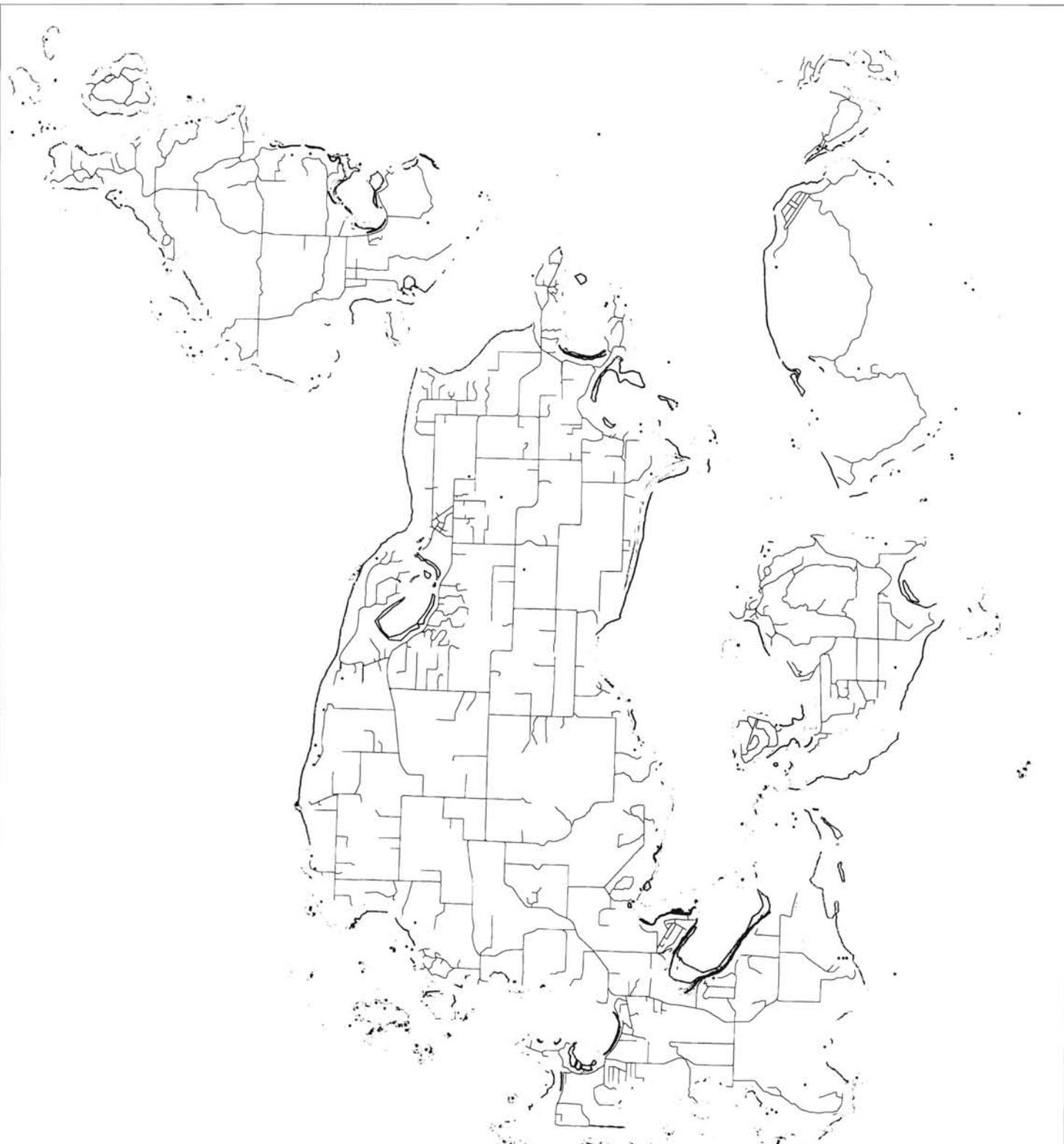
- Priority Species
- Smelt Spawning
- Sand Lance Spawning
- Eelgrass (outer line)
- ▨ Herring Holding/Spawning
- Salmon Habitat
- Kelp Beds
- Shellfish



This map is a graphic representation derived from San Juan County's Geographic Information System. It is designed and intended for reference only, and is not guaranteed to carry accuracy. Information represented on this map is subject to change without notice.



Shoreline Fish and Wildlife Habitat Conservation Areas
 District 1
 San Juan County, Washington



Legend

- Priority Species
- Smelt Spawning
- Sand Lance Spawning
- Eelgrass (outer line)
- ▨ Herring Holding/Spawning
- ▤ Kelp Beds
- ▥ Salmon Habitat
- ▧ Shellfish



2,000 0 2,000 4,000 6,000
 Feet
 Scale: 1:24,000
 1 inch = 2,000 feet

This map is a graphic representation derived from San Juan County's Geographic Information System. It is designed and intended for reference only, and is not guaranteed to survey accuracy. Information represented on this map is subject to change without notice.



Shoreline Fish and Wildlife Habitat Conservation Areas

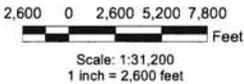
District 2
 San Juan County, Washington



Legend

- Priority Species
- Eelgrass (outer line)
- ▨ Herring Holding/Spawning
- ▤ Kelp Beds
- ▥ Salmon Habitat
- ▧ Sheffish
- ▩ Sand Lance Spawning
- Smelt Spawning

This map is a graphic representation derived from San Juan County's Geographic Information System. It is designed and intended for reference only, and is not guaranteed for survey accuracy. Information represented on this map is subject to change without notice.



Shoreline Fish and Wildlife Habitat Conservation Areas

District 3
San Juan County, Washington

Drawn By
atg

Date
3/05

Sheet
3002

Appendix C - Superseded Regulations

WAC 365-190-030, Definitions

WAC 365-190-040, Process

WAC 365-190-080, Critical Areas

cities statewide in classifying agricultural lands, forest lands, mineral resource lands, and critical areas. These guidelines shall be considered by counties and cities in designating these lands.

Growth management, natural resource land conservation, and critical areas protection share problems related to governmental costs and efficiency. Sprawl and the unwise development of natural resource lands or areas susceptible to natural hazards may lead to inefficient use of limited public resources, jeopardize environmental resource functions and values, subject persons and property to unsafe conditions, and affect the perceived quality of life. It is more costly to remedy the loss of natural resource lands or critical areas than to conserve and protect them from loss or degradation. The inherent economic, social, and cultural values of natural resource lands and critical areas should be considered in the development of strategies designed to conserve and protect lands.

In recognition of these common concerns, classification and designation of natural resource lands and critical areas is intended to assure the long-term conservation of natural resource lands and to preclude land uses and developments which are incompatible with critical areas. There are qualitative differences between and among natural resource lands and critical areas. Not all areas and ecosystems are critical for the same reasons. Some are critical because of the hazard they present to public health and safety, some because of the values they represent to the public welfare. In some cases, the risk posed to the public by use or development of a critical area can be mitigated or reduced by engineering or design; in other cases that risk cannot be effectively reduced except by avoidance of the critical area. Hence, classification and designation of critical areas is intended to lead counties and cities to recognize the differences among these areas, and to develop appropriate regulatory and nonregulatory actions in response.

Counties and cities required or opting to plan under the Growth Management Act of 1990 should consider the definitions and guidelines in this chapter when preparing development regulations which preclude uses and development incompatible with critical areas (see RCW 36.70A.060). Precluding incompatible uses and development does not mean a prohibition of all uses or development. Rather, it means governing changes in land uses, new activities, or development that could adversely affect critical areas. Thus for each critical area, counties and cities planning under the act should define classification schemes and prepare development regulations that govern changes in land uses and new activities by prohibiting clearly inappropriate actions and restricting, allowing, or conditioning other activities as appropriate.

It is the intent of these guidelines that critical areas designations overlay other land uses including designated natural resource lands. That is, if two or more land use designations apply to a given parcel or a portion of a parcel, both or all designations shall be made. Regarding natural resource lands, counties and cities should allow existing and ongoing resource management operations, that have long-term commercial significance, to continue. Counties and cities should encourage utilization of best management practices where existing and ongoing resource management operations that have long-term commercial significance include designated

critical areas. Future operations or expansion of existing operations should be done in consideration of protecting critical areas.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-020, filed 3/15/91, effective 4/15/91.]

PART TWO GENERAL REQUIREMENTS

WAC 365-190-030 Definitions. (1) Agricultural land is land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock, and that has long-term commercial significance for agricultural production.

(2) Areas with a critical recharging effect on aquifers used for potable water are areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water.

(3) City means any city or town, including a code city.

(4) Critical areas include the following areas and ecosystems:

(a) Wetlands;

(b) Areas with a critical recharging effect on aquifers used for potable water;

(c) Fish and wildlife habitat conservation areas;

(d) Frequently flooded areas; and

(e) Geologically hazardous areas.

(5) Erosion hazard areas are those areas containing soils which, according to the United States Department of Agriculture Soil Conservation Service Soil Classification System, may experience severe to very severe erosion.

(6) Forest land is land primarily useful for growing trees, including Christmas trees subject to the excise tax imposed under RCW 84.33.100 through 84.33.140, for commercial purposes, and that has long-term commercial significance for growing trees commercially.

(7) Frequently flooded areas are lands in the flood plain subject to a one percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and the like.

(8) Geologically hazardous areas are areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to siting commercial, residential, or industrial development consistent with public health or safety concerns.

(9) Habitats of local importance include, a seasonal range or habitat element with which a given species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration, such as cliffs, talus, and wetlands.

(10) Landslide hazard areas are areas potentially subject to risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

(11) Long-term commercial significance includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of land.

(12) Minerals include gravel, sand, and valuable metallic substances.

(13) Mine hazard areas are those areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts.

(14) Mineral resource lands means lands primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals.

(15) Natural resource lands means agricultural, forest and mineral resource lands which have long-term commercial significance.

(16) Public facilities include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

(17) Public services include fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.

(18) Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, or soil liquefaction.

(19) Species of local importance are those species that are of local concern due to their population status or their sensitivity to habitat manipulation or that are game species.

(20) Urban growth refers to growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.

(21) Volcanic hazard areas shall include areas subject to pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from volcanic activity.

(22) Wetland or wetlands means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do 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, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands, if permitted by the county or city.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-030, filed 3/15/91, effective 4/15/91.]

(2009 Ed.)

PART THREE GUIDELINES

WAC 365-190-040 Process. The classification and designation of natural resource lands and critical areas is an important step among several in the overall growth management process. Together these steps comprise a vision of the future, and that vision gives direction to the steps in the form of specific goals and objectives. Under the Growth Management Act, the timing of the first steps coincides with development of the larger vision through the comprehensive planning process. People are asked to take the first steps, designation and classification of natural resource lands and critical areas, before the goals, objectives, and implementing policies of the comprehensive plan are finalized. Jurisdictions planning under the Growth Management Act must also adopt interim regulations for the conservation of natural resource lands and protection of critical areas. In this way, the classification and designation help give shape to the content of the plan, and at the same time natural resource lands are conserved and critical areas are protected from incompatible development while the plan is in process.

