

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

OLYMPIC ENVIRONMENTAL COUNCIL, et al.,

Petitioners,

v.

JEFFERSON COUNTY,

Respondent.

No. 01-2-0015

**COMPLIANCE  
ORDER**

On December 5, 2002, we issued a Compliance Order (CO) in this case. At 26-27 of that order, we stated that in order to achieve compliance, the County needed to complete the following within 180 days:

1. Clarify the language of the Unified Development Code (UDC) and Coastal Seawater Intrusion Policy that a well sample reading greater than 200mg/L would preclude use of a well at that site as the water source for new construction.
2. Clearly define what will constitute “degradation” of groundwater under the UDC and Coastal Seawater Intrusion Policy.
3. Set specific timeframes in which the County will act to redraw Seawater Intrusion Protection Zone (SIPZ) maps.
4. Finalize the adaptive management program with the other agencies, including the specific degree of seawater intrusion which will constitute “degradation” for purposes of imposing more rigorous protection standards, and the time within which these more rigorous standards must be imposed.

In addition, within 90 days, the County was required to adopt more stringent protection standards for the sole-source aquifer on Marrowstone Island.

On June 19, 2003, the County filed a Statement of Actions Taken in which it explained what the County had done to reach compliance. The County reports that on March 3, 2003, it enacted Ordinance 03-0303-03 relating to the Marrowstone Island remand. After the passage of this ordinance, the County staff worked hard with volunteers, citizens, a subcommittee of the Planning Commission, state agencies with expertise, the full Planning Commission, and the County Commissioners to comply with the December 5, 2002 CO. For a more detailed description of that process, please refer to Ex. 14-7.

After public hearings before the Planning Commission and the County Commissioners, the County Commissioners enacted Ordinance 06—0609-03 (Ex. 3-11) on June 9, 2003. This ordinance modified and supplemented Ordinance 03-0303-03 relating to Marrowstone Island and is a unified statement of the legislative enactments of Jefferson County relating to seawater intrusion. The findings of that ordinance also explain what steps the County has taken regarding this complex challenge.

On February 18, 2003, the County Commissioners also adopted Resolution 13-03 (Ex. 3-10) expressing their support for the construction of a public water system on Marrowstone Island. Further, the County's Coastal Seawater Intrusion Policy is docketed as part of this year's comprehensive plan amendment cycle.

All of the steps taken by the County to achieve compliance with the Final Decision and Order (FDO) and the CO in this matter have been summarized in a graphic manner in the County's "Compliance Matrix". (Ex. 14-8).

On July 24, 2003, a brief was submitted by the Petitioners, Olympic Environmental Council (OEC) and Shine Community Action Council (SCAC) in response to Jefferson County's Statement of Actions Taken. In that brief, Petitioners stated many reasons why they believe Jefferson County remains out of compliance with the FDO and CO for this case, including:

- (1) The County has adopted protection standards that do not comply with Order #3 of the Final Decision and Order because the standards cannot be expected to prevent further groundwater degradation from seawater intrusion.

(a) The order provides for no County review of the hydrogeological assessments. The County has attempted to defer the responsibility for groundwater protection onto other agencies. The review is assigned to the Department of Ecology but the County has no memorandum of understanding with Ecology.

(b) A reading of 200 mg/liter does not preclude use of a well for potable water for new construction.

(c) Building expansions, replacements, and construction of accessory dwelling units are exempted from groundwater protection standards and monitoring requirements.

(d) Ordinance 06-0609-03, subsection (9)ivC3 does not require Restrictive Covenants on all new wells even in a “high risk” zone. Covenants are only required on those wells that exceed the EPA drinking water safety standard of 250 mg/l chloride at the time of a building permit application.

(e) The County standards are inadequate, unclear, and far from protective.

(2) The County has not complied with Order #4 of the Compliance Order because it has not adopted an adaptive management program in light of its less-than-precautionary standards.

(3) The County has not complied with Orders #3 and 4 of the FDO and Order #4 of the CO because its program is incomplete and vague.

(a) To date, Jefferson County has neither developed nor implemented a monitoring program capable of building a statistically valid data set.

(b) No sampling or data protocol are in place even though the monitoring requirements were adopted in July 2002.

(c) The CO requirement #2 required the County to clearly define what will constitute “degradation”. The County has failed to do so. Ordinance 06-0609-03 states that the County has “... determined that it is not possible to follow the guidance of the Department of Ecology and the BAS and meet the requirement set out in the order regarding the need to clearly define what will constitute degradation...” (Ex. 3-11, at 7).

(d) The adaptive management program still lacks specificity as to “what and when”, even though #4 of the Board’s CO required its completion and specificity.

(e) Even though Order #2 of the FDO requires the County to prevent further groundwater degradation from seawater intrusion, Ordinance 06-0609-03, Subsection (9)ivA excludes near-shore Coastal SIPZ from any requirements for permitting, monitoring, or metering. (Ex. 3-11, at 7).

