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**BEFORE THE WESTERN WASHINGTON GROWTH
MANAGEMENT HEARINGS BOARD**

SWINOMISH INDIAN TRIBAL COMMUNITY, et al.,

Petitioners,

and

WASHINGTON ENVIRONMENTAL COUNCIL, et al.,

Intervenors,

v.

SKAGIT COUNTY,

Respondent,

and

AGRICULTURE FOR SKAGIT COUNTY, et al.,

Intervenors.

No. 02-2-0012c

**COMPLIANCE
ORDER –
ADAPTIVE
MANAGEMENT**

I. SUMMARY OF THE DECISION

This matter comes to the Board to determine Skagit County’s compliance with the Growth Management Act’s (the GMA or the Act) requirements to protect critical areas in designated and ongoing agricultural lands. RCW 36.70A.172, 36.70A.040, and 36.70A.060. For almost a decade, Skagit County (County) has struggled to strike a balance between the conservation of agricultural lands and the protection of fish and wildlife habitat critical areas (FWHCAs) in ongoing agricultural lands. This has been a contentious but very significant undertaking since the County strives to maintain two

1 of its most important assets - productive agricultural lands and wild salmon. The
2 Board found in December 2003 that the County's approach failed to protect FWHCAs
3 in ongoing agricultural lands because of the following: (1) the ordinance failed to
4 ensure that its critical areas regulations in ongoing agricultural lands indeed would be
5 enforced, and (2) the ordinance's monitoring and adaptive management program did
6 not adequately ensure the protection of these FWHCAs. On June 21, 2004, the
7 County adopted Ordinance 020040011 and Resolution No. R20040211 for the purpose
8 of bringing its critical area protections in ongoing agricultural lands into compliance
9 with the GMA. Resolution No. R20040211 was also then appealed by the Swinomish
10 Tribe (the Tribe), alleging that the County's approach still did not protect FWHCAs.
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13 In this decision, the Board finds that the County has amended its ordinance to ensure
14 that alleged violations will be investigated and corrective action will be enforced, if
15 violations have occurred. However, the Board also finds that the County's monitoring
16 and adaptive management program does not ensure the protection of the existing
17 functions and values of FWHCAs in ongoing agricultural lands as required by RCW
18 36.70A.040, RCW 36.70A.060, and RCW 36.70A.172. The County has adopted
19 minimal protective regulations in ongoing agricultural lands which must be buttressed
20 with an adaptive management program to ensure that protection is actually provided.
21 However, the County's program fails to provide the needed adaptive management to
22 ensure that its protection measures are, in fact, protecting FWHCAs. Fundamentally,
23 the program lacks benchmarks and triggers for corrective action and the ability to
24 detect the cause of any deterioration in the existing functions and values of FWHCAs
25 in a timely way so that the current protection measures could be adjusted to provide
26 adequate protection of fish habitat.
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1 **II. PROCEDURAL HISTORY**

2 This case has a long and complicated history. Case No, 02-2-0012c is the final result
3 of the consolidation of Case Nos. 96-2-0025, 01-2-0004c, 00-2-0033c, 02-2-0009, and
4 02-2-0012c. The overriding issue in these now consolidated cases is whether the
5 County has complied with the GMA’s requirements to protect critical areas and
6 anadromous fish habitat in ongoing agricultural lands.
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9 On December 8, 2003, the Board found that the County’s approach failed to protect
10 fish and wildlife habitat areas because of lack of clarity about whether the limited
11 watercourse protection measures it imposed would actually be enforced and because
12 of the lack of an effective monitoring and adaptive management program to ensure
13 that the protective measures were actually working.
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16 On June 21, 2004, the County adopted Ordinance 020040011 and Resolution No.
17 R20040211 for the purpose of bringing its critical area protections in ongoing
18 agricultural lands into compliance with the GMA.
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20 A compliance hearing was held on August 19, 2004. Alix Foster represented the
21 Tribe. Samuel “Billy” Plauche represented the County. Sheila Lynch, Assistant
22 Attorney General, represented the Washington Department of Fish and Wildlife
23 (WDFW). All three Board members attended. At the Compliance Hearing, the
24 Presiding Officer ruled on several of the Tribe’s and County’s motions to supplement
25 the record. The following documents were admitted as supplements to the record:
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- 27
- 28 • Index # 377 - Centennial Clean Water Agreement
 - 29 • Index # 379 - Letter to the County from WDFW (June 8, 2004)
 - 30 • Index # 380 - A June 28, 2004 email from Dan Penttila
 - 31 • Index # 383 - Skagit County’s Field Form, Channel Constraint and Field
32 Chemistry - Streams/Rivers

- 1 • Index # 402 - Critical Assistance Handbook, Appendix ----(Washington
2 Department of Community, Trade, and Economic Development, November
3 2003)

4 The Board took official notice of the following documents:

- 5 • Item # 384 - Concise Explanatory Statement of Responses Study WAC 173-
6 201A- 200
7 • Item # 385 - Evaluation Standards for Protecting Aquatic Water Life
8 (Department of Ecology publication # 00-10-070)

9 The Board denied the motion to add the following items as supplements to the record:

- 10 • Index # 379 - Declaration of Keith Knutzen
11 • Index # 381 - Study of No-name Slough
12 • Index # 382 - Federal Register Notice (June 14, 2004)
13 • Index # 409 - May 29, 2004 e-mail from Rich Costello to Dan Penttila
14 • Index # 401 - June 21, 2005 e-mail from Rich Costello to Peter Birch
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III. BURDEN OF PROOF

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Comprehensive plans and development regulations and amendments to them are
19 presumed valid upon adoption. RCW 36.70A.320.

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The burden is on petitioners to demonstrate that the action taken by Skagit County is
22 not in compliance with the requirements of the GMA. RCW 36.70A.320(2).