Under the Growth Management Act, preliminary classifications and designations will be completed in 1991. Those planning under the act must also enact interim regulations to protect and conserve these lands by September 1, 1991. By July 1, 1992, counties and cities not planning under the act must bring their regulations into conformance with their comprehensive plans. By July 1, 1993, counties and cities planning under the act must adopt comprehensive plans, consistent with the goals of the act. Implementation of the plans will occur by the following year.

(1) Classification is the first step in implementing RCW 36.70A.050. It means defining categories to which natural resource lands and critical areas will be assigned.

Pursuant to RCW 36.70A.170, natural resource lands and critical areas will be designated based on the defined classifications. Designation establishes, for planning purposes: The classification scheme; the general distribution, location, and extent of the uses of land, where appropriate, for agriculture, forestry, and mineral extraction; and the general distribution, location, and extent of critical areas. Inventories and maps can indicate designations of natural resource lands. In the circumstances where critical areas (e.g., aquifer recharge areas, wetlands, significant wildlife habitat, etc.) cannot be readily identified, these areas should be designated by performance standards or definitions, so they can be specifically identified during the processing of a permit or development authorization. Designation means, at least, formal adoption of a policy statement, and may include further legislative action. Designating inventoried lands for comprehensive planning and policy definition may be less precise than subsequent regulation of specific parcels for conservation and protection.

Classifying, inventorying, and designating lands or areas does not imply a change in a landowner's right to use his or her land under current law. Land uses are regulated on a parcel basis and innovative land use management techniques should be applied when counties and cities adopt regulations to conserve and protect designated natural resource lands and critical areas. The department of community development

[Title 365 WAC—p. 35]

(11) Long-term commercial significance includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of land.

(12) Minerals include gravel, sand, and valuable metallic substances.

(13) Mine hazard areas are those areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts.

(14) Mineral resource lands means lands primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals.

(15) Natural resource lands means agricultural, forest and mineral resource lands which have long-term commercial significance.

(16) Public facilities include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

(17) Public services include fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.

(18) Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, or soil liquefaction.

(19) Species of local importance are those species that are of local concern due to their population status or their sensitivity to habitat manipulation or that are game species.

(20) Urban growth refers to growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.

(21) Volcanic hazard areas shall include areas subject to pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from volcanic activity.

(22) Wetland or wetlands means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do 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, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands, if permitted by the county or city.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-030, filed 3/15/91, effective 4/15/91.]

(2009 Ed.)

PART THREE GUIDELINES

WAC 365-190-040 Process. The classification and designation of natural resource lands and critical areas is an important step among several in the overall growth management process. Together these steps comprise a vision of the future, and that vision gives direction to the steps in the form of specific goals and objectives. Under the Growth Management Act, the timing of the first steps coincides with development of the larger vision through the comprehensive planning process. People are asked to take the first steps, designation and classification of natural resource lands and critical areas, before the goals, objectives, and implementing policies of the comprehensive plan are finalized. Jurisdictions planning under the Growth Management Act must also adopt interim regulations for the conservation of natural resource lands and protection of critical areas. In this way, the classification and designation help give shape to the content of the plan, and at the same time natural resource lands are conserved and critical areas are protected from incompatible development while the plan is in process.

Under the Growth Management Act, preliminary classifications and designations will be completed in 1991. Those planning under the act must also enact interim regulations to protect and conserve these lands by September 1, 1991. By July 1, 1992, counties and cities not planning under the act must bring their regulations into conformance with their comprehensive plans. By July 1, 1993, counties and cities planning under the act must adopt comprehensive plans, consistent with the goals of the act. Implementation of the plans will occur by the following year.

(1) Classification is the first step in implementing RCW 36.70A.050. It means defining categories to which natural resource lands and critical areas will be assigned.

Pursuant to RCW 36.70A.170, natural resource lands and critical areas will be designated based on the defined classifications. Designation establishes, for planning purposes: The classification scheme; the general distribution, location, and extent of the uses of land, where appropriate, for agriculture, forestry, and mineral extraction; and the general distribution, location, and extent of critical areas. Inventories and maps can indicate designations of natural resource lands. In the circumstances where critical areas (e.g., aquifer recharge areas, wetlands, significant wildlife habitat, etc.) cannot be readily identified, these areas should be designated by performance standards or definitions, so they can be specifically identified during the processing of a permit or development authorization. Designation means, at least, formal adoption of a policy statement, and may include further legislative action. Designating inventoried lands for comprehensive planning and policy definition may be less precise than subsequent regulation of specific parcels for conservation and protection.

Classifying, inventorying, and designating lands or areas does not imply a change in a landowner's right to use his or her land under current law. Land uses are regulated on a parcel basis and innovative land use management techniques should be applied when counties and cities adopt regulations to conserve and protect designated natural resource lands and critical areas. The department of community development

[Title 365 WAC—p. 35]

will provide technical assistance to counties and cities on a wide array of regulatory options and alternative land use management techniques.

These guidelines may result in critical area designations that overlay other critical area or natural resource land classifications. That is, if two or more critical area designations apply to a given parcel, or portion of a given parcel, both or all designations apply. For counties and cities required or opting to plan under chapter 36.70A RCW, reconciling these multiple designations will be the subject of local development regulations adopted pursuant to RCW 36.70A.060.

(2) Counties and cities shall involve the public in classifying and designating natural resource lands and critical areas.

(a) Public participation:

(i) Public participation should include at a minimum: Landowners; representatives of agriculture, forestry, mining, business, environmental, and community groups; tribal governments; representatives of adjacent counties and cities; and state agencies. The public participation program should include early and timely public notice of pending designations and regulations.

(ii) Counties and cities should consider using: Technical and citizen advisory committees with broad representation, press releases, news conferences, neighborhood meetings, paid advertising (e.g., newspaper, radio, T.V., transit), newsletters, and other means beyond the required normal legal advertising and public notices. Plain, understandable language should be used. The department of community development will provide technical assistance in preparing public participation plans, including: A pamphlet series, workshops, and a list of agencies available to provide help.

(b) Adoption process. Statutory and local processes already in place governing land use decisions are the minimum processes required for designation and regulation pursuant to RCW 36.70A.060 and 36.70A.170. At least these steps should be included in the process:

(i) Accept the requirements of chapter 36.70A RCW, especially definitions of agricultural lands, forest lands, minerals, long-term commercial significance, critical areas, geologically hazardous areas, and wetlands as mandatory minimums.

(ii) Consider minimum guidelines developed by department of community development under RCW 36.70A.050.

(iii) Consider other definitions used by state and federal regulatory agencies.

(iv) Consider definitions used by the county and city and other counties and cities.

(v) Determine recommended definitions and check conformance with minimum definitions of chapter 36.70A RCW.

(vi) Adopt definitions, classifications, and standards.

(vii) Apply definitions to the land by mapping designated natural resource lands.

(viii) Establish designation amendment procedures.

(c) Intergovernmental coordination. The Growth Management Act requires coordination among communities and jurisdictions to reconcile conflicts and strive for consistent definitions, standards, and designations within regions. The minimum coordination process required under these guidelines may take one of two forms:

(i) Adjacent cities (or those with overlapping or adjacent planning areas); counties and the cities within them; and adjacent counties would provide each other and all adjacent special purpose districts and special purpose districts within them notice of their intent to classify and designate natural resource lands and critical areas within their jurisdiction. Counties or cities receiving notice may provide comments and input to the notifying jurisdiction. The notifying jurisdiction specifies a comment period prior to adoption. Within forty-five days of the jurisdiction's date of adoption of classifications or designations, affected jurisdictions are supplied a copy of the proposal. The department of community development may provide mediation services to counties and cities to help resolve disputed classifications or designations.

(ii) Adjacent jurisdictions; all the cities within a county; or all the cities and several counties may choose to cooperatively classify and designate natural resource lands and critical areas within their jurisdictions. Counties and cities by interlocal agreement would identify the definitions, classification, designation, and process that will be used to classify and designate lands within their areas. State and federal agencies or tribes may participate in the interlocal agreement or be provided a method of commenting on designations and classifications prior to adoption by jurisdictions.

Counties and/or cities may begin with the notification option ((c)(i) of this subsection) and choose to change to the interlocal agreement method ((c)(ii) of this subsection) prior to completion of the classification and designations within their jurisdictions. Approaches to intergovernmental coordination may vary between natural resource land and critical area designation. It is intended that state and federal agencies with land ownership or management responsibilities, special purpose districts, and Indian tribes with interests within the jurisdictions adopting classification and designation be consulted and their input considered in the development and adoption of designations and classifications. The department of community development may provide mediation services to help resolve disputes between counties and cities that are using either the notification or interlocal agreement method of coordinating between jurisdictions.

(d) Mapping. Mapping should be done to identify designated natural resource lands and to identify known critical areas. Counties and cities should clearly articulate that the maps are for information or illustrative purposes only unless the map is an integral component of a regulatory scheme.

Although there is no specific requirement for inventorying or mapping either natural resource lands or critical areas, chapter 36.70A RCW requires that counties and cities planning under chapter 36.70A RCW adopt development regulations for uses adjacent to natural resource lands. Logically, the only way to regulate adjacent lands is to know where the protected lands are. Therefore, mapping natural resource lands is a practical way to make regulation effective.

For critical areas, performance standards are preferred, as any attempt to map wetlands, for example, will be too inexact for regulatory purposes. Standards will be applied upon land use application. Even so, mapping critical areas for information but not regulatory purposes, is advisable.

(e) Reporting. Chapter 36.70A RCW requires that counties and cities annually report their progress to department of community development. Department of community devel-

opment will maintain a central file including examples of successful public involvement programs, interjurisdictional coordination, definitions, maps, and other materials. This file will serve as an information source for counties and cities and a planning library for state agencies and citizens.

(f) Evaluation. When counties and cities adopt a comprehensive plan, chapter 36.70A RCW requires that they evaluate their designations and development regulations to assure they are consistent with and implement the comprehensive plan. When considering changes to the designations or development regulations, counties and cities should seek interjurisdictional coordination and public participation.

(g) Designation amendment process. Land use planning is a dynamic process. Procedures for designation should provide a rational and predictable basis for accommodating change.

Land use designations must provide landowners and public service providers with the information necessary to make decisions. This includes: Determining when and where growth will occur, what services are and will be available, how they might be financed, and what type and level of land use is reasonable and/or appropriate. Resource managers need to know where and when conversions of rural land might occur in response to growth pressures and how those changes will affect resource management.

Designation changes should be based on consistency with one or more of the following criteria:

(i) Change in circumstances pertaining to the comprehensive plan or public policy.

(ii) A change in circumstances beyond the control of the landowner pertaining to the subject property.

(iii) An error in designation.

(iv) New information on natural resource land or critical area status.

(h) Use of innovative land use management techniques. Resource uses have preferred and primary status in designated natural resource lands of long-term commercial significance. Counties and cities must determine if and to what extent other uses will be allowed. If other uses are allowed, counties and cities should consider using innovative land management techniques which minimize land use incompatibilities and most effectively maintain current and future natural resource lands.

Techniques to conserve and protect agricultural, forest lands, and mineral resource lands of long-term commercial significance include the purchase or transfer of development rights, fee simple purchase of the land, less than fee simple purchase, purchase with leaseback, buffering, land trades, conservation easements or other innovations which maintain current uses and assure the conservation of these natural resource lands.

