COURT OF APPEALS

OF THE STATE OF WASHINGTON

DIVISION II

NO. 34128-0-II

THURSTON COUNTY, WASHINGTON, a municipal corporation and political subdivision of the State of Washington, and BLACK HILLS AUDUBON SOCIETY, a nonprofit corporation,

Appellants/Cross-Respondents,

v.

QUALITY ROCK PRODUCTS, INC., a Washington Corporation, and EUCON CORPORATION, an Idaho Corporation,

Respondent/Cross-Appellant.

OPENING BRIEF OF APPELLANT/CROSS-RESPONDENT THURSTON COUNTY

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A. ASSIGNMENTS OF ERROR

1. Assignments Of Error

No. 1. The trial court erred in entering the order of October 24, 2005 reversing the Board of County Commissioners' Decision which held, "the proposed gravel mine is not consistent with the comprehensive plan policies on the natural environment," was not supported by substantial evidence in the record.

No. 2. The trial court erred in entering the order of October 24, 2005 reversing the Board of County Commissioners' Decision which held, "the proposed location for the gravel mine is not appropriate due to the gravel mining operation's significant adverse impacts on the surrounding sensitive environment" was not supported by substantial evidence in the record.

No. 3. The trial court erred in entering the order of October 24, 2005 holding that the hearing examiner's decision addressed all of the material issues in the case and was supported by substantial evidence in the record and should be reinstated.

2. Issues Pertaining To Assignments Of Error

When the location of a mine is in hydraulic continuity with a river that is closed to further appropriation during the dry season, and the mine expansion results in a 75 acre lake that will reduce the recharge to the

regulated river by 9 1/2 million gallons annually, with most of the loss occurring during the dry season when evaporation will be at its highest and flows of the regulated river will be at its lowest, and the applicant fails to quantify how much ground water it will pump from its on-site well, is the hearing examiner's conclusion that the mine expansion complies with the comprehensive plan policies prohibiting mineral extraction activities from negatively effecting or endangering surface and ground water flows and quality supported by substantial evidence in the record. (Assignment of Error No. 1).

When the location of a mine is in hydraulic continuity with a river that is closed to further appropriation during the dry season, and the mine expansion results in a 75 acre lake that will reduce the recharge to the regulated river by 9 1/2 million gallons annually, with most of the loss occurring during the dry season when evaporation will be at its highest and flows of the regulated river will be at its lowest, and the applicant fails to quantify how much ground water it will pump from its on-site well, is the hearing examiner's conclusion that the location of the mine is appropriate and will not adversely affect the environment, i.e. will not reduce recharge to the regulated body of water, supported by substantial evidence in the record. (Assignment of Error No. 2).

When the location of a mine is in hydraulic continuity with a river that is closed to further appropriation during the dry season, and the mine expansion results in a 75 acre lake that will reduce the recharge to the regulated river by 9 1/2 million gallons annually, with most of the loss occurring during the dry season when evaporation will be at its highest and flows of the regulated river will be at its lowest, and the applicant fails to quantify how much ground water it will pump from its on-site well, even though this information was required by the State Environmental Policy Act (SEPA) checklist and the Thurston County Mineral Extraction Code, and the hearing examiner conditioned approval of the project on future studies and approvals, did the hearing examiner err in approving the special use application before the required studies were completed and considered. (Assignment of Error No. 3).

B. INTRODUCTION

Flowing from Black Lake and meandering through the southwest quadrant of Thurston County, the Black River has the revered distinction of being, "one of the last, large intact riparian systems of its kind in the Puget Sound area." CP 339; Administrative Record (AR) 969.[1] Unfortunately, however, the Black River falls short of meeting state and

[1] The lengthy administrative record, consisting of four binders and 3232 pages, created before the hearing examiner is simply listed as Clerk's Papers 339. All future references to the administrative record will directly cite the Bates stamped number within the administrative record.

federal water quality standards due to its low flows. AR 346.[2] To protect the Black River, the Department of Ecology (DOE) has set base flows for this river each month of the year. WAC 173-522-020(2). DOE sets base flows[3] to protect the wildlife resources, and recreational and/or aesthetic values of these public waters. RCW 90.22.010. Once DOE sets base flows for a river, no diversions of public water shall be allowed to conflict with these flows. RCW 90.22.030.

In those situations when the water in the stream is insufficient to protect existing rights and provide adequate base flows, DOE may close these waters to further withdrawals. RCW 43.21A.064; *Postema v. PCHB*, 142 Wn.2d 68, 95, 11 P.3d 726 (2000). Since 1976, DOE has also closed the Black River to further appropriation during the dry season between July 1st and September 30th each year. WAC 173-522-050. Once a river is closed to appropriation, no withdrawal of ground water in hydraulic continuity with the closed river shall be allowed "if the withdrawal will have **any effect** on the flow or level of the surface water." Emphasis supplied. *Postema*, at 95.

The state water law and policies described above are reflected in Thurston County's Comprehensive Plan (TCCP) policies on ground water

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[2] First H.E. Decision, FF No. 44.

[3] Base flows "means a level of streamflow . . . required in perennial streams to preserve wildlife, fish, scenic, aesthetic, and other environmental and navigational values." WAC 173-500-050(3).

and stream flows.[4] In particular, "[m]ineral extraction activities should not negatively effect nor endanger surface and ground water flows and quality." TCCP, Chapter Three, Section V. at 3-30.

In 2000, Quality Rock Products, and Eucon Corporation (Quality Rock) acquired the former Fairview Sand and Gravel Company, a 151 acre site adjacent to the designated boundaries of the Black River Wildlife Refuge and approximately 500 feet east of the Black River. AR 335. Due to ground water flows in this area, the ground water under Quality Rock's site flows towards the Black River and recharges the low flows of the Black River. AR 346.

Shortly after acquiring the site, Quality Rock submitted an application for a special use permit (SUP) to Thurston County. AR 615. Quality Rock sought to expand their mineral extraction operation from the originally permitted 26 acres to 151 acres with production goals ranging from 250,000 tons to 750,000 tons of aggregate per year. AR 1394.

Quality Rock's significant expansion, including mining activity below the water table, will ultimately result in the creation of a 75 acre lake. AR 347.[5] The impacts of this lake, which will be in hydraulic continuity with the Black River, will be the removal of 9 1/2 million

[4] The applicable sections of Thurston County's Comprehensive Plan, Chapter Three on Natural Resource Lands, and Chapter Nine on Environment, as they existed at the time Quality Rock's SUP was being reviewed are attached as Appendix A.
[5] First H.E. Decision, FF No. 47.

gallons of water per year from the Black River system due to evaporation. *Id.* Most of this loss will occur during the dry season, when the Black River is closed to further appropriation. AR 2181[6]

In addition, there will be an **unknown amount** of water pumped from Quality Rock's on-site well for operational purposes of the mine expansion[7]. This well, like the lake, is in hydraulic continuity with the Black River, thus the water pumped from the well, is ground water that would otherwise discharge to the Black River. AR 346.

From the initial review of Quality Rock's proposed mine expansion, the manager of Black River Wildlife Refuge and other concerned citizens questioned whether the mine expansion would further reduce water flows to the Black River and thus exacerbate the water quality problems, particularly during the dryer summer months when production would be at its peak, and the flows of the Black River would be at its most critical and lowest flows. AR 346[8] and AR 970.[9] This concern was reflected in the Board of County Commissioner's (Board) first decision which remanded this matter to the hearing examiner for the

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[6] Exhibit 33, Memo from Robert Mead, county hydrologist, to Cindy Wilson.
[7] Quality Rock assumed, without any supporting documentation, that the needs of the mine expansion could be handled by pumping less than 5,000 gallons per day (gpd) from its single exempt well. *See* VR at 58 (2/10/03 hearing). As discussed in the Statement of Facts, this assumption was badly flawed.
[8] First H.E. Decision, FF No. 45.
[9] Administrative Record Exhibit 5, letter from Jean E. Takekawa, Black River Refuge Manager, U.S. Fish and Wildlife Service.

purpose of having the applicant do a "detailed analysis" of the mine expansion's impact to the low flows of the Black River. AR 3223-3224.

Quality Rock responded to this concern by hiring Pacific Ground Water Group (PGG) to do an additional hydrogeological analysis. AR 40. PGG projected that the loss of water from the Black River due to the lake effect would be 7 1/2 million gallons of water per year instead of 9 1/2 million gallons of water per year, as originally projected. AR 2504 and 2518.[10] This projected change in recharge, however, is an annual average and does not reflect the fact that evaporation rates would be significantly higher during the summer months. AR 2504. Consequently, PGG did not address the impacts from the lake during the dry season, when the Black River is closed to further withdrawals.

As noted above, DOE closed the Black River to further withdrawals between July 1st and September 30th each year. WAC 173-522-050. The Black River is closed because the flows in the river are insufficient to meet the existing demands, and maintain the mandated base flows. WAC 173-522-030. The mandated base flows between July 1st and September 30th range from 66 cubic feet per second to 88 cubic feet per second. WAC 173-522-020(2). PGG acknowledged the Black River

[10] Administrative Record, Exhibit No. 66, at 12, and 17. Quality Rock's expert concluded that the change in ground water recharge due to the lake would be 14.5 gallons per minute (gpm) which equates to 7,621,000 gallons per year.

is not meeting its base flows. AR 2507.[11] However, PGG did not address how many days of the year the Black River is not meeting its mandated flows or that the Black River is closed to further withdrawals between July 1st and September 30th each year. Instead, PGG blithely concluded that the reduction in ground water recharge to the flows of the Black River will be "extremely small." AR 2507. Despite admitting that there will be a reduced recharge to the Black River (closed water body), PGG provided no mitigation.

In addition, PGG's analysis had another significant data gap. It omitted a critical element of its hydrogeological analysis as required by the Thurston County Mineral Extraction Code and the SEPA checklist:

> the amount of ground water that would be pumped from Quality Rock's on-site well for the operational purposes of the mine expansion, i.e. washing gravel, dust suppression, wheel and vehicle washing and asphalt production, cement production and dust control.

See TCC 17.20.200(B).

After hearing this matter twice, and faced with significant data gaps in the record, the Board denied the SUP because there was not substantial evidence in the record to support the hearing examiner's ultimate conclusion that the mine expansion complied with the

[11] PGG noted "base flows in the Black River at Littlerock (128th Avenue bridge) ranges from **seven** to more than 400 cfs based on gaging from Thurston County from November 1991 to April 1998." AR 2507. Emphasis supplied.

comprehensive plan polices prohibiting mineral extraction activities from negatively effecting surface water flows. In addition, the Board denied the SUP because the hearing examiner's conclusions that the location of the mine would not adversely affect the low flows, Black River were not supported by substantial evidence in the record. AR 3229-3232.

The first issue before this court is when the mine expansion results in two distinct impacts to the closed flow of the Black River, and these impacts are not mitigated, are the hearing examiner's conclusions, that the mine expansion complies with the comprehensive plan policies prohibiting mineral extraction activities from negatively effecting surface water flows and quality, and the location of the mine is appropriate, supported by substantial evidence in the record.

The second issue before the court is whether the hearing examiner erred in allowing the applicant to provide data on the mine expansion's impacts after approval of the SUP.

C. STATEMENT OF THE CASE

1. Procedural History

Quality Rock submitted a single SUP application to expand a gravel mining operation from 26 acres to 151 acres, replace a concrete batch plant, install a new asphalt plant, and recycle concrete and asphalt. A hearing on Quality Rock's SUP application was held before the hearing

examiner over four days between November 2001 and February 2002. AR 36. On April 5, 2002, the hearing examiner approved the SUP subject to several conditions. *Id.* (First Hearing Examiner's Decision). Black Hills Audubon Society (BHAS) appealed the approval of the SUP to the Board. AR 292. Quality Rock also appealed certain conditions imposed by the hearing examiner. AR 318.

On July 15, 2002, after considering the appeals in a closed record hearing, the Board remanded the matter back to the hearing examiner so that he could among other things conducting "a detailed analysis of the impact to the ground water, aquifer and the Black River, called for in condition Y, prior to the issuance of the SUP." AR 3224. Subsequent to the Board's First Decision, the examiner conducted a second set of hearings on November 13, 2002 and February 10, 2003. AR 37. On May 30, 2003, the hearing examiner issued a second decision approving the SUP, subject to certain conditions. AR 336-59. On June 13, 2003, BHAS timely filed a second appeal. AR 1. Quality Rock did not cross appeal any of the hearing examiner's conditions of approval.

After a second closed record hearing on August 4, 2003, the Board determined that the proposed location for the gravel mine was *not* appropriate due to the mine expansion's significant adverse impacts on the surrounding sensitive environment; and the proposed gravel mine was not

consistent with the comprehensive plan policies on the natural environment. AR 3229. The Board reversed the hearing examiner's decision and denied the SUP. AR 3232.

Quality Rock filed a Land Use Petition, and a Complaint including Claims for Money Damages and Declaratory Relief in Mason County Superior Court. CP 341. On October 24, 2005, Judge Sawyer granted Quality Rock's LUPA appeal, reversing the Board's denial of the SUP, and reinstating the hearing examiner's decision. CP 29-33. Judge Sawyer denied Quality Rock's claim for damages and attorney fees finding that the Board's actions in reversing the hearing examiner's decisions were not arbitrary, capricious or unlawful. *Id.*

Thurston County and BHAS timely filed appeals with this court on the LUPA action. CP 10 & 17. Quality Rock timely cross-appealed the superior court's denial of its damages claim. CP 3.

2. <u>Statement Of The Facts</u>[12]

In 1985, Quality Rock's predecessor, Fairview Sand and Gravel Company, received approval to extract gravel from a 26-acre portion of the 151-acre parcel. AR 335. The 26-acre site was mined continuously for approximately 10 years. AR 51. In 1995, the mining activity ceased

[12] Not all the issues that were addressed in the underlying hearings in this case were appealed to this court. Therefore, the Statement of Facts will only address those facts relevant to those issues before this court. For example, the Statement of Facts will not go into any detail on traffic issues as these issues were not raised on appeal.

on site and the property owner sought to sell the site to another operator. *Id.* In January 2000, Quality Rock purchased the Littlerock Sand and Gravel Operation and immediately resumed mining activity. AR 394.

Shortly thereafter, Quality Rock realized the aggregate was essentially depleted. AR 394. The depleted reserves prompted Quality Rock to file an application for a SUP to Thurston County to expand the mine. AR 394. Quality Rock sought to expand their mineral extraction operation from 26 acres to 151 acres with production goals ranging from 250,000 to 750,000 tons of aggregate per year. AR 1394. The peak mineral extraction season is between June and November. AR 889. In conjunction with this expansion, Quality Rock sought approval to replace a previously approved concrete batch plan, install a new asphalt hot mixing plant, and recycle concrete and asphalt. AR 334.

The mined aggregate will be screened and washed using water from an on-site well. AR 617; 2498. The amount of ground water that will be pumped from the well for gravel washing purposes was not identified by Quality Rock in its SEPA checklist,[13] or in a supplemental

[13] In response to the SEPA checklist question regarding the quantity of ground water that will be withdrawn, Quality Rock responded "The existing excavation is immediately above the ground water table. The onsite wash plant uses the ground water from a shallow pit to produce washed rock products. This water is then infiltrated back into the ground via an existing settling pond." AR 1370.

hydrogeological report.[14] Quality Rock also did not quantify the amount of ground water that will be pumped from its on-site well for all other operational uses of the mine, such as for asphalt and concrete production, domestic needs of its nine employees, vehicle and wheel washing[15] and dust suppression.[16] Verbatim Report of Proceedings of Hearing Examiner's 2/10/03 Hearing at 58. (VR at 58 (HE 2/10/03)).[17] The SEPA Coordinator from DOE commented on Quality Rock's failure to identify its source of water and the water needs for the mine. AR 878.[18]

The eastern boundary of the mine sits approximately 500 feet east of the Black River and adjacent to the designated boundaries of the Black

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[14] PGG prepared a supplemental report which allegedly addressed "the elements of the hydrological report as described in section 17.20.200 of the Thurston County Mineral Extraction Code." AR 2492. However, this report left out one important element called for in TCC 17.20.200(B): "Well information including . . .estimated withdrawal rate."

[15] Pursuant to Thurston County's Mineral Extraction Code, TCC 17.20.170, all trucks leaving the mine site shall comply with RCW 46.61.655. This statute requires that all trucks with deposits of mud, rocks, or other debris on the trucks body, fender, wheels or tries shall be cleaned before entering a public highway. The number of trucks leaving the Quality Rock's mine site and required to be in compliance with RCW 46.61.655 is projected to be as many as 430 trucks per day. AR 891.

[16] Conditions of approval for the mine expansion include washing trucks before they leave the site and cleaning the access road to prevent airborne dust. AR 604; AR 700 (conditions of approval in the OAPCAA Notice of Construction Preliminary Determination.) The number of trucks leaving the sight, and thus needing to be washed, in peak production season could be as many as 430 trucks per day. AR 891.

[17] Quality Rock's attorney testified that the entire project was analyzed based on the assumption that all water needs of the mine could be met with Quality Rock's single exempt well of 5,000 gpd.

[18] In commenting on Quality Rock's MDNS, DOE's SEPA Coordinator stated, "The applicant states the (sic) no water will be withdrawn for this project. What will be the source of water necessary for on-site activities (for example, dust control, human consumption, etc.)" AR 878.

River Refuge. AR 334 and 335.[19] As described by Jean E. Takekawa, the Manager of the Black River Refuge:

> The Black River is one of the last, large intact riparian systems of its kind left in the Puget Sound Area. It is associated with one of the largest wetland mosaics that remain along lowland rivers in western Washington. It supports a wide variety of migratory birds and fish, including several salmonids, many of which are declining and depend on high quality habitats like found in the Black River area. Salmonid species include the coastal cutthroat, which is federally proposed for listing. It also provides crucial habitat for the Oregon spotted frog, a State listed endangered species and also proposed for federal listing.

AR 970.

The mine site is in hydraulic continuity with the Black River, described above. AR 346.[20] DOE has listed the Black River as water quality impaired under Section 303(d) of the Clean Water Act. AR 346.[21] Since 1976, the Black River has been closed to appropriation between July 1st and September 30th each year. WAC 173-522-050. During the remainder of the year, minimum base (instream) flows have been established for the Black River.[22] WAC 173-522-020.