(f) The basic components of the County’s groundwater monitoring programs and adaptive management strategy are policies and are not codified and therefore do not have the force of law that a regulation would have.

(g) The force of law and permanence of those regulations have been minimized in the longevity of Ordinance 06-0609-03. Finding 59 states, “This ordinance will be reviewed for continuation of applicability in January 2005”. (Ex. 3-11, at 8).

(h) The County has adopted “official” policy language which is not yet incorporated into the comprehensive plan, making a consistency analysis impossible.

Finally, Petitioners request that we declare invalidity with no further proceedings on those portions of the UDC which govern permitting of development proposals, including single-family residences, in all Seawater Intrusion Protective Zones.

On August 11, 2003, Jefferson County filed its response brief. The County reminded us that all of the County’s actions are presumed valid and the burden always remains with the Petitioner to convince this Board that Jefferson County’s actions do not comply with the GMA.

The County further reminded us that the work it has been doing on seawater intrusion regulations for the past two years were required by us in the FDO when we found that the County must “protect” not only those places where freshwater enters the ground, but also the aquifers that they feed.” (FDO at 9). We further stated:

We are not persuaded by the County’s arguments that it has no authority to impose some form of water conservation measures, limiting the number of new wells allowed or other measures to reduce the withdrawal of groundwater from individual wells if that withdrawal would disrupt the seawater/freshwater balance and lead to greater SWI [seawater intrusion]. The exemption of RCW 90.44.050 does not limit a local jurisdiction from complying with its mandate for protection of groundwater quality and quantity under the GMA.

**FDO at 16.**

The County asks us to rethink that decision in light of the passage of Chapter 15, 2003 Laws 1<sup>st</sup> Special Session (Ch. 15). Through ESSB 5028, the Legislature amended RCW 90.48 in the following way:

3) The department [Ecology] may not abrogate, supersede, impair, or condition the availability of a water right holder to fully divert or withdraw

water under a water right permit, certificate, statutory exemption, or claim granted or recognized under Ch. 90.03, 90.14, or 90.44 RCW through the authority granted to the department in this chapter.

The County further argues regarding Ch. 15:

Although it is directed at the State Department of Ecology, it is clear that the legislative intent of Ch. 15 was to prohibit the use of statutes other than Ch. 90.03 RCW, Ch. 90.14 RCW or Ch. 90.44 RCW to regulate water withdrawals. Ch. 15 enacted a blanket prohibition against the imposition of restrictions on water rights exemptions because of concerns about water quality (per Ch. 90.48 RCW). If Ch. 15 prohibits Ecology from restricting water rights or water rights exemptions regardless of whether Ecology holds simultaneous concerns about water quality, then it is quite likely that some prohibition also applies to local governments such as this County.

The County asserts that the enactment of Ch. 15 expresses the wishes of the State Legislature regarding the interplay of water rights and water quality, and the deference that should be provided to Ch. 90.03 RCW, Ch. 90.14 RCW and Ch. 90.44 RCW in regulating water use and appropriation. The State Legislature adopted amendments to Ch. 90.48 RCW directing Ecology to use ONLY water quantity laws to regulate water withdrawals, although it has distinct authority and responsibility to protect water quality. This legislative intent is *precisely the OPPOSITE* of the conclusion that this Hearing Board came to when it decided that the water rights exemption found in RCW 99.44.050 did not ‘limit’ the County from its responsibility to protect water quality. *How can this County do what Ecology is expressly prohibited from doing?* The County respectfully requests that this Board review its past decisions in light of this newly adopted statute and determine if under these new circumstances, the FDO and CO previously issued in this PFR are supported by the new state law.

County Response Brief at 3-4 (all forms of emphasis in the original)

The County described its regulatory framework in its response brief:

(1) Before the October 2002 compliance hearing several provisions were in place to protect groundwater from seawater intrusion including:

(a) The downzoning of the rural area had greatly reduced the possibility of the creation of new shoreline lots that could have increased the potential for seawater intrusion (SWI) by 80%.

(b) In 1997, the County adopted a policy that requires development using both an individual well and an individual on-site septic system on an existing lot of record to have not less than one acre of land before a building permit will be granted. This policy significantly reduced the potential for development of existing small lots in rural Jefferson County.

(c) The UDC lowered the allowable impervious surface to 25% per parcel on all rural residential land to ensure that aquifer recharge areas are preserved and that recharge is not lost due to impervious surface.

(d) Jefferson County is one of a few counties in Washington state that have regulations pertaining to development using individual exempt wells. Those other counties that have regulations are much more limited in scope than Jefferson County's protection standards.

(2) Many protection standards have been added since December 5, 2002:

(a) New restrictions for golf courses, turf cultivation and other similar uses in all SIPZ.

(b) Clarification of language regarding storm water disposal and implementation of the 2001 Storm Water Management Manual.