Development in and adjacent to agricultural and forest lands of long-term commercial significance shall assure the continued management of these lands for their long-term commercial uses. Counties and cities should consider the adoption of right-to-farm provisions. Covenants or easements that recognize that farming and forest activities will occur should be imposed on new development in or adjacent to agricultural or forest lands. Where buffering is used it should be on land within the development unless an alternative is mutually agreed on by adjacent landowners.

Counties and cities planning under the act should define a strategy for conserving natural resource lands and for protecting critical areas, and this strategy should integrate the use of innovative regulatory and nonregulatory techniques.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-040, filed 3/15/91, effective 4/15/91.]

WAC 365-190-050 Agricultural lands. (1) In classifying agricultural lands of long-term significance for the production of food or other agricultural products, counties and cities shall use the land-capability classification system of the United States Department of Agriculture Soil Conservation Service as defined in Agriculture Handbook No. 210. These eight classes are incorporated by the United States Department of Agriculture into map units described in published soil surveys. These categories incorporate consideration of the growing capacity, productivity and soil composition of the land. Counties and cities shall also consider the combined effects of proximity to population areas and the possibility of more intense uses of the land as indicated by:

(a) The availability of public facilities;

(b) Tax status;

(c) The availability of public services;

(d) Relationship or proximity to urban growth areas;

(e) Predominant parcel size;

(f) Land use settlement patterns and their compatibility with agricultural practices;

(g) Intensity of nearby land uses;

(h) History of land development permits issued nearby;

(i) Land values under alternative uses; and

(j) Proximity of markets.

(2) In defining categories of agricultural lands of long-term commercial significance for agricultural production, counties and cities should consider using the classification of prime and unique farmland soils as mapped by the Soil Conservation Service. If a county or city chooses to not use these categories, the rationale for that decision must be included in its next annual report to department of community development.

(3) Counties and cities may further classify additional agricultural lands of local importance. Classifying additional agricultural lands of local importance should include consultation with the board of the local conservation district and the local agriculture stabilization and conservation service committee.

These additional lands may also include bogs used to grow cranberries. Where these lands are also designated critical areas, counties and cities planning under the act must weigh the compatibility of adjacent land uses and development with the continuing need to protect the functions and values of critical areas and ecosystems.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-050, filed 3/15/91, effective 4/15/91.]

WAC 365-190-060 Forest land resources. In classifying forest land, counties and cities should use the private forest land grades of the department of revenue (WAC 458-40-530). This system incorporates consideration of growing capacity, productivity and soil composition of the land. Forest land of long-term commercial significance will generally have a predominance of the higher private forest land grades.

(i) Counties and cities should classify seasonal ranges and habitat elements with which federal and state listed endangered, threatened and sensitive species have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.

(ii) Counties and cities should determine which habitats and species are of local importance. Habitats and species may be further classified in terms of their relative importance.

Counties and cities may use information prepared by the Washington department of wildlife to classify and designate locally important habitats and species. Priority habitats and priority species are being identified by the department of wildlife for all lands in Washington state. While these priorities are those of the department, they and the data on which they are based may be considered by counties and cities.

(iii) Shellfish areas. All public and private tidelands or bedlands suitable for shellfish harvest shall be classified as critical areas. Counties and cities should consider both commercial and recreational shellfish areas. Counties and cities should at least consider the Washington department of health classification of commercial and recreational shellfish growing areas to determine the existing condition of these areas. Further consideration should be given to the vulnerability of these areas to contamination. Shellfish protection districts established pursuant to chapter 90.72 RCW shall be included in the classification of critical shellfish areas.

(iv) Kelp and eelgrass beds; herring and smelt spawning areas. Counties and cities shall classify kelp and eelgrass beds, identified by department of natural resources aquatic lands division and the department of ecology. Though not an inclusive inventory, locations of kelp and eelgrass beds are compiled in the *Puget Sound Environmental Atlas, Volumes 1 and 2*. Herring and smelt spawning times and locations are outlined in WAC 220-110-240 through 220-110-260 and the *Puget Sound Environmental Atlas*.

(v) Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat.

Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm-ponds, temporary construction ponds (of less than three years duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.

(vi) Waters of the state. Waters of the state are defined in Title 222 WAC, the forest practices rules and regulations. Counties and cities should use the classification system established in WAC 222-16-030 to classify waters of the state.

Counties and cities may consider the following factors when classifying waters of the state as fish and wildlife habitats:

(A) Species present which are endangered, threatened or sensitive, and other species of concern;

(B) Species present which are sensitive to habitat manipulation;

(C) Historic presence of species of local concern;

(D) Existing surrounding land uses that are incompatible with salmonid habitat;

(E) Presence and size of riparian ecosystems;

(F) Existing water rights; and

(G) The intermittent nature of some of the higher classes of waters of the state.

(vii) Lakes, ponds, streams, and rivers planted with game fish.

This includes game fish planted in these water bodies under the auspices of a federal, state, local, or tribal program or which supports priority fish species as identified by the department of wildlife.

(viii) State natural area preserves and natural resource conservation areas. Natural area preserves and natural resource conservation areas are defined, established, and managed by department of natural resources.

[Statutory Authority: RCW 36.70A.050, 91-07-041, § 365-190-080, filed 3/15/91, effective 4/15/91.]

Chapter 365-195 WAC

GROWTH MANAGEMENT ACT—PROCEDURAL CRITERIA FOR ADOPTING COMPREHENSIVE PLANS AND DEVELOPMENT REGULATIONS

WAC

PART ONE GENERAL CONSIDERATIONS

365-195-010	Background.
365-195-020	Purpose.
365-195-030	Applicability.
365-195-040	General method.
365-195-050	Presumption of validity.
365-195-060	Regional and local variations.
365-195-070	Interpretations.

PART TWO DEFINITIONS

365-195-200	Statutory definitions.
365-195-210	Definitions of terms as used in this chapter.
365-195-220	Additional definitions to be adopted locally.

PART THREE FEATURES OF THE COMPREHENSIVE PLAN

365-195-300	Mandatory elements.
365-195-305	Land use element.
365-195-310	Housing element.
365-195-315	Capital facilities element.
365-195-320	Utilities element.
365-195-325	Transportation element.
365-195-330	Rural element.
365-195-335	Urban growth areas.
365-195-340	Siting essential public facilities.
365-195-345	Optional elements.

PART FOUR INVENTORIES AND REVIEWS

365-195-400	Natural resource lands.
365-195-410	Critical areas.
365-195-420	Identification of open space corridors.
365-195-430	Identification of lands useful for public purposes.

PART FIVE CONSISTENCY

365-195-500	Internal consistency.
365-195-510	Concurrency.
365-195-520	Interjurisdictional consistency.
365-195-530	Coordination with other plans.
365-195-540	Analysis of cumulative effects.

PART SIX ADOPTION PROCEDURES

365-195-600	Public participation.
-------------	-----------------------

However, the presence of lower private forest land grades within the areas of predominantly higher grades need not preclude designation as forest land.

Each county and city shall determine which land grade constitutes forest land of long-term commercial significance, based on local and regional physical, biological, economic, and land use considerations.

Counties and cities shall also consider the effects of proximity to population areas and the possibility of more intense uses of the land as indicated by:

(1) The availability of public services and facilities conducive to the conversion of forest land.

(2) The proximity of forest land to urban and suburban areas and rural settlements: Forest lands of long-term commercial significance are located outside the urban and suburban areas and rural settlements.

(3) The size of the parcels: Forest lands consist of predominantly large parcels.

(4) The compatibility and intensity of adjacent and nearby land use and settlement patterns with forest lands of long-term commercial significance.

(5) Property tax classification: Property is assessed as open space or forest land pursuant to chapter 84.33 or 84.34 RCW.

(6) Local economic conditions which affect the ability to manage timberlands for long-term commercial production.

(7) History of land development permits issued nearby.

[Statutory Authority: RCW 36.70A.050. 91-07-041, § 365-190-060, filed 3/15/91, effective 4/15/91.]

WAC 365-190-070 Mineral resource lands. (1) Counties and cities shall identify and classify aggregate and mineral resource lands from which the extraction of minerals occurs or can be anticipated. Other proposed land uses within these areas may require special attention to ensure future supply of aggregate and mineral resource material, while maintaining a balance of land uses.

(2) Classification criteria. Areas shall be classified as mineral resource lands based on geologic, environmental, and economic factors, existing land uses, and land ownership. The areas to be studied and their order of study shall be specified by counties and cities.

(a) Counties and cities should classify lands with long-term commercial significance for extracting at least the following minerals: Sand, gravel, and valuable metallic substances. Other minerals may be classified as appropriate.

(b) In classifying these areas, counties and cities should consider maps and information on location and extent of mineral deposits provided by the Washington state department of natural resources and the United States Bureau of Mines. Additionally, the department of natural resources has a detailed minerals classification system counties and cities may choose to use.

(c) Counties and cities should consider classifying known and potential mineral deposits so that access to mineral resources of long-term commercial significance is not knowingly precluded.

(d) In classifying mineral resource lands, counties and cities shall also consider the effects of proximity to population areas and the possibility of more intense uses of the land as indicated by:

- (i) General land use patterns in the area;
- (ii) Availability of utilities;
- (iii) Availability and adequacy of water supply;
- (iv) Surrounding parcel sizes and surrounding uses;
- (v) Availability of public roads and other public services;
- (vi) Subdivision or zoning for urban or small lots;
- (vii) Accessibility and proximity to the point of use or market;
- (viii) Physical and topographic characteristics of the mineral resource site;
- (ix) Depth of the resource;
- (x) Depth of the overburden;
- (xi) Physical properties of the resource including quality and type;
- (xii) Life of the resource; and
- (xiii) Resource availability in the region.

[Statutory Authority: RCW 36.70A.050. 91-07-041, § 365-190-070, filed 3/15/91, effective 4/15/91.]

WAC 365-190-080 Critical areas. (1) Wetlands. The wetlands of Washington state are fragile ecosystems which serve a number of important beneficial functions. Wetlands assist in the reduction of erosion, siltation, flooding, ground and surface water pollution, and provide wildlife, plant, and fisheries habitats. Wetlands destruction or impairment may result in increased public and private costs or property losses.

In designating wetlands for regulatory purposes, counties and cities shall use the definition of wetlands in RCW 36.70A.030(22). Counties and cities are requested and encouraged to make their actions consistent with the intent and goals of "protection of wetlands," Executive Orders 89-10 and 90-04 as they exist on September 1, 1990. Additionally, counties and cities should consider wetlands protection guidance provided by the department of ecology including the model wetlands protection ordinance.

(a) Counties and cities that do not now rate wetlands shall consider a wetlands rating system to reflect the relative function, value and uniqueness of wetlands in their jurisdictions. In developing wetlands rating systems, counties and cities should consider the following:

- (i) The Washington state four-tier wetlands rating system;
- (ii) Wetlands functions and values;
- (iii) Degree of sensitivity to disturbance;
- (iv) Rarity; and
- (v) Ability to compensate for destruction or degradation.

If a county or city chooses to not use the state four-tier wetlands rating system, the rationale for that decision must be included in its next annual report to department of community development.