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Pursuant to RCW 36.70A.320(3), we “shall find compliance unless [we] determine
26 that the action by [Skagit County] is clearly erroneous in view of the entire record
27 before the board and in light of the goals and requirements of [the GMA].” In order to
28 find the County’s action clearly erroneous, we must be “left with the firm and definite
29 conviction that a mistake has been made.” *Department of Ecology v. PUD 1*, 121
30 Wn.2d 19, 201 (1993).

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1 **IV. ISSUES TO BE DISCUSSED**

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3 **Compliance Issues¹:**

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5 *1) Whether the County has amended Ordinance 02003002 to make it clear that*
6 *failure to comply with the mandatory Watercourse Protection Measures will result*
7 *in enforcement upon complaint.*

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9
10 *2) Whether the County has provided adequate specificity in its regulations*
11 *applicable to FWHCAs in ongoing agricultural lands as to how monitoring will be*
12 *conducted, how the resulting data will be used, what process will be used to take*
13 *corrective action, and included timelines that ensure prompt corrective action*
14 *and/or additional regulations if the monitoring program demonstrates that the*
15 *current mandatory Watercourse Protection Measures and voluntary BMPs have*
16 *been insufficient to protect critical areas and water quality from further*
17 *degradation.*

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20 **New Issues² & ³:**

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22
23 *a. Whether the Resolution violates the Growth Management Act (“GMA”) by*
24 *failing to comply with the requirement of RCW 36.70A.040(3) and .060(2) that the*
25 *County shall protect the functions and values of critical areas.*

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27 ¹ From the December 8, 2003 Compliance Order

28 ² From the Petition for Review filed in *Swinomish Indian Tribal Community v. Skagit County*,
29 WWGMHB Case No. 04-2-0016 (August 12, 2004), challenging Ordinance 020040011 and Resolution
30 No. R20040211.

31 ³ This case was consolidated with Case No. 02-2-0012c. See *Swinomish Tribal Community v. Skagit*
32 *County*, Case No. 02-2-0012c and *Swinomish Tribal Community v. Skagit County*, Case No. 02-2-0016
(Order on Consolidation, August 24, 2004).

1 *b. Whether the Resolution violates the GMA by failing to consider best*
2 *available science and by failing to give special consideration to conservation or*
3 *protection measures necessary to preserve or enhance anadromous fisheries in*
4 *violation of RCW 36.70A.172(1) and WAC 365-195-920.*

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7 *c. Whether Skagit County has failed to comply with RCW 36.70A.060,*
8 *36.70A.170; and 36.70A.172(1) and WAC 365-195-920 by failing to adopt*
9 *monitoring and adaptive management programs that will result in changes to the*
10 *County's ordinance in the event that the County's ordinance fails to protect the*
11 *functions and values of fish habitat.*

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14 *d. Whether Skagit County has failed to comply with RCW 36.70A.060,*
15 *36.70A.170; and 36.70A.172(1) and WAC 365-195-920 by failing to adopt*
16 *monitoring and adaptive management programs that will result in timely changes to*
17 *the County's ordinance in the event that the County's ordinance fails to protect the*
18 *functions and values of fish habitat.*

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21 *e. Whether Skagit County has failed to comply with RCW 36.70A.060,*
22 *36.70A.170; and 36.70A.172(1) and WAC 365-195-920 by failing to adopt*
23 *monitoring and adaptive management programs that contain performance criteria*
24 *that will trigger changes to the County's ordinance in the event that the County's*
25 *ordinance fails to protect the functions and values of fish habitat.*

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27 *f. Whether Skagit County has failed to comply with RCW 36.70A.172(1) and*
28 *WAC 365-195-920 by failing to adopt scientifically valid monitoring and an adaptive*
29 *management programs.*
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V. DISCUSSION OF THE ISSUES

A. *Enforcement Measures:*

Whether the County has amended its regulations to make it clear that failure to comply with the mandatory Watercourse Protection Measures will result in enforcement upon complaint.

The County added the following language to SCC 14.24.120(4): “Failure to comply with these mandatory Watercourse Protection Measures for Ongoing Agricultural shall result in enforcement as provided in SCC 14.44.085.”

No Petitioner argued that this amendment to the County’s code did not comply with the Board’s December 8, 2004 order or the GMA.

The Board finds that the amended language makes it clear that violations of the Watercourse Protection Measures will be investigated if a complaint is filed and that enforcement will occur if a violation is found.

Conclusion: The Board finds this amendment to SCC 14.24.120(4) now complies with the Board’s December 8, 2003 order. This portion of the County’s regulations for protecting critical areas in ongoing agricultural lands is now compliant with RCW 36.70A.040, RCW 36.70A.060, and RCW 36.70A.172.

B. *Monitoring and Adaptive Management:*

Whether the County has provided adequate specificity in its regulations applicable to FWHCAs in ongoing agricultural lands as to how monitoring will be conducted, how the resulting data will be used, what process will be used to take corrective action, and include timelines that ensure prompt corrective action and/or additional regulations if the monitoring program demonstrates that the current mandatory Watercourse Protection Measures and voluntary BMPs have been insufficient to protect critical areas and

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water quality from further degradation. (Remaining Compliance Issue from December 8, 2003 Compliance Order)

Whether the Resolution violates the GMA by failing to comply with the requirement of RCW 36.70A.040(3) and .060(2) that the County shall protect the functions and values of critical areas.

Whether the Resolution violates the GMA by failing to consider best available science and by failing to give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries in violation of RCW 36.70A.172(1) and WAC 365-195-920.

Whether Skagit County has failed to comply with RCW 36.70A.060, 36.70A.170, and 36.70A.172(1) and WAC 365-195-920 by failing to adopt monitoring and adaptive management programs that will result in changes to the County's ordinance in the event that the County's ordinance fails to protect the functions and values of fish habitat.

Whether Skagit County has failed to comply with RCW 36.70A.060, 36.70A.170; and 36.70A.172(1) and WAC 365-195-920 by failing to adopt monitoring and adaptive management programs that will result in timely changes to the County's ordinance in the event that the County's ordinance fails to protect the functions and values of fish habitat.