In 1993, Hard Rock Mining Company, a smaller 80 acre mine adjacent to the western boundary of Quality Rock's 151 acre mine, requested approval to withdraw over 5,000 gpd from its on-site well to

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[19] First H.E. Decision, FF No. 1 and 6.
[20] First H.E. Decision, FF No. 44.
[21] First H.E. Decision, FF No. 44.
[22] These flows range from a high of 200 cfs in December to a low of 66 cfs in September. WAC 173-522-020.

support its mining operation. AR 2901-02. After a comprehensive review, DOE denied the permit for the following reasons:

- The source of water is in hydraulic continuity with the Black River.
- The Black River is closed to further appropriation between July and September 30 each year, and base (instream) flows for the Black River were established by Chapter 173-522 during the remainder of the year. The Black River is a tributary to the Chehalis River.
- The instream flow set on the Chehalis River by WAC 173-522 is currently not being met 73 days per year at the Porter gage.
- The use of water as requested by the applicant will further impair flows in the Black River, and impair the instream flow of the Chehalis River.
- The appropriation will be detrimental to the public welfare by increasing the number of days each year that base flows are not met, by decreasing water quality, and by further impairing fish habitat.
- Pumping from the proposed well will capture surface water by intercepting ground water that would have discharged to the Black River.
- The Black River exceeds water quality standards for dissolved oxygen and temperature during the dry season. Further reduction in the quantity of water available to the Black and Chehalis Rivers will increase the water quality problems.
- Fish and wildlife habitat is impaired in various areas of the watershed due to seasonal low flows, high temperatures, and low dissolved oxygen levels. Further reductions in streamflow, as would result from this proposed water use, will worsen these problems.

AR 2901-02.

In addition to removing an unknown quantity of water from the Black River as a result of pumping ground water from its on-site well, Quality Rock's expansion will have another direct impact to the Black River. Quality Rock's expansion includes mining activity below the water table. This expansion will ultimately result in the creation of a 75 acre lake. AR 347.[23] The impacts of this lake, which will be in hydraulic continuity with the Black River, are the annual loss of 9 1/2 million gallons of ground water from the Black River system due to evaporation. *Id.*

From the initial review of Quality Rock's SUP application, the manager of the Black River Refuge raised the following concern about Quality Rock's failure to analyze the impact of the lake effect on the Black River:

> **Hydrological impacts:** Little has been done to evaluate or mitigate the effects of the mining operation and resultant 75 acre lake on Black River and its associated wetlands. The analysis that has been done concentrates entirely on the effects to residential wells to the east of the property. The Environmental Checklist report by Subterra states that at the proposed 75 acre lake "9 1/2 million gallons per year would be lost to evaporation", yet no mention is made of the effects of this on the naturally functioning Black River ecosystem or the aquifer. Further, Figures 13 and 14 in that report indicate a direct effect of the 75 acre lake on ground water flow and levels, particularly down-gradient (i.e., on the Black River and its wetlands), but no discussion or

[23] First H.E. Decision, FF No. 47.

> mitigating measures are provided to reduce this effect. This is a significant concern, especially considering the already reduced water flow in the Black River system, which adversely affects habitat quality for wildlife and fish, including salmonids. The extreme depth of the lake (up to 40 feet) will provide little wildlife value, in exchange for the loss of water caused by this artificial lake.

AR 970.[24] The hearing examiner's first response was to approve the project, but require the applicant to undergo another public hearing, at some later undetermined time.[25] The purpose of this public hearing, which would occur sometime after the expansion was underway, was so that the "detailed analysis" of the mine's impact to the Black River and the aquifer, which was lacking in the first hearing, could be presented. AR 362. The hearing examiner also discounted the mine expansion's impact to the Black River because of its designation as a Mineral Resource Land of Long Term Significance (MRL). AR 355. The hearing examiner concluded that because of this designation that the location of the mine is appropriate despite the "significant environmental amenities" contained within the Black River area. *Id.*

On appeal, the Board rejected the "approve now, study later" regime adopted by the hearing examiner. The Board recognized that there

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[24] Administrative Record Exhibit 5, letter from Jean E. Takekawa, Black River Refuge Manager, U.S. Fish and Wildlife Service.

[25] Condition Y of the hearing examiner's first decision states: "The last three phases of the operation shall be subject to further review including detailed analysis of the impact of groundwater to the site, the aquifer and the Black River." This information shall be presented at a public hearing at the appropriate time." CR 362.

was a lack of evidence of the mine expansion's impacts during the summer months when production is at its peak, and the flows of the Black River are at its lowest. AR 3230. Accordingly, the Board specifically directed that a "*detailed analysis*" of the mine expansion's "*impact to the groundwater, aquifer and the Black River*" be conducted. Emphasis supplied. AR 3224. Secondly, the Board recognized that any substantial adverse impacts that might be identified through this "detailed analysis" must be addressed *prior* to SUP approval. *Id.* In addition, the Board noted that there was confusion in the record on whether 26 acres or more of the mine site was designated as a MRL. AR 3226. Because the hearing examiner relied heavily on this designation to conclude that the mine complied with the comprehensive plan policies, and thus the location of the mine was appropriate, AR 355, the Board remanded this matter to the hearing examiner. AR 3225. Quality Rock did not appeal the Board's First Decision.

Instead Quality Rock hired PGG to do the detailed analysis called for in the Board's First Decision. AR 2496.[26] PGG's first report titled "Hydrogeologic Analysis for Littlerock (Fairview) Aggregate Mine, Thurston County Washington," dated October 2002 addressed the "elements of the hydrogeologic report as described in section 17.20.200 of

[26] Administrative Record Exhibit 66.

the Thurston County Mineral Extraction Code," AR 2496, with one important exception: PGG's hydrological report did not quantify the amount of ground water that will be pumped from Quality Rock's existing well for the operational purposes of the mine such as gravel washing, dust suppression, vehicle washing, asphalt and cement production as required by TCC 17.20.200(B). See AR 2503. Pumping ground water from this well will capture surface water by intercepting ground water that would have otherwise discharged to the Black River. See AR 346.[27] The impacts of pumping ground water from Quality Rock's on-site well were not examined by PGG. During testimony before the hearing examiner, PGG's expert, Mr. Wildrick, conceded that he did not take into account water that would be extracted from the ground water system as a result of mining activity, such as gravel washing, or lost to evaporation during the operational aspects of the mine in preparing his report. VR at 17 (HE 2/10/03).

While PGG did not quantify the amount of ground water that would be pumped from Quality Rock's well for the operational purposes of the mine, it was eminently qualified to do such an analysis. In the previous year, PGG conducted a comprehensive water needs analysis for a gravel mine in Mason County. AR 2680-87. This report analyzed the

[27] First H.E. Decision, FF No. 44.

data from several different gravel mines in western Washington and concluded that an exempt 5,000 gallon well could only provide enough water to wash gravel for a projected maximum daily production volume of 685 tons a day or 150,000 tons a year based on a six day work week. AR 2680. For comparison, Quality Rock had proposed using its exempt well for projected productions volumes ranging from 250,000 to 750,000 tons a year. VR at 58.[28] The Mason County analysis prepared by PGG blew Quality Rock's assumption out of the water.

When PGG's Mason County analysis was brought to light by BHAS, AR 2679, Thurston County's environmental health hydrogeologist Robert Mead testified that it had erroneously assumed that the operational needs of Quality Rock's mine expansion could be met with a single exempt well producing 5,000 gallons a day. VR at 56 (2/10/03 hearing).

Instead of quantifying the amount of ground water that would be pumped from Quality Rock's on site well for operational purposes of the mine, PGG's report[29] predominantly looked at the impacts caused by the creation of the 75 acre lake. AR 2503. In this regard, PGG presented a comprehensive discussion of the projected effects of the 75 acre lake on

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[28] Quality Rock's attorney testified "how we analyzed this project from the beginning" was to use less than 5000 gpd.

[29] In response to concerns raised in the 10/03 hearing before the hearing examiner, PGG submitted a second report strictly addressing the impacts to the wells and Ashley Creek upgradient from the mine site. AR 2655 (Exhibit 82). This report did not discuss impacts to the Black River. *Id.*

upgradient water wells and surface water drainages. *See* AR 2492 and 2655.[30] The discussion of downgradient impacts, i.e. to the Black River, due to turbidity, temperature increases and water loss from the lake however, appeared to be limited to a few broad, unsupported statements.[31]

In the first hearing before the hearing examiner, Quality Rock submitted a hydrogeologic report, by Subterra, that estimated that 9 1/2 million gallons per year would be lost to evaporation as a result of crating the 75 care lake. AR 172.[32] PGG added a second step to Subterra's modeling, by comparing the difference between the historical evapotranspiration (ET)[33] and projected evaporation from the proposed

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[30] These reports are Exhibit 66 "Hydrogeologic Analysis prepared by Pacific Groundwater Group dated October 2002; and 82 "Supplemental hydrogeologic Analysis for Littlerock Aggregate Mine, dated January 2003, including the following: Estimation of Pit Lake Effect on Qvr Aquifer and upper Ashley Creek in the vicinity of the Littlerock Mine, by Pacific Groundwater Group for Quality Rock."

[31] Issues regarding increased turbidity were dismissed by stating that the ground water "....will carry a small fraction of the suspended material present in the lake..." but that settling in the aquifer pores and the relatively large distance to the Black River will not cause increased turbidity. AR 2509. PGG did not reference any published information regarding sediment transport by ground water, nor did they conduct any on-site studies to evaluate sediment transport. The downgradient distance of aquifer impact due to turbidity and temperature increases from the mining operation were not identified. Temperature increases due to solar warming of the lake waters appeared to be addressed in the report by citing Public Hearing Testimony from Robert Mead, Hydrogeologist for Thurston County at the time. AR 2508-09. Mr. Mead *expected* that the temperature effects would be limited to an area several hundred feet downgradient from the lake. AR 2509. PGG concluded that the changes to water temperature in the wetlands and the Black River would not be significant. AR 2509. However, no ground water information was presented to address current conditions in the area between the mine boundary and the Black River.

[32] This report is Exhibit 25 and titled Report on the Soils, Geology, and Ground Water dated July 2000.

[33] Evapotranspiration is the process where water returns to the atmosphere as a result of evaporation from free water surfaces and by transpiration from plant. AR 2503.

lake.[34] By comparing the historical site conditions and the amount of water lost due to ET and the post mining lake effect, PGG reduced Subterra's estimate from 9 1/2 million gallons of water per year to approximately 7 ½ million gallons of water per year, or an average daily loss of 21,000 gallons. AR 2504. Both Subterra and PGG's estimates are an average loss for one year. *Id.* Neither Subterra nor PGG calculated the evaporative loss during the summer and fall months when water flow in the Black River is critical and gravel production is at its peak. Thurston County's hydrogeologist, Bob Mead, conceded that "most of the loss will happen during the dry season, when the river most needs water." AR 2181.

Significantly PGG did provide information that the Black River is not meeting its regulated base flows. AR 2507.[35] However, PGG did not address how the loss of 9 1/2 or even 7 1/2 million gallons of water from the Black River system could be mitigated when Black River is not

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[34] In calculating the historical ET rate, PGG "assumed the mine property was originally forested" AR 2503. This assumption does not reflect the current conditions of the site which has been logged and scarified. AR 335. The future evaporation rate for the lake was estimated from pan evaporation data. AR 2504. The estimated change in recharge was then calculated as the difference between evaporation under the future lake and the assumed forested condition. *Id.*

[35] In its first report PGG stated the "flow in the Black River at Littlerock (128th Avenue Bridge) ranges from seven to more than 400 cfs, based on gauging by Thurston County from November to 1991 to April 1998." AR 2507. The minimum base flows for the Black River set by DOE are between 66 cfs and 200 cfs. WAC 173-522-020(2).

meeting its regulated base flows, or when the Black River is closed to appropriation between July 1st and September 30th each year.

In summary, PGG's report did not address all of the hydrogeologic impacts of Quality Rock's proposed mine expansion. Most notably, PGG left out critical information on the volume of ground water that will be pumped from Quality Rock's on-site well, and thus Black River system for the operational needs of the mine. Further, PGG failed to distinguish between summer and annual evaporative losses of water from the 75 acre lake.

After reviewing the applicant's additional reports discussed above, and conducting two additional days of testimony, the hearing examiner issued his second decision on May 30, 2003. AR 36-59. The Second Decision specifically incorporated almost all of his findings from his initial decision. AR 40. Similarly the hearing examiner incorporated *all* the conclusions from his initial decision into his remand decision. AR 53. In response to the Board's First Decision, the hearing examiner clarified that only 26 of the 151 acres benefited from the MRL designation. AR 51.[36] In spite of this finding, the hearing examiner still concluded that the MRL designation on 26 acres of the 151 acre site made gravel mining on the entire 151 acre site, an appropriate use, despite the "significant

[36] Second H.E. Decision, FF 34 & 35; CR 55 (Second H.E. Decision, conclusion 10).

environmental amenities contained within the Black River area." AR 355. In addition, the hearing examiner found that the water needs of the mine expansion could *not* be met with Quality Rock's exempt 5,000 gallon per day well. AR 46. Nonetheless, the hearing examiner approved the project, and required Quality Rock to work out the water issues after the fact, with DOE. AR 59. Finally, the hearing examiner again conditioned approval of the SUP on "further review including detailed analysis of the impact to the groundwater to the site, the aquifer, and the Black River." AR 58.

The hearing examiner, again, approved the project under an "approve now study later" regime. BHAS appealed the hearing examiner's remand decision to the Board. AR 1. Quality Rock did not file a cross-appeal.

After hearing this matter twice, and faced with significant data gaps in the record, the Board denied the SUP for the following reasons:

> These facts clearly establish that there is a hydraulic link between the groundwater on site and to the water quality impaired Black River. Further these facts show the proposal does pose a significant risk to groundwater. Finally the hearing examiner did not make any findings on impacts to the Black River, despite the Board's earlier remand decision to study the impacts to the Black River.
> . . .
> The proposed mitigation to install monitoring wells and study in five years does not sufficiently mitigate the

> undisputed impacts of the proposed project due to the sensitivity of the Black River and surrounding area.
>
> As a result of the hearing examiner's own findings, and lack of findings regarding impacts to the Black River, the hearing examiner's ultimate conclusion that the proposed location of the project is appropriate and that the project will not have an adverse impact on the surrounding environment, including the Black River, and community is not supported by the evidence in the record.
>
> Furthermore the proposed project is not consistent with . . . comprehensive plan policies on the natural environment.

AR 3230 - 3231.

In sum, the Board denied the SUP because there was not substantial evidence in the record to support the hearing examiner's ultimate conclusion that the location of the proposed mine site would not have an adverse significant impact on the Black River, and that the mine expansion complied with the applicable comprehensive plan and other local and state rules, policies and regulations. *Id.*

D. ARGUMENT

1. Summary Of Argument

It is undisputed that the ground water flowing through Quality Rock's mine site is hydraulically connected to the regulated and closed waters of the Black River. AR 346. It is also undisputed that the loss of 9 1/2 million gallons of water from the proposed lake, and the yet to be determined amount of ground water that will be pumped from Quality

Rock's on-site well, diverts water that otherwise would discharge to the Black River. AR 346. It is also undisputed that a significant amount of this diversion, or lost recharge, will occur during the dry season, when the Black River is closed to further appropriation and in most need of water.[37]

The comprehensive plan polices make it clear that mineral extraction activities should not endanger surface and ground water flows or quality. Similarly, state water resource laws prohibit *any diversion* from closed bodies of water. Based on the information in the record, and just as important the omission of information in the record, such as the quantity of ground water that will be pumped from Quality Rock's on-site well, the hearing examiner's conclusion that the mine expansion is consistent with the comprehensive plan policies on protecting ground and surface water flows is not supported by substantial evidence in the record. For the same reasons, the hearing examiner's findings and conclusions that the location of the mine expansion is appropriate, i.e. will not have

[37] PGG estimated that the "*average annual evaporation*" from the lake would be 14.5 gpm or 21,000 gpd or 7,655,000 gallons per year. AR 2504. The evaporative loss calculated by PGG will be much lower during the winter and much higher during the summer during peak gravel production when water flow in the Black River is critical. Thurston County's hydro geologist, Bob Mead, conceded that "most of the loss will happen during the dry season, when the river most needs water." AR 2181. If most (75%) of the 7,655,000 millions gallons of water is lost during the dry season between May and September then the amount of lost recharge to the Black River during the dry season is closer to the order of 38,275 gpd, at a time when the Black River is closed to further appropriation, and is not meeting its base flow.

substantial impact on the closed waters of the Black River, are not supported by substantial evidence in the record.

Further, the hearing examiner's conclusion that the designation of 26 acres of the 151 acre site as a mineral resource land of long term significance overrides the adverse impacts to the Black River is inconsistent with the comprehensive plan and state law and thus is invalid.

Finally, the hearing examiner's conclusion to the extent he determines that additional studies and data can be submitted after the SUP is granted is an erroneous interpretation of the law.

2. Standard Of Review

Quality Rock appealed the Boards' second decision to superior court under the Land Use Petition Act (LUPA). Under LUPA, this court "stands in the shoes of the superior court and reviews the hearing examiner's action on the basis of the administrative record." *Pavlina v. City of Vancouver,* 122 Wn. App. 520, 525, 94 P.3d 366 (2004). A court may grant relief on a land use decision only if the party seeking relief has carried the burden of establishing that one of the following standards is met:

> (a) The body or officer that made the land use decision engaged in unlawful procedure or failed to follow a prescribed process, unless the error was harmless;

> (b) The land use decision is an erroneous interpretation of the law, after allowing for such deference as is due the construction of a law by a local jurisdiction with expertise;
>
> (c) The land use decision is not supported by evidence that is substantial when viewed in light of the whole record before the court;
>
> (d) The land use decision is a clearly erroneous application of the law to the facts;
>
> (e) The land use decision is outside the authority or jurisdiction of the body or officer making the decision; or
>
> (f) The land use decision violates the constitutional rights of the party seeking relief.

RCW 36.70C.1301(1).