(b) Counties and cities may use the National Wetlands Inventory as an information source for determining the approximate distribution and extent of wetlands. This inventory provides maps of wetland areas according to the definition of wetlands issued by the United States Department of Interior - Fish and Wildlife Service, and its wetland boundaries should be delineated for regulation consistent with the wetlands definition in RCW 36.70A.030(22).

(c) Counties and cities should consider using the methodology in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, cooperatively produced by the

United States Army Corps of Engineers, United States Environmental Protection Agency, United States Department of Agriculture Soil Conservation Service, and United States Fish and Wildlife Service, that was issued in January 1989, and regulatory guidance letter 90-7 issued by the United States Corps of Engineers on November 29, 1990, for regulatory delineations.

(2) Aquifer recharge areas. Potable water is an essential life sustaining element. Much of Washington's drinking water comes from ground water supplies. Once ground water is contaminated it is difficult, costly, and sometimes impossible to clean up. Preventing contamination is necessary to avoid exorbitant costs, hardships, and potential physical harm to people.

The quality of ground water in an aquifer is inextricably linked to its recharge area. Few studies have been done on aquifers and their recharge areas in Washington state. In the cases in which aquifers and their recharge areas have been studied, affected counties and cities should use this information as the base for classifying and designating these areas.

Where no specific studies have been done, counties and cities may use existing soil and surficial geologic information to determine where recharge areas are. To determine the threat to ground water quality, existing land use activities and their potential to lead to contamination should be evaluated.

Counties and cities shall classify recharge areas for aquifers according to the vulnerability of the aquifer. Vulnerability is the combined effect of hydrogeological susceptibility to contamination and the contamination loading potential. High vulnerability is indicated by land uses that contribute contamination that may degrade ground water, and hydrogeologic conditions that facilitate degradation. Low vulnerability is indicated by land uses that do not contribute contaminants that will degrade ground water, and by hydrogeologic conditions that do not facilitate degradation.

(a) To characterize hydrogeologic susceptibility of the recharge area to contamination, counties and cities may consider the following physical characteristics:

- (i) Depth to ground water;
- (ii) Aquifer properties such as hydraulic conductivity and gradients;
- (iii) Soil (texture, permeability, and contaminant attenuation properties);
- (iv) Characteristics of the vadose zone including permeability and attenuation properties; and
- (v) Other relevant factors.

(b) The following may be considered to evaluate the contaminant loading potential:

- (i) General land use;
- (ii) Waste disposal sites;
- (iii) Agriculture activities;
- (iv) Well logs and water quality test results; and
- (v) Other information about the potential for contamination.

(c) Classification strategy for recharge areas should be to maintain the quality of the ground water, with particular attention to recharge areas of high susceptibility. In recharge areas that are highly vulnerable, studies should be initiated to determine if ground water contamination has occurred. Classification of these areas should include consideration of the degree to which the aquifer is used as a potable water source,

feasibility of protective measures to preclude further degradation, availability of treatment measures to maintain potability, and availability of alternative potable water sources.

(d) Examples of areas with a critical recharging effect on aquifers used for potable water, may include:

- (i) Sole source aquifer recharge areas designated pursuant to the Federal Safe Drinking Water Act.
- (ii) Areas established for special protection pursuant to a ground water management program, chapters 90.44, 90.48, and 90.54 RCW, and chapters 173-100 and 173-200 WAC.
- (iii) Areas designated for wellhead protection pursuant to the Federal Safe Drinking Water Act.
- (iv) Other areas meeting the definition of "areas with a critical recharging effect on aquifers used for potable water" in these guidelines.

(3) Frequently flooded areas. Flood plains and other areas subject to flooding perform important hydrologic functions and may present a risk to persons and property. Classifications of frequently flooded areas should include, at a minimum, the 100-year flood plain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

Counties and cities should consider the following when designating and classifying frequently flooded areas:

- (a) Effects of flooding on human health and safety, and to public facilities and services;
- (b) Available documentation including federal, state, and local laws, regulations, and programs, local studies and maps, and federal flood insurance programs;
- (c) The future flow flood plain, defined as the channel of the stream and that portion of the adjoining flood plain that is necessary to contain and discharge the base flood flow at build out without any measurable increase in flood heights;
- (d) The potential effects of tsunamis, high tides with strong winds, sea level rise resulting from global climate change, and greater surface runoff caused by increasing impervious surfaces.

(4) Geologically hazardous areas.

(a) Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible commercial, residential, or industrial development is sited in areas of significant hazard. Some geological hazards can be reduced or mitigated by engineering, design, or modified construction or mining practices so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided. This distinction should be considered by counties and cities that do not now classify geological hazards as they develop their classification scheme.

(a) Areas that are susceptible to one or more of the following types of hazards shall be classified as a geologically hazardous area:

- (i) Erosion hazard;
- (ii) Landslide hazard;
- (iii) Seismic hazard; or
- (iv) Areas subject to other geological events such as coal mine hazards and volcanic hazards including: Mass wasting, debris flows, rockfalls, and differential settlement.

(b) Counties and cities should classify geologically hazardous area as either:

- (i) Known or suspected risk;
- (ii) No risk;

(iii) Risk unknown - data are not available to determine the presence or absence of a geological hazard.

(c) Erosion hazard areas are at least those areas identified by the United States Department of Agriculture Soil Conservation Service as having a "severe" rill and inter-rill erosion hazard.

(d) Landslide hazard areas shall include areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to the following:

- (i) Areas of historic failures, such as:

(A) Those areas delineated by the United States Department of Agriculture Soil Conservation Service as having a "severe" limitation for building site development;

(B) Those areas mapped as class u (unstable), uos (unstable old slides), and urs (unstable recent slides) in the department of ecology coastal zone atlas; or

(C) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published as the United States Geological Survey or department of natural resources division of geology and earth resources.

- (ii) Areas with all three of the following characteristics:

(A) Slopes steeper than fifteen percent; and

(B) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

(C) Springs or ground water seepage;

(iii) Areas that have shown movement during the holocene epoch (from ten thousand years ago to the present) or which are underlain or covered by mass wastage debris of that epoch;

(iv) Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

(v) Slopes having gradients steeper than eighty percent subject to rockfall during seismic shaking;

(vi) Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;

(vii) Areas that show evidence of, or are at risk from snow avalanches;

(viii) Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding;

(ix) Any area with a slope of forty percent or steeper and with a vertical relief of ten or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

(e) Seismic hazard areas shall include areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past.

Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by:

- (i) The magnitude of an earthquake;
- (ii) The distance from the source of an earthquake;
- (iii) The type of thickness of geologic materials at the surface; and
- (iv) The type of subsurface geologic structure.

Settlement and soil liquefaction conditions occur in areas underlain by cohesionless soils of low density, typically in association with a shallow ground water table.

- (f) Other geological events:

(i) Volcanic hazard areas shall include areas subject to pyroclastic flows, lava flows, debris avalanche, inundation by debris flows, mudflows, or related flooding resulting from volcanic activity.

(ii) Mine hazard areas are those areas underlain by, adjacent to, or affected by mine workings such as adits, gangways, tunnels, drifts, or air shafts. Factors which should be considered include: Proximity to development, depth from ground surface to the mine working, and geologic material.

(5) Fish and wildlife habitat conservation areas. Fish and wildlife habitat conservation means land management for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. In some cases, intergovernmental cooperation and coordination may show that it is sufficient to assure that a species will usually be found in certain regions across the state.

- (a) Fish and wildlife habitat conservation areas include:

(i) Areas with which endangered, threatened, and sensitive species have a primary association;

(ii) Habitats and species of local importance;

(iii) Commercial and recreational shellfish areas;

(iv) Kelp and eelgrass beds; herring and smelt spawning areas;

(v) Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;

(vi) Waters of the state;

(vii) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; or

(viii) State natural area preserves and natural resource conservation areas.

(b) Counties and cities may consider the following when classifying and designating these areas:

(i) Creating a system of fish and wildlife habitat with connections between larger habitat blocks and open spaces;

(ii) Level of human activity in such areas including presence of roads and level of recreation type (passive or active recreation may be appropriate for certain areas and habitats);

(iii) Protecting riparian ecosystems;

(iv) Evaluating land uses surrounding ponds and fish and wildlife habitat areas that may negatively impact these areas;

(v) Establishing buffer zones around these areas to separate incompatible uses from the habitat areas; and

(vi) Restoring of lost salmonid habitat.

(c) Sources and methods

Appendix D - Best Available Science Synthesis
Chapter 3 Excerpts

Habitat- Shellfish, pp.7-13

Vegetation and Buffers, pp. 61-69

waters of the state. WAC 222-16-030 outlines the state's classification for water bodies into three categories: Type S waters (shorelines of the state), Type F waters (fish habitat), and Type N waters (nonfish habitat). Marine shorelines are also managed under state and local policies and regulation such as the Shoreline Management Program (SMP).

San Juan County includes 408 miles of marine shoreline (SJC 2010a). The County also contains 158 miles of freshwater streams (Kerwin 2002) that eventually flow into nearshore areas. However, fewer than a dozen of these streams are naturally accessible to anadromous salmonids (SSPS 2007). The vast majority enter the marine environment from points that are naturally perched or enter at a gradient too steep for anadromous salmonid access (Kerwin 2002). Due in part to their close proximity to the marine environment, relatively small size, and potential to be affected by land use and development, these streams and the human activities occurring near them potentially influence the nearby marine environment (Fresh et al. 2004). For example, in Westcott and Garrison Bays, logging, agriculture, and residential development activities have been noted as potential or likely sources of impacts (water quality degradation) due to altered filtration capacity, altered stormwater runoff, and elevated nutrients and biocides (Klinger et al. 2006). In addition, the main tributary to Westcott Bay, Doe Creek, is currently experiencing significant erosion and downcutting, which likely contributes to adverse downstream sedimentation.

Other impairments to Waters of the State commonly associated with human use and development activities such as high fecal coliform, nutrients, suspended solids, temperature, and low dissolved oxygen levels, were identified for specific sites in the San Juan County Watershed Characterization Report and the San Juan County Monitoring Project Final Report (SJCWMC 2000; Wiseman et al. 2000). The altered water quality that can result from human impacts (for example, as shown by Barsh et al. [2009]) may result in water quality degradation that affects primary production, habitat conditions, and species higher on the food chain, ultimately degrading marine fish and wildlife habitat conservation areas. This potential impact, as well as other impacts that are associated with local land use and development practices, are described further in the following sections.

Shellfish Areas

San Juan County marine shorelines and waters provide habitat for numerous shellfish species including Pinto (or Northern) abalone (*Haliotis kamtschatkana*), sea urchins (*Strongylocentrotus* spp.), crab, shrimp, and various clams. The species and habitats associated with these HCAs are discussed in the following sections. In general, shellfish depend on specific sediment compositions (such as grain size, amount of different grain and gravel sizes, and organic content). For example, shellfish such as littleneck clam (*Protothaca staminea*) and butter clam (*Saxidomus gigantea*) prefer sediment mixed with gravel and cobble; and populations are sometimes enhanced by increased amounts of these sediments to otherwise muddy or sandy beaches (Dethier 2006). Therefore, development such as bulkhead construction, vegetation removal, or other activities that alter sediment composition (discussed in Section 3.3 regarding the effects of development) can adversely affect a variety of shellfish species. Shellfish are also affected by stormwater or sewage discharges that affect key aquatic habitat parameters (including temperature, salinity, turbidity, oxygen, and pollutants) as well as food availability (Dethier 2006).