(c) Subdivision moratorium on Marrowstone Island. Until an off-island public water supply is developed for Marrowstone Island, no new subdivisions will be allowed.

(d) Installation of variable-speed well pumps. The UDC now requires that, as a condition of obtaining a building permit for a new residential structure in a High Risk SIPZ or anywhere on Marrowstone Island, the applicant must install a special type of well pump which allows homeowners to reduce their withdrawal rate.

(e) Provisions in the UDC requiring the County to include the Department of Ecology in the review of each site-specific hydrogeologic report.

(f) Clarification of the requirements for hydrogeologic reports.

(g) Flow meter installation is required in all of the SIPZ, including Coastal, At-Risk and High-Risk SIPZ.

(h) The County recommends 19 water conservation measures in Coastal and At-Risk SIPZ. These measures are required in any High-Risk SIPZ. These protection standards are consistent with the Best Available Science to prevent ground water quality degradation by sea water intrusion. These conservation measures include the restriction in High Risk SIPZ that new construction will not be allowed to include plumbing for outdoor spigots. No other jurisdictions in the state enforce such a restrictive provision on individual exempt well users.

The County also discussed its compliance with the specific directives from the Compliance Order.

Compliance Order Issue #1: Clarify the language of the UDC and Coastal SWI Policy that a well sample reading greater than 200 mg/L would preclude use of a well at that site as the water source for new construction.

The County contends that the language of the UDC responds to Issue 1 by stating that wells having a “history of chloride greater than 200 mg/L will both (a) create a High Risk SIPZ and (b) prevent use of that well as proof of potable water unless the applicant presents proof that use of that high-chloride well will not “cause any detrimental interference with existing water rights.” The proof must be a report from a hydrogeologist concluding that no harm will occur. This report will be subject to County and Ecology review.

The County further stated:

Separately, the UDC provides flexibility for the County to use ongoing well monitoring data to continually update its maps. Updating maps will consist of adding SIPZ if data indicate that new SIPZ are warranted. Since the adoption of the September 2002 amendments to the UDC, Jefferson County has created five (5) SIPZ from the water quality data submitted for building permits, creating each of these new SIPZ from a single sample. Please note that more than  $\frac{3}{4}$  of the total points on the SIPZ map (attached) are represented by a single sample. So, the application of the standard is clear. SIPZ are mapped and regulated by a single datum. As clearly depicted by the SIPZ map this represents the decision of the local officials to continue to map High Risk SIPZ based on one high chloride (greater than 200 mg/L) sample. ... But faced with the need to develop a protective regulatory structure, Jefferson County has chosen to be more precautionary than what the two independent hydrogeologists assert is scientifically defensible, pursuant to WAC 365-95-920. **Despite the statements by the petitioners to the contrary, the scientific community believes that Jefferson County’s regulatory structure is indeed cautiously, if not overly, protective.** No well in a High Risk SIPZ can be used as proof of potable water for a new building permit without site-specific conclusive proof that the use of the well will not degrade water quality.

Response Brief of Jefferson County at 9. (Emphasis in the original.)

Compliance Order Issue #2: Clearly define what will constitute “degradation” of ground water under UDC and Coastal SWI Policy.

The County responds that it asked for technical assistance from the Department of Ecology to comply with this issue. An Ecology hydrogeologist replied in part:

In terms of chloride concentrations there is no universal bright line to indicate [SWI]. The problem requires a site-specific analysis that considers all appropriate factors and thus does not lend itself well toward a cook-book or “standard technical threshold” solution to make a decision. In short, the situation requires the use of a qualified

hydrogeologist who is capable of evaluating the available data and making a determination considering all of the relevant information.

Ex 17-42 at 4.

The Ecology letter also stated “there are no technical standards for approving water rights or technical thresholds for making a decision.” Ex. 17-42, at 3.

The County points out that Ecology has not adopted or formulated a simplistic formula that would allow someone to immediately know that “degradation” has occurred because no such formula or procedure exists.

Compliance Order Issue #3: Set specific timeframes in which the County will act to redraw SIPZ maps.

The County points out that UDC § 1.4.2.2 requires all maps, including the SIPZ map, be updated annually. (Ex. 2-1, at 1-6).

Compliance Order Issue #4: Finalize the adaptive management program with the other agencies, including the specific degree of SWI which will constitute “degradation” for purposes of imposing more rigorous protection standards, and the time within which these more rigorous standards must be imposed.

The County responds that in addition to strengthening the most stringent protection standards found in this state to prevent water quality degradation from SWI, the County has adopted

measures to solidify monitoring and adaptive management.

The monitoring that occurs includes:

- (1) The Public Utility District (PUD) monitors all existing well owners who volunteer to have their wells monitored at no cost to the homeowner.
- (2) Qualified County staff monitors all wells from new home construction in At-Risk and High Risk SIPZ.
- (3) More detailed monitoring plans would be necessary only if Jefferson County or the PUD were selectively excluding wells.

