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IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR KING COUNTY

THE CITY OF DES MOINES, et al., Plaintiffs, vs. THE PUGET SOUND REGIONAL COUNCIL, et al., Defendants.	NO. 96-2-20357-2 KNT MEMORANDUM RULING ON APPLICATION OF RCW 47.80.23(2)

SUMMARY OF THE ISSUE

Plaintiffs characterize the claims they have pursued in this case against the Puget Sound Regional Council ("PSRC") as raising an important issue of first impression. The issue, as stated by plaintiffs, is this:

> [W]hat are the obligations of a regional body such as the PSRC when it is faced with approving a major transportation project that conflicts with the previously approved comprehensive plans of surrounding communities?

(Reply Brief, at 1.) Plaintiffs argue that the mitigation requirements of their comprehensive plans conflict with Resolution A-96-02 of the PSRC, and that RCW 47.80.23(2) requires the regional transportation plan of the PSRC as amended by Resolution A-96-02 to give way before local plans.

The Court reserves ruling on the questions of whether plaintiffs' comprehensive plan requirements as written do in fact either conflict with Resolution A-96-02 or preclude the development of an essential public facility under RCW 36.70A.200, and of what standards are to be applied on review of project-specific permitting decisions. Those questions are to be fully briefed by the parties in other proceedings. For the purposes of this ruling, the Court simply assumes that the mitigation requirements of local comprehensive plans, as they are interpreted by plaintiffs, do conflict with Resolution A-96-02. The Court in this ruling then addresses only the question of what impact if any RCW 47.80.23(2) has on such a conflict.

DISCUSSION

RCW 47.80.23 is part of the Growth Management Act ("GMA"), which was first passed in 1990. Its words must be analyzed in the context of the overall statutory scheme.

1. General GMA Provisions Governing Transportation Planning

Chapter 47.80 of the RCW sets forth the principal statutory provisions establishing and governing regional transportation organizations. RCW 47.80.010 contains the legislature's declaration that Washington's transportation system is to function as "one interconnected and coordinated system." Local jurisdictions and the state are directed by that section to cooperate to achieve statewide and local transportation goals by means of a coordinated planning program.

RCW 47.80.011 follows with the declaration that "improved integration" of transportation in the comprehensive planning among public institutions, particularly in large metropolitan areas, is "imperative."

The concluding portions of that chapter declare, at RCW 47.80.070, that in order to "ensure state-wide consistency in the regional transportation planning process" the state is to establish minimum standards for regional transportation plans in cooperation with RTPO's, facilitate coordination among RTPO's, and "identify and jointly plan improvements and strategies within those corridors important to moving people and goods on a regional or state-wide basis."

There is therefore nothing in the opening or closing language of Chapter 47.80 which contemplates or implies any form of primacy for local choices over regional choices, particularly in major metropolitan areas and regional transportation corridors. Instead, it directly requires that the state establish standards and that there be joint and cooperative efforts at all levels in order to establish a single interconnected and coordinated state-wide system.

2. Specific GMA Provisions for Transportation Planning

Despite the foregoing statutory emphasis on cooperation under state guidance, plaintiffs insist that their plans must be permitted to overcome differing regional planning. Their argument is based on an extremely selective reading of RCW 47.80.023(2).

The Court quotes below the pertinent portions of RCW 47.80.23 and RCW 47.80.026, and places in bold type those words on which plaintiffs rely. This manner of quotation graphically illustrates that plaintiffs are taking words out of their proper context, not only in the chapter as a whole but also in the very subsection they seek to quote:

RCW 47.80.023 Organization's duties

Each regional transportation planning organization shall have the following duties:

***

(2) Prepare a regional transportation plan as set forth in RCW 47.80.030 that is consistent with county-wide planning policies if such have been adopted pursuant to chapter 36.70A RCW, with county, city, and town comprehensive plans, and state transportation plans.

(3) Certify by December 31, 1996 that the transportation elements of comprehensive plans adopted by counties, cities, and towns within the region reflect the guidelines and principles developed pursuant to RCW 47.80.026, are consistent with the adopted regional transportation plan, and, where appropriate, conform with the requirements of RCW 36.70A.070.

***

RCW 47.80.026 Comprehensive plans, transportation guidelines, and principles

Each regional transportation planning organization, with cooperation from component cities, towns, and counties, shall establish guidelines and principles by July 1, 1995 that provide specific direction for the development and evaluation of the transportation elements of comprehensive plans....and to assure that state, regional, and local goals for the development of transportation systems are met.

***

Examples shall be published by the organization to assist local governments in interpreting and explaining the requirements of this section.

Nothing in those sections even hints, let alone directs, that city comprehensive plans be deemed more important than any other jurisdiction's plans, whether they be town, county, county-wide or even state plans.

The only reasonable reading of RCW 47.80.023(2) is that RTPO plans are to be consistent with all transportation plans, local, county-wide and state-wide, not that the cities control. Likewise, the next subsection, RCW 47.80.023(3), explicitly directs that local comprehensive plans themselves be consistent with the regional transportation plan. This counter-balances any inference of subsection (2) that the regional planning is uniquely required to defer to cities or to any other specific jurisdiction.

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RCW 47.80.023 also directs that local comprehensive plans conform to the general requirements of the Growth Management Act, specifically RCW 36.70A.070, which mandates that the transportation portion of each local comprehensive plan include provisions concerning intergovernmental coordination and an assessment of the impacts of that transportation plan on the transportation systems of adjacent jurisdictions. RCW 36.70A.070 ends with the broad declaration that the comprehensive plan transportation elements of cities, counties and public transportation systems are to be consistent with each other.

All of the sections quoted above contemplate that the regional planning process be a cooperative process. That process provides specific direction for the development of local comprehensive plans. No jurisdiction, large or small, can dictate its desires.

3. The GMA Generally

In RCW 36.70A.100, the Growth Management Act repeats this theme of consistency among all plans. That section directs that the comprehensive plan of each city is to be

> coordinated with, and consistent with, the comprehensive plans of other counties or cities with which the county or city has, in part, common borders or related regional issues.

Coordination, not domination, is the theme.

The only hint of primacy in any jurisdiction is found in RCW 36.70A.210. In subsection (1) thereof, county-wide planning policies are defined as policies that are used solely for establishing "a county-wide framework *from which* county and city comprehensive plans are developed and adopted pursuant to this chapter [Emphasis added]." That subsection posits county-wide planning as the touchstone, not city planning.

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That subsection also proceeds to distinguish between the planning and permitting processes when it states, "Nothing in this section shall be construed to alter the land-use powers of cities." A distinction is thereby clearly drawn between planning in the first instance and, ultimately, executing on those plans. In contrast to their lack of dominion over the broader planning process either in counties or in regions, cities retain substantial power over what is in fact ultimately constructed within their borders. Even in that situation, however, cities may be directly limited by statutes such as RCW 36.70A.200, which directs that no local comprehensive plan or development regulation be allowed to preclude the siting of essential public facilities such as airports.

RCW 36.70A.210 outlines a process for resolution of disputes among jurisdictions. This includes not only mediation, but also gubernatorial power to impose sanctions on jurisdictions that fail to agree. RCW 36.70A.210(2)(d). It does not include a municipal trump card.

Thus, it is clear that no one jurisdiction has absolute power. No jurisdiction's comprehensive plan automatically controls the plan of another. RCW 36.70A.215 reinforces this point. It establishes a requirement for review and evaluation of plans, but no control by any single jurisdiction.

CONCLUSION

Plaintiffs have the burden in this action of demonstrating that Resolution A-96-02's adoption was arbitrary and capricious or otherwise contrary to law.

In the Findings and Conclusions filed this day, the Court has ruled that the Resolution's adoption is not arbitrary or capricious. The Court now also concludes that plaintiffs' argument that RCW 47.80.023(2) by itself invalidates the PSRC's resolution or otherwise renders it contrary to law is plainly insufficient. There is simply no persuasive

argument supporting plaintiffs' argument that cities have a statutory right to trump regional actions. Plaintiffs have excerpted a few selected words from one portion of one subsection, and then read them in isolation from other words not only in the act, chapter and section, but in the very same subsection.

Plaintiffs have not met their burden of proving arbitrary and capricious action or of proving illegal action under RCW 47.80.023(2). For the reasons set forth above and in the Findings of Fact and Conclusions of Law entered herein this day, the Court dismisses plaintiffs' claims herein with prejudice.

IT IS SO RULED, this 23rd day of January, 1998.

JUDGE ROBERT H. ALSDORF

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The Honorable Robert H. Alsdorf

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR KING COUNTY

THE CITY OF DES MOINES, et al.,

Plaintiffs/Petitioners,

v.

PUGET SOUND REGIONAL COUNCIL, et al.,

Defendants/Respondents.

NO. 96-2-20357-2-KNT
NO. 97-2-13908-2-KNT

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL ORDER

This constitutional writ of review action involves a challenge to a legislative decision by the Puget Sound Regional Council ("PSRC") and PSRC's environmental review for that decision under the State Environmental Policy Act ("SEPA"). The court has read and considered the pleadings and files herein, including: Plaintiffs' Trial Brief, PSRC's Response to Plaintiff's Trial Brief, the Port of Seattle's Trial Brief, Plaintiffs' Reply Brief and the administrative record of the proceedings below prepared by PSRC. On January 5, 1998, the court heard oral argument on all of plaintiffs' claims remaining at the time of trial.

At the hearing, plaintiffs were represented by Cutler & Stanfield, LLP, Perry Rosen, Cairncross & Hempelmann and John Hempelmann; defendant PSRC was represented by Bricklin & Gendler, David A. Bricklin and Jennifer A. Dold; and the Port

of Seattle was represented by J. Tayloe Washburn and Roger Pearce.

Based on the foregoing review, and on the Court's Memorandum Ruling issued this day, the court enters the following findings of fact, conclusions of law, and final decision:

I. FINDINGS OF FACT

1. Plaintiffs have here sought appellate review of a decision made by PSRC to amend its Regional Transportation Plan/Metropolitan Transportation Plan ("RTP/MTP").

2. PSRC made its decision to amend its RTP/MTP on July 11, 1996 in a resolution by its General Assembly, Resolution A-96-02.

3. PSRC is the regional transportation planning body for the Central Puget Sound area. It is not a permitting body. PSRC is the official metropolitan planning organization pursuant to state and federal law and the official regional transportation planning organization pursuant to state law. To comply with federal and state requirements, PSRC adopts and updates its RTP/MTP. PSRC does not adopt or enforce development regulations or other regulatory requirements. PSRC does not issue permits for individual projects. PSRC does not implement specific projects within its RTP.