Whether Skagit County has failed to comply with RCW 36.70A.060, 36.70A.170; and 36.70A.172(1) and WAC 365-195-920 by failing to adopt monitoring and adaptive management programs that contain performance criteria that will trigger changes to the County's ordinance in the event that the County's ordinance fails to protect the functions and values of fish habitat.

Whether Skagit County has failed to comply with RCW 36.70A.172(1) and WAC 365-195-920 by failing to adopt scientifically valid monitoring and an adaptive management programs.

((Issues from the new Petition filed in WWGHMB Case No. 04-2-0016, challenging Resolution R20040211, *Swinomish Tribal Community v. Skagit County*, Case No. 04-2-0016 (Petition for Review, August 12, 2004) at 2 and 3.))

1 We will discuss these related issues together.

2

3 **Board Discussion**

4 In its last order, this Board found that the County's development regulations to protect
5 salmon habitat in ongoing agricultural lands must include monitoring and adaptive
6 management to comply with RCW 36.70A.172. Compliance Order (December 8,
7 2003) at 56. The Board determined that the GMA requires the protection of the
8 *existing* functions and values of fish habitat in ongoing agricultural lands. Compliance
9 Order (December 8, 2003) at 27. That decision also emphasized that the County
10 approach adopted in Ordinance 02003002 is acceptable because the County requires
11 that ongoing agriculture activities must be conducted such that those activities do not
12 harm the existing functions and values of fish habitat. Compliance Order (December
13 8, 2004) at 51. The Board acknowledged that the County could impose a lesser level
14 of precaution in designated ongoing agricultural lands to protect fish habitat than is
15 required in all other county designations,⁴ if, at the same time, this "less than
16 precautionary" approach was supported by a monitoring and adaptive management
17 program that identifies and responds to any elements of the County's strategy that fail
18 to protect the existing functions and values of fish habitat.
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23 As a result of the Board's December 8, 2003 Compliance Order and the Tribe's
24 August 12, 2004 Petition for Review, this matter is before the Board to determine
25 whether the County's recently adopted monitoring and adaptive management
26 programs are adequate to ensure the protection of FWHCAs in ongoing agricultural
27 lands. The Tribe argues that the adaptive management program is non-compliant.
28 They point to several deficiencies they see in the program: it suffers from a lack of
29 required targets and benchmarks (a threshold for each parameter); it has no
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32 ⁴ Other than on lands with ongoing agriculture, the County imposes a buffer requirement to protect fish habitat. New development in designated agricultural lands also requires buffers.

1 requirement for corrective action; it cannot determine the cause and effect of any
2 agricultural practices; it doesn't have a timeline for monitoring that will give
3 information quickly enough; and it fails to monitor on agricultural lands if the
4 landowner doesn't consent. Tribe's Motion for Noncompliance and Memorandum of
5 Support Thereof (July 15, 2004) at 13 – 27.
6

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8 The Washington State Department of Fish and Wildlife (WDFW, the Department)
9 also argues against a finding of compliance. At the outset, the Department notes that
10 the County's approach involves more risk to fish than would a buffer requirement.
11 WDFW points out that it is still unclear what level of change will trigger corrective
12 action because the "information conclusively demonstrates" standard is vague and
13 uncertain. WDFW further notes that the process for responding to changes is highly
14 subjective because change is only required when "deemed necessary." Opening Brief
15 of Washington Department of Fish and Wildlife Regarding the August 19, 2004
16 Compliance Hearing (WDFW's Opening Brief, July 15, 2004) at 2 – 4. As to the
17 subjects that the County has chosen to monitor, WDFW notes that stream habitat
18 parameters do not include water temperature; that "wadeable streams" is not a defined
19 term; and that the monitoring program fails to segregate data from streams with a
20 salmonid presence from those without such a presence. The Department further
21 criticizes the failure of the program to characterize substrates within the sampling and
22 to ensure that sampling is done at the same times each year. WDFW's Opening Brief
23 at 4 and 5.
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27 The County, on the other hand, responds that there were only two areas for
28 compliance under the Board's last order: requiring enforcement if there is a failure to
29 comply with the mandatory Watercourse Protection Measures; and development of a
30 Monitoring and Adaptive Management Program to comply with the Board's
31 December 8, 2003 order. Skagit County's Response Brief for Compliance Proceeding
32

1 (Skagit County's Response Brief, August 5, 2004) at 5. The County points out that
2 the new plan shows how monitoring will occur and how data will be collected,
3 provides specificity as to how the data will be used, establishes statistically significant
4 water quality trends, collects data and evaluates this data at five-year intervals,
5 provides for evaluation and corrective action, and sets timelines for prompt corrective
6 action (at least every three years). Skagit County's Response Brief at 5 – 14. The
7 County argues that what the Tribe and WDFW want is beyond the scope of
8 compliance and that Petitioners have not met their burden of proof because the County
9 has added the specificity to its monitoring and adaptive management program that the
10 Board's December 8, 2003 directed. Skagit County's Response Brief at 5. The
11 County argues that the failure to identify the cause of trends isn't a flaw in the
12 program because this can be determined later if deterioration in functions has been
13 proved. Skagit County's Response Brief at 22 – 24. It also asserts that the opt-out
14 provisions which allow landowners to refuse to allow monitoring on their lands do not
15 make the system biased. Skagit County's Response Brief at 18 – 20.
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19 **A. The Scope of this Decision**

20 The Board has labored over this compliance decision, in part because the County's
21 implementation of an adaptive management program has highlighted some critical
22 deficiencies in the County's plan overall. We are mindful that the County is entitled
23 to finality on those issues that were decided in its favor in the 2003 Compliance Order.
24 However, this Board has stated in several decisions that the issue before the Board at a
25 compliance hearing is not whether the County has complied with the Board's remand
26 order but whether the County's action complies with the GMA pursuant to RCW
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1 36.70A.330(1) .⁵ For instance, in *Achen v. Clark County*, WWGMHB Case No. 95-2-
2 0067(Compliance Order, 10/6/95), the Board said:

3 We have previously held in *Port Townsend v. Jefferson County*,
4 WWGMHB #94-2-0006 (*Port Townsend*) that the clear
5 language of RCW 36.70A.330(1) directs that the ultimate
6 question in a compliance hearing is whether there is compliance
7 with the Act, not necessarily whether there is specific
8 compliance with the remand order.