The County contends that since it has adopted a precautionary approach no further work is necessary on its adaptive management plan. Further, the rapidity with which the County Commissioners would apply more severe restrictions would depend on the seriousness of the degradation.

The County states that it cannot be more precise than that in stating when more severe restrictions would be imposed.

As to some of the other Petitioners' allegations, the County responds in part:

- (1) The County has repeatedly stated that best available science (BAS) does not support the contention of the Petitioners that there must be a prohibition on new wells in At-Risk or Coastal SIPZ. All of the SIPZ do not represent degraded areas, but only areas that have different risk levels for seawater intrusion. Relevant science does not state that being located within a particular distance to the marine coastline necessarily or automatically indicates a risk to SWI. The designation of a Coastal SIPZ does not represent a future area of SWI. It is an educational tool that the County is using to help prevent potential SWI areas in the future. As the SIPZ map shows, although there is over 100 miles of marine coastline in Eastern Jefferson County, there are only about a dozen High Risk SIPZ in the entire area.
- (2) The County does not need to hire a hydrogeologist to review the hydrogeologic assessments. RCW 18.220.190(4) allows a local agency employee to review the work of a geologist without a state-granted license. The County will also send the assessments to the

Department of Ecology for its review. No MOU with Ecology is necessary.

(3) The Hearings Board and Petitioners apparently misunderstood what the County intended in its regulations. There has never been an absolute ban on use of a well showing in excess of 200 mg/L as proof of potable water nor should there be since Best Available Science does not support such a ban.

(4) The County has consistently stated in the record and in its regulations that its regulations regarding SWI are triggered solely when an applicant needs to provide the County with proof of potable water. Since expansions, replacements, and ADUs do not require proof of potable water (a valid residence with a valid source of potable water must already be in place) the SWI regulations have never applied to them.

(5) Petitioners' arguments about how the ordinance could be better or stronger are irrelevant since the Board only has jurisdiction to determine if the County's choices comply with the Act.

(6) The County has included under the "umbrella" of its monitoring program every potential well that it can lawfully include. Case law prevents the County from entering private property without either consent or a signed search warrant.

(7) The fact that the average citizen cannot determine from certain data if degradation has occurred is neither a flaw in the system nor does it make this regulatory framework noncompliant with the GMA.

(8) The Coastal SWI policy will be made part of the County's CP through this year's CP amendment cycle.

In its reply brief, Petitioners reiterated many of the points made in its opening brief. Petitioners disagreed with many of the County's arguments, including:

(1) There is nothing temporary about aquifer protection and seawater intrusion, and there must be nothing temporary about the County's protection strategies.

(2) Stormwater standards will not balance aquifer recharge with withdrawal. Stormwater infiltration is now required, but the controls remain limited to future residential site development and ignores existing development.

(3) Restrictions on water consumptive land uses are undermined by exemptions.

(4) Technical review of reports and evaluation of data are not assured.

(5) Water conservation measures lack enforcement.

(6) If no ongoing sampling of coastal wells is conducted, no elevated risk will be observed

and no BAS or adaptive management can be applied.

(7) Given the less-than-precautionary standards and the County's admitted lack of control over the inclusion of wells, a plan that creates a valid database and mitigates the selection bias is essential, along with providing the necessary details about the sampling protocol, frequency and statistical analysis.

At the Hearing on the Merits, the County reminded us that Petitioners have argued all sorts of ways the County's SWI program could be improved. The County had to ask itself three questions when it was developing its approach: a) What can we legally do? b) What can we afford to do? and c) Will it work? If the County had unlimited dollars and technical capabilities, it might be able to do some of the things Petitioners are demanding. However, what the County has done complies with the Act and BAS in the record. In fact, the Growth Management Act (GMA) is silent on seawater intrusion.

At the hearing, the County also explained that the SWI requirements do not sunset in January of 2005. The reference in finding 59 as to review for continuity of applicability refers to the upcoming vote of citizens as to establishing a public water system on Marrowstone Island. If that vote passes, and a public water system from an off-island source is built, some of the most severe of the currently imposed restrictions would no longer be necessary.

### **Board Discussion:**

We have carefully laid out the major positions of the parties on the previous pages. We encourage the reader of this decision to read those positions as a foundation for this rather brief discussion.

In the December 5, 2002 Compliance Order, we stated:

The Board is very impressed with the progress made by Jefferson County in addressing this technically complex area. The protection of aquifers used for potable water from seawater intrusion is vitally important to the citizens of Jefferson County and the County has taken a reasoned approach. However, the absence of clear standards in the Unified Development Code on the basis for exceptions to well-drilling restrictions, the level of impact on water quality that will constitute "degradation", and the failure to set more restrictive protection standards for Marrowstone Island despite the science in the record, prevent us from finding compliance

## Compliance Order at 5

As to the specific concerns which prevented a finding of compliance in the CO:

1) Clarify the language of the UDC and Coastal Seawater Intrusion Policy that a well sample reading greater than 200 mg/L would preclude use of a well at that site as the water source for new construction.