Standards (a), (b), (e), and (f) present questions of law the court reviews de novo. *HJS Dev., Inc. v. Pierce County,* 148 Wn.2d 451, 468, 61 P.3d 1141 (2003). Standard (c) concerns a factual determination that the court reviews for substantial evidence supporting it. *Freeburg v. City of Seattle*, 71 Wn. App. 367, 371, 859 P.2d 610 (1993).

Substantial evidence is evidence that would persuade a fair-minded person of the truth of the statement asserted. *Freeburg*, 71 Wn. App. at 371. This review requires the court to consider all of the evidence and reasonable inferences in the light most favorable to the party who prevailed in the highest forum that exercised fact-finding authority.

Freeburg, 71 Wn. App. at 371-72. In this case, that was the hearing examiner.

The clearly erroneous standard (d) test involves applying the law to the facts. *Citizens to Preserve Pioneer Park, L.L.C. v. The City of Mercer Island,* 106 Wn. App. 461, 473, 24 P.3d 1079 (2001). Under that test, the court determines whether it is left with a definite and firm conviction that a mistake has been committed. *Id.*

Under LUPA, a court may grant relief from a local land use decision only if the party seeking relief has carried the burden of establishing that one of the six standards listed above has been met. *Wenatchee Sportsmen Ass'n v. Chelan County,* 141 Wn.2d 169, 175, 4 P.3d 123 (2000). The underlying burden is on the party seeking relief from the land use decision. *Id.* The land use decision under review here is the Board's decision. This decision reversed the hearing examiner approval of the SUP, because his decision was not supported by substantial evidence in the record. Quality Rock is the party seeking relief from this land use decision, and thus bears the burden of establishing the standards of RCW 36.70C.130.

3. <u>County Standards For Approval Of Special Uses</u>

Under the County Code, each zoning district lists special uses that, because of their impact or unique characteristics, can have a substantial

adverse impact upon or be incompatible with other uses of land. TCC 20.54.010. Because this impact cannot be determined in advance of the use being proposed for a particular location, such uses must meet certain general and specific standards before it can be approved as a permitted use. *Id.*

In this case the proposed mine expansion must meet both the specific standards applying to mineral extraction and the general standards applicable to all special uses. *Cingular Wireless, LLC v. Thurston County*, 131 Wn. App. 756, 775, ¶ 25,129 P.3d 300 (2006). The general standards provide that:

> 1. *Plans, Regulations, Laws. The proposed use at the specified location shall comply with the Thurston County Comprehensive Plan and all applicable federal, state, regional, and Thurston County laws or plans.*
>
> 2. Underlying Zoning District. The proposed use shall comply with the general purposes and intent of the applicable zoning district regulations and sub area plans. Open space, lot, setback and bulk requirements shall be no less than that specified for the zoning district in which the proposed use is located unless specifically provided otherwise in this chapter.
>
> 3. *Location. No application for a special use shall be approved unless a specific finding is made that the proposed special use is appropriate in the location for which it is proposed.* This finding shall be based on the following criteria:
>
> *a. Impact. The proposed use shall not result in substantial or undue adverse effects on adjacent property, neighborhood*

> *character, natural environment, traffic conditions, parking, public property or facilities, or other matters affecting the public health, safety and welfare.* However, if the proposed use is a public facility or utility deemed to be of overriding public benefit, and if measures are taken and conditions imposed to mitigate adverse effects to the extent reasonably possible, the permit may be granted even though the adverse effects may occur.

Emphasis supplied. TCC 20.54.040. The specific standards are contained within TCC 20.54.070(21) and the Thurston County Mineral Extraction Code, chapter 17.20 TCC. Each of these sections require that the applicant provide full disclosure on the proposed use and its impacts at the time of application. *See* TCC 20.54.070(21)(c)[38] and TCC 17.20.020.

At issue in this case is whether or not the proposed mine expansion and its resulting impacts to the Black River comply with the "Comprehensive Plan and all applicable federal, state, regional and Thurston County laws or plans" TCC 20.54.040(1) and "is appropriate in the location for which it is proposed." TCC 20.54.040(3). This latter finding must be based on a determination that among other things the proposed use shall not result in substantial or undue adverse effects on the natural environment. TCC 20.54.040(3)(a).

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[38] The application to the county for a special use permit for mineral extraction shall include: a list of all proposed activities anticipated or planned to occur on the site, including but not limited to the ***method of mineral extraction, washing, sorting, crushing, asphalt or concrete batching, equipment maintenance, or any activity that could result in a potential, significant, adverse environmental impact.*** Emphasis supplied.

4. Hearing Examiner's Conclusion That Mine Expansion Complies With Comprehensive Plan Policies Prohibiting Mineral Extraction Activities From Endangering Surface Water Flows Is Not Supported By Substantial Evidence In The Record, Because The Mine Expansion Will Reduce The Recharge To Black River, A Water Body Closed To Further Withdrawals, By 9 1/2 Million Gallons Annually, With Most Of The Loss Occurring During The Dry Season When Evaporation Will Be At Its Highest And Flows Of The Regulated River Will Be At Its Lowest, Plus An Additional Unknown Amount Of Ground Water Will Be Pumped From The On-Site Well For Operational Purposes Of The Mine

a) Comprehensive Plan Policies Prohibit Mineral Extraction Activities From Endangering Surface And Ground Water Flows And Quality.

Thurston County Comprehensive Plan (TCCP) Chapter Three (Natural Resource Lands) and Chapter Nine (Natural Environment) contain policies applicable to Quality Rock's proposed mine expansion.[39] AR 354 and 355.[40]

Chapter Three contains policies applicable to Mineral Resource Lands of Long-Term Commercial Significance. This chapter balances the need to allow mineral extraction industries to locate where prime natural resource deposits exist against the needs of protecting the environment, and in particular, water quality and quantity:

> **Mining Shall not Negatively Affect Water Quality or Quantity:** Just as sand and gravel is a natural resource, so too is the ground water the county depends on. The policies provide that generally, mining should minimize

[39] Copies of Chapter 3 and 9 of the TCCP that were in effect at the time the SUP was being reviewed is attached to this brief as Appendix A.
[40] First H.E. Decision, Conclusion 5(b) and (f).

> adverse impacts on the environment, and specifically, should minimize its effect on surface and ground water.

TCCP, Chapter Three, Section IV. at 3-19. In particular, Policy 10 of Goal 7, emphasizes the importance of protecting ground and surface water:

> Mineral extraction activities should not negatively effect nor endanger surface and ground water flows and quality.

TCCP, Chapter Three, Section V. at 3-29.

Similarly, Chapter Nine (Natural Environment) emphasizes the need to protect the county's water resources. This chapter implements the County Wide Planning Policies which highlights a need to balance human uses and natural environment and protect ground and surface water from further degradation. *Id.* It also recognizes that ground water, "provides the water to sustain stream flows during the *dry* season." Emphasis supplied. *Id.* at 9-3. To this end, the comprehensive plan directs the county to recognize the hydrologic continuity between ground and surface water. *Id.* (Policy 3). Similarly, the comprehensive plan directs the, "County to protect streams from adverse impacts of activities occurring adjacent to their waters or within their watersheds." TCCP, Chapter Nine, Section IV, Goal 2, Objective C, Policy 1 at 9-13. Finally, the comprehensive plan directs the County to "protect the quality and to

manage the quantity of ground water for all uses in the present and in the future." TCCP, Chapter Nine, Section IV, Goal 2, Objective G at 9-17.

b) Comprehensive Plan Policies Reflect State Water Law Requirements To Retain Base Flows In Regulated Rivers And Prohibit The Withdrawal Of Water That Would Be In Conflict With Base Flows And Closed Rivers.

The comprehensive plan policies as they relate to ground water and surface water are essentially reflections of state water resource laws and regulations.[41] Therefore guidance on applying and interpreting the comprehensive plan polices can be gleaned from state water resource laws.

RCW 90.54.020(3) sends a clear message that withdrawals of water shall not interfere with base flows in rivers and streams:

> The quality of the natural environment shall be protected and, where possible, enhanced as follows:
> **(a)** Perennial rivers and streams of the state shall be **retained with base flows** necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values. . . . **Withdrawals of waters which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.**

[41] These laws include chapter 90.44 RCW (Regulation of Public Ground Waters), chapter 90.54. RCW (Water Resources Act of 1971); chapter 90.22 RCW (Minimum Water Flows and Levels); chapter 173-500 WAC (Water Resources Management Program); and chapter 173-522 WAC (Water Resources Program in the Chehalis River Basin, WRIA- 22 and 23.)

Emphasis supplied. For bodies of water like the Black River, the state has authorized the DOE to set base flows to protect the wildlife resources, and recreational and/or aesthetic values of these public waters. RCW 90.22.010. If DOE sets base flows for a river, no diversions of public water shall be allowed to conflict with these base flows. RCW 90.22.030. In those situations when the water in the stream is insufficient to protect existing rights and provide adequate base flows, DOE may close these waters to further withdrawals. RCW 43.21A.064; *Postema*, 142 Wn.2d at 95.

To protect the Black River, DOE has set base flows ranging from 66 cfs to 200 cfs. WAC 173-522-020. DOE has determined that subject to base flows, there are public waters available for allocation to beneficial uses from the Black River during the months of October through June. WAC 173-522-020; 030. However between July 1st and September 30th each year, DOE has determined that there are no waters available for further appropriation from the Black River system except for domestic and stock watering purposes. WAC 173-522-050.[42]

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[42] Like surface water, all ground waters are "public ground waters," and "belong to the public" and shall be used for "beneficial use." RCW 90.44.040. All withdrawal of ground water over 5,000 gpd must receive a water right. RCW 90.44.050. This 5,000 gallon a day exemption does not authorize a collective withdrawal of more than 5,000 gpd for a single project. *DOE v. Campbell & Gwinn, L.L.C.*, 146 Wn.2d 1, 12, 43 P.3d 4 (2002) (holding that where a developer proposes to use multiple wells that would, individually, withdraw less than 5,000 gpd but that would, collectively, exceed the 5,000 gallons pr day limit, the exemption, is unavailable.) An exemption from the water rights

A "withdrawal of groundwater from a closed stream or lake in hydraulic continuity must be denied if it is established factually that the withdrawal will have ***any effect*** on the flow or level of the surface water." Emphasis supplied. *Postema*, 142 Wn.2d at 68. As the *Postema* court noted "[s]tream closures by rule embody Ecology's determination that water is not available for further appropriations." *Id.* A stream closure is a, "recognition that the water in the stream is insufficient to meet existing rights and provide adequate base flows. Thus, where a proposed withdrawal would reduce the flow in surface water s closed to further appropriations, denial is required because water is unavailable and withdrawal would be detrimental to the public welfare." *Postema* at 94.

The County's comprehensive plan policies when read in conjunction with state water resource laws prohibit the withdrawal of ground water that would interfere with the base flows of the Black River. Further, these policies prohibit the withdrawal of water from the Black River when it is closed to appropriation between July 1st and September 30th each year. Finally any interference with these purposes shall not be allowed or authorized unless it is clear that overriding considerations of the public interest will be served. Accordingly, when the County reviews

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requirement must be determined before water is ever withdrawn. *Id.* The issue of whether or not an exemption applies is a matter of the plain meaning of the statute, and DOE may enforce this statutory requirement without first adopting a rule on the subject. *Id.* at 19.

a SUP that withdraws ground water, the County must consider the interrelationship of the proposed use with the surface water and determine whether the surface water flows will be impacted by the ground water withdrawals.

c) Hearing Examiner Did Not Have Substantial Evidence To Support His Conclusion That The Mine Expansion Would Not Endanger The Low Flows Of The Black River When It Is Closed To Further Appropriation During The Dry Season.

In this case, the ground water withdrawals precipitated by the mine expansion will have two direct effects on the flows of the Black River. First, the mine expansion will result in a 75 acre lake less than 1000 feet from the Black River. The ground water flowing under the mine is in hydraulic continuity with the Black River. The effect of this lake is the annual loss of 9 1/2 million gallons of ground water recharge to the Black River. Most of this loss will occur during the dry season, AR 2181, when the Black River is closed to further appropriation. Because the Black River is closed to further appropriation between July 1st and September 30th each year, it is necessary to assess the impacts of the lake effect during this closed period. As Thurston County's hydrogeologist, Bob Mead, conceded, "most of the loss will happen during the dry season, when the river most needs water." AR 2181.[43]

[43] Exhibit 33, Memo from Robert Mead, county hydrologist, to Cindy Wilson.

If *most* of the evaporative loss of 9,500,000[44] gallons of water from the lake occurs during the dry season, the loss of ground water from the Black River, when it is closed, is approximately 47,500 gpd.[45] This withdrawal of ground water is equivalent to between nine and ten exempt 5,000 gallon wells. If *most* of the evaporative loss of 7,655,000[46] gallons of water from the lake occurs during the dry season, the loss of ground water from the Black River when it is closed is approximately 38,275 gpd.[47] This withdrawal of ground water is equivalent to between seven and eight exempt 5,000 gallon wells. Finally, even if you *average* the evaporative loss of 7,655,000 gallons from the lake, the loss of ground water from the Black River when it is closed is approximately 14.5 gpm or 21, 000 gpd. AR 2504. This withdrawal of ground water is equivalent to four exempt 5,000 gallon wells. Under *Postema*, even this withdrawal of ground water would fall within "any effect" since when you are withdrawing from a closed basin, there is no such thing as a deminimus exception. *Postema*, 142 Wn.2d at 95.

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[44] Subterra's gross estimate of the loss of ground water from the lake effect. AR 1721.
[45] If most (75%) of the 9,500,000 gallons of ground water is lost during the dry season between May and September (five months), then the amount of lost recharge to the Black River during the dry season is closer to the order of 47,500 gpd (9,500,000 gallons x 75% = 7,125,000 gallons/5 months = 1,425,000 /30 days = 47,500 gpd).
[46] PGG's net estimate of the loss of ground water from the lake effect. AR 2504.
[47] If most (75%) of the 7,655,000 gallons of ground water is lost during the dry season between May and September (five months), then the amount of lost recharge to the Black River during the dry season is closer to the order of 38,275 gpd (7,655,000 gallons x 75% = 5,741,250 gallons/5 months = 1,148,250 /30 days = 38,275 gpd).

Unlike the NPDES permit Quality Rock secured from DOE to address stormwater discharges, AR 529, Quality Rock has nothing from DOE certifying that this loss of ground water recharge is acceptable, or that it will not endanger the flows of the Black River when it is closed between July 1st and September 30th. Under the rationale of *Postema* where "any effect" on closed waters is prohibited, it comes as little surprise that DOE has not sanctioned such loss. Furthermore, Quality Rock has not provided any mitigation for this loss of recharge to the Black River.

The second effect of the mine expansion on the flows of the Black River is the need to pump ground water from Quality Rock's on-site well, for the operational purposes of the mine.

The amount of ground water that will be pumped from the well for gravel washing purposes was not identified by Quality Rock in its SEPA checklist, or in a supplemental hydrogeological report.[48] Quality Rock also did not quantify the amount of ground water that will be pumped from its on-site well for all other operational uses of the mine, such as for asphalt and concrete production, domestic needs of its nine employees,

[48] Pacific Groundwater Group (PGG) prepared a supplemental report which allegedly addressed "the elements of the hydrological report as described in section 17.20.200 of the Thurston County Mineral Extraction Code." AR 2498. However, this report left out one important element called for in TCC 17.20.200(B): "well information . . .including estimated withdrawal rate."

vehicle and wheel washing and dust suppression. (VR at 58 (HE 2/10/03)) The SEPA Coordinator from Department of Ecology commented on Quality Rock's failure to identify its source of water and the water needs for the mine. AR 878.

An analysis of water needs for mines in the Puget Sound area establish that Quality Rock's water needs for its proposed production will be well in excess of 5,000 gpd. Again, there is no certification in the record from DOE approving the use of the on-site well for the operational needs of the mine.

Based on the loss of between 7 and 9 1/2 million gallons of recharge to the Black River, with most of this loss occurring during the period when the Black River is closed, plus the unknown amount of water that will be pumped from the on-site well, the hearing examiner's conclusion that the mine expansion complies with the comprehensive plan prohibition, on endangering surface water flows, is not supported by substantial evidence in the record.

5. Hearing Examiner Erred When He Concluded The Mine's Designation As A Mineral Resource Land Of Long Term Significance Supersedes Any Adverse Impacts Of The Mine Expansion To The Black River

In addressing whether or not the mine expansion complied with Chapter Nine on the Natural Environment, the hearing examiner

acknowledged the, "significant environmental amenities contained within the Black River area." AR 355.[49] Nonetheless he erroneously concluded that because a portion of the mine expansion was designated as a mineral resource land of long term commercial significance, "gravel mining" is nonetheless "an appropriate use for the site." *Id.*

There are two problems with the hearing examiner's conclusion. First, it is not supported by the substantial evidence in the record. Only 26 of the 151 acre site are designated as a mineral resource land of long term commercial significance. AR 51 and 55.[50] Thus to the extent this designation has any significance, it only applies to 26 acres of the 151 acre mine site. Secondly, if you accept the hearing examiner's argument that designation of the mine site as "a natural resource land of long term commercial significance" controls whether a proposal meets the comprehensive plan and the general requirement that it is appropriate for the location, there would be no basis to reject a mine expansion at a particular location that endangered surface water flows and quality, so long as the site was designated. This interpretation would be inconsistent with comprehensive plan polices and state water resource law, and thus is invalid. The comprehensive plan policies on mineral resource lands recognize the importance of balancing mineral extraction activities against

[49] First H.E. Decision, Conclusion 5(g)(i).
[50] Second H.E. Decision, FF 33 and 34; and Conclusion 10.

the needs of protecting ground water and surface water quality. These policies like state law prohibit endangering stream flows.

Secondly, even if the comprehensive plan could be read to authorize mine expansion on designated lands irrespective of their environmental cost, the proposed use must still comply with the general standards of the special use chapter. TCC 20.54.040. Furthermore the general standards supplement the other standards "by permitting the County to take into account the nature of the *particular site* in evaluating a proposal's impact." *Cingular* 131Wn. App. at 776 ¶ 27. (Emphasis supplied). To the extent the hearing examiner concluded that designated mineral lands overrides negative impacts to surface and ground water, the hearing examiner erroneously interpreted the law.