Abalone

San Juan County Occurrence

Pinto abalone (*Haliotis kamtschatkana*) occur in San Juan County. In fact, the only part of the inside waters of Washington where they are currently found is the San Juan Islands and the Strait of Juan de Fuca (Dethier 2006). Unfortunately, their numbers appear to be decreasing. In the San Juan Archipelago, between 1992 and 2005, abalone declined from 351 animals per site to 103 animals per site at 10 long-term monitoring stations (PSAT 2007).

Habitat

Pinto abalone live in shallow subtidal rocky areas with moderate to high wave energies. They typically occur in the low intertidal zone in kelp beds along well exposed coasts, and in depths up to 35 feet (10.7 meters) (PSAT 2007). They have also been found in depths up 330 feet (100 meters) (NMFS 2007).

Food and Foraging

Pinto abalone are herbivore gastropod mollusks. Settled juveniles and adults commonly rely on kelp fragments for food (DFO 2010).

Threats

Although current population abundance of the species is not well known, overharvest is thought to be a significant problem for this species (NMFS 2007, West 1997), and populations along the west coast of the United States and Canada have experienced dramatic declines in the last few decades (NMFS 2007, PSRF 2010). An ongoing threat is that current population levels are likely too low to support effective reproduction (Dethier 2006, NMFS 2007). The decline in population is attributed to several factors including overharvest (historical overharvest and ongoing illegal, unreported harvest), predation from sea otters, and disease. These factors have contributed to densities that are too sparse to support sustainable, viable reproduction (NMFS 2007).

Protection and Conservation

Commercial harvest has never been allowed by Washington State, and recreational fisheries have been closed since 1994. Since 2004, they have been federally listed as a 'Species of Concern' (NMFS 2007). A general lack of data indicates that the existence of and extent of illegal harvest of pinto abalone is uncertain; therefore, habitat protection within their range may be a more important factor to population success than harvest pressures. Abalone, along with other mollusks, is considered an important indicator assemblage and their dwindling population has been used to highlight the need for conservation of kelp forest communities (Rogers-Bennett 2007). Therefore, it is likely that efforts to protect and preserve kelp forests (see Section 3.3.3), and reduce development related impacts to kelp habitat, will have reciprocating benefits for abalone.

Sea Urchin

San Juan County Occurrence

WDFW data indicates sea urchin (*Strongylocentrotus* spp.) distribution throughout much of San Juan County's shoreline (SJMRC undated), and their distribution is likely associated with the availability of rocky substrates (Dethier 2006).

Habitat

Sea urchins are herbivores that live in shallow to deep waters on rocky substrates, especially in the northern inside waters and the more exposed waters of the state (Dethier 2006).

Food and Foraging

Sea urchins are critical agents of subtidal community structure in rocky areas due to their intensive grazing of young and adult seaweeds. They are consumed by seastars and sea otters (Dethier 2006).

Threats

There is limited documentation on the potential or likely threats to sea urchins. There are commercial fisheries for several of the species in the San Juan Islands (Commercial Urchin Harvest Districts 1 and 2), Strait of Juan de Fuca, and outer coast. Predation by marine mammals (for example, Carter et al. 2007) is likely a major influence on population success. Land use and development that affect kelp forests could also indirectly affect urchin as urchins rely on this habitat for food and refuge from predation (see Section 3.2.3 regarding kelp).

Protection and Conservation

In general the Puget Sound sea urchin population is considered stable, although population declines in specific geographic areas have prompted harvest restrictions or closures for stock conservation (PSAT 2007). Due to their reliance on kelp forests as habitat and food, protection of kelp is critical for the survival and population success of this species.

Crab

Dungeness crab (*Cancer magister*) is an important fishery resource and listed on WDFW's priority habitat and species list. The species is also a critical component in the food web and is a vital food source for many sensitive or protected species (Fisher and Velasquez 2008).

San Juan County Occurrence

There is limited information on the distribution and habitat use of Dungeness crab specific to San Juan County. Dungeness crab is distributed throughout Washington's coastlines. Intertidal and shallow subtidal areas along the shoreline provide suitable habitat for Dungeness crab. Large estuaries like Puget Sound provide essential habitat for this species (Fisher and Velasquez 2008). In Puget Sound they are more abundant in waters north of Seattle than south (Bumgarner 1990). Dungeness crab distribution has been documented in Lopez Sound, Roche Harbor, False Bay, most of West Sound, East Sound (Buck Bay and Ship Bay), Reid Harbor, Cowlitz Bay, and surrounding Socia Island (SJMRC undated).

Habitat

Dungeness crab are distributed throughout Washington's coastlines. Intertidal and shallow subtidal areas along the shoreline provide suitable habitat for Dungeness crab. Large estuaries like Puget Sound provide essential habitat for this species (Fisher and Velasquez 2008). In Puget Sound they are more abundant in waters north of Seattle than south (Bumgarner 1990). Adults migrate to shallow waters in spring (March through June) to mate (Fisher and Velasquez 2008). After mating occurs, larvae are dispersed by currents. Juveniles are closely associated with cover in the intertidal that can consist of bivalve shells, eelgrass (*Zostera* spp.), gravel-sand substrates, and/or macroalgae (Thayer and Phillips 1977, Dinnel et al. 1986a, Dinnel et al. 1986b; as cited in Fisher and Velasquez 2008). These forms of cover provide juveniles a refuge from birds, fish, and many other predators (Eggleston and Armstrong 1995). Juveniles eventually settle to the bottom, and progressively move to deeper water as they grow (Fisher and Velasquez 2008).

Food and Foraging

Dungeness crab are non-specific feeders, but generally consume clams and shrimp. Juveniles tend to feed on bivalves, but also consume smaller crabs, shrimp, other crustaceans, fishes, and other mollusks. Intertidal habitats are critical for juvenile feeding as those areas can have prey densities higher than subtidal habitats (Fisher and Velasquez 2008).

Threats

Fishing, disease, and development activities that result in direct disturbance or impaired water quality related to increased pollutants are likely factors in low population success. For example, hypoxic conditions has been shown to alter the feeding behavior of crabs (Bernatis et al. 2007); thus, land use and development that results in increased hypoxic conditions in nearshore areas could adversely impact crab survival. This includes the discharge of excess nutrients into local embayments, for example, East Sound, which is on the Federal Clean Water Act 303(d) list because water quality is limited due to low dissolved oxygen.

Dungeness crab is more susceptible to population impacts from harvest, disease, and development-related activities (for example, dredging) in areas where it concentrates for mating and egg incubation, but it is also susceptible to mortality from derelict fishing gear in feeding grounds (Fisher and Velasquez 2008) as well as from abandoned crab pots left by recreational fishers. Refuge from predation is considered a key post-settlement determinant of subsequent abundance of juvenile Dungeness crab (Eggleston and Armstrong 1995).

Protection and Conservation

Eelgrass is present along approximately 34 percent of the County's shoreline (personal communication from Tina Whitman, FSJ, May 13, 2011). Due to the dependence of juvenile crab on this habitat for refuge from predators, eelgrass habitat (and the conservation of eelgrass) is important for crab survival in San Juan County. Development related impacts and the subsequent loss of intertidal habitat, or alteration of habitat (such as removal of suitable breeding substrate, or reduced water quality) are direct and indirect limiting factors for Dungeness crab populations (Fisher and Velasquez 2008). Impacts related to shoreline development and construction, including over-water and in-water structures, bulkheads, and dredging and filling in intertidal areas should be minimized for effective conservation of crab.

Shrimp

Pandalid shrimp (also called humpy shrimp) (*Pandalus goniurus*) are an arthropod that is considered a state priority species for recreational, commercial, and tribal importance, and for having vulnerable aggregations that are susceptible to population decline (WDFW 2008). There is limited information for this species with regard to habitat requirements, potential threats, and conservation.

San Juan County Occurrence

Concentrations of Pandalid shrimp have been documented throughout much of San Juan County's marine waters including in Griffin Bay, Lopez Sound, Cowlitz Bay, and other waters (SJMRC undated).

Habitat

Pandalid shrimp live mostly in the subtidal zone as adults (NMFS 2010a). They are usually over muddy substrate at depths up between 20 feet (six meters) and 1200 feet (365 meters) (ADFG 2010).

Food and Foraging

Pandalid shrimp eat polychaetes, small crustaceans such as amphipods and euphausiids, limpets, and other shrimp (NMFS 2010a).

Threats

Threats to Pandalid shrimp are not well documented, but with regard to development activities, are likely to be similar to limiting factors for crab (discussed above) to the extent that development impacts extend to deeper waters where Pandalid shrimp inhabit the subtidal zone. Alterations to water quality, which could affect the distribution of food sources or result in direct impacts on shrimp, may be of greatest potential threat.

Protection and Conservation

Along the same line as potential threats, protection and conservation efforts are likely to be similar for shrimp as with other shellfish species (see previous section regarding crab).

Oyster, Clam, and Geoduck

San Juan County Occurrence

San Juan County shorelines provide relatively isolated patches of habitat for numerous oyster and clam species. This includes non-native Pacific oyster (*Crassostrea gigas*); various clams including native littleneck clam (*Protothaca staminea*), introduced manila clam (*Venerupis philippinarum*), varnish clam (*Nuttalia obscurata*), butter clam (*Saxidomus gigantea*), and Olympia oyster, geoduck clams, and mussels. Clams and oyster beds are documented to occur in Westcott Bay and Ship Bay (SJMRC undated). Clam distribution also includes Griffin Bay, Mud Bay, and Lopez Sound in the general vicinity of Spencer Spit, and subtidal populations in isolated patches throughout the county's shorelines (SJMRC undated).

Shellfish growing areas in San Juan County include those at Buck Bay, East Sound, Hunter Bay, Mackaye Harbor, Mud Bay, Shoal Bay, Upright Channel, and Westcott Bay (Washington

Department of Health [DOH] 2010a). Annual Growing Area Review Reports and accompanying maps are available from the DOH (DOH 2010a). San Juan County currently has no shellfish sites identified on the early warning system as "threatened areas" (DOH 2010a, 2010b). San Juan County contains numerous recreational shellfish harvest areas. Recreational shellfishing opportunities occur throughout much of San Juan County shorelines along public clam and oyster beaches (WDFW 2010c).

Commercial geoduck clam fisheries are not designated in San Juan County (WDFW 2010d). However, geoduck (*Panopea abrupta*) distribution is patchy throughout the Salish Sea. Commonly found in subtidal areas, geoduck can also occur in low intertidal zones. In San Juan County it is likely precluded from most intertidal areas due to unsuitable habitat conditions; distribution has been documented and mapped by WDFW (SJMRC undated).

Habitat

Native littleneck clams are one of several commercially important shellfish. They commonly occur in the intertidal zone and shallow subtidal zone (to depths of about 35 meters), and where substrates are composed of cobble or gravel mixed with sand or mud. Fine sand is less suitable, but the clams are known to use a variety of substrates (Dethier 2006). Most often they are found in intertidal zones from -1.0 to 1.3 meters MLLW (Chew and Ma 1987). Butter clams can be found in a wide variety of substrates but prefer sand, shell, and gravel beaches. Butter clams can be found as deep as 50 ft below the low-tide ODFW 2010).