The record and oral argument at the October 22, 2002 hearing were confusing as to what the result of a 200 mg/L sample would be. This led to our order directing the County to clarify that a 200 mg/L sample would result in denial of a building permit. The County has explained in its current briefing that the UDC now states that wells having a “history of chloride” greater than 200 mg/L will both a) create a High-Risk SIPZ and b) prevent use of that well as proof of potable water unless the applicant presents proof in the form of a hydrogeological report stating that use of that high chloride well will not “cause any detrimental interference with existing water rights.”

We are satisfied with the County’s clarification. **The County is in compliance with the Act regarding the clarification of the impact of a well sample reading greater than 200 mg/L.**

2) Clearly define what will constitute “degradation” of groundwater under UDC and Coastal SWI Policy.

We are convinced by the explanation of the County and the Department of Ecology (Ecology) hydrogeologist staff in the record that the basis for making a determination of seawater intrusion must be done by professional assessment rather than a bright-line standard as to proof of potable water. Ecology has not developed or adopted technical standards that would allow someone to know with assurance that “degradation” has occurred because no such formula exists. Instead, a complex analysis of the hydrogeology of the sample area is needed. BAS in the record reflects that our hopes for a definition for degradation could not be met. Instead, the County’s choice to require a hydrogeologic assessment, in conformity with its code provisions for professional reports, comports with the BAS on determining whether seawater intrusion has occurred. **We find the County in compliance with the Act as to Compliance Issue 2.**

3) Set specific timeframes in which the County will act to redraw SIPZ maps.

The County has adequately explained that UDC §1.4.2.2 requires all maps, including the SIPZ map, be updated annually. (Ex. 2-1, at 1-6). **We find the County in compliance with the Act as to Remand Issue 3.**

4) Finalize the adaptive management program with the other agencies, including the specific degree of seawater intrusion which will constitute “degradation” for purposes of imposing more rigorous protection standards, and the time within which these more rigorous standards must be imposed.

We have already discussed how the County has now provided sufficient scientific information to convince us that a particular chloride level would not accurately determine “degradation”. Instead, a hydrogeologic assessment to professional scientific standards is required.

We now turn to the issue of the County’s adaptive management program. The Final Decision and Order provides:

If the County wishes to adopt less than precautionary protection standards it must also develop and adopt an adaptive management program that includes a scientifically defensible methodology for collecting, managing and analyzing groundwater monitoring data to regularly evaluate the effectiveness of adopted performance standards. The plan must also include more restrictive DRs to be implemented at once if the adopted strategies are found not to be adequate.

Final Decision and Order at 19.

The basis for the Board’s order regarding an adaptive management plan has its origins in the guidelines for including BAS to protect the functions and values of critical areas pursuant to RCW 36.70A.172. Those guidelines may be found in Chapter 365-195 WAC. With respect to circumstances where the scientific information is uncertain, these guidelines encourage local jurisdictions to adopt “precautionary” or “no risk” approaches:

Where there is an absence of valid scientific information or incomplete scientific information relating to a county’s or city’s critical areas, leading to uncertainty about which development and land uses could lead to harm of critical areas or uncertainty about the risk to critical area functions of permitting development, counties and cities should use the following approach:

(a) A “precautionary or a no risk approach,” in which development and land uses could lead to harm of critical areas or uncertainty about the risk to critical area function of permitting development, counties and cities should use the following approach:

(1) A “precautionary or a no risk approach,” in which development and land use activities are strictly limited until the uncertainty is sufficiently resolved; and

(2) As an interim approach, an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions achieve their objectives. Management, policy, and regulatory actions are treated as experiments that are purposefully monitored and evaluated to determine whether they are effective and, if not, how they should be improved to increase their effectiveness. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. To effectively implement an adaptive management program, counties and cities should be willing to:

(a) Address funding for the research component of the adaptive management program;

(b) Change course based on the results and interpretation of new information that resolves uncertainties; and

(c) Commit to the appropriate timeframe and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting critical areas protection and anadromous fisheries.

#### WAC 365-195-920

The situation with respect to seawater intrusion in Jefferson County is exactly the kind of situation anticipated by these guidelines. There is great scientific uncertainty as to the nature and extent of any seawater intrusion in the coastal areas of Jefferson County. This uncertainty is largely due to the relative paucity of sample sites on which the County can base a determination of seawater intrusion and several other reasons for high chloride readings not relating to seawater

intrusion.