6. The Hearing Examiner's Conclusion That The Location Of The Mine Is Appropriate, i.e. It Does Not Have A Significant Adverse Effect On The Black River, Is Not Supported By Substantial Evidence In The Record.

A fundamental issue in this case is whether or not the location of the proposed mine is appropriate. Under the general standards for approving special uses:

> No application for a special use shall be approved unless a specific finding is made that the proposed special use is appropriate in the location for which it is proposed. This finding shall be based on the following criteria:

a. Impact. The proposed use shall not result in substantial or undue adverse effects on adjacent property, neighborhood character, natural environment, traffic conditions, parking, public property or facilities, or other matters affecting the public health, safety and welfare. . . .

TCC 20.54.040 (3).

A land use decision regarding a SUP allows a use at the discretion of local government. *Timberlake Christian Fellowship v. King County*, 114 Wn. App. 174, 181, 61 P.3d 332 (2002) review *denied sub nom., Citizens for a Responsible Rural Area Dev. v. King County,* 149 Wn.2d 1013, 69 P.3d 874 (2003). When such decisions are reviewed on appeal, courts must recognize the broad range of discretion the local decision makers have in determining whether to grant a SUP application. *Id.*

Under the facts of this case, the Board appropriately exercised its discretion in denying Quality Rock's SUP application. For the same reasons discussed in the preceding sections, the hearing examiner's decision that the location of the mine is appropriate, or that the mine expansion will not have an undue adverse effect on the Black River, i.e. will not reduce recharge to the Black River at a time it most needs the water, is not supported by substantial evidence in the record. In addition, there is no mitigation in place to minimize this loss. Finally, Quality Rock has failed to disclose the full cumulative impacts of the mine.

In its first review, the Board recognized there were significant data gaps in the record and remanded this matter to the hearing examiner. In particular the Board, like the Black River Refuge manager, was concerned about how the mine expansion would impact the low flows of the Black River during the dry season. Quality Rock had a second opportunity to fully disclose the impacts of its mine expansion and provide appropriate mitigation. Instead Quality Rock downplayed the significance of the lake effect by employing additional modeling to reduce the loss of recharge from 9 1/2 million gallons of water to 7 1/2 million gallons of water. Quality Rock also sidestepped the significance of this water loss. Unlike its traffic studies which analyzed impacts of truck traffic during both the low season and the peak season, i.e. more truck trips in peak season, AR 600, Quality Rock only provided an average annual loss of water as opposed to peak water loss. Since the Black River is closed to appropriation in the dry season, the significance of accurate loss of water during this time is critical to assess the mine's impact to the Black River. Furthermore, Quality Rock did not begin to assess the amount of ground water it would need to pump from its on-site well for the operational purposes of the mine. In this context, the Board appropriately used its discretion to deny Quality Rock's proposed mine expansion the second time around.

7. <u>The Hearing Examiner Erred When He Concluded That Additional Reports Regarding Impacts To The Black River Could Be Submitted After The Approval Of The Special Use Permit.</u>

The hearing examiner approved the SUP for Quality Rock's mine expansion before reviewing all the information required by SEPA and the Thurston County Mineral Extraction Code, regarding the mine expansion's impact to the Black River. In addition, the hearing examiner approved the SUP on the condition that certain studies and analysis could occur after the approval of the SUP.[51] The Board rejected this "approve now, study later" regime adopted by the hearing examiner because SEPA, the Mineral Extraction Code, chapter 17.20 TCC and the Special Use Criteria, chapter 20.54 TCC, require that the applicant provide full disclosure on the proposed uses and impacts of its mineral extraction activities, at the time of application, and not after the approval of the SUP. *See* TCC 20.54.070(21)(c) and TCC 17.20.020.

The special use criteria requires that an applicant submit the required data at the time of application. TCC 20.54.060 and TCC 20.60.030. Similarly, under TCC 17.09.080, a completed environmental

[51] For example in condition No. V of the hearing examiner's second decision, he conditioned approval as follows: "The last three phases of the operation shall be subject to *further review* including detailed analysis of the impact of the groundwater to the site, the aquifer, and the Black River." Emphasis supplied. AR 58. In condition No. W, the hearing examiner approved the project subject to Quality Rock obtaining a water right and submitting this water right after the fact. AR 59. This review by DOE after approval of the SUP precludes assessment of the cumulative impacts of the project prior to approval. The cumulative effects being the amount of water withdrawn from the on-site well, and the amount of water lost from the lake effect.

checklist, with supplemental materials shall be filed at the same time as an application for a permit. The purpose of SEPA is essentially to ensure that environmental impacts and alternatives are properly considered by the decision makers before a project is approved. *Bellevue Farm Owner's Association v. State of Washington*, 100 Wash. App. 341, 354, 997 P.2d 380 (2000).

Quality Rock had an obligation to reveal "***any activity that could result in a potential, significant, adverse environmental impact.***" TCC 20.54.070(21)(c). In other words, it is up to Quality Rock to show all of its warts, and it is up to the County to review those warts to see if they create an adverse impact. This system relies on the applicant to be forthcoming about all the impacts of its proposal. In a sense it is a case of the fox guarding the hen house. Because if applicant does not want to reveal its warts, these warts may or may not be discovered in the review process.

In this case the SEPA checklist specifically asked Quality Rock to quantify how much ground water it will be withdrawing for its project. AR 1370. Quality Rock did not provide this information. *Id.* Similarly, under the Thurston County Mineral Extraction Code, hydrogeologic reports must be submitted at the time of application for a special use permit. TCC 17.20.020(2). Like the SEPA checklist, the hydrogeologic

report required Quality Rock to identify the amount of ground water that will be pumped from its well. TCC 17.20.200(B). Quality Rock failed to provide this information and thus did not disclose how much water it would need for the operational purposes of its mine. Instead it simply assumed that a 5,000 gallon per day exempt well could cover the needs of the mine even at full production volume of 750,000 tons of aggregate a year. This assumption was blasted out of the water, by the diligence of BHAS, who brought a recent analysis of gravel mine water needs to light. Ironically this analysis was conducted by Quality Rock's own consultant, PGG, the year before.

Instead of addressing the lack of this information required by the county codes, the hearing examiner approved the SUP and directed Quality Rock to figure out how much water it will use with DOE after the fact. AR 59. The problem with this approach, as described above, is the applicable county codes require this information at the time of application, not after the use has been approved. Quality Rock had an obligation to figure out its water needs prior to applying for a special use permit. Quality Rock neglected to do so. Just like any other applicant needing to make arrangements for water, a letter must be provided by the utility provider, or in this case DOE, at the time of application, not after

approval. TCC 20.60.030(3)(c)(vii). TCC 20.54.020 also requires that this information be supplied at time of application because,

> No special use shall be issued unless the use complies with all of the applicable standards of this chapter and all other applicable requirements of this title.

Without a letter from DOE certifying that Quality Rock has received a water rights permit or some other approval for supplying water, the hearing examiner cannot make a finding that the mine expansion complies with state water resource laws. Furthermore, Quality Rock's analysis on the mine expansion's impact to neighboring wells, did not factor in the amount of ground water that will be pumped from Quality Rock's on-site well. Therefore, any finding that the hearing examiner made that the neighboring wells will not be impacted is called into question by allowing Quality Rock to pursue water rights to pump an undetermined amount of water from its on-site well.

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E. CONCLUSION

For the reasons discussed, Thurston County respectfully requests the Court to reinstate the Board's decision denying the SUP.

Respectfully submitted this 22nd day of May, 2006.

EDWARD G. HOLM
PROSECUTING ATTORNEY

Elizabeth Petrich

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A copy of this document was properly addressed and mailed, postage prepaid, to the following individual(s) on May 22, 2006.

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I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct. Olympia, Washington.

Date: May 22, 2006

Signature: Wendy Smith

CHAPTER THREE -- NATURAL RESOURCE LANDS

I. AGRICULTURE RESOURCES

Community Context: Agriculture in Thurston County has an important and varied role. Although Thurston County is not often noted as a farming county, local agriculture accounts for 16 percent of the County's land use and produces over $77 million worth of farm products a year. Land conservation and local food production is essential to the long-term sustainability of the community. It preserves nonrenewable resource land, enhances regional self-reliance for food and jobs, maintains diversity of the local economy, reduces dependence on petroleum products, and increases the quality of life. As the county's population continues to grow, the need for conservation measures to protect this resource intensifies because of increased development pressure on farm lands and the greater local demand for agricultural products. This interconnection between urban residents within the county and local farmers points to the need for community-wide awareness, appreciation, and support for farming.

Farming Diversity: Thurston County products range from nursery stock to hay, from strawberries to dairy products, representing the diversity of our local resources. Two major reasons for this diversity are the unique soil and water resources which occur here. For example, the instance of particularly sandy, well-drained soil types in spots throughout the county has given rise to very successful seedling tree enterprises. These soils allow for the planting and harvesting of plants during wet weather, when other soils are impossible to work. This characteristic allows crops to be grown here that are difficult to grow on heavier soils. In addition, pure water from relatively shallow aquifers has provided for the irrigation needs of a variety of different crops.

Thurston County also has a diversity of types of farms. They include larger-scale commercial farms, organic farms, historic family farms, smaller-scale, close-to-market produce farms, orchard farms, and part-time farming operations. Community-Supported Agriculture is a concept that is growing in popularity within the county. And, in recent years fish farming operations have located here, finding substantial quantities of pure water, an important factor in the successful rearing of fish.

Market: In addition to the soil and water resources, the proximity of the county to major population centers of the Puget Sound region has also played a role in encouraging some crops to be grown here. In recent years, several vegetable farms have been started, selling both locally at farmers' markets, and wholesaling their products to markets throughout the Puget Sound region. Recently, several turf growing companies have come to Thurston County partly because of the county's proximity to a major marketing area and because of the availability of good farm ground. Proximity to markets has also been a factor in sustaining the county's egg and poultry producers (Thurston County leads the state in egg production).

Conventional crops have also been grown in the county. Corn, oats, wheat, and peas are still grown here. However, since the 1940's, with the notable exception of dairy and poultry operations, the culture of those basic crops has shifted to Eastern Washington.

Evidence from the 1992 Federal Farm Census shows a slight increase in the number of farms and farm acreage in Thurston County as well as an upsurge in income and variety of farm enterprises as compared with the 1987 Census. Production of nursery and greenhouse crops has tripled since 1987. Niche crops such as vegetables and flowers have flourished. The value of dairy products sold in the County has doubled from 1987 to 1992.

Adaptation: Pessimists of the viability of farming west of the Cascades and Thurston County, have especially noted this trend. Conventional crops and modern farming practices do not often fit the wet climate and small-scale nature characteristic to farming in this area. But these disadvantages have also produced numerous opportunities for the innovative farmers and aquaculturalists who committed themselves to staying here. Some focused on specialty crops and pioneered growing methods tailored to unique local conditions. Others saw the increasing demand for nursery stock and changed their operations into wholesale nurseries. Dairy farmers formed a marketing cooperative, giving to even the smallest dairy the marketing strength of a large producer. Recently, several local small vegetable growers also formed a cooperative, expanding their marketing capability, and sharing warehousing facilities.

Farmers in Thurston County are affected by changing conditions: markets, federal, state and local regulations, land costs, water rights issues, and land uses surrounding farming areas. They are affected by labor shortages and limited infrastructure within the county, such as processing plants and agricultural suppliers. New farmers have a special need for more information about the industry, such as market conditions, and new crops and technology.

Farmers in Thurston County, regardless of farm size or commodity produced, share a common sense of stewardship and love of the land. They want farming to continue in this county. Due to market and regulatory issues which are outside the control of local farmers, there is a need for a comprehensive approach to maintain the commercial viability of local agriculture. Farmers need to be flexible and capable of growing a diversity of crops to remain competitive, and there needs to be a program of community support for local agriculture. There is also a need for protection of an affordable land base, soil fertility, and ground and surface water quality and quantity, in order to maintain and enhance resource opportunities for existing and future generations.

Vision Statement: The residents of Thurston County envision a diverse and thriving agricultural industry that is able to respond quickly to changing market conditions. They recognize the essential role of land conservation and local food production in maintaining the quality of life and long-term sustainability of the community. They also recognize that this requires a partnership with the farming community.

The community as a whole takes responsibility for conserving prime farm lands, promoting local markets, minimizing incompatible land uses, and providing other community support. This includes support for regulatory processes that are sensitive to the needs of farmers and that recognize the need to protect the environment. Farmers take responsibility for preserving soil fertility and ground and surface water quality, and for promoting a land stewardship ethic for existing and future generations.

Protection from High Tax Rates: An important issue addressed by the policies in this Plan is protecting farms from high property tax rates. Removing the pressures to convert farmland to urban and suburban uses should help relieve speculative land values which drive up property tax assessments. In addition, farmland owners currently have the option to enroll in a special property tax program which gives them approximately an 80 percent reduction in taxes on their farm ground. While many farmers are currently enrolled in this program, some are not or do not know how to enroll. The policies and action recommendations provide for encouraging enrollment and publicizing the program.

Another threat to increased farmland tax values is taxes or assessments for sewer, water, public utility districts, local improvement districts, and utility local improvement districts. The policies encourage the inclusion of farmland in these districts.

The Limited Resource: Food, feed, forage, fiber, and oil seed crops are all best produced on prime farmland soils which provide superior physical and chemical

characteristics. Historically, valuable agricultural lands have been diverted and eliminated by urbanization in the form of low-density suburban sprawl located outside cities and their urbanized environments.

The Farm-Farmer Connection: An overriding philosophy in this Plan is that in order to save commercially significant agricultural land for future generations, the business of agricultural production must remain economically viable. Agricultural producers serve a vital role in the care and management of prime agriculture lands as well as make significant economic, cultural, and environmental contributions to the quality of life in Thurston County. This Plan places great emphasis on protecting the economic viability of agriculture businesses to encourage agricultural producers to continue to serve as stewards of the land and contributors to the quality of life in the future.

Growth Management Act: The State Growth Management Act of 1990, (RCW 36.70A.020) states the following goal for natural resource industries: "Maintain and enhance natural resource based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses."

Section 16 of the Growth Management Act (RCW 36.70A.160) requires counties to designate agricultural lands of long-term commercial significance. In addition, the Act directs the Washington State Department of Community, Trade and Economic Development (DCTED) to provide guidelines to counties for how to classify and designate resource lands of long-term commercial significance. The criteria which follow were used to designate agricultural lands of long-term commercial significance. The criteria are based on; (1) the Washington State Department of Community, Trade and Economic Development's (DCTED) guidelines for the classification and designation of resource lands; (2) existing Thurston County policies; and (3) an analysis of local conditions.

1. Soil Type:

   The classification and identification of agricultural lands of long-term commercial significance is based upon the land capability classification system of the United States Department of Agriculture Handbook No. 210. Those classes of agricultural lands are based upon consideration of growing capacity, productivity, and soil composition. They have been incorporated into map units of the Department's soil surveys. The

following list of prime farmland soils in Thurston County is based on the Soil Conservation Service's Soil Survey of Thurston County, Washington, 1990. Designated lands should include predominantly prime farmland soils.

SCS Map Unit #	Soil Description
14	Bellingham silty clay loam (where drained)*
26	Chehalis silt loam
29	Dupont muck (where drained)*
31	Eld loam
36	Everson clay loam (where drained)*
37	Galvin silt loam, 0 to 5 percent slope
38	Giles silt loam, 0 to 3 percent slope
41	Godfrey silty clay loam (where drained)*
50	Kapowain silt loam, 0 to 3 percent slope
64	Maytown silt loam
69	Mukilteo muck (where drained)*
70	Mukilteo muck (drained)*
71	Newberg fine sandy loam
72	Newberg loam
73	Nisqually loamy fine sand 0-3 percent slope (where irrigated)
75	Norma fine sandy loam (where drained)*
76	Norma silt loam (where drained)*
86	Prather silty clay loam, 3 to 8 percent slope
88	Prather silty loam (where drained)*
89	Puyallup silt loam
97	Salkum silty clay loam, 3 to 8 percent slope
100	Scamman silty claim loam, 0-5 percent slope (where drained)*
104	Semiahmoo muck (where drained)*
105	Shalcar muck (where drained)*
106	Shalcar Variant muck (where drained)*
107	Skipopa silt loam, 0-3 percent slope
115	Sultan silt loam
120	Tisch silt loam (where drained)*
126	Yelm fine sandy loam, 0 to 3 percent slope

* Large areas which are known to qualify as Class I wetlands, (wetlands with threatened or endangered species) and which are not already in agricultural use, should be excluded from designation.

2. The Availability of Public Facilities and Services:

Since lands within Urban Growth Areas, as established within this Comprehensive Plan, are intended to be served by public facilities and services within a twenty-year period, agricultural lands of long-term commercial significance should be located outside of these boundaries.

3. Existing Land Use and Tax Status:

Designated agricultural lands should include only areas that are used for agriculture. Aerial photograph interpretation can identify areas used for agriculture. In addition, property enrollment in the Open Space Agricultural Tax Program is an indicator that the existing land use is commercial agriculture.

4. Relationship or Proximity to Urban Growth Areas:

Since lands within Urban Growth Areas, as established within this Comprehensive Plan, are intended to be developed at urban densities over a twenty-year period, agricultural lands of long-term commercial significance should be located outside of those boundaries. Furthermore, designated agricultural lands should be separated from urban residential densities by a natural or man-made feature, (e.g., railroad, road, or river), in order to avoid potential land use conflicts.

5. Predominant Parcel Size:

For Thurston County, the predominant parcel size is 20 acres or more, which, in conjunction with soil type, provides economic conditions sufficient for managing agriculture lands for long-term commercial production.

6. Land Use Settlement Patterns and Their Compatibility With Agricultural Practices:

Except within urban growth areas, adjacent residential development should be minimal and at rural densities of one unit per five acres. Recent subdivision activity near or adjacent to designated agricultural lands is an indication of settlement patterns that may have an effect on the long-term viability of agriculture. The most compatible land uses within and adjacent to long-term agricultural lands include forestry, mining, parks and preserves, and open space.