4. Part of PSRC's planning obligations include regional air transportation planning. In 1990, PSRC's predecessor, the Puget Sound Council of Governments, adopted a growth and transportation planning document titled VISION 2020. VISION 2020 included the 1988 Regional Air System Plan ("RASP") as its airport capacity transportation element. The RASP addressed the existing components of the regional airport system, including Seattle-Tacoma International Airport ("Sea-Tac") and other airport facilities, future air carrier demands, short-term and long-term alternatives to address future air carrier demands, and financial strategies to address future air carrier demands.

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5. When PSRC was created in 1991, it adopted VISION 2020 and the 1988 RASP. In May 1995, VISION 2020 and its transportation element, the RTP/MTP were adopted for the central Puget Sound region.

6. In 1988, PSRC's predecessor and the Port of Seattle created a regional airport planning task force known as the Puget Sound Air Transportation Committee ("PSATC"). PSATC undertook the Flight Plan project, an endeavor to develop alternatives and recommendations for meeting the region's long-term air transportation needs.

7. In 1992, PSATC issued its Flight Plan Project report. This report recommended a multiple airport system, including a third runway at Sea-Tac.

8. In conjunction with PSATC's work, PSRC and the Port issued a non-project environmental impact statement, the Flight Plan EIS, which identified and analyzed environmental impacts of a wide range of alternatives for meeting the region's airport capacity needs. The Flight Plan EIS analyzed the multiple airports recommended by PSATC, the alternative of a third runway without any new airports, numerous other combinations of new airports (supplementing or replacing Sea-Tac, improvements at Sea-Tac), and the "do nothing" alternative.

9. The adequacy of the Final Flight Plan EIS was challenged by plaintiff City of Federal Way in an administrative appeal. In ruling upon that appeal, the PSRC Hearing Examiner upheld the EIS, citing the greater flexibility afforded by SEPA's rules for non-project proposals, and finding that the inclusion of some site-specific information in the non-project EIS was also consistent with the SEPA rules. Plaintiff City of Federal Way did not seek judicial review of the Examiner's decision.

10. On April 29, 1993, following review of the Flight Plan Project report, the Flight Plan EIS, workshops, decision meetings, open houses, and public hearings, PSRC's General Assembly adopted Resolution A-93-03. Resolution A-93-03 amended the transportation element of VISION 2020 and determined that a third runway at Sea-Tac should be authorized by April 1, 1996 unless it was determined that a supplemental site to Sea-Tac was feasible and eliminated the need for a third runway; after demand management and system management programs were pursued and achieved or determined to be infeasible; and when noise reduction performance objectives at Sea-Tac were scheduled, pursued, and achieved based on independent evaluation and based upon measurement of real noise impacts.

11. Pursuant to Resolution A-93-03, independent expert panels were created to review supplemental site feasibility and demand/system management programs and noise reduction measures at Sea-Tac.

12. In 1994, PSRC conducted a Major Supplemental Airport Study to consider feasibility of a major supplemental airport to Sea-Tac. After conducting numerous public meetings and hearings, collecting information, and reviewing multiple sites, the PSRC Executive Board concluded in October, 1994 that a major supplemental airport was not feasible and that further studies of alternatives sites should not be undertaken. This decision was not challenged by plaintiffs.

13. In June 1994, the Expert Arbitration Panel was appointed to determine whether demand/system management programs were being pursued at Sea-Tac and whether noise reduction objectives were being met at the existing Sea-Tac facility. This panel held public meetings and hearings, received voluminous, technical expert testimony and reports from plaintiffs, opposition citizen groups, and the Port of Seattle.

14. In December 1995, the Expert Panel issued a final order finding that congestion pricing, gate controls, high speed rail, and existing rail service improvements could not reasonably defer the need for a third runway at Sea-Tac and therefore were not feasible alternatives under Resolution A-93-03.

15. In March 1996, the Expert Panel issued a final order on noise issues. The expert panel referenced the Port's efforts to abate and mitigate noise at Sea-Tac; stated that the Port is a "leader in the field of airport noise control"; and stated that few airports have undertaken the type of coordinated effort that the Port did. By a 2-1 vote, the Panel determined that these efforts had not been a meaningful reduction of real on-the-ground noise impacts sufficient to satisfy the noise condition of Resolution A-93-03. The expert panel also identified a list of additional recommended noise reduction measures to be considered for implementation at Sea-Tac.

16. From 1993 through 1996, the Port had developed an update of its Master Plan for Sea-Tac Airport, which included construction of a third runway. During this time, the Port, in conjunction with the Federal Aviation Authority ("FAA"), conducted detailed, project-specific environmental review for the proposed Master Plan in its Master Plan Update EIS.

17. While Sea-Tac currently operates efficiently during good weather conditions, during bad weather conditions Sea-Tac operates with measurable levels of delay. Delays are expected to worsen as the region grows and demand for commercial aviation service correspondingly rises. The primary purpose to be addressed by the third runway and other improvements analyzed in the Port's Master Plan is to increase the operating efficiency of Sea-Tac during poor weather conditions.

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18. In April 1996, the PSRC Executive Board requested the PSRC staff to initiate the process to amend the RTP/MTP to a plan for a third runway at Sea-Tac with the additional noise reduction measures recommended by the Expert Noise Panel. On May 30, 1996, the Executive Board held a workshop to discuss the Expert Noise Panel's recommendations and the responses to the Expert Panel's recommendations from plaintiffs, the public, the Port, and other agencies.

19. On June 10, 1996, PSRC issued a draft RTP/MTP amendment incorporating the Expert Panel's recommendations for public review and comment.

20. In conducting environmental review for the proposed RTP/MTP amendment, PSRC used the pre-existing 1992 Final Flight Plan EIS and the 1996 Final Master Plan Update EIS. By using both documents, PSRC gave decision makers a broad range of analysis covering virtually every reasonably conceivable eventuality, including those scenarios contended by plaintiffs to be most likely to occur.

21. The Flight Plan EIS was a programmatic, non-project EIS. The Draft Flight Plan EIS examined 34 alternative configurations of airports, runways, and systems, and narrowed these alternatives to one preferred alternative and six secondary alternatives for analysis in the Final EIS. The Final Flight Plan EIS then considered and compared, on a region-wide planning level, the potential impacts of the seven alternatives with respect to noise, air quality, surface transportation, land use, public services, and utilities, natural environment, earth, energy, and public safety. The Final Flight Plan EIS utilized a range of forecasts of airport operations (numbers of flights) to assess and compare environmental impacts. The Flight Plan EIS explained how these forecasts, together with data on population and employment growth, affect production of airport capacity demand. The Flight Plan EIS set forth the forecast assumptions, the uncertainties inherent in such

forecasting, and the variations of outcomes. The Final Flight Plan EIS noted that high and low forecasts could meet this activity level between 2015 and 2035 without necessarily discrediting a selective system alternative.

22. PSRC also used the 1996 Final Master Plan Update EIS. This EIS had been prepared by the Port and the FAA and was an EIS for specific projects at Sea-Tac, including a third runway. Both PSRC and the plaintiffs had reviewed and provided comments on the environmental review contained in the Draft Master Plan Update EIS.

23. In 1996, the Port and the FAA issued the Final Master Plan Update EIS. This EIS contained responses to comments related to the aviation demand forecasts set forth in the Draft Master Plan Update EIS.

24. The Final Master Plan Update EIS contained an analysis of alternative demand forecasts based on an assumed growth projection which was approximately 25 percent higher than the growth forecast in the Draft Master Plan Update EIS. The Final Master Plan Update EIS also evaluated the differences in noise, air pollution, surface transportation, and other impacts based on this 25 percent higher growth assumption.

25. In conducting environmental review for its RTP/MTP amendment, PSRC also published an Addendum to the Flight Plan EIS and the Master Plan Update EIS. The purpose of the Addendum was to identify and add to the two pre-existing EISs used to assess the impacts of the proposed planning decision. The Addendum outlined PSRC's administrative SEPA processes and set forth a deadline for requesting the preparation of a supplemental EIS ("SEIS").

26. PSRC received six requests for the preparation of an SEIS, including one from the plaintiffs. Plaintiffs requested an SEIS claiming that there were changes to PSRC's proposal and alleging that there was new and significant information regarding

noise impacts, air quality, traffic, and capacity and delay issues.

27. In reviewing the requests for an SEIS, PSRC considered the Flight Plan EIS and the Master Plan Update EIS in unison to determine whether significant new information existed which was not covered in either EIS; PSRC reviewed responses to comments on the Draft Master Plan Update EIS; PSRC reviewed letters received on the Final Master Plan Update EIS; PSRC reviewed testimony provided at the March 18, 1996 Congressional field hearing on the proposed third runway at Sea-Tac; PSRC reviewed local comprehensive plans in the vicinity of Sea-Tac and determined that none had been amended since publication of the Master Plan EIS; and PSRC consulted with the FAA, the Puget Sound Air Pollution Control Agency, and the Port of Seattle staff familiar with the pertinent environmental issues. PSRC then identified four criteria used to evaluate the information developed through the previous six steps which included whether the EISs were adequate for PSRC's regional planning decision and whether new information existed that indicated probable significant adverse impacts or was significant to PSRC's regional planning decision.

28. Through this evaluation, PSRC identified some information and analysis which was new but which it reasonably concluded did not substantially change the analysis in the existing environmental documents.

29. PSRC reviewed plaintiffs' Request for an SEIS and specifically addressed the contentions made by plaintiffs that recent operations data included a greater rate of increase than the Master Plan Update EIS forecasts. PSRC noted that the Master Plan Update EIS included an analysis of the potential environmental impacts that could occur in the event that construction of the third runway does induce a higher level of operations. PSRC noted that the analysis of more operations in the Master Plan Update EIS also

responded to comments regarding the accuracy of the forecasts, specifically that flight operations and enplanements have increased and will increase faster than predicted in the Master Plan forecasts. The Master Plan Update EIS also analyzed impacts in the areas of noise, air quality, wetlands, stream relocations, property acquisitions, earth fill, and similar areas as a result of greater aviation activity. PSRC rejected plaintiffs' Request for an SEIS because it determined that no new significant information had come to light.

30. Plaintiffs' local comprehensive plans call for mitigation of impacts from the third runway on local communities. None of the local policies requires the regional planning body to impose the mitigation. This is not necessarily inconsistent with Resolution A-96-02, which itself calls for mitigation.