In reaction to this dilemma, the County has developed a two-pronged approach: it has established a scale of risk for seawater intrusion based on well water samples submitted as proof of potable water needed to obtain a building permit; and it has a monitoring program. In examining well water samples, the County has distinguished “At-Risk” from “High Risk” seawater intrusion zones. At Risk SIPZ are areas in which the chloride levels in the samples submitted are in the 100-200 mg/l range. The County does not require that the applicant follow up on such chloride levels to determine that the source is not seawater. Instead, the County requires monitoring of the well and other protective measures, many of them voluntary. However, when the chloride levels in the water samples submitted reach 200 mg/l or greater, the County considers the area to be High Risk, maps the site of the well, and requires the applicant to obtain a hydrogeologic assessment showing that the high chloride reading was *not* due to seawater intrusion. The applicant would have to demonstrate that the use of the well would not cause any detrimental interference with existing water rights and would not be detrimental to the public interest.

The science in the record of this case is consistent that readings of over 50 mg/l may be indicative of seawater intrusion. However, there is no bright line reading of chloride levels that will establish seawater intrusion. The only way to tell for sure is to do a hydrogeologic assessment. However, the County has balanced the risk of seawater intrusion against the burden to the applicant of obtaining a hydrogeologic assessment and determined that it will only require such an analysis if the well water sample provided reaches 200 mg/l.

We do not fault the County for this choice. The burden of providing a hydrogeologic assessment is significant. However, such a choice is not “precautionary” or “no risk”. A “no risk” option would be to require hydrogeologic assessments of every chloride reading that poses a scientific possibility of arising out of seawater intrusion, i.e., readings over 50 mg/l.

The County argues that the County’s approach is precautionary because the County has drawn seawater protection zones in a 1,000 foot radius around a single well sample in excess of 200 mg/l. However, this mistakes the nature of the concern here. The concern is that chloride levels which may have arisen from seawater intrusion are still being permitted as the source of potable

water to new dwelling units. Regardless of the size of the seawater protection zone, the determination to limit development is based on chloride levels that are much higher (200 mg/l) than is the scientific consensus of an indication that seawater intrusion may have occurred (50 +mg/l).

The second prong of the County's program is important, then, to confirm that the choice of 200 mg/l as a level at which hydrogeologic assessments are necessary will work to protect groundwater from seawater intrusion. The County approaches this part of the program with monitoring and evaluation of an ever-increasing number of wells. The County's program provides for regular readings and an evaluation of those readings through a Sanitas software program approved by Ecology to run statistics on well data and a Sen's slope indicator test and other appropriate statistics. Upon a determination through the software program that degradation has occurred, that information is promptly relayed to the County, the public and the County's elected commissioners. Thereupon, the County has a variety of actions that it can take.

Petitioner takes issue with the specificity with which the County determines degradation and the measures the County is taking to obtain accurate monitoring of seawater intrusion. However, the County states that the Sen's Slope Indicator test is the scientifically accepted measure of degradation and that County staff do not have the expertise to take the program apart and explain its component parts to the public. We agree that it is sufficient for the County to adopt a scientifically accepted program for evaluating the monitoring data for "degradation", where the degree of scientific expertise needed to describe the analysis to be undertaken is highly specialized. The County indicated at oral argument that it was willing to incorporate a reference to the Sanitas software program and Sen's Slope Indicator test as its specific basis for determining degradation in its seawater intrusion policy and we would find such a reference to adequately address the need for a scientifically based standard of "degradation". We recognize that scientific methods will be improved over time. Therefore, the County could also include reference to the scientific method for determining seawater intrusion in their development regulations, as an alternative to including it their comprehensive plan. This might provide the County more flexibility in adjusting their monitoring program as science changes. Whatever method the County chooses to specify the scientific basis for a determination of degradation, it must be included in either the comprehensive plan or the development regulations

Petitioners believe that the sampling and monitoring that will occur as part of the County's adaptive management program are not sufficient. In an ideal world, the County would collect multiple water samples from many sites throughout the coastal zones. What the County has chosen to do within its resources is to create monitoring locations at the time of the building permit process and through cooperative undertakings with other agencies. We find that this approach complies with the requirements for "purposeful" monitoring, even though more sample sites might be desirable; and the County's monitoring approach provides a sound basis for evaluation of the success of the County's other protective measures.

We note that the following protective measures are significant. Since the December 5, 2002 Compliance Order, the County has adopted many new restrictions on water consumption, including:

- (1) limiting use of water for golf courses, turf cultivation, and other similar uses in all SIPZ;
- (2) adopting a subdivision moratorium on Marrowstone Island;
- (3) requiring installation of variable-speed well pumps in all High-Risk SIPZ and anywhere on Marrowstone Island;
- (4) requiring installation of flow meters in all of the SIPZ; and,
- (5) adopting 19 water conservation measures that are recommended in Coastal and at-risk SIPZ and required in any High-Risk SIPZ. Ex. 200.