7. Proximity of Markets:

Local or regional markets should be available. Designated agricultural lands should have access to road, rail, or air transportation routes to markets.

8. Agricultural Diversity:

A diversity of agricultural activities should exist, or the area should be capable of supporting agricultural activity. No single designated agricultural area should be smaller than 320 acres, or 200 acres if near another designated area. This helps assure land use compatibility for long-term resource use, and a diversity of agriculture uses in one area. Boundaries should follow landmarks visible on the ground when possible, to provide visual distinction of land use areas.

9. Environmental Considerations:

Designated agricultural lands should be outside of Natural Shoreline Environments if they are not already being used for agriculture. The Shoreline Master Program regulations severely limit the ability to convert such areas to agricultural uses, and from one agricultural use to another.

The above criteria were applied to all agricultural lands of Thurston County. The analysis revealed a number of areas that currently qualify for designation as agricultural land of long-term commercial significance. They are shown on Map M-42.

Included on Map M-42 are two areas of designated agricultural lands located in the Nisqually Valley. These areas merit special consideration due to the unique values the Nisqually Valley holds. The following excerpt from the Nisqually Sub-Area Plan highlights those unique values:

> "The Nisqually Planning Area serves as the eastern gateway to Thurston County. The 40 million yearly travelers along the I-5 Corridor will recognize it as one of the few undeveloped river valleys between Olympia and Everett. It is distinguished by the broad open areas of the Nisqually Wildlife Refuge north of I-5 and the rural farms south of the freeway. This picturesque rural setting is framed with a wooded hillside extending the length of the western McAllister Bluff which loops back into the valley. The northern portion of the planning area lies adjacent to Puget Sound whereas the portion south of the valley sits upon a plateau paralleling the Nisqually Planning Area. It is this combination of farm and forest, hillside and valley, or clusters of development and adjacent open areas which gives this planning area its distinctive character."

Some may view the relatively small proportion of the county designated as agricultural land of long-term commercial significance as an indicator that the agricultural industry in the county risks losing continued viability. However, in Thurston County land area is not the critical factor for long-term viability, considering the adaptive uses local farmers have created. The county continues to consider agriculture to be a viable industry in the county, and not merely a symbolic remnant of its history.

Some agricultural areas are at risk, however. The farmlands designated as long-term in the Chehalis River Valley area need protection from flooding. Flooding of the Chehalis River negatively impacts agriculture in that it washes away topsoil, erodes banks, destroys fences and driveways, and kills livestock, resulting in severe economic losses.

Redesignation of Agricultural Areas. While the emphasis of this Plan is to prevent the loss of agricultural lands, the County is subject to trends and events that it has little ability to control. While the areas designated for long-term agricultural use meet the primarily physical criteria for long-term commercial use, other factors may arise that can render commercial agriculture activity completely non-viable. If farming economics changes so as to affect the long-term potential for farming in a substantial portion of an agriculture district, the land use designation should be reconsidered.

Piecemeal redesignation of lands within the designated agricultural areas should not be allowed. The piecemeal redesignation of individual properties from agricultural use to residential use can have a domino effect. The farm areas designated as agricultural lands of long-term commercial significance were chosen because there was a "critical mass" of operating farms with significant investments in land, buildings, and other improvements, productive farm soils, and absence of incompatible land uses. Conflicts between new residents and surrounding farmers make it harder for the farms to continue. These conflicts add pressure to those surrounding farmers to seek redesignation of their land too. Therefore, the reevaluation of agricultural land should occur only for whole areas of land designated as agricultural land of long-term commercial significance.

Redesignation of the agriculture areas to other land use designations should be taken up only when changes in economic conditions, surrounding land use or regulatory conditions are negatively affecting farms throughout the district, over a period of several years. The losses of an individual farm should not be reason, by itself, for eliminating or endangering the remaining acres of Thurston County's best chance for agricultural land in the future.

The following criteria are provided to capture, in a general way, the limited nature of the circumstances under which the County should reevaluate a whole area designated as agricultural land of long-term commercial significance.

A. Changes in surrounding land use severely inhibit or severely interfere with continued agriculture use;

B. Changes in market conditions severely reduce the economic viability of agriculture use; or

C. Changes in regulatory requirements severely reduce the economic viability of agriculture use.

These circumstances should create severe losses lasting several years, covering a wide range of crops or products, and affect a majority of the producers in the area, before a reevaluation of agricultural lands is undertaken.

Due to the aquifer sensitivity of the McAllister Springs recharge area, existing farming operations within this area may be limited in their use of pesticides and fertilizers at some point in the future. If further urbanization of the Urban Growth Area to the north of these farms results in increased neighbor complaints and enforcement actions, this could also place increased pressure on existing farmers in maintaining an economically viable operation. For these reasons, farmland within the McAllister Springs recharge area were found not to meet the long-term designation criteria.

II. AQUACULTURE RESOURCES

A thriving shellfish industry is located along the county's Puget Sound shorelines. The warm, nutrient rich tide flats of southern Puget Sound is an exceptionally valued shellfish growing area. Shellfish growers have taken advantage of this, producing more oysters than anywhere else in Puget Sound. In 1995, there were 10,580 acres of commercial shellfish beds in Thurston County. Yearly, the 33 commercial shellfish growers operating out of Thurston County's marine waters produce nearly 120,000 gallons of oysters and 140,000 pounds of clams as part of the $43 million Puget Sound shellfish industry in 1993 dollars. Also located in the Thurston County area are over 10 million pounds of subtidal geoduck clams. The total value of the geoduck resource exceeds $60 million. The value of these commercial shellfish resources is expected to significantly increase due to widespread pollution and disease that are decimating the Chesapeake Bay and Gulf Coast shellfish industries. As a result, Washington State is expected to become the leader in the United States in shellfish production.

In addition to these over-the-water marine based aquaculture operations, several land based fish farms reside in Thurston County. These operations rely on the plentiful and pure water from shallow aquifers to raise fish, many pumping millions of gallons a day. Unlike surface waters which have fluctuating temperatures dependent on the season, ground water remains a constant 50 degrees, allowing for the consistent and sustained growth of the fish. Under these favorable conditions, local fish farms produce over 2 million pounds of fish a year, with gross sales of $2 million.

For aquaculture operations in Thurston County, there are three main issues the goals, objectives, and policies attempt to address:

Protection of Water Quality: Protection of water quality, both ground water and surface water, is particularly important. Both the land based fish rearing facilities and the marine water shellfish, seaweed and net pen rearing facilities require good water quality to operate. Since 1983, 3,210 acres or 28 percent of the county's shellfish beds have been downgraded (decertified) due to nonpoint pollution. The goals, objectives, and policies provide a general framework for ensuring that these critical water sources are protected from degradation.

Protection of Commercial Aquaculture Areas: A second issue is protecting existing and future aquaculture operations from incompatible development. For land based facilities, sites and general location are provided for in the commercial agriculture, forestry, and rural land use designations. For over-the-water based operations, the goals, objectives, and policies in this chapter provide for identifying and designating commercial shellfish harvesting areas, seaweed and net-pen rearing sites, and related shoreline and upland facilities. In addition, the policies discourage encroachment from incompatible uses to avoid nuisance conflicts and water quality degradation.

Minimize Adverse Impacts from Aquaculture Operations: The third main issue involves the potential impacts that aquaculture activities may have on adjacent uses and the general environment. The policies provide that normal aquaculture practices should not be considered a nuisance unless they threaten the public health and safety. Clearly there is a need for balance on this issue, since aquaculture operations operate in areas where the environment is particularly fragile, and where other kinds of activities occur. Because of this, the policies recommend that adverse impacts from aquaculture operations be minimized. Development of guidelines to help guide aquaculture operations in avoiding potential conflicts is also proposed.

III. FOREST RESOURCES

Forest lands are a paramount economic resource for the State of Washington. This valuable resource must be conserved and protected to ensure that the production of timber and forest products continues into the future. It is the State's policy to encourage forestry and restocking of forests (RCW 84.33.010). It is through proper forestry management that environmental benefits will be enhanced in the areas of water quality, air quality, reduction of soil erosion, lessening of storm and flood damage, protection of valuable wildlife habitats, and the provision of scenic and recreational spaces.

Forestry production activities have had a long history in Thurston County evolving from the timber "mining" days of the late 19th and early 20th centuries to the sustained yield forestry management that occurs today. Currently, approximately 58 percent of the county's land area is managed for long-term forestry production (41 percent private commercial timberland, 12 percent Department of Natural Resources (DNR)-managed land, and 5 percent federally owned forest land including Fort Lewis). The DNR-managed trust lands in the county, such as Capitol Forest, are managed for the dual purpose of conserving forest resource lands and producing a long-term income from timber harvesting for schools and other public institutions.

In addition to timber and timber by-products, a variety of other economic products are harvested from forests in Thurston County including salal, ferns, and moss for the floral industry and chantrell mushrooms for a growing local and export food market.

Minimizing Adverse Impacts from Forestry Operations: An issue addressed by the policies involves the potential impacts that forestry activities may have on adjacent uses and the general environment. The policies provide that normal forestry practices should not be considered a nuisance unless they threaten the public health and safety. This is consistent with the recently amended RCW 7.48.305, which states that forest practices undertaken in conformity with all applicable laws and established prior to surrounding non-forestry uses, are presumed to not constitute a nuisance unless the activity has a substantial adverse

effect on the public health and safety. However, the policies also recognize that forestry operations need to minimize the potential adverse impacts on other uses and the environment. Thus, the policies try to strike a balance between forestry management and other activities and environmental concerns.

Responding to Growth Management Needs: With the passage of the State Growth Management Act in 1990, the identification and conservation of forest lands of long-term commercial significance was mandated for cities and counties in high population growth areas, such as Thurston County.

The State Growth Management Act states the following goal for natural resource industries: "Maintain and enhance nature resource based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses" (RCW 36.70A.020). The section requiring regulations to protect resource lands also states, "Such regulations shall assure that the use of lands adjacent to agriculture, forest, or mineral resource lands shall not interfere with the continued use, in the accustomed manner and in accordance with best management practices, of these designated lands for the production of food, agricultural products, or timber..." (RCW 36.70A.060).

The State Growth Management Act requires cities and counties to classify and conserve forest lands of long-term commercial significance. The Act defines "long-term commercial significance" as determined by the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration of the land's proximity to population areas, and the possibility of more intense uses of the land. The Washington State Department of Community, Trade and Economic Development (DCTED) recommends that classification of forest lands be based on the private forest land grades of the Department of Revenue (WAC 458-40-530), among other criteria.

The land grade system incorporates consideration of growing capacity, productivity, and soil composition of the land. Forest land of long-term commercial significance will generally have a predominance of the higher private forest land grades. However, the presence of lower private forest land grades within the areas of predominantly higher grades need not preclude designation of forest land.

DCTED also recommends that each county determine which land grades constitute forest land of long-term commercial significance, based on local and regional physical, biological, economic, and land use considerations.

The following table is a cross-reference of tree species, site index (growth potential) and corresponding land grades:

Table 3-1
Washington State Private Forest Land Grades

Species	Site Index (Growth Potential)	Land Grade[1]
Douglas Fir	136 ft. and over	1
	118 - 135 ft.	2
	99 - 117 ft.	3
	84 - 98 ft.	4
	under 84 ft.	5
Western Hemlock	136 ft. and over	1
	116 - 136 ft.	2
	98 - 115 ft.	3
	83 - 97 ft.	4
	68 - 82 ft.	5
	under 68 ft.	6
Red Alder	117 ft. and over	6
	under 117 ft.	7

The predominant species growing in Thurston County is Douglas Fir. There is no occurrence of land grade 1, and very little of land grade 4. Most of the county is evenly split between land grade 2 and land grade 3.

For designating forest lands of long-term commercial significance, Thurston County initially identified those areas where forest land grade 2 predominates.

In addition to physical growing conditions, however, DCTED also requires that the county consider the effects of proximity to population areas and the possibility of more intense uses of the land, as indicated by:

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

   In Thurston County, this is defined as the areas where the extension of public services and facilities is not planned for at least 20 years. Since lands within the Urban Growth Area boundaries, as established within this Comprehensive Plan, are intended to be served by public facilities and services within a 20-year period, forest lands of long-term commercial significance should be located outside of these boundaries.

[1] Land Grade 1 = highest, Land Grade 7 = lowest.

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

   In addition to being outside Urban Growth Areas, long-term forest lands should be far enough from urban areas that land use conflicts are avoided.

3. The size of the parcels: forest lands consisted of predominantly large parcels.

   For Thurston County, this means parcel sizes of predominantly 640 acres or larger.

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

   For Thurston County, this means that residential development should be minimal within the surrounding area and generally at a rural density of one unit per five acres to limit land use conflicts with forestry operations, such as trespassing, vandalism, shooting, and dumping. Other compatible land uses within and adjacent to commercial forestry include agriculture, mining, parks, preserves, and other open space. Each area designated as forest land of long-term commercial significance should total approximately 5,000 acres or more.

5. Property tax classification: property is assessed as open space or forest land pursuant to Chapter 84.33 or 84.34 RCW.

   Thurston County considered properties enrolled in the Classified or Designated Timber programs, as well as public land managed for time production.

6. Local economic conditions which affect the ability to manage timber lands for long-term commercial production.

   Economic conditions should be conducive to long-term timber management. In Thurston County, unfavorable economic conditions include locations with high administrative costs due to complaints from nearby landowners, locations requiring extensive security control efforts, and locations in which allowable forest practices such as burning and chemical applications will significantly interfere with other permitted land

uses. Favorable economic conditions include land grade 2 forest soils, which provide (in conjunction with large parcel sizes) the growth potential to manage timber lands for long-term commercial production.

7. History of land development permits issued nearby.

   For Thurston County, this means that recent residential development is an indicator of a pattern or direction of growth that may be encroaching on the forest land.

The above criteria were applied throughout unincorporated county areas to designate those forest lands of long-term commercial significance. Those lands that currently meet the criteria are shown on Map M-42.

IV. MINERAL RESOURCES

As a result of major glacial activity in Thurston County's geologic past, major deposits of gravel and sand are located in Thurston County. This geologic heritage provides the raw material for several sand and gravel operations throughout the county. The deposits are perhaps doubly significant considering their proximity to major population areas and construction projects which use sand and gravel.

Another significant mining activity is the Centralia coal mine on the county's southern border with Lewis County. This is an "open pit" mine which supplies the Centralia Steam Plant with coal. Unlike many open pit mines of the past which remain as open scars on the earth, the Centralia mine sets the industry standard for reclamation and minimizing environmental damage. Land that was mined ten years ago now supports a mixed forest of fir and alder, and several wetlands.

Growth Management Act: Section 17 of the 1990 State Growth Management Act states that "...each county...shall designate where appropriate...mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals." The Act defines "minerals" as gravel, sand, and valuable metallic substances. Other minerals may be designated as appropriate. Section 6 of the Act states that "...each county...shall adopt development regulations...to assure the conservation of...mineral resource lands designated under Section 17 of this Act."

Within Thurston County, minerals of potentially long-term commercial significance include sand and gravel deposits, coal deposits (Centralia mine), and rock

resources, such as columnar basalt (shot rock) and sandstone. Basalt "shot rock" is important for highway construction and flood control (rip rap), and the sandstone quarries at Tenino have provided valuable building material for the State Capitol and other structures around the County. There are no known valuable metallic minerals within the County.

To determine the location of mineral resource lands of long-term commercial significance, the County applied the criteria in the Washington State Department of Community, Trade and Economic Development's (DCTED) "Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands, and Critical Areas." The DCTED criteria consider the effects of proximity to population areas and the possibility of more intense uses of the land. They also address the quality, quantity and other physical characteristics of the mineral deposit, and resource availability within the region.

Based on the DCTED Guidelines, the County developed the following criteria to designate mineral resource lands of long-term commercial significance.

1. Mineral Deposits. Existing deposits consist of sand and gravel, coal, basalt, sandstone, or igneous rock, based on U.S. Geological Survey maps or site-specific information prepared by a geologist, or as indicated by State Department of Natural Resources (DNR) mining permit data.

2. Location. Mineral resource lands are located outside public parks and preserves, and at least 1,000 feet from urban growth areas and rural residential areas with existing densities predominantly one dwelling unit per five acres or higher, in order to minimize land use conflicts during the long-term operation of the mine.

3. Minimum Area Width. The minimum area width is 500 feet for sand and gravel, coal, and basalt, which allows for 100-foot setbacks and a 300-foot width for the working site and reclamation.

4. Marketability. Mineral resource lands contain non-strategic minerals which are minable, recoverable and marketable in the present or foreseeable future (50 years).

5. Minimum Value. The resource value over the life of the mine must exceed certain thresholds. The minimum threshold values in 1990 equivalent dollars are as follows:

    a. Construction materials: $5,000,000.

b. Quarried rock: $1,000,000.

c. Industrial and chemical mineral materials: $1,000,000.

d. Metallic and rare minerals: $500,000.

e. Non-fluid mineral fuels: $1,000,000.

Mining operations meeting the above criteria, and which have all legally required permits at the onset of the extraction operation are designated as long-term commercially significant. In addition, future mining operations which meet the criteria above may apply for designation status concurrently with the application for a Special Use Permit under the Zoning Ordinance. Map M-43 identifies the mining sites currently meeting the designation criteria and is provided for background information only. This map is subject to change based on future approvals for designation by the county's Hearings Examiner. The map will be updated during the next available Comprehensive Plan amendment process following a new designation approval.

Designated mineral resource lands of long-term commercial significance are also shown on the "Official Designated Mineral Resource Lands" map accompanying the official zoning map, in the custody of the Development Services Department. This map shall be immediately updated following approval of a new designated site.

Long-term commercially significant (designated) mineral deposits should be conserved for long-term resource extraction. To this end, the following measures should be implemented:

- Resource use notice to new developments within 300 feet of designated mineral lands, informing prospective property owners of the long-term resource use nearby; and

- Limit private nuisance claims against operators of designated mines when certain conditions are met.

These measures are intended to assure that the use of lands adjacent to designated mineral lands shall not interfere with the continued use, in accordance with best management practices (BMPs), of the designated lands for mineral extraction.