Geoduck spawn microscopic larvae which drift in currents for extended periods (up to 47 days) allowing them to travel many miles. After drifting on currents, geoduck larvae settle to the bottom, metamorphose into juveniles, and burrow two to three feet into the substrate over several years. Geoduck are most abundant in sand or mixtures of sand, silt, and gravel, but may occur in a variety of substrates. Preferable substrates of this type present in the subtidal zone are typically suitable habitat to support geoduck colonization.

Food and Foraging

Oysters and clams are bivalve mollusk filter feeders. They consume various marine plankton species by sifting food from the water column.

Threats

The Washington Department of Health maintains a map of shellfish harvest zones and a list of beaches for the purpose of notifying the public of beach health and closures (DOH 2010c). Closures commonly occur due to temporary increases in marine biotoxin levels or due to chronic pollution (for example, due to coliform bacteria).

Development activities that result in impacts to water quality, direct disturbance of substrate, or indirect alteration of substrate conditions, are potential threats to oysters and clams. Barsh et al. (2010) attributed local water quality degradation to low summer instream flows, use of the riparian corridor for cattle pasture, pesticide use, and untreated runoff from roads, and found that water quality related to local development may be contributing to pesticide contamination of bivalves in Fishing Bay (Barsh 2009). As an important food source for many other species covered under the marine HCAs, oyster and clam health and population success will likely have implications for higher trophic species (Sobocinski et al. 2010).

Geoduck clams, generally limited to deeper subtidal areas around San Juan County, would be less likely to experience direct effects from shoreline disturbance, but could still be impacted by

altered water quality or habitat conditions to the extent that those impacts extend into the subtidal zone.

Protection and Conservation

Conservation efforts for oysters and clams are likely to be similar to those efforts implemented for the protection of other marine HCAs and would include protection from pollutants, protection of suitable habitat areas, and minimization of disturbance to the substrate. Inventory of substrates where clams are currently distributed, and review of site specific conditions relative to suitable habitat conditions, would be a logical step toward conservation during site development planning and building application reviews.

Kelp and Eelgrass Beds

The basis for nearly all life in the sea is the photosynthetic activity of aquatic autotrophs such as planktonic algae, cyanobacteria, benthic microalgae, benthic macroalgae (kelps and seaweeds), and seed plants (such as seagrasses and salt-marsh plants) (Nybakken and Bertness 2005). Kelp forests and eelgrass beds (also referred to as eelgrass meadows) represent major aquatic plant communities in the region and they provide important habitat for salmon, forage fish, shellfish, and other species (Mumford 2007).

Kelp

Floating kelps are found adjacent to approximately 11 percent of Washington's shoreline (Mumford 2007). The smaller, non-floating kelps are not easily monitored or mapped because they are often not readily visible in aerial photographs (EnviroVision et al. 2007). However, non-floating kelps are more widely distributed and more abundant than the floating varieties. Kelp forests form refuge habitat for a number of fish species (Mumford 2007). They provide important habitat for some rockfish species (74 FR 18521). Juvenile and subadult salmon are also known to use habitat created by kelp forests, and depend on many species that are associated with kelp forests as a food source. Through food web interactions, kelp forests are an important community for sea urchins, herring, crabs, mollusks, and a variety of marine mammals including sea otters and whales (Steneck et al. 2002, Carter et al 2007, Mumford 2007, NOAA 2010b).

San Juan County Occurrence

Kelp forests are comprised of both floating and non-floating species and both types occur in a patchy distribution throughout the subtidal zone of San Juan County's shorelines (Washington Coastal Atlas 2010). Floating kelp species occur along approximately 44 percent the county's shoreline (personal communication from Tina Whitman, FSJ, May 13, 2011). Of the 23 kelp species known to occur in Puget Sound (Mumford 2007), at least 17 have been observed in San Juan County, and were collected from subtidal sites at Cantilever Point, Reed Rock, Friday Harbor, Point George, Shady Cove, McConnell Island, and Burrows Bay (Garbary et al. 1999).

Habitat

Kelps are generally found in water with high salinity (>25 practical salinity units [psu]), low temperature (<15 Celsius), high ambient light, hard substrate, and minimal sedimentation (Mumford 2007). Most occur in the shallow subtidal zone from MLLW to about 65 feet (20 meters) below MLLW, and prefer high-energy environments where tidal currents renew available nutrients (and prevent sediments from covering young plants (Mumford 2007). Kelps are not rooted plants, although they have a root-like mass (or holdfast) that anchors the thallus

could result in the following impacts, which would have subsequent implications for species survival and overall habitat condition:

Altered shade and temperature regime: Caused by direct removal of vegetation.

Reduced bank and shoreline stability: Caused by degradation of riparian vegetation, loss of vegetative cover and root cohesion, and reduced resistance to erosion. This may, in turn, affect aquatic habitat by increasing suspended sediments and altering riparian habitat structure.

Altered organic material contributions: Caused by reduced source of leaf litter, woody debris, terrestrial insects, and other biota.

Altered habitat complexity and increased habitat fragmentation: Caused by removal of native vegetation and creating habitat favored by invasive species

There are geologic constraints on the type and density of vegetation that can establish on some areas of marine shoreline in San Juan County. For example, many bedrock shorelines, especially those exposed to swell and the stress of sea spray are limited in the development of functional densities of vegetation and even shrub species may be precluded, particularly where shores are composed of ultramafic bedrock.

SHADE AND TEMPERATURE

The effects of modifications to riparian vegetation on shade and temperature have not been well studied in marine systems (Herrera 2007b). The majority of research on the effects of modification of riparian vegetation, particularly temperature impacts on aquatic species, has focused on salmonids in stream environments (Herrera 2008b), where optimal shading and temperature regulation have been associated with mature forest cover and a high degree of canopy closure near the stream (Kleinschmidt 1999). Altered water temperatures (particularly temperature increases) can adversely affect habitat for marine species (Rice 2006). This can have direct or indirect effects on fish health and survival, and can include mortality as well as sublethal or behavioral effects.

While the removal of stream, lake, and wetland riparian vegetation may at first be perceived as irrelevant to the marine ecosystem, indirect impacts are actually likely, particularly in areas where freshwater streams mix with saltwater and the freshwater contributions play a major role in nearshore ecology. This includes areas such as Westcott Bay on San Juan Island and East Sound on Orcas Island. Hence, consideration should be given to potential impacts associated with development taking place throughout the stream-based watersheds. These considerations include, for example, avoiding riparian vegetation removal by establishing regulated buffer areas, and maintaining pre-development flow regimes to the extent possible (such as infiltrating runoff from impervious surface areas) to help maintain base flow to streams, lakes, and wetlands.

Implementing actions that are aimed to protect water temperature will also help to avoid the impacts associated with turbidity and sedimentation in the nearshore environment (see related discussion in the Shoreline Stability section). The same is likely applicable to pollutants that may originate throughout the watersheds. This includes moss control chemicals (such as zinc strips, detergent, and chemical mixtures), deicing chemicals, and pesticides used on lawns, gardens and around house foundations (such as spray for ants and termites). Hence, although it is outside the main scope of this chapter, it is important to understand the relevance of stream riparian vegetation, within the context of how it can moderate the water temperature and pollutant concentration of nearshore areas with limited mixing of marine water.

Marine riparian shade influences microclimate conditions in the upper intertidal zone. Loss of riparian shade is correlated with increased substrate temperatures and reduced humidity (Rice 2006), which in turn affect the survival of many upper intertidal organisms, including summer spawning forage fish species, specifically sand lance and surf smelt (Brennan and Culverwell 2004, Penttila 2001, Rice 2006). Approximately 1,000 survey sites in San Juan County, including potential forage fish spawning areas, were documented with shading of less than 50 percent (Friends of the San Juans 2004a). Shade values of less than 50 percent were noted for 42 documented forage fish spawning beaches. It is also likely that juvenile salmon and other species sensitive to temperature (for example, some shellfish species discussed in this document) are adversely affected by reduced shade to the extent that it impacts water temperature in the nearshore zone. This would particularly be the case in areas with limited water circulation, mixing, or exchange.

SHORELINE STABILITY

Marine riparian vegetation clearly plays a role in stabilizing marine shorelines, particularly bluffs and steep slopes (Brennan and Culverwell 2004; Desbonnet et al. 1994; Lemieux 2004; Myers 1993), but the specific impact mechanisms are not as well understood as they are in freshwater environments. Along marine shorelines, stability and erosion rates are affected by site-specific factors including soil type and depth, surface and below ground hydrologic conditions, and whether the location is susceptible to wind and wave erosion. Vegetation removal and other development can lead to destabilization of bluffs and shorelines, and accelerated erosion and sedimentation levels that are out of equilibrium from natural bluff erosion processes.

While natural sediment input from bluff erosion is an important physical process that gives rise to beaches and productive nearshore habitat, accelerated erosion due to riparian vegetation removal or poor stormwater management can often increase the rate of sediment production as well as produce sediment with a more fine-grained, silt, and clay character that can degrade water quality and habitat.

Sedimentation and siltation impacts resulting from destabilized shorelines can affect the distribution of eelgrass beds or other organisms which are dependent on specific substrate compositions (Finlayson 2006). Siltation thus reduces habitat complexity and may reduce or eliminate habitats (Steneck et al 2002, Mumford 2007) that are important sources of food (prey) and refuge for salmon and marine fish, and are important spawning habitat for forage fish. Due to their dependence on specific water quality conditions, eelgrass beds and kelp forests that provide important habitat for forage fish and other sensitive species may be affected by updrift development activities which affect water quality. In addition, upstream impacts on water quality within freshwater systems discharging to marine waters can affect the nearshore environment if the activities result in the discharge of sediment-laden water or excessively warm and/or contaminated water to nearshore areas that have limited mixing potential.

ORGANIC MATERIAL CONTRIBUTIONS

Marine riparian vegetation, and vegetation along streams and wetlands draining into marine waters, are a known source of organic matter, nutrients, insects (e.g. midges, mayflies, blackflies, and net spinning caddisflies) and macroinvertebrate prey for numerous sensitive species (Murphy, 1995; Duffy et al. 2010). In aquatic systems there are two sources of energy, primary production from photosynthesis associated with aquatic plants (e.g. diatoms), and leaves and needles deposited from trees and shrubs which are then consumed by aquatic organisms (Murphy, 1995). Leaves from deciduous trees and shrubs are consumed relatively quickly, while those from coniferous trees take longer to decompose and be consumed. Productivity

associated with photosynthesis peaks in the summer, and that associated with deposition of leaves peaks in the fall.

Along streams, mature conifer forest (which allows in some light and provides large woody debris) mixed with some deciduous trees and shrubs has been found to provide optimal, year round food sources for fish and aquatic invertebrates (Murphy, 1995; Knutson and Naef, 1997). In well functioning stream systems, sediment, water and nutrients are slowly metered out over time. When supplies of woody debris are inadequate, stream energy during storm events is not adequately dissipated, there is less storage capacity for sediment and organic material, and these materials are quickly flushed out of the system resulting in a reduction of food sources and habitat for aquatic invertebrates (Murphy, 1995).