9 *Achen v. Clark County*, Case No. 95-2-0067(Compliance Order,
October 1, 1996) at 2.

10 Furthermore, the Tribe has filed a timely petition that challenges Resolution No.
11 R20040211. In the new petition, the Tribe asks the Board to determine that the
12 challenged enactments do not comply with RCW 36.70A.040, RCW 36.70A.060, and
13 RCW 36.70A.172 on the grounds that: (1) the monitoring and adaptive management
14 program does not protect the functions and values of FWHCAs, (2) best available
15 science was not considered in designing the monitoring and adaptive management
16 program needed to preserve anadromous fish, (3) the monitoring and adaptive
17 management program cannot make timely changes if the County's protection
18 measures fail to protect FWCHAs and anadromous fish, and (4) the monitoring and
19 adaptive management program do not contain performance measures to trigger timely
20 changes if protection measures fail. *Swinomish Tribal Community v. Skagit County*,
21 WWGMHB Case No. 04-2-0016 (Petition for Review, August 12, 2004).

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25 Therefore, consistent with RCW 36.70A.330(1), previous decisions of this Board, and
26 the obligation to review all the issues raised in a timely filed petition, the Board will
27 decide whether the County's monitoring and adaptive management program complies
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31 ⁵ The Board shall set a hearing for the purpose of determining whether the state
32 agency, county, or city is in compliance with the requirements of this chapter.
(RCW 36.70A.330(1)).

1 with the goals and requirements of the GMA, in light of the findings in the Board's
2 earlier compliance decisions.

3
4 **B. Why an Adaptive Management Program is Critical**

5 We note that the County's approach to critical areas regulations in ongoing
6 agricultural lands must be viewed as an integrated strategy; if one piece of that
7 strategy does not work, then it implicates the whole. Therefore, the effectiveness of
8 the monitoring and adaptive management program cannot be viewed as some ancillary
9 issue; it is central to approval of the County's approach to regulation of critical areas
10 in ongoing agricultural lands. Our December 8, 2003 Compliance Order described
11 the lack of certainty of the scientific information regarding existing fish habitat in
12 Skagit County's ongoing agricultural lands and agreed that the County could pursue
13 its minimal protection measures in ongoing agricultural lands provided they were
14 buttressed by an adaptive management program to ensure their effectiveness in
15 protecting fish habitat:
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18 The Tribe and WEC believe that the County's approach is too risky, is
19 not precautionary, and shifts the balance in favor of agriculture. We
20 find that since the information about existing fish habitat is at this time
21 incomplete, it is not clear that this in fact is the case. However, we
22 agree with the Tribe, WEC, and the WDFW that effective monitoring
23 and adaptive management are key ingredients to achieving this balance
24 and reducing the risk.

25 Compliance Order (December 8, 2003) at 30.

26 For this reason, the Board found that a less-than precautionary approach in ongoing
27 agricultural lands could be compliant with the requirements of RCW 36.70A.172,
28 36.70A.040 and 36.70A.060, but only if it included a well-defined and responsive
29 adaptive management program. The Board found that while the County's Resolution
30 outlined its monitoring and adaptive management program, it was not sufficiently
31 described to provide the needed safety net for the County's less-than-precautionary
32

1 strategies and did not comply with the GMA. Compliance Order (December 8, 2003)
2 at 57.

3
4 **C. The Concept of “Adaptive Management”⁶**

5 “Adaptive management” is a term used to describe an approach to managing
6 regulations to achieve effectiveness in the highly complex area of ecological
7 functions. In the GMA context, the idea of adaptive management is used where there
8 is uncertain or insufficient scientific information about critical areas in a given
9 jurisdiction. WAC 365-195-920. This administrative provision provides that in such
10 circumstances a “precautionary” approach should be adopted (WAC 365-195-920(1))
11 together with “an effective adaptive management program that relies on scientific
12 methods to evaluate how well regulatory and nonregulatory actions achieve their
13 objectives.” WAC 365-195-920(2). It provides that management, policy and
14 regulatory actions should be treated as experiments that are purposefully monitored
15 and evaluated to determine whether they are effective and, if not effective, improved
16 to increase their effectiveness. WAC 365-195-920.

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20 Although the Board did not require the County to take a “precautionary or no risk
21 approach” in ongoing agricultural lands, it did reference WAC 365-195-920; the
22 Board referred to this guidance as setting out the basis for a monitoring and adaptive
23 management program to ensure that the limited development regulations (and
24 voluntary measures) that the County adopted are indeed effective in protecting the
25 existing functions and values of fish habitat.
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30 ⁶ Pursuant to RCW 36.70A.172(2), the Board consulted with Dr. Oscar Soule, Ph.D., retired professor
31 of Environmental Studies at The Evergreen State College, to assist the Board in reaching its decision
32 involving critical areas. Dr. Soule provided expert review of the Board’s decision regarding adaptive
management principles. Attached as Appendix A to this decision is a copy of the Notice of
Consultation with Scientific Expert Pursuant to RCW 36.70A.172(2) provided to the parties.