The extraction process does pose potential conflicts with surrounding uses, particularly rural residential uses. While responding to the requirements of the

Growth Management Act, the county also recognizes the needs of existing residents. During the process of designating resource lands of long-term commercial significance, the county considered several concerns related to ground water protection, hazards posed by gravel truck travel, and residential densities surrounding the designated mineral resource lands, among others. The criteria for designation and the conservation measures takes these issues into account. Also in response to the concerns mentioned above, additional requirements for Special Use Permits and BMPs have been adopted by the county. The county intends that these additional standards will ensure that mining operations are in keeping with public health and safety and environmental protection.

Major Mineral Resource Issues: The goals, objectives, and policies of this plan address four major issues involving mineral extraction industries in Thurston County:

- Availability of the resource;
- Restoration of mining sites;
- Minimizing adverse impacts to the environment; and
- Maintaining compatibility between resource use and residential use.

Ensure that Mineral Resource Lands of Long-Term Commercial Significance Can Be Used for Mineral Extractions: Protecting mineral deposits of long-term commercial significance for mining use is an important goal of the policies. The policies lay the basis for allowing mining activities to occur, and prevent residential and other incompatible uses from locating adjacent to these deposits. The county recognizes that a mining operator's hauling distance to the resource user is an important factor to its economic viability. However, the policies also provide that mining activity should not encroach on existing residential uses nor adversely affect the environment. In addition, significant geologic features, should not be used for mining purposes. "Significant geologic features" is left undefined, and it is left for future study to define and identify such features. Prime and unique farmland (as defined by the Soil Conservation Service) should not be used for mining purposes unless they can be restored to their original production capacity as mining occurs.

Restoration of Mining Sites Provided For: The policies specify that mineral extraction sites should be restored as mining occurs. This gives the major direction for the establishment of restoration standards in the action recommendations. Existing, non-operating or abandoned mining sites pose a concern to many county residents because they may leave aquifers vulnerably exposed, and invite illegal waste dumping. The action recommendations also seek to address the problem of these non-operating sites.

Mining Shall not Negatively Affect Water Quality or Quantity: Just as sand and gravel is a natural resource, so too is the ground water the county depends on. The policies provide that generally, mining should minimize adverse impacts on the environment, and specifically, should minimize its effect on surface and ground water.

The Needs of Mining Operators are Balanced with the Needs of Neighboring Residents: The policies recognize the necessity for mineral extraction to be located in rural areas of the county with low population densities or in industrial-zoned areas. The movement of large amounts of mineral resource necessitates good roads capable of handling significant numbers of heavily-loaded trucks. Loaded trucks en route from the extraction site may lose a very small but potentially hazardous portion of their load, and track dirt or mud onto public roadways. Therefore, the policies also respond to the need for better prevention of such mining impacts on county residents.

V. GOALS, OBJECTIVES AND POLICIES

GOAL 1: AGRICULTURE LAND SHOULD BE PRESERVED IN ORDER TO ENSURE AN ADEQUATE LAND BASE FOR LONG-TERM FARM USE. (This applies to all agricultural land)

OBJECTIVE A: Agriculture lands should be conserved and enhanced for long-term farming use.

POLICIES:

1. Residential uses adjacent to farms should be developed in a manner which minimizes potential conflicts and reduces unnecessary conversion of farmland.

2. Commercial farmland owners should be encouraged to retain their lands in commercial farm production and enroll their land in the Open Space Agriculture Tax Program.

3. In order to reduce development pressure from the farm and rural areas, future development should be directed toward designated growth areas where existing and planned services can more easily accommodate growth. Outside these growth areas, densities should remain low.

ACTION NEEDS FOR OBJECTIVE A:

1. *Develop strategies for preservation of farm lands. Strategies such as rural cluster subdivisions, purchase of development rights, and transfer of development rights should be considered.*

2. *Strategies aimed at recognizing the importance of farming in rural areas, including farms located outside designated agricultural lands, should also be considered. This may include placing signs along roads warning drivers about farm equipment on roadways in farming areas.*

OBJECTIVE B: Full utilization of the county's agricultural resources by farmers should be encouraged.

POLICIES:

1. The county should encourage the schools and the media to provide more information on the special problems, potential, and importance of agriculture to all citizens.

2. The county, through its Agricultural Advisory Committee and the Thurston Conservation District, should continue to support the continued viability of agriculture and encourage community support for it.

ACTION NEEDS FOR OBJECTIVE B:

1. *Encourage community efforts to support local agriculture, including continued support for the Agricultural Advisory Committee and the Thurston County Fair.*

2. *Working with the Agricultural Advisory Committee, Thurston Conservation District and other community groups, prepare an inventory of existing farm enterprises within the county and assist local farmers in developing strategies for support of the local agricultural industry.*

OBJECTIVE C: Provide regulations that are supportive to long-term agricultural use.

POLICIES:

1. Farmers often need to work with a variety of federal, state, and local government regulations and agencies. Thurston County should assist farmers in working their way through this often time-consuming and complex process.

2. The county should provide some form of advocacy for local farmers both on general issues related to local agriculture and specific problems of individual farmers relating to local, state, and federal regulations.

3. Noxious weeds pose a significant economic threat to agriculture. The County Noxious Weed Control Board should have the opportunity to recommend control options as part of their integrated pest management program in accordance with the proposed Ground Water Management Plan, the Thurston County Pest and Vegetation Management Policy, and any other applicable county policies.

4. Where further regulation regarding the use of agricultural chemicals is needed, the Department of Agriculture should develop Special Area Regulations (SARs). Initially, SARs should be pursued according to the policy guidance in the Ground Water Management Plan. Thurston County shall not be precluded from regulating agricultural chemicals if adequate protection of the resources and public health are not being met by existing regulatory agencies.

5. Within Thurston County, farmers should be given protection from nuisance claims in accordance with State law.

ACTION NEEDS FOR OBJECTIVE C:

1. County staff should assist farmers with meeting regulatory requirements.

2. *Evaluate the impact of new regulations on agriculture to be sure they do not threaten a continued agriculture industry in Thurston County.*

GOAL 2: AGRICULTURAL LAND OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE CONSERVED.

OBJECTIVE A: Agriculture lands of long-term commercial significance should receive the highest priority for conservation.

POLICIES:

1. Designated agricultural lands should be zoned at very low densities to ensure the conservation of the resource for continued agricultural use.

2. Non-agricultural development within designated agricultural areas should be limited to non-prime farmland soils where possible.

3. Non-agricultural development within designated agricultural areas should be compactly developed, in order to conserve the largest area possible for continued agricultural use.

4. The county discourages the establishment or expansion of local improvement districts, utility local improvement districts, or sewer, water or public utility districts into designated agricultural areas of long-term commercial significance.

5. Except within urban growth areas, land uses that are adjacent to long-term commercial agriculture areas should be of compatible use, such as sawmill operations, warehousing, agri-businesses, and low density residential.

6. The designation of agricultural land of long-term commercial significance should be reevaluated if changes in surrounding land use or farming economics create severe losses lasting several years, covering a wide range of crops or products, and affect a majority of the producers in the area.

ACTION NEEDS FOR OBJECTIVE A:

1. *Place a notice on any new subdivision or residential building permit located within 300 feet of designated agriculture land of long-term commercial significance, which states that a variety of commercial agricultural activities may occur that may not be compatible with residential development. The notice should also state that a person's right to recover under a nuisance claim against agricultural activities may be restricted.*

2. *Jointly work with Grays Harbor and Lewis County on the Chehalis River flooding problem.*

3. *Investigate the possibility of a cost share program between Thurston County and the Agriculture Stabilization and Conservation Service for flood protection activities for agricultural lands of long-term commercial significance along the Chehalis River.*

OBJECTIVE B: Programs should be provided that help farmers of agricultural land of long-term commercial significance to realize the capital from the land's development potential without converting it to non-agricultural uses.

POLICY:

1. Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) programs should be utilized as economic incentives for farmers to stay in agriculture.

ACTION NEEDS FOR OBJECTIVE B:

1. *Recognizing the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of the community, immediately pursue development and adoption of a Purchase of Development Rights Program for designated agricultural lands.*

2. *Pursue development and adoption of a Transfer of Development Rights program and consider the unincorporated territory within Urban Growth Areas as potential receiving areas for transferred units.*

3. *For TDR to be successful, encourage the cities and towns to consider allowing transferred units to exceed the maximum density permitted in residential zoning districts.*

4. *Encourage the cities and towns to consider allowing an additional density bonus if development rights are transferred from designated agricultural lands.*

5. *Create a register for recording the development potential of agricultural lands of long-term commercial significance.*

6. *Base the determination of value in PDR and TDR programs on a density of 1 unit per 5 acres.*

7. *Conduct a review of the overall conservation plan for designated agricultural lands in 1997, including an assessment of the progress in implementing a Purchase of Development Rights Program. Without a Purchase of Development Rights Program, changes will need to be made in the conservation plan.*

OBJECTIVE C: The designated agricultural lands within the Nisqually Valley should be protected by means specially suited to the Valley's unique characteristics.

POLICIES:

1. Agricultural lands within the Nisqually Sub-Area should be protected from the encroachment of existing and potential residences within the valley and along the adjacent wooded hillsides.

2. The unique agriculture areas of the Nisqually Valley should receive highest priority in the Purchase of Development Rights and Transfer of Development Rights programs.

ACTION NEEDS FOR OBJECTIVE C: *None.*

GOAL 3: AQUACULTURE GROWING AREAS SHOULD BE PROTECTED AND PRESERVED IN ORDER TO ENSURE AN ADEQUATE RESOURCE BASE FOR LONG-TERM USE.

OBJECTIVE A: The county should provide land use and water management programs to conserve and enhance commercial marine aquaculture areas and land based aquaculture for long-term economic use.

POLICIES:

1. Commercial marine aquacultural areas should be identified and designated as such.

2. Uses of lands that are adjacent to designated marine aquacultural areas should be compatible, such as forestry and low density rural residential. Those uses should not increase stormwater runoff or otherwise degrade water quality for aquacultural use.

3. Facilities for land based and marine aquacultural operations should be protected from incompatible adjacent or nearby land uses.

4. Land based and marine aquacultural activity should not be considered a nuisance if carried out in a reasonable manner and within applicable

regulations. Restrictions should not be imposed on aquacultural activities unless they are necessary for preserving the public health, welfare, and safety.

5. Proposed residential and other uses in aquacultural areas should be developed in a manner which minimizes potential conflicts with aquaculture operations.

6. Aquacultural activities should be undertaken in a way that minimizes adverse impacts, such as views from upland property and general environmental quality.

7. Aquacultural operations that draw on ground water supplies should not degrade the quality nor substantially reduce the quantity of ground water.

8. Water quality in the county's marine and inland waters, and ground water in the county should be protected from degradation. Degraded waters should be restored within the drainage basins of designated commercial marine aquaculture areas, or areas of significant recreational shellfish harvesting.

9. Landowners in drainage basins feeding aquaculture growing waters should be eligible for the Open Space Tax Program, if they undertake conservation measures to protect water quality.

ACTION NEEDS FOR OBJECTIVE A:

1. Identify and designate commercial marine aquaculture areas.

2. Modify the Shoreline Management Program and County Zoning Ordinance to include standards for upland aquaculture facilities.

3. Develop guidelines for minimizing adverse impacts between non-aquaculture and aquaculture developments.

4. Continue regular, ongoing water quality monitoring of marine waters, watersheds and ground water.

RELATIONSHIP TO THE SHORELINE MASTER PROGRAM:

The Shoreline Master Program is the county document which governs development on the shorelines in compliance with the State Shoreline Management Act (RCW 90.85). Within the master program there are policies and regulations relating to aquaculture. The Comprehensive Plan goals, objectives and policies are intended to complement those in the master program; both documents should be consulted in reference to developing in the shoreline area.

GOAL 4: FOREST LANDS SHOULD BE CONSERVED IN ORDER TO MAINTAIN A VIABLE FORESTRY INDUSTRY WHILE PROTECTING ENVIRONMENTAL VALUES.

OBJECTIVE A: Forest lands should be conserved and enhanced for long-term economic use.

POLICIES:

1. Residential development adjacent to forestry uses should occur in a manner which minimizes potential conflicts and reduces unnecessary conversion of forest land through use of such mechanisms as clustering, buffers, etc.

2. The county supports and encourages the maintenance of forest lands in timber and current use property tax classifications consistent with RCW 84.28, 84.33 and 84.34.

3. Within Thurston County, forest practices should be given protection from nuisance claims in accordance with state law.

ACTION NEED FOR OBJECTIVE A:

Publicize Open Space and Forest Lands Tax programs.

OBJECTIVE B: Provisions should be made for forest lands to accommodate public recreation and conservation of fish and wildlife habitats, scenic vistas, and nearby property values.

POLICIES:

1. Public trails, camping facilities, and other low intensity recreation uses are encouraged in forest lands.

2. The county endorses the concept of cooperative resource management as developed in the Timber, Fish and Wildlife agreement, which is an agreement among industrial timber landowners, environmental groups, state resource agencies, and Indian tribes for managing the state's public and private timber lands and public resources.

3. Some mature forest stands should be purchased in the metropolitan fringe areas of the county for their historic and aesthetic values for parks and other recreational uses, unless they are designated as forest lands of long-term commercial significance.

4. When timber harvesting is for conversion to other uses, the county should ensure that harvesting is done in a manner compatible with land uses of the surrounding area and maintenance of water quality, environmentally sensitive features, and fish habitat. When such timber harvests abut county roads that are collectors or arterials, a buffer strip of uncut vegetation and trees should be left to ensure a visible separation between the clear cut and roadway, unless the buffer strip will pose a threat to public safety.

5. Owners of forest lands planned for conversion to another use should provide buffers between their property and adjacent forestry uses.

6. Forestry activities should not alter wetlands or stream corridors.

ACTION NEEDS FOR OBJECTIVE B: *None.*

GOAL 5: FOREST LANDS OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE CONSERVED IN ORDER TO ENSURE AN ADEQUATE LAND BASE AND DISCOURAGE INCOMPATIBLE USES.

OBJECTIVE A: Forest lands of long-term commercial significance should be conserved for productive economic use.

POLICIES:

1. The primary land use activities in forest lands of long-term commercial significance should be commercial forest management, agriculture, mineral extraction, accessory uses, and other non-forest related economic activities relying on forest lands.

2. Land use activities within or adjacent to forest lands of long-term commercial significance should be sited and designed to minimize conflicts with forest management, and other activities on forest land.

3. Commercial forest land considered desirable for acquisition for public recreational, scenic and park purposes should first be evaluated for its impact on a viable forest industry and local government revenue and programs.

4. The county discourages the establishment or expansion of coal improvement districts, utility local improvement districts, or sewer, water or public utility districts in lands designated as long-term commercial significance which result in the imposition of assessments, rates, or charges on designated forest land.

5. Clustering of residential development on adjacent rural lands is encouraged. The open space in clustered development should be adjacent to the forest lands of long-term commercial significance.

6. The county should encourage the continuation of commercial forest management by supporting land trades that result in consolidated forest ownerships and are in the public interest.

7. The county should encourage the continuation of commercial forest management by working with forest managers to identify and develop other incentives for continued forestry.

8. Subject to any state or local regulation of critical areas, the county encourages the multiple economic use of forest land for a variety of natural resource and other land use activities particularly suited for forest lands because of physical and topographical characteristics; remoteness from populated areas; availability of water supplies; the quality of the forest environment; or where the efficient provision of statewide or regional utilities, energy generating and/or transmission facilities, or public facilities require access across or use of such forest lands.

ACTION NEED FOR OBJECTIVE A:

Place a notice on any new subdivision or residential building permit located within 300 feet of designated forest land of long-term commercial significance, which states that a variety of forestry activities may occur that may not be compatible with residential development. The notice should also state that a person's right to recover under a nuisance claim against forestry operations may be restricted.

GOAL 6: RURAL FOREST LANDS ENROLLED IN A CURRENT USE TAX ASSESSMENT PROGRAM SHOULD BE PROTECTED FROM PRESSURES TO CONVERT TO OTHER USES.

OBJECTIVE A: Provide measures to protect owners of rural forest lands from development pressures.

POLICIES:

1. Development regulations should accommodate and encourage clustering of residential development on rural lands adjacent to rural forest lands. The open space in clustered development should buffer rural forest land from development.

2. Land use activities adjacent to forest land in rural areas should be sited and designed to minimize conflicts with forest management and other permitted activities on forest land.

ACTION NEEDS FOR OBJECTIVE A: *None.*

GOAL 7: MINERAL RESOURCE LANDS OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE ALLOWED TO BE USED BY EXTRACTION INDUSTRIES, WITH MINIMAL HARM TO THE ENVIRONMENT.

OBJECTIVE A: The county should provide regulatory mechanisms that balance and minimize the conflicts between extractive industries, other land uses, and general environmental concerns.

POLICIES:

1. Mineral extraction industries should be allowed to locate where prime natural resource deposits exist.

2. Designated mineral resource lands of long-term commercial significance should be conserved for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.

3. Designated mineral resource sites that are being operated in accordance with applicable best management practices and other laws and regulations should be given increased protection from nuisance claims from landowners who have been notified of the presence of the long-term mineral extraction site.

4. Restoration of mineral extraction sites should occur as the site is being mined. The site should be restored for appropriate future use and should blend with the adjacent landscape and contours.

5. Prime and unique farmland (as defined by the SCS) should not be used for mineral or soil mining purposes unless they can be restored to their original production capacity as mining occurs.

6. New residential uses should be discouraged from locating near prime designated mineral deposit sites until mineral extraction is completed unless adequate buffering is provided by the residential developer.

7. Extraction industries should not adversely impact adjacent or nearby land uses, or public health and safety.

8. Proposed mining activities should not alter significant geologic features such as mima mounds.

9. Areas where existing residential uses predominate should be protected against intrusion by mineral extraction operations.