Further, the County has begun implementing the 2001 Stormwater Management Manual, has added a provision in the UDC requiring the County to include the Department of Ecology in the review of each site-specific hydrogeologic report, and has clarified the requirements of those hydrogeologic reports

As to our biggest concern, Marrowstone Island, the County has adopted a subdivision moratorium on Marrowstone Island. Until an off-island public water supply is developed for Marrowstone Island, no new subdivisions of land will be allowed. The County has also adopted many stringent conservation standards on new homes built on existing lots of record. These measures include: a) installation of a special type of well pump which allows homeowners to reduce the water withdrawal rate; b) installation of water flow meters; c) prohibition of plumbing

for outdoor spigots; and many more.

Given Jefferson County's limited population and resources, we think the County has done an excellent job dealing with seawater intrusion. We commend the County for adopting so many measures to prevent greater seawater intrusion into the potable water sources of its citizens. We also commend Petitioners for all they have done to encourage these tough decisions by the County.

The County has asked us to rule on the legal effect of ESSB 5028, amending RCW 90.48. We believe that the interpretation of Ch. 90.48 RCW is outside our authority. The Legislature has strictly limited the jurisdiction of the boards to determining compliance with the GMA, the Shorelines Management Act and SEPA with respect to comprehensive plans and development regulations. RCW 36.70A.280(1). We simply have not been given authority to construe water rights legislation.

We also find that the effect of ESSB 5028 amending Ch. 90.48 RCW is not relevant to the inquiry here. The issue here is the protection of groundwater and critical aquifer recharge areas from development that may degrade water quality and affect water quantity. It is the County's efforts with respect to the types and extent of development permitted in areas vulnerable to seawater intrusion that have been challenged. Regardless of the nature of the underlying water rights, the County has the authority and the responsibility to plan so that development will not occur in ways that threaten groundwater and critical aquifer recharge areas.

With respect to the more restrictive requirements that will promptly go into effect should the County's protective measures prove to be inadequate to prevent further groundwater degradation, the County has expressed a concern about adding any more specificity to policies and development regulations which would require more specific legislative actions. The County states that it cannot be more precise than it already is because the speed with which the Board of County Commissioners (BOCC) would apply more severe restrictions will depend on the seriousness of the degradation. We note that the Unified Development Code already contains an administrative remedy in the event the "administrator" finds that seawater intrusion is occurring in the area of a specific building permit request. Taken together with the legislative measures

provided in the seawater intrusion policy, these provide “appropriate remedial measures” that the County can reference as its response in the event of a determination of further degradation.

As to the surety of such a response being taken, the wording of the current Seawater Intrusion Policy might give the impression that the BOCC could choose to ignore the scientific evidence of degradation established through its monitoring procedures. In order to comply, the policy must make it clear that the County will act if the monitoring program demonstrates that the current actions have been insufficient to protect groundwater from further seawater intrusion. With the adoption the Seawater Intrusion Policy that includes this clarification, as part of the Comprehensive Plan, the County’s adaptive management plan should comply with the Act.

### **FINDINGS OF FACT**

1. On March 3, 2003, Jefferson County Commissioners enacted Ordinance 03-0303-03, placing a new subdivision moratorium on Marrowstone Island. Until an off-island public water supply is developed for Marrowstone Island, no new subdivisions of land will be allowed.
2. On June 9, 2003, the County Commissioners enacted Ordinance 06-0609-03 (Ex. 3-11). This ordinance modified and supplemented Ordinance 03-0303-03 and is a unified statement of the legislative enactments of Jefferson County relating to Seawater intrusion.
3. In response to Remand Issue 1 of the December 5, 2002 Compliance Order, an applicant wishing to use an individual well in which water quality testing indicates a chloride reading in excess of 200 mg/L cannot use the well for proof of potable water for a building permit, unless the applicant obtains a hydrogeologic assessment demonstrating that use of the well will not cause any detrimental interference with existing water rights and is not detrimental to the public interest.
4. The hydrogeologic assessment will also be transmitted to the State Department of Ecology for review and comment.
5. In response to Remand Issue 2, a Department of Ecology hydrogeologist stated that it is inconsistent with his knowledge of hydrogeology to adopt specific standards for groundwater degradation that could be used in all cases to make a decision for determining impacts to aquifers. Best Available Science suggests that the analysis requires each application, i.e., each well, to be reviewed with appropriate hydrogeologic information.
6. The scientific evidence in the record establishes that chloride levels greater than 50 mg/l

in well samples submitted as evidence of potable water could be indicative of seawater intrusion. However, the only way to determine whether seawater intrusion is occurring is through a professional hydrogeologic assessment.

7. The County has dovetailed its technology with what the Department of Ecology uses. The County will rely on the existing criteria under RCW 90.03.290 as implemented by the Department of Ecology.

8. In order to determine potential for aquifer degradation over time, each new building permit issued by Jefferson County with a well in an at-risk SIPZ, a High Risk SIPZ and anywhere on Marrowstone Island will be monitored for chloride and water usage, and the water quality data will be analyzed using a statistical procedure known as the Sen's Slope Indicator Test (or equivalent statistical procedure), which will determine if degradation is occurring and whether it is necessary to implement the remedial measures listed in the Coastal Seawater Intrusion Policy.