1 Adaptive management is an approach used in a variety of different environmental
2 contexts. Under Washington administrative regulations, adaptive management is
3 recognized as a regulatory approach utilized in forest practices and shorelines
4 protection, as well as in protection of critical areas under the GMA. See WAC 173-
5 26-201(1)(g) (relating to shorelines protections) and WAC 222-08-160 (relating to
6 forest practices).
7

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9 The concept of adaptive management to address scientific uncertainties in complex
10 ecosystems has also been adopted in other jurisdictions as well. See, for example,
11 Hymanson, Kingma-Rymek, Fishbain, Zedler and Hansch, California Coastal
12 Commission: Procedural Guidance for Evaluating Wetland Mitigation Projects in
13 California's Coastal Zone, "Use of Monitoring and Adaptive Management to Promote
14 Regeneration in the Allegheny National Forest," Lois DeMarco, USFS National
15 Silvicultural Workshop, Kalispell, Montana (regarding the Allegheny National Forest
16 in Pennsylvania); and the British Columbia Forest Practices Code.
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19 An adaptive management program incorporates research into conservation action.
20 Salarfsky, Margoluis and Redford, "Adaptive Management: A Tool for Conservation
21 Practitioners," World Wildlife Fund, Inc. (2001). Both policy and science are required
22 to design a monitoring program that is capable of providing timely and accurate
23 information to policy makers and habitat managers so that they can effectively react to
24 trends. Memorandum from W. Gregory Hood Ph.D. to Larry Wasserman, The Skagit
25 County Salmon Habitat Monitoring Program, May 30, 2004, Ex. 364.5.1 at 2. Thus,
26 an adaptive management program should accomplish two major objectives: it should
27 collect and evaluate meaningful data concerning the effectiveness of the less-than-
28 precautionary protection measures; and it should provide for swift and certain
29 corrective action in response to indications that those measures are not sufficient to
30 protect the critical areas at issue. The establishment of clear goals, objectives,
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1 performance standards, and a well-defined monitoring program are key to a successful
2 adaptive management program. Procedural Guidance for Evaluating Wetland
3 Mitigation Projects in California's Coastal Zone, California Coastal Commission,
4 *supra*.

5
6 This description of adaptive management is consistent with previous direction the
7 Board has given the County. In our compliance order in *Skagit Audubon Society v.*
8 *Skagit County*, Case No. 00-2-0033c, in a similar instance where the Board accepted
9 an untested, innovative approach to protecting FWHCAs in ongoing agricultural lands,
10 the Board said:
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12
13 Since MARP uses an untested approach, the effectiveness and
14 responsiveness of the monitoring and adaptive management program
15 will be key. We will maintain jurisdiction to ensure that the design and
16 development of that program contains the following elements:

- 17 (1) clearly defined biological performance standards,
- 18 (2) specific habitat objectives for triggers,
- 19 (3) specific predetermined management responses to unmet
standards and objectives,
- 20 (4) timelines by which standards must be met and required
timelines for predetermined management responses, and
- 21 (5) funding and work program established.

22 *Skagit Audubon Society v. Skagit County*, WWGMHB Case No. 00-2-0033c
(Compliance Order, 2/9/01) at 2.

23 24 **D. The County's Adaptive Management Program**

25
26 Here, uncertainty exists about the efficacy of the Watercourse Protection Measures
27 and the voluntary best management practices allowed in ongoing agricultural lands for
28 the purpose of protecting the functions and values of fish habitat. While the County
29 has added specificity to its regulations defining how monitoring will be conducted,
30 how the resulting data will be used,⁷ and the process that will be used to take
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⁷ Skagit County's Response Brief for Compliance Proceeding (August 5, 2004) at 7 and 8.

1 corrective action, specificity alone does not make the County's monitoring and
2 adaptive management program compliant with the GMA. Until there is specificity
3 about what to expect of the County's program, compliance with the GMA could not be
4 determined. That is why the Board required specificity in the County's program.
5 Now, the County has provided specificity so that the merits of the program in reaching
6 the needs to protect fish habitat can be assessed.
7

8
9 WDFW advised the County about the important components of an effective adaptive
10 management program:

11 "Clearly defining what constitutes success or failure and what triggers
12 action by policy before the data are collected is a critical part of
13 adaptive management."

14 Memo from WDFW Review of the Skagit County Salmon Habitat Monitoring
15 Program Quality Assurance Project Plan. (Draft March 27, 2004), Exhibit
16 364.5.4 at 2.

17 Under the circumstances here, the adaptive management program should provide
18 meaningful data concerning the effectiveness of the less-than-precautionary protection
19 measures adopted by the County to protect salmon habitat in ongoing agricultural
20 lands; and it should provide for swift and certain corrective action in response to
21 indications that those measures are not sufficient to actually protect that habitat. In
22 this way, the adaptive management program will provide the basis for taking any
23 needed corrective action in order to protect the existing functions of FWHCAs (RCW
24 36.70A.040 and .060). We examine the County's adaptive management program to
25 determine whether it accomplishes these aims.
26

27
28 ***1) Collect and evaluate meaningful data concerning the effectiveness of the***
29 ***less-than-precautionary protection measures***

30 To acquire meaningful data, the program should start with benchmarks that describe
31 the state of the existing functions and values of fish habitat in ongoing agricultural
32 lands. This is necessary because there must be a baseline from which the effectiveness

1 of the protective regulations is measured. Tribe's Memorandum at 13 – 17, Reply
2 Brief of Washington Department of Fish and Wildlife Regarding the Department of
3 Fish and Wildlife Regarding the August 9, 2004 Compliance Hearing at 2, and
4 Exhibit 364.5.4 at 1 and 2. As the County admits, it still has not developed these
5 benchmarks. County's Response Brief at 25. While the County points to difficulties
6 in establishing benchmarks, these difficulties do not obviate the need for a baseline
7 from which effectiveness can be measured.
8

9
10 In fact, it appears that the County was very close to making to having some
11 benchmarks at the time Resolution No. R20040211 was adopted:
12

13 The County will conduct a baseline survey of physical and in-stream
14 physical and in-stream salmon characteristics of representative salmon-
15 bearing watercourses countywide prior October 31, 2004.
16 Resolution No. R20040211, Section 2(a).