10. Mineral extraction activities should not negatively effect nor endanger surface and ground water flows and quality.

ACTION NEEDS FOR OBJECTIVE A:

1. *Define and identify prime mineral deposits.*

2. *Establish performance standards for mineral extraction and site rehabilitation.*

3. *Define and identify significant geologic features that should not be altered by mining activities.*

4. *Investigate the problems associated with non-operating and non-permitted mining sites and work with the appropriate state agencies to resolve such problems.*

5. *Based on the cumulative effects study on gravel mining, completed by the County Environmental Health Division in 1993, the county shall work with DNR, mineral operators, and interested citizens in the designation and conservation of future mineral resource lands of long-term commercial significance.*

6. *Encourage mineral extraction operators in the county to voluntarily provide a resource use notice to nearby landowners.*

7. *Work with mineral extraction operators in the county to develop a "good neighbor" relationship.*

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CHAPTER NINE -- NATURAL ENVIRONMENT

I. ENVIRONMENTAL FEATURES

The Growth Management Act provides for the protection of the environment and the preparation of development regulations to protect critical areas. The Act contains the following Planning Goal 10: "Protect the environment and enhance the state's high quality of life, including air and water quality; and the availability of water." The Act also requires the development of regulations to protect critical areas. Thurston County adopted these regulations in 1993.

The County-Wide Planning Policies also include guidance on the environment. It states that all jurisdictions in the county should recognize our interdependence on natural systems and maintain a balance between human uses and the natural environment, protect ground and surface water from further degradation, protect and enhance air quality, minimize high noise levels, promote awareness of cultural and natural heritage, encourage recycling of materials and products and reduce waste, and plan for growth in a manner that can be sustained without degrading livability and environmental quality.

Thurston County is distinctive for its diverse physical setting. Air quality is generally of high quality due to climate, physiography, and few particulate producing industries. There are over 90 miles of Puget Sound coastline bordering four peninsulas. This shoreline includes rare geologic marine features, high bluffs and a river delta which is the home for over 300 species of wildlife and the Nisqually National Wildlife Refuge. The central area of the county consists mainly of prairies that were cleared long ago. The Black Hills to the west, and the Cascade foothills in the southeast are forested and steep sloped. There are three major river basins and over 100 freshwater lakes and ponds totalling over 6,300 acres. All of these forest, water, and prairie resources are valued aesthetic, recreational, and economic resources.

A variety of natural features are sensitive or pose hazards to development. Wetlands, which are important for local flood control, retention of water quality, and wildlife habitat, cover nearly 10 percent of the county. Another 13 percent of the county has steep slopes or unstable soils which are subject to erosion, slippage, or settling in the event of earthquakes, rain saturation, or improper building practices. Other sensitive areas include floodplains; geologic features such as canyons, waterfalls, and mima mounds; fish and wildlife habitat areas; and rare shoreline features, such as spits, points, and barrier berms.

The policies in this Chapter indicate how the county will protect its natural beauty and quality environment. The policies focus on those features which require special consideration in order to reduce hazards and prevent adverse impacts to the environment as the county grows and as residents undertake their day-to-day activities.

II. WATER RESOURCES

The Growth Management Act requires the jurisdictions planning under the Act to address water resource protection. It requires that the county: "Provide for protection of ground water quality and quantity, and provide guidance for corrective actions to mitigate or cleanse those discharges entering Puget Sound or other waters of the State."

Located at the southern terminus of Puget Sound, Thurston County's diverse water resources range from its beaches to the Bald and Black Hills to the south and west. One of the distinctive water features of Thurston County is the four deep indentations of Puget Sound: Budd, Eld, Henderson and Totten Inlets. The county is separated from Pierce County by the Nisqually River which flows northwesterly from the southeastern corner of Thurston County to the Nisqually Reach on the northern border. Totten Inlet serves as a common water body to both Mason and Thurston Counties.

Thurston County is located within three major drainage basins. The largest is the Chehalis River which, along with the Black and Skookumchuck Rivers, drains the southwest portion of the county. The Deschutes River drains diagonally across the central portion of the county. The Nisqually River drains a narrow area along the eastern boundary of the county. While the Deschutes, Nisqually and small creek drainages flow to Puget Sound, the Chehalis River including the Black and the Skookumchuck Rivers, flows to the Pacific Ocean through Grays Harbor.

A substantial number of lakes abound in Thurston County. Open surface water area accounts for approximately 6,343 acres in 108 lakes. Of these, Alder Lake is the largest at 1,117 acres and is a man-made impoundment of the Nisqually River behind Alder Dam. Black Lake is the largest natural lake at 576 acres which discharges to Percival Creek. Skookumchuck Lake was formed by an impoundment of the Skookumchuck River and contains 550 acres. While the county contains a substantial number of lakes, their distribution is not even throughout the county. Lakes are concentrated in a band across the middle part of the county.

Nearly all residents of Thurston County rely on ground water for their drinking water supplies. Except for minor surface withdrawals, ground water provides all the water used by industry and agriculture. It also provides the water to sustain stream flows during the dry season. Studies have shown that nearly all ground water in Thurston County started out as rainfall within the county. Further, the soils in Thurston County, even including sloping and clay-rich soils, allow for rainfall to infiltrate into the local aquifers.

Various parts of the county have very different ground water aquifers. Northern Thurston County has four major aquifers stacked on top of each other with two clay-rich layers between them. Much of southern Thurston County has essentially a single shallow aquifer with no confining layers. The remaining areas of the Black and Bald Hills as well as the Maytown uplands near Tenino do not contain reliable aquifers. In general, the water in these aquifers flows toward the closest large body of surface water.

Ground water in the county is of generally high quality and adequate supply, with some exceptions. Projected population increases will require additional ground water withdrawals to serve the new residents. In some places small ponds and streams are dry for significant portions of the year due to lowering of the ground water levels in the upper aquifer. There have been scattered leaks and spills which have contaminated small areas of the aquifers with fuels or solvents. In several areas, wells have been abandoned because of pesticide contamination. A few areas in the county have nitrate levels that are significantly above background levels, but in most cases the county's water is much better than required by the drinking water standard.

III. IMPORTANT GREENSPACES

The Growth Management Act requires that the future land use map include "recreation, (and) open spaces". The Act also requires that "open space corridors within and between urban areas" be identified within the Comprehensive Plan. These open space corridors are to include "lands useful for recreation, wildlife habitats, trails, and connection of critical areas". The Act contains the following Planning Goal #9: "Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks".

The County-Wide Planning Policies include the following:

- "Maintain significant wildlife habitat and corridors"
- "Provide for parks and open spaces"

Several new important plans have been adopted by the county which relate to open space corridors, since the adoption of 1988 Comprehensive Plan. In the 1988 Plan, preparation of a park plan was identified as an "Action Need."

The Thurston County Parks Plan was adopted in 1989 and is to be recertified by the Washington State Interagency for Outdoor Recreation (IAC) every five years. It includes a summary of the county's supply of parks (in 1989), the community desires, classification of county parks, and potential park acquisitions. It targets the acquisition of at least 3,000 acres of developed recreation lands and 5,000 acres of natural preserves by the year 2010. This is in addition to the improvement and development of many of the existing facilities which have remained "land banked" for the lack of development and maintenance resources.

Thurston County has a wide variety of recreational facilities and open space lands. The county currently owns 21 parks, preserves, trails and historic sites. The developed properties are diverse and include Burfoot Park on Budd Inlet, Frye Cove on Eld Inlet and the Off-Road Vehicle (ORV) Sports Park at the Grays Harbor County border on Highway 8. The county Park Department manages the Mima Prairie Cemetery and Fort Eaton Monument as historical sites. Of the remaining 15 sites; 2 are regional parks, 3 are trail facilities, 4 are district parks, and the remaining 6 sites are preserves and will have minimal improvements. In addition, Thurston County's fairgrounds on Long Lake provide some recreational facilities that are available to groups.

Within the county there are also state parks, Natural Area Preserves, the Woodard Bay Natural Resource Conservation Area on Henderson Inlet, many recreational sites within the state's Capitol Forest, the state and federal Nisqually Wildlife Refuge and other wildlife habitat mitigation or management sites. The state also owns or operates several boat ramps on lakes, rivers and salt water throughout the county. Private sites also provide other recreational opportunities such as golf, lake access and equestrian facilities. Along with outdoor facilities, many recreational opportunities can be found at schools, colleges, churches, community centers and private clubs. For a complete list of the park and recreational facilities available within Thurston County, refer to Thurston County Parks and Recreation Comprehensive Plan 2010.

In 1990, Thurston Regional Planning Council prepared the Railroad Right-of-Way Strategy Report which provided an inventory of the existing rail lines which might

be abandoned in the near future. It identified general protection techniques and outlined the "rails to trails concept". This information became the foundation for the 1992 Railroad Right-of-Way Preservation and Use Strategy for the Thurston Region. The 1992 report included the analysis and recommendations from an intergovernmental committee for each individual rail line. Implementation of action recommendations from this document began in 1993 with the county's acquisition of the Yelm to Tenino corridor and the potential acquisition of the Gate to Belmore corridor by the Port of Olympia.

In 1990, Thurston Regional Planning Council prepared the Olympia, Lacey and Tumwater Urban Trails Plan. This document provided the overall guidance for an interconnected trail and open space system within the urban growth management area of the three cities. It also contains some trails within the rural area, which provide connections to the urban trails and an inventory of existing facilities. It includes guidelines for the blueprint for the future urban trail system.

The Important Greenspaces Map M-31 provides an inventory of the existing recreation, important habitat, preservation, water protection, wetland and trail resources within and adjacent to the county. This map should be updated on a regular basis to reflect existing conditions.

IV. GOALS, OBJECTIVES AND POLICIES

GOAL 1: ENVIRONMENTAL QUALITY SHOULD BE PROTECTED AND IMPROVED, AND THE CAPABILITY OF THE AIR, LAND, WATER, AND FISH AND WILDLIFE RESOURCES TO SUSTAIN VARYING INTENSITIES OF HUMAN ACTIVITIES WITHOUT DEGRADING LIVABILITY AND ENVIRONMENTAL QUALITY SHOULD BE A DETERMINING FACTOR IN MAKING LAND USE DECISIONS.

OBJECTIVE A: ***Management Approaches*** **-** A wide range of management approaches should be used to protect the quality of air, land, water and wildlife resources.

POLICIES:

1. Management approaches should recognize our interdependence on natural systems and maintain a balance between human uses and the natural environment by:
   a. Establishing a pattern and intensity of land and resource use in concert with the ability of land and resources to sustain such use; and

b. Concentrating development in urban growth areas in order to conserve natural resources and enable continued resource use.

2. Management approaches should include but not be limited to: education, the use of incentives, regulation, construction, maintenance, and public acquisition.

3. The selection of approaches to managing an environmental resource should vary depending upon the degree of risks or hazards to the public, the uniqueness and sensitivity of the resource, and the long-term public benefit and the cost and financing feasibility of the various approaches.

4. Special incentives beyond regulation should be used to encourage preservation of high quality examples of the natural environment. The means to be used (in order of priority) include: open space taxation, the assistance of federal or state resource agencies, the initiatives of private conservation organizations and local land trusts, or public acquisition.

ACTION NEED FOR OBJECTIVE A:

Education programs for all environmental resources (air, land, water, and wildlife) should be developed and implemented. Existing education programs that meet environmental quality objectives should be continued.

OBJECTIVE B: ***Critical Areas*** **-** The county should guide development away from critical areas; uses and activities which may occur within or adjacent to these critical areas should be regulated.

POLICIES:

1. The county should designate Critical Areas which include but are not limited to: Aquifer Recharge Areas, Geologic Hazard Areas, Important Habitats and Species, Special Management Areas, Floodplains, Streams, and Wetlands.

2. The county should continue to limit development within or adjacent to areas which are susceptible to erosion, sliding, earthquakes or other geologic events, as provided in the Critical Areas Ordinance. Such areas should be referred to as "Geologic Hazard Areas."

3. The county should locate and designate geographic areas which contain a unique combination of physical features and require a special set of management techniques specially designed for that area, or where the uniqueness of the area demands and even greater degree of environmental

protection, as provided in the Critical Areas Ordinance. Such an area should be referred to as a "Special Management Area."

4. The county should continue to protect areas containing wildlife habitats which are important to the long-term viability of important species of Thurston County, habitats which are unique or rare, or which contain important species from those State Priority Species which are known to occur in Thurston County, as provided in the Critical Areas Ordinance.

5. The county should protect areas containing special plants and special plant communities, once the WDNR Heritage Program has prepared management guidelines for these areas similar to the WDFW Priority Habitats and Species Program.

ACTION NEEDS FOR OBJECTIVE B: *None.*

OBJECTIVE C: ***Air Quality and Noise*** **-** Provision should be made to protect and enhance the county's clean air quality and minimize noise.

POLICIES:

1. Land uses that produce air pollutants and odors should comply with adopted air quality standards for the region.

2. The peace and quiet of residential neighborhoods should be provided for and maintained through the use of screens, open space, or other buffers, and controlled by noise standards.

3. Land uses or activities which produce noises should comply with the Washington State Noise Control Act and Thurston County laws.

4. The county should minimize the noise impacts from noise-producing sources, such as airports and military firing ranges, by designating noise impacted lands to be used for forestry, agriculture, public reserves, industrial and as a last priority, low density residential. Residential subdivisions should contain statements in the deed, title, or covenants notifying prospective purchasers that the property will be affected by noise.

ACTION NEEDS FOR OBJECTIVE C: *None.*

OBJECTIVE D: ***Marine Shoreline Management*** **-** Plans and management procedures should be maintained to preserve and protect shorelines as valuable natural resources.

POLICIES:

1. The county should continue to regulate uses and activities along the marine shoreline and within the waters of Puget Sound, as provided in the State Shoreline Management Act, and to recognize private property rights consistent with the public interest.

2. The county should continue to limit development along the bluffs of Puget Sound, as provided in the Critical Areas Ordinance, to minimize damage due to landslides and reduce the potential for shoreline erosion. These shorelines should be referred to as "marine bluff hazard areas".

3. The county should protect special shoreline features, including dry accretion beaches, along with undeveloped bays and lagoon because they are rare and biologically significant.

4. The county should provide information to property owners regarding various protection options for their marine shoreline, as provided in the State Shoreline Management Act and the Shoreline Master Program for the Thurston Region.

5. The county, and other affected jurisdictions, should integrate the Goals and Policies from the Shoreline Master Program for the Thurston Region into their comprehensive plans and the General Regulations into their development regulations.

ACTION NEEDS FOR OBJECTIVE D:

1. *The county needs to update and refine the data contained within the Inventory and Characterization of Shoreline Armoring -- Thurston County, Washington 1977-1993, and make this information easily available to the public, such as through a Geographic Information System (GIS).*

2. *The county needs to integrate the Goals and Policies from the Shoreline Master Program for the Thurston Region into the Comprehensive Plan and the General Regulations into various development regulations in a coordinated approach.*

OBJECTIVE E: *Solid and Hazardous Waste* - Management of solid waste and hazardous wastes should be done on a county-wide basis, and include planning for needs, facilities and services.

POLICIES:

1. Handling and disposal of solid and hazardous waste should be done in ways that minimize land, air and water pollution and protect public health.

2. Strategies for dealing with these wastes should be in the following order: waste reduction, recycling, energy recovery, and disposal.

3. New sites and methods of disposing of solid wastes should be continually explored.

4. Programs recommended in the county's Moderate Risk Waste Plan should be continued to safely dispose of household and small business hazardous wastes outside of landfills.

5. Equitable and practical solutions to problems of illegal dumping should be actively sought.

6. Dredging and disposal of sediments should only be done in a manner that does not pose serious health risk to humans or result in adverse effects to water and land resources, including biological organisms.

7. The Zoning Ordinance should provide for:

   a. Facilities which treat and store hazardous materials.

   b. On-site fire fighting systems/supplies.

   c. Proof of liability insurance or bonding.

8. All facilities which store, process or use hazardous materials or generate or treat hazardous wastes in their operations should be sited in compliance with state and local laws, best management practices for the protection of ground and surface waters, and should be periodically monitored for compliance with such laws and practices.

ACTION NEEDS FOR OBJECTIVE E:

1. *Implement and update the county Moderate Risk Waste Plan.*

2. *Maintain and update the county Solid Waste Management Plan.*

3. *As a means of reducing impacts on the landfill, support and enhance all waste reduction and recycling efforts.*

4. *Continue to seek opportunities for better disposal or recycling of tires and better enforcement of illegal disposal of tires.*

5. *The county should act as the coordinating entity in the upland disposal of clean and contaminated dredge sediments, under the authority of Article 5 of the Sanitary Code.*

6. *The Zoning Ordinance should be reviewed and evaluated for hazardous materials provisions according to the adopted Moderate Risk Waste Plan, the Northern Thurston County Ground Water Management Plan, the Critical Areas Ordinance and the Comprehensive Plan's policies for businesses that handle hazardous materials.*

GOAL 2: THURSTON COUNTY IS COMMITTED TO PROTECTING ITS WATER RESOURCES BY INSURING THAT GROUND WATER IS DRINKABLE; THAT STREAMS, LAKES AND RIVERS ARE FISHABLE; AND THAT SHELLFISH CAN BE HARVESTED IN ITS MARINE WATERS.

OBJECTIVE A: ***Management Approaches*** **-** Coordinate water resources planning, funding and implementation within Thurston County to maximize the protection of the resource and minimize the costs of parallel programs and staffs.

POLICIES:

1. The county should manage county-wide water resources through a coordinated water resources program.

2. The county should implement its water resources program through the integration of county ground water supply, surface water, stormwater, lakes, stream and wetland programs.

3. The county should manage water resources by recognizing the hydrologic continuity between ground and surface water.

4. The county should address water resource concerns by relevant geographic area such as a watershed or sub-basin for surface waters and by aquifers for ground waters.

5. The county should use the "watershed approach" when addressing water resources concerns, which include but are not limited to the following: poor agricultural management practices, failing septic systems, untreated

stormwater, stormwater peak flows and volumes, poor forestry management practices, sewage treatment plant effluent, and marine waste disposal.

6. The county should continue to support grass root solutions to local problems by undertaking a ground water, watershed or stormwater basin plans which includes affected stakeholders.

7. The county should support and strive to implement the county-adopted water resource plans addressing watersheds, stormwater, sewerage, ground water, water supply and solid waste including the Northern Thurston County Ground Water Management Plan and the South Thurston County Aquifer Protection Strategy.