31. The 1992 Flight Plan EIS analyzed the financial benefits, capital costs, and funding sources associated with the wide range of alternatives identified to meet the region's air capacity needs. The Flight Plan EIS compared capital costs and available funds of all alternatives, including Sea-Tac with a third runway. The 1996 Master Plan EIS, prepared by the Port and the FAA, also contained a discussion of the funding for a third runway at Sea-Tac.

32. Before PSRC made its decision to amend the RTP/MTP, it reviewed up-to-date financial information from the Port regarding funding for a third runway at Sea-Tac. This information was provided both to the PSRC Executive Board and General Assembly. This up-to-date financial information indicated that a third runway would be financed exclusively with airport sources of capital: FAA grants, landing fees, passenger facility charges, revenue bonding funds, and third-party financing. Opponents of the third runway on PSRC's Executive Board and General Assembly used their opportunities to raise questions about this information and present contrary information and points of view.

33. In considering the proposed RTP/MTP amendment, PSRC considered hundreds of letters, comments, and information from plaintiffs, the public, the Port, and other agencies. PSRC considered information related to both the environmental and financial ramifications of the proposed RTP/MTP amendment. Both PSRC's Executive Board and General Assembly considered information provided by the Port regarding the funding of a third runway at Sea-Tac and outlining cost-benefit information related to a third runway.

34. On June 27, 1996, the PSRC Executive Board voted to recommend approval of the RTP/MTP amendment. On July 11, 1996, the PSRC General Assembly voted to adopt Resolution A-96-02.

35. The General Assembly's action culminated a nearly decade-long regional planning effort involving the public and affected municipalities, who fully utilized their opportunities to provide information and affect the outcome. The Court has concluded that there was no significant additional necessary information to be considered by the regional decision makers. Opposing points of view had been reasonably presented and given full consideration in analyzing alternatives from which one or more options would be selected for project-specific planning and permitting. The record indicates that PSRC had sufficient information to make a reasoned decision to assess the consequences of its actions, and to amend its transportation plan.

36. In adopting Resolution A-96-02, the General Assembly identified a number of factors it considered including: the need for additional air capacity to address the region's growing demand for commercial air transportation services; the impacts of poor weather on Sea-Tac Airport's current capabilities; the alternatives for meeting air travel demand, including whether a major supplemental airport and demand/system management

actions were feasible; the environmental impacts and alternatives discussed in the Flight Plan EIS and the Master Plan EIS; new information and analyses in the Addendum to those EISs; the conclusions of the Expert Panel on demand/system management and on noise reduction issues; and the extensive public comment received by the PSRC and the EIS processes, workshops, decision meetings, open houses, telephone hotline, and public hearings. The General Assembly determined, on balance, that the RTP/MTP amendment to include plans for a third runway at Sea-Tac Airport with additional noise mitigation measures recommended by the Expert Noise Panel was a reasonable and necessary decision for addressing the long-term commercial air transportation capacity needs of the central Puget Sound region.

37. The noise mitigation measures in Appendix G to Resolution A-96-02 only addressed existing noise from Sea-Tac. Resolution A-96-02 neither required nor precluded additional mitigation through project-level permitting for specific proposals at Sea-Tac.

38. PSRC is a planning agency. It is not a permitting agency. Resolution A-96-02 imposed mitigation requirements only for existing conditions. Resolution A-96-02 is not the principal mechanism by which project-specific mitigation requirements are to be imposed. Project-specific mitigation requirements are imposed and their propriety and sufficiency adjudged through the project-specific permitting process and any appeals therefrom.

39. PSRC's regional transportation planning responsibilities include surface transportation planning. In meeting this responsibility, PSRC prepared and adopted the 1995 RTP/MTP which estimates total surface transportation system costs (state highways, public transit, state ferries, county and city roads, freight and goods movement, and non-

motorized transportation) and identifies capital system needs and funding for maintenance and preservation of all existing modes of transportation.

40. PSRC's 1995 RTP/MTP included planning for regional truck traffic which involved considerations of regional mobility connections and needs throughout the entire regional trucking network. The 1995 RTP/MTP includes a "freight and goods mobility" component which addresses the region's truck trips. PSRC identified the major existing freight activity generators, such as intermodal yards, ports, rail lines, and airports, including Sea-Tac, and the extensive existing network of rail lines and major roadways which serve existing freight mobility needs. The 1995 RTP/MTP includes a list of recommendations to improve regional freight mobility, including non-capital actions and capital actions. The 1995 RTP/MTP also identifies current revenues as sufficient for the maintenance and preservation of the existing system. However, because the 1995 RTP/MTP identified a shortfall in funds for new transportation projects, PSRC also developed a six year action strategy to establish new project priorities. The Six-Year Action Strategy was adopted on December 5, 1996.

41. The central Puget Sound region currently generates 9.6 million daily person trips on the total regional transportation system. Truck traffic is estimated as approximately 12 percent of the total system. Thus, as of 1995, the Central Puget Sound region had approximately 1.1 million daily truck trips on the regional road network. Truck trips are naturally expected to grow in proportion to projected population and employment growth and the regional network of major freight-oriented roadways identified in the 1995 RTP/MTP are expected by PSRC to accommodate these truck trips. The Court cannot conclude that no reasonable person would find, and therefore concludes that a reasonable person could find, that the degree of impact of truck trips related to runway construction is

not so serious as to require either rejection of the third runway or imposition of project-specific mitigation measures in A-96-02.

II. CONCLUSIONS OF LAW

1. PSRC's decision to amend the region's transportation plan to include planning for a third runway at Sea-Tac is a legislative decision. As a legislative decision, it is reviewable by the courts only pursuant to a constitutional writ of review. Thus, Counts I and II in plaintiffs' complaint are reviewed by the Court pursuant to a constitutional writ of review.

2. Review by a constitutional writ is limited to the Court's review of the record before the agency to determine whether the decision or act complained of involved arbitrary and capricious or illegal actions violating the appellants' fundamental right to be free of such actions. Bridle Trails Comm. Club v. Bellevue, 45 Wn. App. 248, 251-52, 724 P.2d 1110 (1986). Under the arbitrary and capricious standard, plaintiffs must show that the agency action was willful and unreasoning, taken without regard to or consideration of the facts and circumstances surrounding the action. Hayes v. Seattle, 131 Wn.2d 706, 718, 934 P.2d 1179 (1997). An action by an agency is not arbitrary and capricious when there is room for two opinions. Hillis v. Washington, 131 Wn.2d 373, 383, 932 P.2d 139 (1997).

3. Review by constitutional writ is not to be used by the Court to substitute its views for the legislative and political decisions made by the region's elected officials. See generally Raynes v. Leavenworth, 118 Wn.2d 237, 243, 821 P.2d 1204 (1992).

4. Because Counts I and II involve claims that PSRC violated ch. 36.70A RCW, the Growth Management Act ("GMA"), this Court has reviewed decisions made by the Growth Management Hearings Board. The decisions of these Boards have been

accorded considerable deference because they are expert agencies created by the Legislature to oversee implementation of the GMA.

5. The GMA differentiates between planning policies and development regulations. Planning policies are used to guide the preparation of development regulations. RCW 36.70A.040(4), RCW 36.70A.120. Development regulations are used to decide whether to condition or deny specific projects. RCW 36.70A.030(7).

6. The PSRC only has authority to adopt planning policies in various forms. As a planning agency, it does not adopt or implement development regulations. PSRC does not issue permits for specific projects and therefore does not generally impose mitigation requirements for individual projects. Imposing mitigation is the responsibility of agencies with permitting authority.

7. In this case, when PSRC authorized planning for a third runway at Sea-Tac, PSRC required the Port to take additional steps to address noise from the existing facility. PSRC's decision to seek some additional mitigation of existing noise impacts did not transform PSRC into a regulatory agency nor did it impose on PSRC a duty to fully mitigate all impacts associated with the third runway. The ability and the duty to impose project specific mitigation remains with the appropriate permitting agencies, and the propriety and sufficiency of such mitigation conditions are subject to review on proper appeal therefrom.

8. For the reasons set forth in the Court's Memorandum Ruling issued this date, plaintiffs' claims that Resolution A-96-02 violated the Growth Management Act, specifically RCW 47.80.023(2), are legally insufficient and are dismissed.

9. Plaintiffs have also alleged that PSRC failed to comply with RCW 47.80.030 because PSRC allegedly failed to include a "complete, adequate, or credible"

financial plan in support of the RTP/MTP amendment and because PSRC allegedly failed to assess regional development patterns, capital investment, and other measures necessary to ensure the preservation of the existing regional transportation system for existing and future major roadways. See RCW 47.80.030(1)(d), (e)(i).

10. Plaintiffs assert that PSRC must have created a financial plan for the RTP/MTP amendment. The evidence shows PSRC did not create an independent "financial plan" for the RTP/MTP amendment.

11. However, under the GMA, PSRC is entitled to rely upon the financial information and plans compiled and created by the Port, the agency which will actually undertake the detailed planning for and construction and operation of a third runway at Sea-Tac. The Growth Management Hearings Boards have consistently ruled that where special districts within a county or city adopt plans, including financial plans, a county or city need not repeat or duplicate that work. See Sky Valley v. Snohomish County, CPSGMHB No. 95-3-0068c (Final Order, Mar. 12, 1996); Wenatchee Valley Mall Partnership v. Douglas County, EWGMHB No. 96-1-0009 (Final Order, Dec. 10, 1996); Bremerton v. Kitsap County, CPSGMHB No. 95-3-0039c, 97-3-0024c (Finding of Non-Compliance and Determination of Invalidity in Bremerton and Order Dismissing Port Gamble, Sep. 8, 1997). RCW 47.80.030's requirement for the creation of a financial plan by multi-county regional planning bodies must be construed in a similarly practical way. The provision should not be read to require PSRC to duplicate the financial planning for Port projects. For PSRC to have undertaken specific financial planning for the Port is beyond PSRC's authority and would have been duplicative of the Port's own financial planning.

12. Financial information in the environmental documents, documents provided to the Executive Board and General Assembly in 1996, debate before the Executive Board

and General Assembly, and other evidence in the record establishes that PSRC considered the financial issues and had before it the pertinent financial information demonstrating how the RTP/MTP amendment could be implemented and indicating what sources of revenue were available to carry out the amendment. Plaintiffs have failed to meet their burden to show that PSRC acted arbitrarily or capriciously or contrary to the GMA in failing to undertake additional financial analysis or otherwise in complying with RCW 47.80.030(1)(d).