9. The County has not formally adopted the Sen's Slope Indicator Test as its scientific basis for a determination of degradation based on monitoring data, but has indicated a willingness to designate the Sen's Slope Indicator Test as its standard within the comprehensive plan or development regulations. The Sen's Slope Indicator Test is accepted within the scientific community as a reliable measure for determining whether seawater intrusion has occurred. The specific scientific formulas incorporated within this test are complex and need not be specified in county regulations beyond the incorporation of the Sen's Slope Indicator Test as the County's adopted scientifically-based standard for a determination of degradation.

10. In response to Remand Issue 3 of the Compliance Order, the County Commissioners did not make any changes but pointed out that the existing UDC Section 1.4.2 contains provisions for annual remapping of all environmentally sensitive area maps.

11. In response to Remand Issue 4 of the Compliance Order, the County Commissioners finalized their Memorandum of Understanding (MOU) with the Jefferson County PUD #1 for additional seawater intrusion testing. The County's plan to use data from wells in at-risk and high risk seawater protection zones, as well as information collected through other agencies, to monitor the effectiveness of the County's protective measures in preventing seawater intrusion provides a sound basis for evaluating those protective measures.

12. The Seawater Intrusion Policy lists immediate remedial actions which may be taken by the BOCC in the event that the scientific monitoring results indicate that degradation has occurred. The Seawater Intrusion Policy is not clear as to whether the BOCC may disregard the scientific evidence of degradation in making a determination that the current actions to protect against seawater intrusion have proved insufficient. To meet the requirements for immediate

remedial action in the event that the County's protective measures are not preventing further seawater intrusion, the policy must provide that remedial actions will be forthcoming based upon scientific evidence meeting the County's definition of degradation.

13. In response to the requirements specific to Marrowstone Island in the Compliance Order, the County Commissioners adopted a moratorium on future subdivision until public water is available from an off-island source; have required groundwater and water use monitoring; have required installation of a variable speed pump, flow meter, and use of a 1,000-gallon storage tank as a condition on each new building permit that is issued.

14. The County Commissioners analyzed and included added restrictions to the list of water conservation measures that are recommended in Coastal and At-Risk SIPZ and mandatory in High-Risk SIPZ.

15. Additional restrictions were added including:

- (a) restriction of turf cultivation and golf courses in all SIPZ;
- (b) restriction from using well water for outdoor irrigation in High-Risk SIPZ; and
- (c) restriction to not allow water softeners that utilize salt in High-Risk SIPZ.

16. The Seawater Intrusion Policy has not been incorporated into the Jefferson County Comprehensive Plan. It is docketed for such inclusion in the 2003 update process.

### **CONCLUSION OF LAW**

Except for three minor process and clarity insufficiencies listed in the Order section below, we find the County in compliance with the Act as to protecting its aquifers from further seawater intrusion and protecting potable water for its citizens.

### **ORDER**

Having considered the entire record, including local circumstances, and based on the foregoing, we find that the County will have reached compliance with the GMA in meeting the requirements for protection of groundwater and critical aquifer recharge areas upon incorporating its seawater intrusion policy into its comprehensive plan, ensuring that its remedial measures will be implemented in the event of further degradation, and specifying the scientific basis for evaluating its monitoring data.

The County would be in compliance with respect to its groundwater and seawater intrusion

protection policies with the following actions that the County has indicated it is willing to take:

- 1) Adoption of the Seawater Intrusion Policy as part of the Comprehensive Plan;
- 2) Inclusion in its comprehensive plan (or development regulations) reference to the Sen's Slope Indicator Test and/or other appropriate tests as the scientific basis upon which a determination of degradation will be based; and
- 3) Making it clear that the County will take immediate action upon a scientific determination that further degradation has occurred, pursuant to the legislative remedies listed in the seawater intrusion policy.

Because the County has not yet completed the listed actions, the County's policies on groundwater protection and seawater intrusion are not yet fully compliant with the GMA. A hearing is set for March 10, 2004, at which time the County may provide evidence that it has completed the actions listed above or otherwise met the requirements for including its seawater intrusion policy in its comprehensive plan, ensuring that its remedial measures addressing further seawater intrusion will be implemented, if necessary, and specifying the scientific basis for evaluating its monitoring data.

This is a Final Order under RCW 36.70A.300(5) for purposes of appeal.

Pursuant to WAC 242-02-832(1), a motion for reconsideration may be filed within ten days of issuance of this final decision.

So ORDERED this 31st day of October, 2003.

WESTERN WASHINGTON GROWTH MANAGEMENT HEARINGS BOARD

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Nan Henriksen, Board Member

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Holly Gadbow, Board Member

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Margery Hite, Board Member