17 However, the County's adaptive management program in support of its less-than-
18 precautionary protective measures cannot be found compliant without a baseline that
19 shows the existing status of the habitat that requires protection.
20

21 Second, the data should measure those characteristics of fish habitat that are necessary
22 to support fish. The adaptive management program should look to science to
23 determine what characteristics of the existing functions and values of fish habitat in
24 ongoing agricultural lands are necessary to sustain fish. We were told, at argument,
25 for example, that there are certain levels of salt that will kill fish or fish at various
26 stages of development. The County's program needs to establish triggers to change
27 management practices affecting the existing functions and values of fish habitat well
28 before that level is reached. These triggers for change should be set both in light of
29 the benchmarks for existing conditions *and* in accordance with scientifically-based
30 habitat minimums. Exhibit 364.5.2 at 2 and Exhibit 364.5.4 at 1 – 4. Our last
31
32

1 compliance order also expressed the Board's concern about the County's adaptive
2 management program's lack of benchmarks and triggers:

3
4 The County must also clearly define "data conclusively demonstrates"
5 so it will be clear what level of change will be necessary to trigger
6 corrective action."

7 Compliance Order (12/8/03) at 49.

8 An examination of the County's Resolution shows that the County has not changed its
9 approach to address the Board's direction that the County clearly define what level of
10 change will be necessary to trigger correction action.

11
12 If at any time monitoring data *conclusively demonstrates* that the
13 current Watercourse Protection Measures specified in SCC
14 14.24.120(4) are not sufficient to meet the No Harm or Degradation
15 Standard, then the County shall consult with the Skagit Conservation
16 District, the Natural Resource Conservation Service, the Washington
17 Department of Ecology, the Washington Department of Fish and
18 Wildlife, and/or other state or federal agencies with jurisdiction or
19 technical expertise to recommend revisions, or amendments or to assist
20 in the development of new Watercourse Protection Measures sufficient
21 to meet the No Harm or Degradation Standard and sufficient to meet
22 the County's GMA obligations to preserve and protect agriculture. If
23 any changes to the Watercourse Protection Measures are *deemed*
24 *necessary* to meet the No Harm or Degradation Standard, proposals to
25 amend, revise or add new requirements to the County's critical areas
26 ordinance (SCC 14.24) will be considered by the County at a
27 minimum, consistent with the 3 year evaluation of the regulatory and
28 monitoring program.... (emphasis added).

29 Resolution No. R20040211 at Section (3)(v).

30 While the County Commissioners may obtain recommendations from federal and
31 state agencies and other entities with expertise, the County's adaptive management
32 program does not have standards or performance objectives to determine whether an
33 evaluation of the program is necessary or criteria to evaluate these recommendations.

34 If the County's adaptive management program does not set the standard for a change
35 in regulations to account for deterioration in fish habitat, then it is not addressing a key

1 component of adaptive management – a response system that uses the information to
2 make appropriate changes. The County’s program makes it possible to put off
3 protection measures, no matter what the degree of danger to fish.
4

5 Third, the data collected should be tied to the protective measures that are being
6 assessed. The objective of an adaptive management program is to monitor the
7 effectiveness of protective measures whose efficacy is uncertain and make
8 adjustments if they are not working adequately to provide protection. See WAC 365-
9 195-920. The County must have some way of knowing how the information that it
10 collects relates to the regulations that are in effect in ongoing agricultural lands. While
11 there are many difficulties in determining the efficacy of voluntary practices (because
12 those practices are unknown), the County cannot rely upon them if they are not
13 evaluated through the monitoring program. Moreover, the County should be able to
14 monitor whether the specific Watercourse Protection Measures (such as prohibiting
15 stock in the streams) it adopted are having the impact on bank erosion and pollutant
16 contamination that was forecast.
17
18

19
20 The County establishes two ways of monitoring: (1) trends and conditions monitoring
21 through the Environmental Monitoring and Assessment Program (EMAP) and (2)
22 monitoring for investigations in regard to complaints about violation of the
23 Watercourse Protection Measures. While the monitoring for specific complaints will
24 result in a change in practices, if necessary, the EMAP system is not presently
25 designed to provide an expeditious measure of the effectiveness of the County’s
26 protective measures. As designed, the EMAP system takes a much longer time to
27 determine the cause of a significantly negative trend, a deterioration in existing
28 conditions, or the reason the Watercourse Protection Measures are inadequate than
29 would be needed to buttress the limited protective measure applicable in ongoing
30 agricultural lands. Under this program, it will take six years of data collection before
31 the County can get a full look at trends and conditions. The County will post its
32

1 information on its website regularly. If a significantly negative trend is identified
2 before that, the County can consult with local, federal, and state agencies and entities
3 with expertise to make recommendations for changes in the Watercourse Protection
4 Measures. These agencies and the public have an opportunity at three-year intervals
5 to make recommendations about needed changes to the County's Watercourse
6 Protection Measures.
7

8
9 We have no reason to doubt the scientific validity of the EMAP monitoring system for
10 monitoring overall trends and conditions and its usefulness to a statewide view of
11 salmon habitat. However, adaptive management is not just a question of monitoring
12 trends – an adaptive management program must monitor and respond to the
13 effectiveness of the specific protection measures that are at issue.
14

15 ***2) Provide for swift and certain corrective action in response to any indications that***
16 ***the protective measures are not sufficient to protect the critical areas at issue***
17

18 In this regard, setting performance measures that will trigger the need for change in
19 protective regulations is the heart of the adaptive management program. *See*
20 Procedural Guidance for Evaluating Wetland Mitigation Projects in California's
21 Coastal Zone, California Coastal Commission, *supra*. As is the case in setting habitat
22 minimums, this is a situation where the County should incorporate best available
23 science to determine what levels of key functions in fish habitat will require a change
24 in the protective measures that are in place.
25

26
27 Second, the County should commit to undertaking change in management practices if
28 evidence of habitat deterioration meets the trigger points established in accordance
29 with best available science. Exhibit 364.5.4 at 2. A chief complaint of both the Tribe
30 and WDFW continues to be that there are no standards for determining when change
31 is required. The County argues that this will be a legislative decision for the Board of
32

1 County Commissioners and that decision will be reviewable. However, that could
2 mean that fish habitat could be deteriorating without a County commitment to take
3 action.