Riparian areas also provide driftwood to the nearshore zone, which then accumulates detritus from both marine and upland sources. The detritus is subsequently consumed by invertebrates, birds, and other organisms (Brennan et al. 2009). Also, terrestrial insects have recently been shown to be a large component of the diet of juvenile salmonids (Romanuk and Levings 2010). Sobocinski (2003) documented the importance of insect communities and benthic organisms that are either directly or indirectly associated with riparian vegetation. These lower trophic organisms serve as the basis of the food web for sensitive fish species that use the upper nearshore environment (Romanuk and Levings 2010, Williams and Thom 2001). In addition, some fish and invertebrates feed directly on vegetative detritus (Brennan et al 2004, Fresh 2007).

The recruitment of organic matter, nutrients, and macroinvertebrate prey items can be reduced when riparian vegetation is removed (Brennan et al. 2004, Sobocinski 2003, Williams et al. 2001). Reduction of organic material contribution into the marine environment, in turn, reduces the availability of food for sensitive species. Studies suggest that the delivery of leaf and other organic matter declines at greater distances away from the water's edge, and that most contributions are made within 100 to 200 ft (30-60 meters) of the shoreline (Brennan et al. 2009). Finally, in freshwater systems it has been shown that detritus feeding organisms may not be adapted to the leaf fall patterns or the chemical characteristics of leaves from non-native trees suggesting that riparian areas are most effective when comprised of native vegetation (Karr and Schlosser 1977). This is likely the same for marine riparian areas. In addition, native plant species have adapted to local physical conditions such as soil, geology, and climate and therefore require less maintenance, are resistant to most pests and diseases, and require little or no irrigation or fertilizers, once established. Thus maintaining native plant species in marine riparian areas can have consequent benefits on maintaining water quality.

HABITAT STRUCTURE AND COMPLEXITY

By maintaining bank stability and contributing large wood to the aquatic environment, riparian vegetation forms and maintains habitat complexity. As described above, riparian vegetation and large wood improve beach stability and contribute to roughness and sediment trapping (Brennan and Culverwell 2004, Gonor et al. 1988, Herrera 2005). Riparian vegetation also provides contributions of organic matter, moisture, and nutrients that assist in the establishment and maintenance of estuarine marsh plants (Eilers 1975, Williams and Thom 2001).

Herrera (2005) suggested that driftwood and tree fall at the top of the beach may also stabilize the upper beach area by slowing littoral drift and reducing wave-induced erosion). It has been suggested that estuarine wood can affect water flow and the subsequent formation of bars and

mudbanks (Gonor et al. 1988). The contribution to habitat complexity along marine shorelines may be maximized if trees that fall to beaches remain in place (Herrera 2005).

Marine shorelines that have been modified by human activities tend to have less large woody debris and driftwood than unmodified beaches (Herrera 2005; Higgins et al. 2005). In particular, shoreline development including marinas, jetties, and bulkheads, redistribute large woody debris such that it concentrates in certain areas and is absent in others (Miller et al. 2001, Herrera 2007a).

Direct disturbance of shoreline vegetation can also alter habitat complexity. Disturbance by pedestrian traffic and kayaks can impact intertidal plant communities as well as the species that rely on the vegetation. The impacts of trampling on rocky intertidal beaches is well documented (Brosnan and Crumrine 1994; Irvin 2005; Jenkins 2002; Pinn and Rodgers 2005). On San Juan Island, Jenkins et al. (2002) showed that experimental trampling of 250-steps, three times per week reduced seaweed species (*Fucus* spp.) cover by 70 percent after six weeks with continued loss of cover for at least three months after the end of trampling. *Fucus gardneri* populations at Cattle Point on San Juan Island were exposed to trampling, and the study by Irvine (2005) showed increased loss of biomass with increased trampling, and reduced cover ranging between 10 percent cover in a 100-step plot up to 85 percent loss in a 200-step plot (Irvine 2005). Trampling has also been shown to result in loss of mussels (*Mytilus* spp.) and significantly reduced barnacle cover (Brosnan and Crumrine 1994), loss of larger, branching species of algae, and an increase in ephemeral (short-lived) and smaller, non-branching species (Pinn and Rodgers 2005).

SCIENTIFICALLY BASED OPTIONS FOR MARINE RIPARIAN BUFFERS

Due to the importance of riparian vegetation in freshwater and marine systems, the establishment of buffers is commonly regarded as having a key role in protecting aquatic habitat. In general, the term **buffers** refers to terrestrial areas surrounding a wetland, stream, water body or other area of high ecological, geological, or hydrological importance, and whose purpose is to reduce or prevent impacts to the functions of the protected resource, such as may occur from adjacent land uses. In comparison, **setbacks** are regulatory tools used to protect land from encroachment by structures, but do not generally specify how the setback area must be managed. Like setbacks, buffers are measured a specified distance between a development and the resource being protected. Unlike setbacks, buffers usually are considered off-limits to some activities and land uses which themselves may impact the functions of the resource being protected. Buffers are often (but not necessarily) configured to completely encircle a wetland, lake or other resource, whereas setbacks are confined to just a direct path between the development and the resource being protected.

Although information on the application and effectiveness of marine buffers is more limited than for freshwater systems, many of the same physical processes occur, particularly with regard to transport of pollutants, organic material, and food and nutrients from the land to the water (Lemieux et al. 2004). Because riparian buffers in both stream and marine environments can have implications for water quality in the marine ecosystem, some references to freshwater buffers are included in this section. Best available science for freshwater and marine riparian environments, particularly related to safeguarding the processes that protect riparian functions, remains an active field of research.

Nonetheless, an extensive body of research and literature has emerged over the last three decades which documents the importance of riparian areas in providing ecological functions related to waters of the state. These functions include the following (Romanuk and Levings 2010, Brennan et al. 2009, Lemieux et al. 2004):

- Water quality maintenance
- Fine sediment control
- Large woody debris delivery and retention
- Microclimate moderation
- Nutrient delivery and retention
- Terrestrial carbon source to nearshore food webs
- Fish and wildlife habitat creation and maintenance
- Direct food support for juvenile salmonids
- Hydrologic based slope stability

There is consensus in the scientific community that marine riparian area buffers are critical to sustaining many ecological functions (Desbonnet et al. 1994, Brennan and Culverwell 2004, Lemieux et al 2004, Brennan et al. 2009) however few studies were found addressing marine riparian buffer functions and identifying and proposing specific distance requirements. As for freshwater stream riparian areas, these are commonly grouped into three primary categories: water quantity, water quality, and habitat. Development and human activities can adversely affect water bodies by impacting the hydroperiod (extent, duration, and timing of flow), or by impacting water quality and habitat either directly or indirectly. This is especially true when structures and land uses that discharge generate and discharge pollutants are located in areas that are most likely to flush pollutants into the water (see discussion in Chapter 2). Buffers adjacent to water bodies are therefore key to providing functional benefits related to water quality and habitat. For example, vegetation in buffers can improve water quality through capture and uptake, and buffers provide a complex transitional zone between upland and aquatic environments that is important habitat for many species.

Other factors relevant to the effectiveness of marine buffers, or of a given buffer width, include the type and intensity of surrounding land development; influence of groundwater; stability of slopes or bluffs; types of pollutants and their sources; vegetation dynamics (such as type and density); susceptibility of the buffer to wind throw, which may require buffers in excess of one site potential tree height (e.g. in areas with high winds, particularly when prevailing winds are perpendicular to the buffer (Murphy, 1995); whether some tree removal will be allowed in the buffer; and geomorphic functions of driftwood or other habitat features that might affect the functions and values of the buffer (Brennan et al. 2009). For example, slopes that are more susceptible to massive failure may require a larger buffer, particularly if existing development is contributing to an increased rate of erosion such as from poor stormwater management or lack of stabilizing vegetation. Likewise, feeder bluffs contributing to spawning beaches may require a larger buffer in order to protect future development while also decreasing the need for shoreline armoring. In some cases, steep slopes comprised of bedrock may allow for a narrower buffer as slope stability and sediment sources would not be impacted by development. For example, in the San Juan Islands, there can be a nearly vertical slope in basalt that can be very stable. However, water quality and habitat protection may warrant additional buffer width. Regarding effects of limited tree removal within buffers, Wenger (1999) suggests that after the first 25 – 50 feet some removal of trees can occur. Kleinschmidt Assoc. (1999) recommends an increase in buffer width for areas with less than 75% canopy closure and recommends that no tree removal be allowed in the first 35 feet, with limited tree removal allowed in the outer portions of the buffer. Murphy (1995) found that more than 58% of potential large woody debris must be maintained to support stream functions. Finally, in areas with high winds, particularly if prevailing winds are perpendicular to the buffer, tree removal may increase the potential for blow down of the remaining trees. (Note: canopy closure and basal area are often used to describe the coverage of trees on a site, with basal area being the cross sectional area of the timber at a point 4 ½ feet from the ground surface).

Sustaining habitats and species requires protection of the ecological functions and processes that support survival and population success, in addition to the direct protection of the habitats themselves. Without adequate habitat protection, the functions listed above and key natural processes become degraded. In response to this risk, scientifically based recommended buffer widths and site-specific methods for determining buffers have been established in several sources.

Because much of the existing riparian and buffer literature is related to freshwater systems, WDFW established a panel of scientists in 2008 to assess the freshwater riparian scientific literature to establish its applicability to marine shoreline systems. The result of the literature review, and the Marine Riparian Workshop Proceedings conducted by the scientific panel in 2008 was a common consensus that freshwater riparian buffer research was generally applicable to marine shorelines (Brennan et al. 2009). The scientific panel determined the functions listed in Table 3-3 were the most critical to marine shorelines and they identified a range of applicable studies that provided recommendations to protect these functions.

The data provided by the scientific panel (Brennan et al. 2009) suggest that necessary buffer widths vary considerably depending on the site-specific functions and characteristics. For example, in order to achieve at least 80 percent effectiveness at removing pollutants from stormwater runoff, the recommended buffer varied from as little as 16 feet to as large as 1,969 feet depending on the slope, depth and type of soil, surface roughness, density of vegetation and the intensity of the land use (see Table 3-3) reflecting the breadth of water quality issues. The panel found that studies of recommended buffer widths required for organic matter contributions (such as plant litter and terrestrial insects) were limited for the marine environment, however buffer widths ranging from between 16 to 328 feet from the shoreline depending on site conditions were recommended by Bavins et al. (2000) for providing this function. Buffers recommended to protect the large woody debris function (important to habitat structure as described in the previous section) were between 33 and 328 feet. However, given that trees located 300 feet landward from the edge of a bluff or bank would not immediately be recruited on the nearshore, consideration should be given to the site's potential tree height and the current and expected rate of bluff or bank retreat when establishing buffers for providing large woody debris.

The panel found that buffer widths to support a number of specific riparian functions were identified by May (2003) and Knutson and Naef (1997). May recommended 98 feet for fine sediment control, and shade and microclimate control and 164 feet for the LWD function. Knutson and Naef recommended 138 feet for fine sediment control, 90 feet for temperature moderation, and 147 feet for LWD and litter fall functions. The panel's review indicated that recommendations for wildlife habitat protection ranged from 50 feet (specific to rural areas) to 328 feet.