13. Plaintiffs alleged that PSRC violated the GMA because its RTP/MTP amendment failed to assess regional development patterns, capital investment, and other measures necessary to ensure the preservation of the existing regional transportation system, including requirements for operational improvements, resurfacing, restoration, and rehabilitation of existing and future major roadways. This contention fails because PSRC has conducted regional surface transportation planning pursuant to RCW 47.80.030(1)(e)(i). This planning recognized Sea-Tac (with or without a third runway) as a traffic generator. PSRC did not need to revise its measures addressing surface transportation when it amended its RTP/MTP to authorize planning for the third runway.

14. There was no need for PSRC to re-assess its regional surface transportation planning based on the short-term increase in truck traffic. The plaintiffs did not meet their burden of demonstrating that PSRC acted arbitrarily and capriciously when it decided that the regional significance of the truck traffic was too limited to require a revision of the existing regional surface transportation plan.

15. In addition, site-specific truck traffic impacts (e.g., identifying particular roadway segments that may be particularly impacted by increased truck traffic) are properly addressed through site-specific environmental review. Thus, plaintiffs have failed

to meet their burden to show that PSRC acted arbitrary or capriciously or contrary to the GMA in meeting the requirement of RCW 47.80.030(1)(e)(i).

16. In reviewing EISs to determine whether they meet the requirements of SEPA, courts use "the rule of reason" standard. Citizens Alliance v. Auburn, 126 Wn.2d 356, 361, 894 P.2d 1300 (1995). Under the rule of reason standard, agencies are accorded broad discretion in designing and preparing impact statements. Id. at 362. The rule of reason test is a broad, flexible, cost-effectiveness standard which does not require a discussion of every conceivable impact or an exhaustive discussion of alternatives. Klickitat County Citizens v. Klickitat County, 122 Wn.2d 619, 633, 860 P.2d 390 (1993). Courts must give substantial deference to the agency's determination that an EIS is adequate. RCW 43.21C.090. The Court does not rule on the wisdom of the proposed development but on whether the EIS gave the decision maker sufficient information for a reasoned decision. Citizens Alliance, 126 Wn.2d at 362.

17. Under SEPA, a "non-project" action includes "plans, policies, and programs." WAC 197-11-774. When the decision-making agency is making a non-project decision, the requirements for SEPA review are especially flexible. WAC 197-11-442(1). For non-project actions, the impacts and alternatives are required to be discussed only at the level of detail appropriate to the scope of the proposal. WAC 197-11-442(2). The discussion of alternatives should be limited to a general discussion and site-specific analysis is not required. WAC 197-11-442(3) & (4).

18. SEPA allows phased environmental review where broad planning guidelines are approved in a non-project decision and detailed environmental review for a specific project occurs in a separate decision making process. WAC 197-11-443(2); WAC 197-11-060(5); WAC 197-11-776; OPAL v. Adams County, 128 Wn.2d 869, 879, 913 P.2d 793

(1996). Under the SEPA rules for non-project actions like PSRC's amendment, site-specific environmental analysis may be included at the agency's discretion. WAC 197-11-442(4); Klickitat County Citizens, 122 Wn.2d at 639-40. Thus, PSRC's decision to review the project-specific Master Plan EIS in addition to the broader programmatic Flight Plan EIS satisfies the requirements of SEPA.

19. The nature of PSRC's action is essential to defining the scope of the Court's review of PSRC's environmental review. The action for which PSRC was required to include environmental review was the adoption of Resolution A-96-02. In that decision, PSRC amended its RTP/MTP and decided where the region should plan for enhanced air transportation capacity in the future. It was the culmination of a nearly decades long regional planning process which first identified a broad, exhaustive array of alternatives and slowly winnowed the field until one option – a third runway at Sea-Tac – was selected as the option which should be scrutinized in further site-specific review by the permitting agencies. PSRC's planning exercise – culling the field of alternatives so that a single site could be subjected to additional, exhaustive environmental review – is properly viewed as the first phase in a multi-phase environmental review process. As the first, but not the only, phase, PSRC's environmental review did not have to include the level of detail that would be necessary in a site-specific review.

20. Plaintiffs argue that the 1996 Master Plan Update EIS underestimated environmental impacts because it was based on a forecast that underestimated use of the expanded Sea-Tac airport and that PSRC thereby failed to fulfill the requirements of SEPA. Plaintiffs' argument overlooks the analysis contained in the Flight Plan EIS; ignores analysis in the Master Plan EIS which analyzed impacts associated with higher use projections; and is based on a flawed premise, i.e., that the Master Plan EIS forecast is

unreasonable.

21. In approving Resolution A-96-02, PSRC used the 1992 programmatic Flight Plan EIS. This EIS evaluated the environmental impacts of meeting future regional air transportation needs. The Flight Plan EIS looked at alternatives, air capacity, and future airport needs from a regional perspective. The Flight Plan EIS utilized a range of forecasts for airport operations (numbers of flights). The Flight Plan EIS explained how these forecasts, together with data on population and employment growth, affect projections of air capacity demand. The EIS also noted that the use of its range of forecasts meant that high and low forecasts could meet needed demand without necessarily discrediting a selective system alternative. The Flight Plan EIS also analyzed the impacts of the alternatives, including Sea-Tac with a third runway. The EIS evaluated noise, air quality, surface transportation, land use, and other types of environmental impacts. Thus, standing alone, the Flight Plan EIS, which has gone unchallenged by plaintiffs, contains a sufficient disclosure of general aviation demand trends and associated impacts in the Puget Sound Region to support PSRC's decision to amend its RTP/MTP.

22. The Master Plan Update EIS based its forecast of airport traffic volume on the independent variables that are reasonably believed to have predictive value as determinants of aviation demand: population, per capita income, and average air fares. Under the rule of reason, the Court must give deference to the agency's environmental review including the agency's choice of methodology. Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 200-01 (D.C. Cir. 1991). Moreover, when an agency is presented with conflicting expert opinion on an issue, it is the agency's job, and not the job of a reviewing appellate body, to resolve those differences. Webb v. Gorsuch, 699 F.2d 157, 160 (4th Cir. 1983). Here, the Port of Seattle and the FAA are the agencies with expertise

in forecasting aviation demand. These agencies have determined that the Master Plan Update aviation forecast is the most reasonable methodology available for forecasting future aviation demand at Sea-Tac. In addition, this methodology is commonly accepted throughout the industry for predicting airport demand.

23. During the comment periods for the Master Plan Update EIS and PSRC's environmental review, the plaintiffs submitted comments that raised criticisms of the Master Plan Update EIS's forecasting methodology. These comments, and the responses from the Port and the FAA to them, were included in the Final Master Plan Update EIS. PSRC also addressed the conflicting points of view in its Addendum. Thus, at the time of its decision, PSRC was aware that there were conflicting points of view regarding the forecast. The Master Plan Update EIS also included an appendix which analyzed impacts associated with use of the airport 25 percent greater than that which formed the basis for the original analysis, i.e., at a use level similar to plaintiffs' theories.

24. Similarly, the Flight Plan EIS analyzed impacts across a range of operation forecasts that at its maximum exceeded the Master Plan Update EIS forecasts by 21 percent. Thus, the two EISs provided PSRC with data covering a wide range of differing opinions on the air traffic and traffic-related impacts that an expanded Sea-Tac might generate.

25. One of the central purposes of SEPA is to provide information on environmental impacts to decision makers before decisions are made, so that the decision makers are fully informed of the likely environmental consequences and the debate regarding the possible range of those consequences. Here, that purpose has been fully met. PSRC decision makers knew there was a dispute regarding the forecast, knew the basis of the differing opinions, knew what the potential consequences were from both points of

view, and were informed of the entire range of consequences in the Flight Plan EIS and Master Plan Update EIS. Thus, the disclosure requirements of SEPA were met in this case. Plaintiffs have failed to meet their burden under the rule of reason standard. Plaintiffs' SEPA claims are denied.

III. FINAL ORDER

Based on the foregoing findings of fact and conclusions of law, it is ORDERED, ADJUDGED AND DECREED as follows:

1. The plaintiff's claims brought in this action are dismissed with prejudice.

2. PSRC and the Port of Seattle are the prevailing parties in this action and are entitled to costs and attorney fees to the extent provided by law. PSRC and the Port shall file a Cost Bill and any other appropriate documentation and briefing related thereto within ten days of receipt of this order.

DATED this 23rd day of January, 1998.

The Honorable Robert H. Alsdorf
King County Superior Court Judge

CENTRAL PUGET SOUND
GROWTH MANAGEMENT HEARINGS BOARD
STATE OF WASHINGTON

PORT OF SEATTLE, Petitioner, v. CITY OF DES MOINES, Respondent.	Case No. 97-3-0014 FINAL DECISION AND ORDER

I. PROCEDURAL HISTORY

On February 14, 1997, the Central Puget Sound Growth Management Hearings Board (the Board) received a Petition for Review (PFR) from the Port of Seattle (the Port) challenging the comprehensive plan (the Plan) of the City of Des Moines (Des Moines or the City). The Port alleged that the Plan is not in compliance with the Growth Management Act (GMA or the Act) because it purports to preclude the expansion of an essential public facility; violates the property rights goal of the Act; is internally inconsistent; and is also inconsistent with the King County Comprehensive Plan (County Plan), the County-wide Planning Policies (KCCPPs) and Multi-County Planning Policies (MPPs).

On May 5, 1997, the Board received the "Brief of Amicus Puget Sound Regional Council Regarding Certain Multi-County Planning Policy Issues."

On May 30, 1997, the Board issued an "Order on Motions to Supplement" and an "Order on Dispositive Motions," in which the Board ruled on the motions to supplement, but declined to rule on the dispositive motions.

On June 4, 1997, the Board received the "City of Des Moines' Motion for Reconsideration of Board's Order on Motions to Supplement" (City's Motion for Reconsideration). On the same date, the Board received the "City of Des Moines Motion to Supplement the Record with Rebuttal Exhibits" (City's Motion to Supplement the Record with Rebuttal Exhibits).

8/13/1997

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On June 5, 1997, the Board received from the Port a "Motion to Strike City of Des Moines' Motion for Reconsideration and Motion to Supplement the Record with Rebuttal Exhibits" (**Port's Motion to Strike**).

On June 6, 1997, the Board issued an "Order Granting Port's Motions to Strike" which granted the Port's Motion to Strike the City's Motion for Reconsideration and Motion to Supplement with Rebuttal Exhibits.

On June 16, 1997, the Board received "Petitioner Port of Seattle's Prehearing Opening Memorandum" (**Port's Prehearing Memorandum**).