4
5 Third, the County should move expeditiously if the triggers are reached. What
6 constitutes “expeditious” action will depend upon the level at which the triggers are
7 set. The current scheme provides for consideration of monitoring data every 3-5 years.
8 If the triggers are set well in advance of danger levels, then more time could be
9 allotted for response. If danger points have been reached, waiting years for response
10 is clearly insufficient. If triggers are set when actual danger to fish survival is
11 imminent, then the response time must occur almost immediately. *See Ex. 364.5.15*
12 (discussing critical response needs depending upon function measured). Once
13 environmental damage is done, it may take many years to repair, if it is even possible
14 to remedy the loss. *See Kucera v. State*, 140 Wn.2d 200, 211, 995 P.2d 63 (2000)
15 (noting the “irreparable nature of environmental injury”). An adaptive management
16 program as part of a less-than-precautionary regulatory approach should evaluate
17 performance more frequently than once every three to five years to provide a back-
18 stop for measures whose efficacy is still uncertain. Therefore, timely response to
19 evidence of injury to fish habitat is essential to the adaptive management program
20 here.

21
22
23
24 Finally, we remind the County that none of the requirements for adjusting protection
25 measures in critical areas to address the causes of deterioration in FWHCAs or the
26 danger to fish should be viewed as punishment for individuals; nor is a determination
27 that a protection measure is insufficient a finding of fault. The question is what
28 works, not where fault should lie. By definition, the County’s evaluation of its
29 protection measures should begin from a position of uncertainty as to how these
30 practices will impact fish habitat, a position that the Board recognized when it allowed
31 the County’s less-than-precautionary approach,. Therefore, an appropriate adaptive
32

1 management program should start from a neutral position, and not presume that the
2 adopted practices are sufficient or insufficient. Starting from a position of uncertainty
3 and presumption of neutrality, the adaptive management system should not require an
4 elevated level of proof to adjust and refine better practices. Instead, the adaptive
5 management program must measure the effect of the practices whose impacts are not
6 certain, and modify them promptly when they appear to be failing to prevent a
7 deterioration of functions.
8

9
10 We do not, with these comments, intend to dictate the terms of the adaptive
11 management program that the County should develop. The Board has neither the
12 expertise nor the authority to design an adaptive management program for these
13 circumstances; that is for the County to accomplish. However, we highlight those
14 points of an adaptive management program in this situation that should be provided in
15 order to actually measure and adjust for changes in fish habitat; without that ability,
16 the adaptive management program cannot be an effective part of a protection strategy.
17

18 **E. Conclusion**

19
20 Our finding of noncompliance here does not mean that the Board discounts the hard
21 work, public process, and creative thinking the County Commissioners, staff, and
22 citizens from all perspectives have done to try to achieve the difficult balance of
23 conserving agriculture lands and fish habitat. The question is what will work to
24 protect fish habitat in the same environment where ongoing agriculture is well-
25 functioning and being conserved. Adaptive management is a creative tool to explore
26 possible solutions but it requires rigor, commitment and prompt change in response to
27 indications of problems in order to ensure the County's less-than-precautionary
28 protections of fish habitat in ongoing agricultural lands comply with RCW
29 36.70A.040, .060, and .172. The monitoring and adaptive management system
30 embodied in amended Resolution No. R20040211 still does not establish an overall
31
32

1 protection strategy for fish and wildlife habitat in ongoing agricultural lands that
2 complies with these provisions of the GMA.

3
4 *Conclusion:* The monitoring and adaptive management system embodied in amended
5 Resolution No. R20040211 does not comply with RCW 36.70A.040, .060, and .172,
6 to protect the functions and values of fish habitat in ongoing agricultural lands.
7

8 **FINDINGS OF FACT**

9
10 1. Skagit County is a county located west of the Cascades and required to plan under
11 RCW 36.70A.040.

12 2. On June 21, 2004 the County adopted Ordinance 020040011 and Resolution No.
13 R20040211 for the purpose of bringing its critical area protections in ongoing
14 agricultural lands into compliance with the Growth Management Act (“GMA”).

15 3. On August 12, 2004, Resolution No. R20040211 was appealed by the Swinomish
16 Tribe (the Tribe), alleging that the County’s approach still did not protect fish and
17 wildlife habitat critical areas (FWHCAs).

18 4. The County has amended its regulations to ensure that alleged violations of its
19 Watercourse Protection Measures will be investigated and corrective action will be
20 enforced, if violations have occurred.

21 5. In the December 8, 2003 Compliance Order issued in this case, the Board found
22 that a less-than-precautionary approach to protecting critical areas in ongoing
23 agricultural lands could be compliant with the requirements of RCW 36.70A.172,
24 36.70A.040 and 36.70A.060, but only if it included a well-defined and responsive
25 adaptive management program.

26 6. The County requires scientifically based buffers on all streams in the County
27 except those in designated ongoing agricultural lands. In ongoing agricultural lands,
28 the County imposes voluntary best management practices and its Watercourse
29 Protection Measures instead of buffers.
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1 7. Uncertainty exists about the efficacy of the Watercourse Protection Measures and
2 the voluntary best management practices allowed by the County in ongoing
3 agricultural lands for the purpose of protecting the functions and values of fish habitat.
4 Because of that uncertainty, these measures are less-than-precautionary and require an
5 adaptive management program to ensure that needed changes can be made promptly if
6 these measures are not sufficient to protect FWHCAs.
7

8 8. Under the circumstances of this case, an adaptive management program should
9 accomplish two major objectives: it should collect and evaluate meaningful data
10 concerning the effectiveness of the less-than-precautionary protection measures; and it
11 should provide for swift and certain corrective action in response to any indications
12 that those measures are not sufficient to protect the critical areas at issue.
13

14 9. To acquire meaningful data, the program should start with benchmarks that
15 describe the state of the existing functions and values of fish habitat in ongoing
16 agricultural lands. This is necessary because there must be a baseline from which the
17 effectiveness of the protective regulations is measured.