Riparian buffer widths necessary for protecting functions have also been based on a site's potential mature tree height called the FEMAT Curves Method (FEMAT 1993). Several other site specific methods of sizing buffers for freshwater systems have been developed and are discussed later in Section 3.5.

FEMAT CURVES METHOD

The panel found that the FEMAT curves method is applicable to marine nearshore environments (Brennan et al. 2009). The FEMAT curves method is based on the effectiveness of a mature forest at supporting a riparian function at various buffer widths. For example, the FEMAT curve for large woody debris (LWD) indicates that an approximately 131-foot buffer width achieves 80% effectiveness of the LWD function (Table 3-3). In some cases, the FEMAT function curves

illustrate several parameters, such as the water quality FEMAT curve, which shows recommended buffer widths to achieve 80 percent removal of pollutants from 82 feet for sediment, 197 feet for nitrogen to 279 feet for phosphorous removal. In this case, the range of widths reflects recommendations addressing each parameter of concern. FEMAT curve based recommendations were not provided for wildlife functions

Table 3-3. Riparian buffers functions and width recommendations in the literature.

Riparian function	Standard literature citations for recommended buffer widths (feet) to achieve 80% effectiveness and literature cited	FEMAT Curve Method (minimum buffer width to achieve 80% effectiveness)
Water quality	Lowest: 16 ft: Schooner and Williard (2003) for 98% removal of nitrate in a pine forest buffer	82 ft: sediment 197 ft: TSS 197 ft: nitrogen 279 ft: phosphorus
	Highest: 1969 ft: Desbonnet et al (1994/1995) for 99% removal	
Fine sediment control	Lowest: 82 ft: Desbonnet et al (1994/1995) for 80% removal	82 ft: (sediment) 197 ft: (TSS)
	Highest: 299 ft Pentec Environmental (2001) for 80% removal	
Shade/Microclimate	Lowest: 56 ft: Belt et al 1992 IN Eastern Canada Soil and Water Conservation Centre (2002) for 90% effectiveness	121 ft (0.6 SPTH*)
	Highest: 125 ft: Christensen (2000) for 80% temperature moderation	
LWD	Lowest: 33 ft: Christensen (2000) for 80-90% effectiveness	131 ft (0.65 SPTH*)
	Highest: 328 ft: Christensen (2000) for 80-90% effectiveness	
Litterfall & Insects	16 to 328 ft: Bavins et al (2000)	80 ft (0.4 SPTH)
Hydrology/slope stability	Consensus is that for steep slopes affecting critical areas such as feeder bluffs, a site specific analysis by a qualified professional is necessary to determine a specific buffer width.	Recommendations are based on protecting property. Buffers widths are provided for a range of slope conditions but do not consider underlying geology or adjacency to critical areas.

*FEMAT data in this table are based on one SPTH as equal to 200 ft. This typical mature tree height will vary based on site conditions. For San Juan County, the height of mature conifers is estimated to be 80 – 90 feet.

Figures 3-2 and 3-3 illustrate buffer function compared to buffer width from Murphy, 1995.

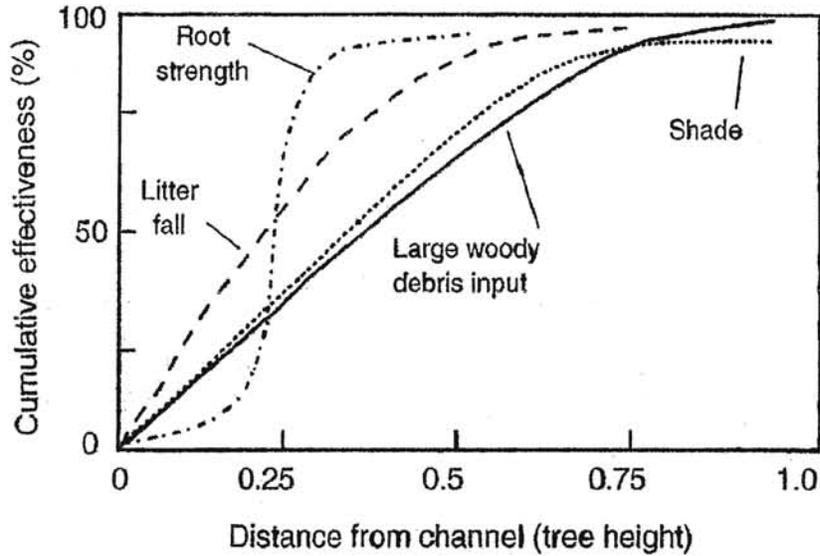


Figure 3-2. The cumulative effectiveness of various functions of riparian vegetation in relation to distance from the streambank in western Oregon. [Murphy (1995) after FEMAT 1993]. For San Juan County, the height of mature conifers is estimated to be 80–90 feet.

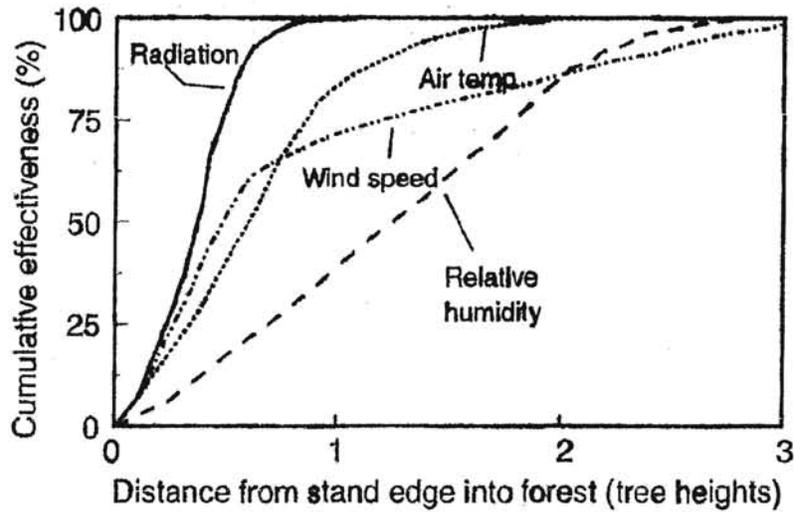


Figure 3-3. The cumulative effectiveness of various functions of forest vegetation in relation to distance from the edge of adjacent clearcuts in western Oregon. [Murphy (1995) after FEMAT 1993].

Regardless of which approach or combination of approaches is adopted, to increase the effectiveness of the buffer, additional considerations should be applied. These include allowing driftwood accrual on beaches, and protecting, restoring and enhancing marine riparian forests for long-term future wood recruitment. These measures will help to prevent or slow shoreline retreat, and reduce landslide potential. Using natural stabilization designs to protect shores (if shoreline protection is needed) will further help to protect nearshore ecosystem processes.¹⁸ A need for shoreline protection may become more frequent with increased wave energy (predicted for some portions of the County), and sea level rise that are anticipated as a result of global climate change.

Activities that pose a higher risk of adverse effects on marine HCAs may require additional "setbacks" with limitations on uses. Other measures may allow for reduced buffers, such as effective on-site pollution control measures, low impervious surface, and minimizing breaks (or gaps) in buffers (Wenger 1999). Similarly, encouraging preservation and restoration of native vegetation may contribute to increased habitat complexity and improved functional benefits compared to non-native landscapes, which typically result in a homogenous habitat structure. This could lead to allowing a narrower buffer in such circumstances. As mentioned previously, shoreline stability and/or the presence of a feeder bluff may dictate a larger buffer or additional setback, based on the observed and anticipated erosion rates (determined by a qualified professional).

Finally, although minimally discussed in this report, the County may wish to consider measures to protect rocky intertidal communities from degradation due to human trampling. An example would be to adapt Oregon's territorial sea management plan (OCMP 2010) to local circumstances (Irvine 2005). Irvine (2005) recommends the plan because it includes realistic considerations for several of the main issues related to human use of the shoreline. More specifically, the evaluation of human use and disturbance trends in order to minimize impacts from human trampling may provide long-term benefits for the conservation of important habitats.

DISCUSSION AND DATA GAPS

The importance of terrestrial contributions to the marine environment has been documented (Romanuk and Levings 2010), however, there have been no quantitative assessments describing the contribution (rate and volume) of litter fall and allochthonous inputs specific to the county's marine riparian zone. Therefore, the extent of impacts from local shoreline development in this regard remains uncertain. Similar uncertainties are present with regard to other functional benefits potentially provided by the marine riparian area for a range of habitats.

Much of the existing buffer literature addressing water quality maintenance describes buffer effectiveness based on a percentage of pollutant removal, without recognizing that the quantity of pollutants exported from a site is actually the product of both the quantity of incoming pollutants and the removal effectiveness of the buffer either standing alone, or in conjunction with other treatment mechanisms. If this is not considered, a particular percentage reduction may be excessive for a given situation (with a buffer that is larger than necessary), or the buffer may not provide sufficient treatment to comply with water quality standards or protect biological resources. More focused studies that apply to marine shorelines and are specific to

¹⁸ Natural stabilization designs to protect shores include:

- Using stable large wood pieces without the use of cables or ecology block,
- Nourishment with sediment types appropriate for the site, and
- Revegetation (using, for example, inoculation with beneficial microorganisms and other treatments to expedite growth) with plants that respond well to site-specific conditions.

No. 72235-2-1

COURT OF APPEALS, DIVISION I
OF THE STATE OF WASHINGTON

COMMON SENSE ALLIANCE,
P.J. TAGGARES COMPANY,
AND FRIENDS OF THE SAN
JUANS,

Appellants,

v.

GROWTH MANAGEMENT
HEARINGS BOARD, WESTERN
WASHINGTON REGION, AND
SAN JUAN COUNTY,

Respondents.

CERTIFICATE OF SERVICE

The undersigned, under penalty of perjury under the laws of the State of Washington, declare that on November 5, 2014, they caused to be served: (1) BRIEF OF APPELLANTS; and (2) this DECLARATION OF SERVICE on the parties as indicated below:

Amy S. Vira
Deputy Prosecuting Attorney
San Juan County Prosecuting Attorney
350 Court Street
P.O. Box 760
Friday Harbor, WA 98250
Email: amyv@sanjuanco.com
(360) 378-4101
Attorneys for Respondent San Juan County

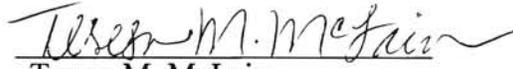
2014 NOV 5 PM 4:01
COURT OF APPEALS DIV I
STATE OF WASHINGTON

Kyle A. Loring
Friends of the San Juans
P.O. Box 1344
Friday Harbor, WA 98250
Email: kyle@sanjuans.org
(360) 378-2319
Attorney for Petitioner Friends of the San Juans

Diane L. McDaniel
Senior Assistant Attorney General
Wash. State Office of the Attorney General
P.O. Box 40100
Olympia, WA 98504-0100
Email: dianem@atg.wa.gov and LALolyEF@atg.wa.gov
(360) 753-2747
Attorney for Respondent Growth
Management Hearings Board

Brian T. Hodges
Pacific Legal Foundation
10940 NE 33rd Place, Suite 210
Bellevue, WA 98004
Email: bth@pacificlegal.org
(425) 576-0484
Attorney for Amicus Curiae Pacific Legal Foundation

Signed this 5th day of November, 2014, at Seattle, Washington


Teresa M. McLain