On June 30, 1997, the Board received the "Brief of Amicus Puget Sound Regional Council Regarding Port of Seattle's Pre-Hearing Opening Memorandum."

Also on June 30, 1997, the Board received "Respondent City of Des Moines' Prehearing Brief" (**City's Response Brief**).

On July 7, 1997, the Board received the "Reply Brief of Amicus PSRC."

On July 8, 1997, the Board received "Respondent City of Des Moines' Motion To Strike 'Reply Brief Of Amicus PSRC,'" (**City's Motion to Strike Reply Brief of PSRC**). On the same date the Board received from the PSRC a "Response To Des Moines' Motion To Strike Reply Brief Of Amicus PSRC," and later that same day the Board received "Port Of Seattle's Opposition To City Of Des Moines' Motion To Strike Reply Brief Of Amicus PSRC."

On July 9, 1997, the Board held a hearing on the merits in room 5500 of Two Union Square in Seattle, Washington. Board members Joseph W. Tovar, Presiding Officer, and Chris Smith Towne were present for the Board.[1] The Port was represented by J. Tayloe Washburn and the City was represented by John W. Hempelmann. The PSRC was represented by David A. Bricklin. Court reporting services were provided by Jean M. Ericksen, RPR, of Robert H. Lewis & Associates, Tacoma. No witnesses testified. As a preliminary matter, the presiding officer heard argument regarding the City's Motion to Strike Reply Brief of PSRC, after which he orally denied the motion.[2] The presiding officer orally granted leave to the City to file a post-hearing brief, by no latter than July 18, 1997, to respond to issues addressed by PSRC in its "Reply Brief of Amicus PSRC" and "Brief of Amicus PSRC Regarding Opening Memorandum."

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[1] Board member Edward G. McGuire reviewed the briefs and exhibits in this matter and read the transcript of the hearing on the merits.

[2] At the request of the City, Board member Towne absented herself from the hearing room during argument regarding the City's motion and returned when Presiding Officer Tovar announced his ruling on the motion. *See* WAC 242-02-522(5).

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On July 18, 1997, the Board received "Respondent City of Des Moines' Post-Hearing Brief In Response To Reply Brief Of Amicus PSRC And Brief Of Amicus PSRC Regarding Port's Pre-Hearing Opening Memorandum."

On July 28, 1997, the Board received from the Port a copy of Exhibit 163 (PSRC Resolution A-91-01), which was inadvertently omitted from the exhibits filed with the Board.

On July 29, 1997, the Board received Amicus PSRC's "Motion to Strike" portions of the City's July 18 memorandum (PSRC Motion to Strike).

On July 31, 1997, the Board received "Respondent City of Des Moines' Memorandum in Opposition to Amicus PSRC's Motion to Strike."

II. FINDINGS OF FACT

1. On October 25, 1990, the Puget Sound Council of Governments (PSCOG) passed Resolution A-90-01, adopting VISION 2020: Growth and Transportation Strategy for the Central Puget Sound Region. Ex. 133.

2. On October 24, 1991, the City passed Resolution 667, authorizing execution of the "Interlocal Agreement for the Regional Planning of the Central Puget Sound Area," including the creation of a regional planning agency, the Puget Sound Regional Council (PSRC). The PSRC is to "ensure implementation in the [central Puget Sound] region of the provisions of state and federal law which pertain to regional transportation planning and regional growth management." Ex. 162.

3. On October 21, 1992, the Executive Board of the PSRC adopted a PSRC Action Item affirming that the PSRC "is the governmental agency responsible for meeting the requirement in the [GMA] for multicounty planning policies." Ex. 160(a).

4. On March 11, 1993, the PSRC General Assembly passed Resolution A-93-02, amending VISION 2020 to include MPPs for King, Kitsap, Pierce, and Snohomish Counties. Ex. 174.

5. On May 25, 1995, the PSRC passed Resolution A-95-02, adopting the 1995 update to VISION 2020 and the Metropolitan Transportation Plan (MTP). Ex. 136.

6. On December 7, 1995, the City adopted the Greater Des Moines Comprehensive Plan. Ex. 160.

7. On July 11, 1996, the PSRC passed Resolution A-96-02, amending the 1995 MTP to include a third runway at Sea-Tac International Airport (STIA). Ex. 138.

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8. On August 1, 1996, the Port passed Resolution 3212, adopting the Airport Master Plan Update for STIA, including the development of a third runway, and noise reduction measures in accordance with PSRC Resolution A-96-02. Ex. 140, at 3-4.

9. An L_{dn} is a unit of measure representing an average day-night noise level typically used for airport-related noise measurements. *See* Port's Prehearing Brief, at 40 n.21.

10. The expansion of STIA requires the use of fill dirt. The borrow site for this fill dirt is within Des Moines. Consequently, trucks hauling fill dirt from the borrow site to STIA must drive through the City. *See* Ex. 148 *and* City's Response Brief, at 16.

11. The City's development code requires trucks used to haul fill dirt through the City to obtain permits pursuant to local regulations (Chapter 12.04 DMMC). Ex. 148.

III. RULINGS ON MOTIONS

Since they went to the heart of the case, the Board took no action on the two dispositive motions. Because the Board now addresses the substance of the dispositive motions , the Board will not rule on these motions.

The City's Motion to Dismiss the Reply Brief of PSRC is denied. PSRC's motion for leave to submit additional briefing is granted.

PSRC's Motion to Strike is denied.

IV. STANDARD OF REVIEW

The City urged the Board to apply Engrossed Senate Bill (ESB) 6094, specifically Section 20. ESB 6094, Chapter 429, Laws of 1997. Section 20 changes the standard of review to be used by the Boards. The Board takes official notice of ESB 6094, which became effective on July 27, 1997. Section 53 expressly provides that this new law is prospective in effect, except for Section 22, which is explicitly retroactive. In other words, the 1997 amendments to the Growth Management Act became effective on July 27, 1997.

The Board obtained jurisdiction to review this dispute when the PFR was filed on February 14, 1997. Briefing, pursuant to the Board's Rules of Practice and Procedure, was received from April 21, 1997, through July 8, 1997.[3] The hearing on the merits was held on July 9, 1997. But for the issuance of this final decision and order, all events in this proceeding occurred prior to July 27, 1997 -- the effective date of ESB 6094.

[3] In addition to the prehearing briefs, the City and PSRC filed post-hearing briefs. *See* Procedural History.

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If, as the City suggests, the date of issuance of the Board's decision is determinative as to the law to be applied, the Board could select the law to apply based upon its desire and ability to accelerate or delay the issuance of its decision. This is an outcome the Board cannot reach, nor can the Board conclude that it is a result the legislature intended.[4] Consequently, to give effect to the legislature's clear direction, as contained in Section 53, the Board has a duty to apply the provisions of the GMA as they existed at the time the PFR was filed.[5]

RCW 36.70A.320(1) provides that:

> Except as provided in subsection (2) of this section, comprehensive plans and development regulations, and amendments thereto, adopted under this chapter are presumed valid upon adoption. In any petition under this chapter, the board, after full consideration of the petition, shall determine whether there is compliance with the requirements of this chapter. In making its determination, the board shall consider the criteria adopted by the department under RCW 36.70A.190(4). The board shall find compliance unless it finds by a preponderance of the evidence that the state agency, county, or city erroneously interpreted or applied this chapter. (Emphasis supplied.)

The Port must show, by a preponderance of the evidence, that the City erroneously interpreted or applied the provisions of the GMA.

V. DISCUSSION AND CONCLUSIONS

The Board's Prehearing Order set forth five Legal Issues. While several of these legal issues raise significant issues of first impression, the Board finds that, after answering Legal Issue 2, it need not, and will not, reach the remaining issues.[6] For the reasons

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[4] The Board takes notice of the legislature's clear intent to reemphasize the importance of the Boards' deference to local policy choices and decisions when those choices and decisions comply with the GMA.

[5] Any actions taken by a local government after July 27, 1997, including actions taken to comply with a Board remand order, will be subject to the provisions of ESB 6094. The Board's compliance review of the remand action in this case will, likewise, be subject to ESB 6094.

[6] The other legal issues listed in the Prehearing Order were as follows:

> *1. Does the City's Plan fail to comply with RCW 36.70A.100 because Plan policies (CP) 1-04-05, 5-02-08, 5-03-02, 5-04-04, 8-03-01(2), 8-04-01(1), 8-04-01(1)(c), 8-03-04(4), 4-04-01, 6-03-23, 6-04-09(4), 6-04-09(5), 8-03-01(3), 8-03-02(3), 8-04-01(1)(b) and 8-04-02(1) are inconsistent with King County Comprehensive Plan policies T-101, T-107, F-218, T-540 and T-542?*
>
> *3. Does the City's Plan fail to comply with RCW 36.70A.210:*

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presented below, the Board concludes that Des Moines' comprehensive plan is not in compliance with RCW 36.70A.200, and it will therefore be remanded and invalidated in part.

Legal Issue 2

Does the City's Plan fail to comply with RCW 36.70A.200 by containing policies and strategies which purport to preclude the expansion of Seattle-Tacoma International Airport (STIA) based on the City Plan policies cited above in Legal Issue No. 1 and CP 5-04-04, 6-04-09(4), 6-04-09(5), 8-04-01(1)(b), and 8-04-02(1)(d)?

DISCUSSION

RCW 36.70A.200 provides:

> (1) The comprehensive plan of each county and city that is planning under this chapter shall include a process for identifying and siting essential public facilities. Essential public facilities include those facilities that are typically difficult to site, such as airports, state education facilities and state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, and group homes.
> (2) The office of financial management shall maintain a list of those essential state public facilities that are required or likely to be built within the next six years. The

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3.1 Is the City's Plan (including all of the CPs listed in these legal issues) inconsistent with King County Countywide Planning Policies FW-19, S-1.11, and FW-32?

3.2 Is the City's Plan (including all CPs listed in these legal issues) inconsistent with Multi-county Planning policies (MPPs) adopted by the PSRC and embodied in the VISION 2020 Regional Growth Strategy and Regional Transportation Plan (RTP), including the following MPPs contained in VISION 2020's 1995 Update adopted on May 25, 1995: RF-3, RC-2.11 and RT-8.31, and the RTP as implemented and amended by PSRC Resolution No. A-96-02?

4. Does the City's Plan fail to comply with RCW 36.70A.070 because it is internally inconsistent, including inconsistencies between CP 1-03-07, (including all CPs listed in these legal issues) and CP 1-04-05(1); also, is there an inconsistency between CP 3-02-04, and CP 5-04-04 (as well as all of the CPs listed in these legal issues)?