8. The county should include common elements which can reduce the duplication of efforts in new watershed, ground water or stormwater basin plans. These plans should address specific state requirements, but generally include the following sections: the identification of the problems, an assessment of the effectiveness of existing management approaches, an analysis of possible solutions, a preliminary cost assessment of those solutions, and a summary of those costs. Costs associated with capital facilities should be included within the Capital Facilities Plan.

9. The county should manage its coordinated water resources by means of prevention as the least costly approach for all residents.

10. The county and the Washington Department of Natural Resources (WDNR) should jointly develop a Memorandum of Agreement (MOA) and a county ordinance regulating forest practices for lands which are likely to convert.

11. The county should monitor both surface and ground water to evaluate program effectiveness, establish trends for both water quality and water quantity and provide for the early detection of pollution which will minimize the damage and the cost of resource restoration.

12. The state, county and LOTT should merge their water quality monitoring data into a common Geographic Information System (GIS) thereby making this information more accessible to the public.

13. The county should distribute a report card on county-wide water quality on an annual basis which includes an evaluation of the data by watershed and the type of water resource.

14. The county should utilize a unified source of funding for water resource protection efforts, to reduce multiple and piecemeal fees and charges for water protection efforts.

ACTION NEEDS FOR OBJECTIVE A:

1. *The polices and action recommendations contained within county adopted water resource plans should be implemented.*

2. *The county and WDNR will need to work on the MOA and the local ordinance for lands likely to convert.*

3. *The county needs to identify and implement a long term funding source to provide for water resource protection services including investigation and enforcement.*

4. *Participate in the intergovernmental regional ground water program.* (Resolution 11589, 12/15/97)

OBJECTIVE B: ***Coordinated Protection Options*** **-** Mechanisms to manage water resources should be provided in a regional, comprehensive manner which ensures high quality surface and ground water, preservation of the functions of water resources and compatibility between land and water uses.

POLICIES:

1. The county should protect ground water aquifers, natural drainage, fish and wildlife habitat, public health and recreational functions of rivers, streams, lakes, wetlands, Puget Sound and their shorelines.

2. The county should manage water resources for multiple beneficial uses. Use for one purpose should preserve opportunities for other uses, while maintaining overall water quality. When conflicts arise, the natural system should be given priority.

3. The county should retain substantially in their natural condition: ponds, wetlands, rivers, lakes and streams, and their corridors.

4. The county should not allow uses and activities to degrade lakes, streams and commercial shellfish areas, recreational shellfish harvesting on public lands, or result in the loss of the natural functions of waterbodies, wetlands, and ground water aquifers.

5. The county should require that sewage treatment plant owners have explored opportunities for the beneficial use of treated waste water before any new point discharges are authorized.

ACTION NEEDS FOR OBJECTIVE B: *None.*

OBJECTIVE C: ***Surface Water Management*** **-** Protect surface waters and Puget Sound from further degradation.

POLICIES:

1. The county should protect streams from adverse impacts of activities occurring adjacent to their waters or within their watersheds. This protection should be achieved by avoiding stream channel damage from excessive flows, by protecting riparian vegetation and streambank integrity, and by avoiding degradation of water quality.

2. The county should continue to protect and maintain the valuable natural functions of wetlands and stream corridors as provided in the Critical Areas Ordinance, by maintaining an undisturbed or restored native vegetation buffer and by prohibiting filling, draining, and clearing within wetlands and adjacent to streams. Physical alterations should be minimized except where restoring the natural functions.

3. The county should encourage that buffers and wetlands of lakes, streams, rivers, and Puget Sound be restored as a part of new land uses or development activity.

4. The county should encourage steam and wetland restoration activities through partnerships between the county, Conservation District, other agencies and land owners.

5. The county should develop stream and wetland restoration guidelines in cooperation with the Conservation District and other State or Federal resource agencies which improve water quality and habitat values, while still providing for some economic use of the land. When developed, these guidelines should be adopted as part of the Thurston County Critical Areas Ordinance Chapter 17.15.

6. The county should maintain or restore surface waters within the drainage basins of, Geological Sensitive Areas, or areas of significant recreational, commercial shellfish harvesting, and recreational shellfish harvesting on public lands to the highest water quality possible.

7. The county should prohibit waste water discharges, including those from sewage treatment plants, into waters where shellfish are commercially harvested or where there is recreational shellfish harvesting on public lands. Burfoot County Park, Frye Cove County Park, and Tolmie State Park are examples of publicly owned tidelands which are currently open for shellfish harvesting.

ACTION NEEDS FOR OBJECTIVE C:

1. *Update the "Stream Type" map used by the Critical Areas Ordinance map, on a regular basis with assistance from fishery resources stakeholders.*

2. *Fully implement requirements of the Drainage Design and Erosion Control Manual, Nonpoint Pollution Ordinance and other county ordinances relating to clearing, grading, erosion control and nonpoint sources of pollution.*

OBJECTIVE D: ***Lake Management***-Adopt a comprehensive, long-term approach to lake management which accommodates all uses and benefits, including fish and wildlife.

POLICIES:

1. The county should work with watershed property owners and interested parties to develop an integrated aquatic management plan for lakes which addresses pollution sources, such as stormwater runoff and on-site disposal system effluent, as well as possible solutions.

2. The county should seek to reduce the spread of Eurasian milfoil or the exotic aquatic weeds through monitoring, public information and other means.

ACTION NEEDS FOR OBJECTIVE D: *None.*

OBJECTIVE E: ***Floodplain Management*** **-** Life and property should be protected from flood hazards and the flood storage and transmission capacity of rivers and streams should be retained.

POLICIES:

1. The county should give priority to such land uses as forestry, agriculture, public recreation, or water-dependent uses in areas subject to flooding to minimize the hazards to life and property. Other development in the flood plain should be of low priority and constructed to avoid damage from floods, including compensating design features.

2. The county should maintain storage and transmission capacity of floodplains by prohibiting filling of wetlands and discouraging filling elsewhere in the floodplain.

3. The county should prohibit encroachment in floodways except for the purpose of stabilizing channels against erosion in order to protect agricultural lands, public roads and bridges, existing public or private structures and to achieve habitat enhancement.

ACTION NEED FOR OBJECTIVE E:

The Flood Management Ordinance needs to be updated to reflect recent changes in the Critical Areas Ordinance and the county's Stormwater Management Program.

OBJECTIVE F: ***Stormwater Management*** **-** Stormwater management should be maintained as a major long-term utility service responsibility of local government.

POLICIES:

1. Land use activities and septic tank effluent should not result in polluted stormwater runoff that results in degraded surface or ground water.

2. Existing and new development should minimize increases in total runoff quantity, maximizes on-site infiltration, should not increase peak stormwater runoff, and should avoid altering natural drainage systems to prevent flooding and water quality degradation.

3. Site plans and construction practices should be designed to prevent on- and off-site erosion and sedimentation during and after construction. Runoff also should be routed and sufficiently diffused or controlled so that the flows do not create erosion.

4. The quantity and quality of water entering wetlands, streams and ponds should be maintained.

5. To reduce runoff at commercial and industrial sites, off-street parking and pavement in lightly used areas should use pervious paving devices (such as lattice block pavers or other alternatives) to the maximum extent possible.

6. The county should take steps to ensure that stormwater systems are adequately maintained in order to ensure high quality surface and ground water.

7. Education and technical assistance should be provided in a comprehensive, regional manner to promote understanding the connections between ground and surface waters, and the watershed boundary transcendence over jurisdictional boundaries.

ACTION NEEDS FOR OBJECTIVE F:

1. *The county needs to provide support for implementing the stormwater management program and consider the expansion of similar program efforts in the southern portion of the county.*

2. *The county will need to review and update ongoing water resource plans on a regular basis.*

3. *Desired level of stormwater management activity identified, as well as alternative permanent funding sources for planning, public information and education, monitoring, maintenance, capital improvements, reserves and regulation. As a priority, primary sources of stormwater pollution should be identified and funds provided for an ongoing function within county government to correct polluted runoff problems as they are identified.*

OBJECTIVE G: ***Ground Water Management*** **-** Seek to protect the quality and to manage the quantity of ground water for all uses in the present and in the future.

POLICIES:

1. The county should protect water quality and prevent aquifer contamination or degradation through the comprehensive management of the ground water resource in conformance with the principals contained in the Northern Thurston County Ground Water Management Plan and the South Thurston County Aquifer Protection Strategy.

2. The county should restrict land use densities in areas where the supply of ground water is limited unless alternative domestic water supplies are available from other sources.

3. The county should regulate land uses within wellhead protection areas to ensure that negative land use effects on ground water quality are avoided or mitigated.

4. The county should strive to develop and fully implement regional wellhead protection policies and locally developed wellhead plans.

5. The urban growth areas should be serviced by coordinated, reliable water systems. Compatible, coordinated water system design standards should be developed by adjacent jurisdictions within growth areas.

6. Construction and use of individual private wells should be discouraged in urban growth areas where other water is reasonably and economically available.

7. Community water systems should be provided in unsewered areas where residential density is in excess of one unit per acre. Community water systems should also be provided in residential developments with densities in excess of one unit per two acres and with areas of excessive soil permeability. In the urban growth area water pressure and quantity should be sufficient for fire-fighting.

8. Community water supplies must meet State and local standards.

9. The county should require that community water systems are being managed to meet State and local health standards.

10. Water quality of all watersheds feeding into water bodies used for drinking water should be regularly monitored and protected. Polluted watersheds should be identified and programs initiated to improve their water quality.

11. The safe recycling and reuse of water and treated waste water should be encouraged, in order to reduce contamination of receiving waters.

12. The use of no-and low-water use appliances and fixtures should be encouraged, in order to reduce contamination of ground water. The county should make available to residents literature comparing efficiency of low-water use fixtures.

13. Surface water standards should be revised to allow for the injection or infiltration of treated waste water to recharge our ground water aquifers and thereby maintaining more of a balance between recharge and withdrawals.

ACTION NEEDS FOR OBJECTIVE G:

1. *The county and the municipal water purveyors need to implement a long-term funding source to provide water resource protection services for the entire county.*

2. *The county and the municipal water purveyors need to establish and maintain regular programs to monitor water quality in aquifers in order to assess long term trends, levels of contamination, etc.*

3. *The county should review the extent and nature of well siting problems and propose solutions.*

4. *The county should obtain review authority for water systems of up to 14 service connections (Group B systems) and consider expanding the review authority to medium Group A size systems to provide coordinated local oversight of water systems within the county.*

5. *The urban water supply service area plan should be reviewed and strong consideration given to the development of a regional water source and distribution system. The plan should examine 50+ years supply issues and be funded through inter-jurisdictional agreements.*

6. *Identify the extent of areas critical to the protection of drinking water supplies and measures needed to assure their protection.*

7. *The building code should be examined for standards for low-water use fixtures. The county should make available to residents literature comparing efficiency of low-water use fixtures.*

8. *The county should require that community water systems comply with the standards of the state and county Boards of Health.*

9. *The county needs to sustain the awareness of public and private water purveyors regarding the "North Thurston County Coordinated Water System Plan - Area-Wide Supplement" which is being updated.*

10. *Encourage and allow reuse techniques and reclamation of waste water where water quality can be protected.*

11. *Work with other jurisdictions to maintain and support financially, as resources allow, a coordinated water quality and water quantity monitoring program through the Thurston County Regional Ground Water Program.*

12. *Participate in regional collection and management of data through the Thurston County Regional Ground Water Program.*

13. *Provide technical assistance and education, to the extent resources allow, in designated wellhead protection areas to small businesses, industries, and residents regarding proper storage, handling and disposal of hazardous materials.*

14. *Encourage through education and technical assistance the use of safer, less hazardous products and the reduction of hazardous materials.*

15. *Participate, as resources allow, in planning and collaborative training and the implementation of regional spill response in designated wellhead protection areas.*

16. *Consider methods to mitigate the risk from commercial hazardous materials transportation through designated wellhead protection areas when doing transportation planning for new transportation corridors.*

17. *Consult with the appropriate regional transportation planning agencies and neighboring jurisdictions prior to establishing prohibitions of transportation corridors for commercial hazardous materials transport.*

18. *Provide, as resources allow, local information to the existing data management program within the Department of Ecology to develop and maintain an underground storage tank data base for commercial underground storage tanks.*

19. *Coordinate the environmental review with other jurisdictions when a development proposal is within a designated wellhead protection area.*

20. *Participate in regional planning to address loss of domestic drinking water supply.*

21. *Incorporate requirements for enhanced protection of wellhead areas when stormwater drainage manuals and ordinances are revised.*

22. *Work together with other jurisdictions to coordinate educational programs to provide a basic wellhead protection message and work with community groups and private parties to incorporate this message whenever possible.*

23. *Encourage the Thurston Conservation District Board and others to continue their voluntary efforts on education, conservation planning, and installation of best management practices on existing farms, golf courses, parks, schools and other facilities which use pesticides and fertilizers in designated wellhead protection areas.*

24. *Promote the use of integrated pest management, reduction of pesticide use, and reduction of fertilizer use by residents, businesses, and other governmental agencies in designated wellhead protection areas.*

25. *Encourage interjurisdictional water resource management committees to consider wellhead protection during the development of their annual work programs.*

26. *Encourage the Ground Water Policy Advisory Committee and the Solid Waste Advisory Committee to discuss and coordinate activities and programs related to ground water protection and local hazardous waste management.*
(Resolution 11589, 12/15/97)

GOAL 3: IMPORTANT GREENSPACES USEFUL FOR RECREATION, TRAILS, WATER RESOURCE PROTECTION OR WHICH CONTAIN CRITICAL AREAS FOR IMPORTANT HABITATS AND SPECIES SHOULD BE PROTECTED.

OBJECTIVE A: ***Important Greenspaces Designation*** **-** Inventory important greenspaces within and adjacent to Thurston County.

POLICIES:

1. The county should identify important greenspaces such as sites, corridors, ecological units and watersheds which are useful for recreation, trails, water resource protection, or important habitats and species.

2. The county should maintain and update its inventory of important greenspaces within the unincorporated areas and immediately outside the county.

3. The county should solicit information about existing and potential important greenspaces from the following stakeholders: tribes, federal agencies, state departments, county departments, adjacent jurisdictions, private conservation organizations, local land trusts, resource land owners, county residents and other interested parties.

4. The county should update the Important Greenspaces map (M-31) on a regular basis to accurately reflect changing conditions.

ACTION NEED FOR OBJECTIVE A:

The county needs to update its inventory of important greenspaces on a regular basis.

OBJECTIVE B: ***Management Approaches*** **-** Planning for the comprehensive preservation of important greenspaces should be integrated with the acquisition and development of future county parks, trails, preserves, or water resource protection areas.

POLICIES:

1. The county should coordinate with other important greenspaces stakeholders in planning for future county parks, trails, preserves, or water resource protection areas. The other important greenspaces stakeholders may include tribes, federal agencies, state departments, county departments, adjacent jurisdictions, private conservation organizations, local land trusts, resource land owners, county residents and other interested parties.

2. The county should provide for extensions of urban trail or rail corridors which have been identified by an adjacent jurisdiction.

3. The county should provide ecological connections for important habitat areas which have been identified within an adjacent jurisdiction.

4. The county should support greenspaces planning efforts by important greenspaces stakeholders within or adjacent to Thurston County. These

activities may include establishing management recommendations or master plans for important greenspaces.

ACTION NEEDS FOR OBJECTIVE B: *None.*

OBJECTIVE C: ***Protection Options*** **-** Use a variety of protection options to preserve important greenspaces.

POLICIES:

1. The county should evaluate various protection options for each important greenspace. Preservation options should include, but not be limited to: natural resource land zoning, critical area buffers, clustered development, open space tax program, conservation easements, purchase or transfer of development rights, and public acquisition.

2. The county should regularly update its critical area regulations to provide protection for important habitats and species.

3. The county should encourage private property owners to protect important greenspaces through the clustering of residential development on the least sensitive portion of the property.

4. The county should encourage private property owners with priority resources, according to the Open Space Tax Program, to enroll their properties.

5. The county should support efforts by land trusts and conservation organizations to acquire either fee simple property for preserves or conservation easements on private lands.

6. The county should support efforts to protect lands identified in the WDNR Natural Heritage Data Base, through either private initiatives or public acquisition.

7. The county should promote the purchase of development rights as the preferred means of providing long-term protection for some county agricultural districts. *(Priorities to be determined within a PDR program.)*

8. The county should support efforts by other governmental agencies to acquire and develop parks, trails or preserves within or adjacent to Thurston County.

9. The county should support efforts by public water utilities to acquire or provide long-term management of wellhead protection areas.

ACTION NEEDS FOR OBJECTIVE C:

1. *It will be necessary to undertake a detailed evaluation of all the important greenspaces to determine what the primary protection option should be for each site. This evaluation process should involve all the greenspaces stakeholders.*

2. *The Thurston County Open Space Tax Program needs to be updated to reflect recent changes in the state law and to facilitate private land preservation efforts.*

OBJECTIVE D: ***County Lands Acquisition*** **-** A wide variety of lands should be acquired for parks, trails, and preserves which include sites for both passive and active recreation.

POLICIES:

1. The county should acquire lands which include:

   a. Lands with recreational values, such as picnicking, boating, fishing, swimming, camping, trail use, nature observation, play areas and sports fields;

   b. Lands containing environmental features with significant educational, scientific, wildlife habitat, natural, wetland, historic, or scenic values, and lands important to public health, such as recharge areas for drinking water supplies;

   c. Lands that provide access to fresh and marine waters; or

   d. Lands that provide scenic amenity, community identity, and buffers within and between urban and rural development.

2. The Park Department should use its "Park Acquisition Criteria" as a means of screening important greenspaces for possible county acquisition.

3. The county should require that areas for active recreation and other open space sites be dedicated as part of the development approval process of residential developments containing 10 or more acres and zoned for more than one residential dwelling unit per acre.

ACTION NEEDS FOR OBJECTIVE D:

1. *The Park Department needs to develop an operating policy regarding acquisition and receiving gifts of property.*

2. *The county needs to update its Park Plan on a regular basis. This may include a special task force to identify specific acquisition priorities, develop a specific funding method, and set a time table for acquisition.*