18 10. The data should also measure those characteristics of fish habitat that are
19 necessary to support fish, utilizing the best available scientific information. This will
20 allow the triggers for change to be set both in light of the benchmarks for existing
21 conditions *and* in accordance with scientifically-based habitat minimums.
22

23 11. The data collected should be tied to the protective measures that are being
24 assessed. The objective of an adaptive management program is to monitor the
25 effectiveness of protective measures whose efficacy is uncertain and make
26 adjustments if they are not working adequately to provide protection.
27

28 12. Providing for swift and certain corrective measures requires setting performance
29 measures that will trigger the need for change in protective regulations.

30 13. Adaptive management also requires the County to commit to undertaking change
31 in management practices if evidence of habitat deterioration meets the trigger points
32 established in accordance with best available science. The need for change in

1 protective measures should be determined at the outset to ensure that it is determined
2 independent of politics.

3 14. Further, to make the adaptive management program meaningful, the County
4 should commit to moving quickly if the triggers are reached. The time set for a
5 County response should be closely related to the level at which triggers are set so that
6 timely response to evidence of injury to fish habitat will occur.

7
8 15. Under Washington administrative regulations, adaptive management is recognized
9 as a regulatory approach utilized in forest practices and shorelines protection, as well
10 as in protection of critical areas under the GMA. *See* WAC 173-26-201(1)(g) (relating
11 to shorelines protections) and WAC 222-08-160 (relating to forest practices).

12 16. The County's program does not provide benchmarks from which the effectiveness
13 of its the less than precautionary Watercourse Protection Measures can be evaluated.

14 17. The County's adaptive management program does not include specific habitat
15 triggers or biological objectives based on best available science.

16 18. The County's adaptive management program does not tie its monitoring program
17 to the less than precautionary protective measures that are being evaluated.

18 19. The County's adaptive management program does not provide predetermined
19 management responses based on best available science.

20 20. The County's adaptive management program does not provide criteria based on
21 best available science to evaluate the extent of habitat deterioration or how well the
22 Watercourse Protection measures are working.

23 21. The environmental monitoring and assessment program (EMAP), the habitat
24 monitoring program that the County is using, measures trends and conditions in
25 salmon habitat over time but does not monitor the effectiveness of protective measures
26 whose efficacy is uncertain and make adjustments if they are not working adequately
27 to provide protection.

28 22. Under EMAP, it will take six years of data collection before the County can get a
29 full look at trends and conditions in fish habitat.
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1 23. With EMAP, it will be very difficult and time consuming to determine the cause of
2 deteriorating habitat conditions or failure of the Watercourse Protection measures to
3 protect the existing functions and values of FWHCAs in designated ongoing
4 agricultural lands.

5 24. The County's approach to protecting the existing functions and values of
6 FWHCAs in designated ongoing agricultural lands fails to buttress its less than
7 precautionary protection measures with an adaptive management program that will
8 ensure that swift and effective corrective measures are taken if the less than
9 precautionary measures fail to protect existing functions and values of fish habitat.
10
11

12 **CONCLUSIONS OF LAW**

13 A. The Board has jurisdiction over this case pursuant to RCW 36.70A.330(1).
14

15 B. Petitioners have standing to challenge the Resolution No. R20040211 that
16 establishes the County's monitoring and adaptive management program, an integral
17 part of their approach to protecting FWHCAs in designated ongoing agricultural lands,
18 because they participated in the review of this resolution in the manner prescribed by
19 the County and/or filed Petition for Review of Resolution in a timely way pursuant to
20 RCW 36.70A.290(2).
21

22 C. The amendment to SCC 14.24.120(4) providing for enforcement upon the
23 filing of a complaint now complies with the Board's December 8, 2004 order. This
24 portion of the County's regulations for protecting critical areas in ongoing agricultural
25 lands is now compliant with RCW 36.70A.040, RCW 36.70A.060, and RCW
26 36.70A.172.

27 D. The County's protection measures for fish and wildlife habitat critical areas in
28 ongoing agricultural lands fail to comply with RCW 36.70A.040, 36.70A.060, and
29 36.70A.172.
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ORDER

The County must bring its regulations to protect FWHCAs in designated ongoing agricultural lands into compliance with RCW 36.70A.040, RCW 36.70A.060, and RCW 36.70A.172 within 180 days of this order.

Compliance Due	July 12, 2005
County's Statement of Actions Taken	July 28, 2005
Petitioners' Objections, if any, to a Finding of Compliance	August 18, 2005
County's Response	September 8, 2005
Petitioners' Reply (Optional)	September 15, 2005
Compliance Hearing	September 28, 2005

This is a final order for purposes of appeal pursuant to RCW 36.70A.300(5) and for reconsideration pursuant to WAC 242-02-832.

So ORDERED this 13th day of January 2005.

WESTERN WASHINGTON GROWTH MANAGEMENT HEARINGS BOARD

Holly Gadbaw, Board Member

Margery Hite, Board Member

Gayle Rothrock, Board Member

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APPENDIX A
BEFORE THE WESTERN WASHINGTON GROWTH
MANAGEMENT HEARINGS BOARD

SWINOMISH INDIAN TRIBAL COMMUNITY, et al.,

Petitioners,

and

WASHINGTON ENVIRONMENTAL COUNCIL, et al.,

Intervenors,

v.

SKAGIT COUNTY,

Respondent,

and

AGRICULTURE FOR SKAGIT COUNTY, et al.,

Intervenors.

No. 02-2-0012c

**NOTICE OF
CONSULTATION
WITH SCIENTIFIC
EXPERT
PURSUANT TO
RCW 36.70A.172(2)**

THE BOARD hereby gives notice to all parties that it has consulted with a scientific expert in reaching its decision with regard to critical areas in this case. The Board retained Oscar Soule, Ph.D., an expert in environmental studies, to review the Board's

1 decision with respect to the principles of adaptive management articulated in the
2 decision. The letter provided by Dr. Soule is attached to this notice, as is Dr. Soule's
3 curriculum vitae.
4

5 ENTERED this 13th day of January, 2005.
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9 WESTERN WASHINGTON GROWTH MANAGEMENT HEARINGS BOARD
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13 _____
14 Holly Gadbow, Presiding Officer
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17 Margery Hite, Board Member
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20 Gayle Rothrock, Board Member
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