5. Does the City's Plan fail to comply with RCW 36.70A.020(6) because it contains policies, including CP 6-02-04, CP 8-03-03 and 8-04-03(1)(c), that deprive the Port of Seattle of its property rights without consideration of whether such policies protect property owners from arbitrary and discriminatory actions?

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> office of financial management may at any time add facilities to the list. No local comprehensive plan or development regulation may preclude the siting of essential public facilities. (Emphasis added.)[7]

There are two duties imposed on the City under RCW 36.70A.200: a duty to adopt in its Plan a process to site essential public facilities (EPFs), and a duty not to preclude their siting in its Plan or implementing development regulations. In this case, the question is whether Des Moines' failure to amend its Plan in recognition of the third runway at STIA, and thereby retaining certain Plan policies, precludes the siting of an EPF. But first, the Board must determine whether the expansion of an existing EPF is protected by RCW 36.70A.200.

Airports are specifically identified as EPFs. There is no credible argument that an existing EPF, such as STIA, is not an EPF, even though it predates the GMA. In addition, there is no credible argument that expansion of an existing EPF is not within the scope of RCW 36.70A.200. Further, there is nothing in the language of .200 to justify distinguishing between expansion of an existing EPF and a new EPF. Indeed, the present dispute is evidence that it is no less difficult to site the expansion of an existing EPF than it is to site a new EPF. Nor does the language of .200 suggest that a city's comprehensive plan is prohibited only from precluding EPFs within its jurisdiction. Likewise, .200 does not support the notion of precluding necessary support activities for the expansion of the EPF that occur within the city's jurisdiction. **The Board holds that the expansion of an existing EPF, including necessary support activities associated with that expansion, is protected by RCW 36.70A.200.**

The Port does not challenge a specific City action; instead, the Port charges that the City's failure to act violates the GMA. Specifically, the Port asserts that the City failed to amend its Plan in response to the PSRC's regional decision to expand STIA by adding a third runway.

Where a petitioner has proposed a comprehensive plan amendment to a local government and that local government declines to adopt the proposed amendment, the Board has found in favor of the local government. *See Cole v. Pierce County [Cole]*, CPSGMHB Case No. 96-3-0009, Final Decision and Order (1996). Cole argued, among other things, that his proposed amendment would "correct" a GMA defect in Pierce County's plan. *Id.* at 9. The Board rejected Cole's appeal, holding "**that the actions challenged in Cole's petition were not taken in response to a GMA duty to act by a certain deadline, or in response to any other duty imposed by the act . . . .**" *Id.*, at 10-11.

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[7] In *Children's Alliance v. City of Bellevue [Children's Alliance]*, the Board noted that it would regard the last sentence of RCW 36.70A.200(2) as a third subsection of .200. CPSGMHB Case No. 95-3-0011, Final Decision and Order (July 25, 1995), at 17.

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The present case is unlike *Cole*. Here, there is a GMA duty -- the duty not to preclude EPFs. RCW 36.70A.200(2). Although the City's Plan may not have conflicted with .200(2) when the Plan was originally adopted, the subsequent regional decision to expand an EPF, STIA, requires the City to re-evaluate its Plan to determine if it still complies with .200(2).

When Des Moines adopted its Plan in December 1995, there was no regional decision to expand STIA. However, the PSRC passed Resolution A-96-02, amending the MTP to include a third runway at STIA, on July 11, 1996. The City's duty to comply with the GMA in the context of the decision to expand an essential public facility (STIA) was triggered when the PSRC passed Resolution A-96-02. RCW 36.70A.200 imposes a duty requiring the City's Plan not to preclude essential public facilities, even when the decision regarding the essential public facility was made subsequent to the initial adoption of the Plan.

In *Children's Alliance*, the Board defined "preclude" as "render impossible or impracticable." *Children's Alliance*, at 19. "Impracticable" is defined as "not practicable: incapable of being performed or accomplished by the means employed or at command." *Merriam Webster's Collegiate Dictionary* 584 (10th ed. 1996). In other words, the City's Plan need not make it impossible to build the third runway in order to violate the GMA. If the City's Plan has the effect of making the expansion incapable of being accomplished by the means at the Port's command, then the Plan is in violation of the GMA.

The Board holds that a local government plan may not, through policies or strategy directives, effectively preclude the siting or expansion of an EPF, including its necessary support activities.

The City of Des Moines Comprehensive Plan contains a number of policies that the Port alleges are not in compliance with RCW 36.70A.200. These include policies 1-04-05, 5-02-08, 5-03-02, 5-04-04, 8-03-01(2), 8-04-01(1), 8-04-01(1)(c), 8-03-04(4), 4-04-01, 6-03-23, 6-04-09(4), 6-04-09(5), 8-03-01(3), 8-03-02(3), 8-04-01(1)(b) and 8-04-02(1). *See* Port's Prehearing Memorandum, at p. 4 and 37 - 40.

The City's Plan contains four categories of policies: Goals, Findings, Policies, and Strategies. The policies relevant here are:

> Finding 5-02-08: The siting, construction, and operation of public facilities and utilities has sometimes resulted in adverse impacts upon nearby properties and the natural environment. *The City currently accepts more than its fair share of adverse impacts associated with air transportation; to allow any increase in those impacts would require that Des Moines accept an even greater disproportionate share of those impacts.* (Emphasis added.)
>
> Finding 7-02-08: Much of Des Moines is impacted by aircraft noise related to Sea-Tac International Airport (STIA). *Virtually all of the Des Moines Planning*

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Area is within the 65 L_{dn} noise contour, and large portions of the Planning Area are within the 70 or 75 L_{dn} noise contour (STIA Existing Noise Exposure Map, 1991).... (Emphasis added.)

Policy 5-03-02: *When not against the City's interests*, Des Moines should promote cooperative working relationships between Des Moines and the other municipalities, agencies and districts identified in this Comprehensive Plan. (Emphasis added.)

Policy 8-03-01: Residential Neighborhood Preservation: . . . (2) Develop plans, land use regulations and review procedures to preserve and protect designated residential communities from inconsistent and incompatible land uses which threaten to undermine their stability and their residential character. (chapter 18.02 DMMC, chapter 18.38 DMMC)

Strategy 1-04-05: Intergovernmental Cooperation/Annexation: (1) . . . *When decisions are made by state, county, regional agencies*, tribes, or special purpose districts, *and those decisions are clearly in the best interests of the state, county or region, take appropriate measures to implement those decisions* within Des Moines and the Planning Area, *unless the decisions unfairly or negatively affect the residents or businesses in the Des Moines area.* (Emphasis added.)

Strategy 5-04-04: . . . Adopt development regulations as needed that provide a process for the identification and possible siting of essential public facilities. Cooperatively work with surrounding municipalities and King County during the siting and development of facilities of regional significance. *Oppose new facilities associated with Sea-Tac International Airport that increase adverse impacts to the City of Des Moines.* (Emphasis added.)

Strategy 6-04-09: In order to protect and preserve park and recreation areas Des Moines should: . . . (4) *Oppose proposed land use and transportation facilities that would subject park and recreation areas of local significance* (except golf courses, ball fields, outdoor spectator sports areas, amusement areas, riding stables, nature trails and wildlife refuges) *to exterior noise exposure levels which exceed 55 L_{dn} or the L_{dn} level existing as of the effective date of this Element, whichever is greater. A reduction in the exterior noise level (greater than 55 dBA) that existed as of April 20, 1995 shall become the new maximum exterior noise level.* (chapter 18.38 DMMC). (Emphasis added.)

Strategy 6-04-09: In order to protect and preserve park and recreation areas Des Moines should: . . . (5) *Oppose proposed land use and transportation facilities that would subject locally significant golf courses, ball fields, outdoor spectator sports areas, amusement areas, riding stables, nature trails, and wildlife refuges to exterior noise exposure levels which exceed an L_{dn} of 60 dBA, or the L_{dn} level existing as of the effective date of this Element, whichever is greater. A reduction*

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in the exterior noise level (greater than 60 dBA) that existed as of April 20, 1995 shall become the new maximum exterior noise level. (chapter 18.38 DMMC). (Emphasis added.)

Strategy 8-04-01: Residential Neighborhood Protection: (1) Protect and preserve residential neighborhoods by: . . . (b) *Opposing land use changes and infrastructure improvements that would subject residential neighborhoods to environmental noise exposure levels which exceed an L_{dn} of 55 dBA, or existing levels as of April 20, 1995, whichever is greater.* (chapter 18.38 DMMC). (Emphasis added.)

Strategy 8-04-01: Residential Neighborhood Protection: (1) Protect and preserve residential neighborhoods by: . . . (c) *Adopting weight limits and maximum noise levels for commercial trucks on surface streets in residential neighborhoods to ensure that non-routine commercial traffic does not damage residential roads, or subject the neighborhood to unusual congestion and noisy street traffic.* (chapter 7.16 DMMC, chapter 10.28 DMMC, chapter 12.04 DMMC). (Emphasis added.)

Strategy 8-04-02: Historic Preservation: (1) Protect and preserve historic properties and archeological sites by: . . . (d) *Opposing land use and transportation proposals that would subject historic and archeological sites of local significance to environmental noise exposure levels of L_{dn} of 65 dBA, or existing levels as of April 20, 1995, whichever is higher. A reduction in the environmental noise level (greater than 65 L_{dn}) that existed as of April 20, 1995 should become the new maximum environmental level.* (Emphasis added.)

According to Plan Finding 5-02-08, the City has "accepted more than its fair share of adverse impacts" associated with STIA. Any increase in these adverse impacts would require the City to "accept an even greater disproportionate share." This Finding or "fact" assists the Board in interpreting Plan Strategies 1-04-05(1), 5-04-04, and 8-04-01(1)(c).

Strategy 1-04-05(1) directs the City to implement regional decisions "clearly in the best interests of the state, county, or region . . . unless the decisions unfairly or negatively affect" the City. There is no question that the expansion of STIA could have some adverse impacts on the City. Nonetheless, these impacts could be minimized or mitigated. Since Finding 5-02-08 makes it clear that expansion of STIA will unfairly or negatively affect the City, Strategy 1-04-05(1) can only be read to mean that the City will not take measures to implement the regional decision to expand STIA.

Further, Strategy 5-04-04 states the City's intent to oppose new facilities at STIA "that increase adverse impacts on the City." Reading this Strategy together with Finding 5-02-08 leads to the conclusion that any action causing adverse impact on the City, however slight, will result in the City's opposition. It is significant that nothing in the challenged policies cited above talks about mitigation; the language used is "oppose." In its brief, the City stated "[T]he City's opposition to the third runway is conditioned on unmitigated

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impacts." City's Response Brief, at 46. However, the City cites to no Plan policy to support its argument, nor could the Board find support for this assertion in the City's Plan. The Plan expresses the City's clear intent to exercise its municipal authority to prevent expansion of STIA, not to mitigate its impacts.[8]

Finally, Finding 5-02-08 provides direction to the City in carrying out Strategy 8-04-01(1)(c), which directs the City to limit weight and noise levels of commercial trucks through residential neighborhoods. This Strategy cites to three chapters of the City's municipal code, one of which (chapter 12.04 DMMC) the City asserts requires trucks hauling fill for STIA expansion to obtain City permits. Ex. 148. Since the GMA requires the City to exercise the permit discretion of chapter 12.04 DMMC consistent with the Strategies and Findings of its Plan, the clear effect of the direction of these Plan policies will be to prevent, not mitigate, expansion of STIA.

Strategy 5-04-04 directs the City to "[o]ppose new facilities associated with Sea-Tac International Airport that increase adverse impacts to the City of Des Moines." Since expansion of STIA will have adverse impacts to the City, this Strategy is particularly instructive in reading Strategies 1-04-05(1), 8-04-01(1)(b), 8-04-01(1)(c), and 8-04-02(1)(d). Reading these Plan provisions as a whole, the City will oppose expansion of STIA because it "unfairly or negatively affect[s]" the City (1-04-05(1)), and because it would increase environmental noise exposure levels (8-04-01(1)(b) and (c), and 8-04-02(1)(d)). These Plan provisions do not allow necessary support activities, such as fill dirt hauling, that are necessary for expansion of STIA.

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[8] In a earlier EPF case dealing with a transportation facility, the Board observed that RCW 36.70A.200 does not prevent a local government from identifying in its plan appropriate and reasonable provisions for mitigation. In *Hapsmith v. City of Auburn [Hapsmith]*, CPSGMHB Case No. 95-3-0075c, Final Decision and Order (May 10, 1996), the Board stated:

> Regardless of whether the MTP or the Preliminary WSDOT Plan explicitly names the Auburn Railyard as a site for an intermodal facility serving the Ports of Tacoma and Seattle and much of Western Washington, all the evidence before the Board indicates that the City must plan for this eventuality.
>
> At the same time, the City has made a number of credible points about the serious localized consequences of siting an essential public facility such as BNSF has described for its property. The Board has also concluded that the Special Planning Area designation for the Railyard is an innovative comprehensive plan technique authorized by RCW 36.70A.090 to enable the City to articulate its legitimate site and off-site issues in the form of a more detailed localized planning document. The planning process described by the City in its briefing and in the Plan itself (Plan, at 14-16 to 14-18) provides the opportunity for the concerned state, regional and local agencies to craft appropriate site design standards and identify the necessary infrastructure improvements and mitigation. Such a planning process provides a reasonable framework for the City to articulate its legitimate concerns, and for other public agencies and the Railroad to respect and creatively respond to those concerns. *Hapsmith*, at 33.

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The City's Plan also includes a Finding that indirectly affects expansion of STIA. According to Plan Finding 7-02-08, virtually all of the City is within the 65 L_{dn} noise contour. This Finding illuminates Strategies 6-04-09(4), 6-04-09(5), 8-04-01(1)(b), and 8-04-02(1). All of these Strategies direct the City to oppose land use changes and transportation facilities or infrastructure improvements that will result in noise of 55, 60, or 65 L_{dn}, or "existing levels as of April 20, 1995."[9] Most of these Strategies provide that, if the environmental noise level declines, the new, lower level will become the maximum allowable. The Board notes that the ambient noise levels, as found by the City in 7-02-08, already exceed the numerical limits of these Strategies; therefore, the practical effect of these Strategies is to make the maximum noise level that level existing as of April 20, 1995. Although the City may certainly impose reasonable mitigating conditions on EPFs, or necessary support activities if the EPF itself is not within the City's jurisdiction, these particular Plan provisions direct the City to prohibit any increase in environmental noise. The obvious effect of these Plan provisions will be to prevent the excavation and fill dirt hauling support activities associated with expansion of STIA.

The GMA made comprehensive plans binding documents. *See* RCW 36.70A.040; see also, *Snoqualmie v. King County*, CPSGPHB Case No. 92-3-0004, Final Decision and Order (March 1, 1993), at 15. The City is bound to implement the policy provisions it includes in its Plan. The Plan Findings, Policies, and Strategies identified by the Port require the City to oppose activities related to the expansion of STIA. Although the City's jurisdiction is limited to its city limits, clearly the Plan directs the City to oppose those necessary support activities for the expansion of STIA within its limits. *See* City's Response Brief, at 16. The expansion of STIA requires a large volume of fill dirt. The borrow site for the project is within Des Moines and trucks hauling this fill dirt must travel within the City limits. The City's Plan, particularly Strategies 1-04-05 and 5-04-04, obligates the City to oppose necessary support activities, such as the excavation and hauling operations. **The Board holds that the City's Plan does not comply with RCW 36.70A.200 and will preclude expansion of STIA.**

CONCLUSION NO. 2

The City's Plan does not comply with RCW 36.70A.200 because it precludes the expansion of STIA, an essential public facility.

INVALIDITY

The Board specifically finds that Plan policies 1-04-05 and 5-04-04, by precluding the siting of an essential public facility, substantially interferes with the fulfillment of RCW 36.70A.020(3), which provides:

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[9] The record does not reveal the existing noise levels on April 20, 1995.

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(3) Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans. RCW 36.70A.020(3).

These Plan policies substantially interfere with the fulfillment of RCW 36.70A.020(3) because they preclude the expansion of STIA, a regional transportation priority, and an essential public facility.

VI. ORDER

Having reviewed and considered the above-referenced documents, having considered the arguments of the parties, and having deliberated on the matter, the Board finds that the Des Moines Comprehensive Plan is not in compliance with RCW 36.70A.200. Because policies 1-04-05 and 5-04-04 purport to preclude the expansion of an essential public facility, namely, Seattle Tacoma International Airport, and such preclusion would substantially interfere with the fulfillment of RCW 36.70A.020(3), these policies are invalid.

The Plan is remanded to the City and it is instructed to bring the Plan into compliance with RCW 36.70A.200 by no later than Monday, December 15, 1997, in order to achieve compliance with this Order and the GMA. In amending the plan to address the invalidated policies, the City will, pursuant to the Act, be required to maintain internal plan consistency. Thus, other related policies may need to be amended.

The City is further instructed to file with the Board, and provide a copy to both the Port and Amicus PSRC, a Statement of Actions Taken to Comply, by no later than 4:30 p.m. on Monday, December 29, 1997. The Board will then promptly schedule a compliance hearing.

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So ORDERED this 13th day of August, 1997.

CENTRAL PUGET SOUND GROWTH MANAGEMENT HEARINGS BOARD

Edward G. McGuire, AICP
Board Member

Joseph W. Tovar, AICP
Board Member
(Board Member Tovar filed a concurring opinion)

Chris Smith Towne
Board Member

Note: This Final Decision and Order constitutes a final order as specified by RCW 36.70A.300 unless a party files a Petition for Reconsideration pursuant to WAC 242-02-830.

Board Member Tovar's Concurring Opinion

I concur with the majority in disposing of this case in resolving Legal Issue 2 - finding that the City's Plan fails to comply with RCW 36.70A.200. However, unlike my colleagues, I would also have reached Legal Issue 3 - the allegation that Des Moines' Plan fails to comply with RCW 36.70A.210 because the challenged City policies are inconsistent with countywide planning policies and multicounty planning policies. Notwithstanding principles of judicial economy, I believe that the controversy at the core of Legal Issue 3 is a matter of significant public interest that can and should be reached. In my judgment, the same policies that the Board finds violate RCW 36.70A.200 also fail to comply with RCW 36.70A.210 because they are inconsistent, to varying degrees, with the King County Comprehensive Plan and the King County County-wide Planning Policies, as well as the multicounty planning policies for the Central Puget Sound Region.

Many allegations were made by the Port regarding the inconsistencies between the City policies and various policies from these regional documents. Des Moines variously argued that there was no inconsistency between city and regional policies (City Response Brief, at 21-42), that various regional policy documents were unlawfully enacted and thus have no effect (City Response Brief, at 9-12), and that, in any case, there is no directive relationship between regional policies and a city plan (City Response Brief, at 49-57).

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At the hearing on the merits, the City summarized its position by stating that, rather than a "coercive" hierarchy, the GMA "enshrine[s] the political ethic and the legal history of our region in saying that in this part of the country we do operate through collaboration, cooperation and consensus building." Transcript of Hearing on the Merits, July 9, 1997, at 77. Des Moines insists that there is no hierarchy of policy authorized or required by the GMA and that there is no support for the proposition that a city plan must yield to a county-wide planning policy, let alone a multicounty planning policy. City's Response Brief, at 49-56. To the extent that the Port relies on Board holdings to this effect in past cases, such as *Snoqualmie*, *Edmonds* and *Aagaard*,[10] the City argues that these readings

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[10]In its first CPP case, the Board examined the purpose, nature and effect of CPPs. In *Snoqualmie v. King County [Snoqualmie]*, CPSGMHB Case No. 92-3-0004, Final Decision and Order (March 1, 1993), the Board concluded:

> The requirement that plans be coordinated suggests the need to jointly decide upon procedural matters such as schedules, formats, common data bases and methods for communication. However, RCW 36.70A.100 requires not just coordination but also consistency. To achieve the consistency requirement of the GMA requires more than simply a coordination of the mechanics of process, but rather a substantive and directive relationship between the policies in the CPPs and the policies in the comprehensive plans of cities and counties. Therefore, the Board concludes that the *effect* of the CPPs is both procedural and substantive.
>
> Further, the Board observes that the CPPs provide substantive direction not to development regulations, but rather to the comprehensive plans of cities and counties. Thus, the consistency required by RCW 36.70A.100 and RCW 36.70A.210 is an *external* consistency between comprehensive plans. The CPPs do NOT speak directly to the implementing land use regulations of cities and counties. Thus, the Board concludes that the requirement for consistency in RCW 36.70A.100 and .210 does not require an alteration to the land use powers of cities. *Snoqualmie*, at 15-16. Emphasis added.

The Board clarified the new GMA-created reality in a 1993 case, *City of Edmonds and City of Lynnwood v. Snohomish County [Edmonds]*, CPSGMHB Case No. 93-3-0005, Final Decision and Order (October 9, 1993):

> To conclude that each of those local governments retains the full range of its pre-GMA land use prerogatives would perpetuate balkanized self-interest and thwart the Legislature's clear direction to take decisive regional action to limit sprawl, site needed facilities, meet pressing human needs, protect the environment and sustain economic development. *See* RCW 36.70A.010 and RCW 36.70A.020.
>
> The broadened perspective that permeates the Act means that local governments, particularly cities, must include a regional perspective in the making of their plans, indeed, in the definition of their responsibilities to plan for the future. The "land use powers of cities" cannot be construed in such a way as to allow a city to deny its regional context or shirk its regional responsibilities. *Edmonds*, at 27-28. Emphasis added.

In 1995, the Board summarized the relationship among the goals of the GMA, policies in regional policy documents, and city plans. In *Aagaard, et al., v. City of Bothell [Aagaard]*, CPSGMHB Case No. 94-3-0011, Final Decision and Order (July 21, 1995), the Board stated:

> Thus, the decision-making regime under GMA is a cascading hierarchy of substantive and directive policy, flowing first from the planning goals to the policy documents of counties and cities (such as CPPs, UGAs and comprehensive plans), then between certain policy documents

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of the Act have been "called into question" by *Postema v. Snohomish County [Postema]* 83 Wn. App. 574 (September 9, 1996), *review denied*, 131 Wn.2d 1019 (April 4, 1997). City Response Brief, at 56-57.

The City's arguments describe a universe in which each city is, in effect, sovereign because each city has the authority to accept only those regional policy decisions that it deems to be "fair" and "not against the interests" of that city. In such a city-centered universe, a city plan is not obligated to yield to a regional[11] decision adopted pursuant to RCW 36.70A.210, regardless of whether or not such a regional policy decision is unambiguous, explicitly directive, and lawfully adopted. While such a city-centered universe may or may not have ever existed in the past, or may exist in a county with only a single incorporated city[12], it certainly does not exist now in the Central Puget Sound Region. The great number of local governments[13] and population density[14] of this metropolitan region, particularly in view of the tremendous population and employment growth currently underway, make the notion of absolute city "sovereignty" archaic. If commonly held and acted upon by the four counties and seventy-eight cities in this region, such a notion would perpetuate the type of "uncoordinated and unplanned growth" that the GMA identified as a "threat to the environment [and] sustainable economic development" of this state. RCW 36.70A.010.

(such as from CPPs to IUGAs and from CPPs and IUGAs to comprehensive plans), and finally from comprehensive plans to development regulations, capital budget decisions and other activities of cities and counties. *Aagaard*, at 6. Emphasis added.

[11] "Regional" in the context of the GMA means either a county or two or more contiguous counties. RCW 36.70A.210(1) and (7).

[12] In the State of Washington, there are a number of counties planning under the GMA that have only one city: Ferry, Garfield, Jefferson, Mason and San Juan. None of these counties is in the Central Puget Sound Region. Washington State Data Book, 1995.

[13] There are at present four counties and 78 cities in the Central Puget Sound region. Washington State Department of Community, Trade and Economic Development, "*Growth Management - It's Beginning to Take Shape*," Olympia, WA. January 1997, at 9. This does not include the cities of Maple Valley and Covington, where incorporation has been approved by the voters, but the effective date of the incorporation has not yet arrived.

[14] The population density of the Central Puget Sound region is 12 times that of the balance of the state. In a 1995 case, the Board took official notice of the *July 6, 1995, Correction Release of the Washington State Office of Financial Management's April 1, 1995, Populations of Cities, Towns and Counties used for the Allocation of State Revenues*. According to these counts, the four counties of the Central Puget Sound Region then contained 3,020,000 people (approximately 56 percent of the state's population) in 6,287 square miles (approximately 9.4 percent of the total area of the state) for a regional population density of 480 people per square mile. The balance of the population (2,409,900 people) on the remaining land area of the state (60,295 square miles) then equaled a population density of 40 people per square mile. *Bremerton v. Kitsap County*, CPSGMHB Case No. 95-3-0039, Final Decision and Order, October 9, 1995, at 29, fn. 12.

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The legislature is presumed to be aware of the *Snoqualmie*, *Edmonds*, and *Aagaard* decisions. While the legislature has amended the GMA many times and has had the opportunity to provide legislative correction to the interpretations that this Board has given to RCW 36.70A.210 in these cases, it is significant that the legislature has never done so. In fact, the legislature has made no substantive revisions to RCW 36.70A.210 since it created that section in 1991.[15] Therefore, I can only conclude that the legislature agrees with the Board's interpretations of the Act in the above cited cases - that RCW 36.70A.100 requires coordination and consistency between and among county and city plans, that CPPs adopted pursuant to RCW 36.70A.210 provides the mechanism to achieve that coordination and consistency, and that in order to do so, CPPs must have a substantive and directive effect on the comprehensive plans of cities.[16]

Even in the most recent session, the legislature relied upon the substantive and directive authority of CPPs to carry out the important task of monitoring land use within the urban growth areas for the purposes of determining what, if any, actions are necessary to assure that adequate land supply remains available to accommodate expected population growth. While Des Moines called the Board's attention to a portion of Sec. 25 of ESB 6094 in support of its "collaborate and coordinate - but don't coerce" theory (City's Response Brief, at 15-16), a closer inspection of the entirety of this section leads to the opposite conclusion. It is true that this section directs cities and counties to work together in a cooperative fashion. However, this simply mirrors the language of RCW 36.70A.210 by stating that a "county shall adopt, in consultation with its cities, county-wide planning policies to establish a review and evaluation program." ESB 6094, Sec. 25 (1). The emphasized language unmistakably says that, while the county has a GMA duty to consult with the cities, it still has the sole authority to adopt these new CPPs.

While recognizing that "consultation" is essential, the legislature requires more than simply process and dialogue without ultimate closure. The final subparagraph of Section 25 states that, after a cooperative consultative process including the cities, the county "if necessary, [shall] adopt amendments to county-wide planning policies to increase consistency." Section 25 (4). ESB 6094. The directiveness of these action verbs (shall adopt ... increase consistency) reveals legislative intent that cities and counties are to do more than simply engage in an idle process. Rather, this statutory language provides direction to local governments to achieve results.

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[15] RCW 36.70A.210 was created in 1991. ReSHB 1025 § 2. This section has never been substantively amended by the legislature. Deadlines for adoption of CPPs were changed by amendments in 1993 and the name of the growth planning hearings board was changed to the growth management hearings board in 1994. [1994 c 249 § 28; 1993 sp.s. c 6 § 4; 1991 sp.s. c 32 § 2.]

[16] The Board has recognized that the more abstract CPPs are, the more room will be left for interpretation. *See Snoqualmie*, at 13. In addition, there are limitations on the substantive effect of CPPs. *Snoqualmie*, at 18-19. *See also, Edmonds*, at 29-31.

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Inevitably, at some point in these iterative and interactive dialogues, a decision needs to be rendered by the county and, when necessary, the county needs to take action "to increase consistency." Section 25 of ESB 6094 describes a process that recognizes the county's role as a regional government responsible for the long-term viability of the UGA. For a county to discharge this duty requires the CPPs to constitute more than the voluntary and advisory process that Des Moines suggests in its arguments. This conclusion is consistent with prior Board holdings regarding the duty of city comprehensive plans to be consistent with CPPs. Unless and until either the legislature or the courts explicitly address the matter of the relationship between lawfully adopted, unambiguous CPPs and city plans and provide explicit direction to the contrary, the Board's holdings to date on this subject retain their vitality.[17]

In conclusion, I agree with the City that "collaboration, cooperation and consensus building" are good things and that they are part of the "history" of our region. However, these principles are not "enshrined" in the GMA. The City has no explicit GMA duty to "collaborate" or "build consensus;" however, it does have an explicit GMA duty to achieve "coordination and consistency" with the plans of others as to regional issues. RCW 36.70A.100. The fatal flaw in Des Moines' reading of the Act is that it fails to acknowledge and meet this most fundamental and important GMA duty- *consistency with regional policies that address regional issues.*

The regional policies adopted pursuant to RCW 36.70A.210 provide the GMA's mechanism to achieve this consistency. Absent an effective mechanism to adopt and enforce regional policies, whether those be the location or capacity of UGAs, allocation of a fair share of various types of housing, siting of essential public facilities, or location of regional transportation improvements, the Central Puget Sound region would continue to suffer from balkanized decision-making and unmet regional needs. In short, this region would be captive to the inefficient and uncoordinated land use decision-making of Des Moines' imagined past - a regime that it mistakenly believes the GMA now enshrines. After a review of the record and the argument in this case, I am left with the firm conviction that the City has erroneously interpreted the Act. Des Moines has failed to acknowledge its duty under RCW 36.70A.100 and RCW 36.70A.210 to achieve consistency with regional policy documents, and its Plan breaches that duty.

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[17] As to the City's arguments regarding the *Postema* decision, I note that the court addressed only one issue - whether RCW 36.70A.210 creates a regional government that violates the principle of one person, one vote." 83 Wn. App., at 580. To decide this issue, the court looked at the scope of powers of "an informal intergovernmental planning group" which was tasked by Snohomish County to draft CPPs. *Id.*, at 578. The court recognized that the group's draft policies were not binding and that RCW 36.70A.210 did not vest this group with governmental powers. *Id.*, at 582-583. The court expressly declined to decide whether RCW 36.70A.210 creates a hierarchy of authority giving CPPs the power to "trump" city policies, because there was no actual controversy on that issue in *Postema*. Id., at 584.

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INTERLOCAL AGREEMENT

between

PORT OF SEATTLE

and

CITY OF SEATAC

Date: September 4, 1997

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EXHIBIT B

SWM AGREEMENT

Introduction

Both the City and Port have surface water management programs and facilities. The following agreement set forth in this Exhibit B implements the parties' desire to coordinate and have mutually compatible SWM programs.

The parties acknowledge that the purpose of City SWM rates and charges is to provide a method for payment of all or any part of the cost and expense of surface and storm water management services, or to pay or secure the payment of all or any portion of any issue of general obligation or revenue bonds or other debt issued for such services. These rates and charges are necessary to promote the public health, safety and welfare by minimizing uncontrolled surface and storm water, erosion and water pollution; to preserve and utilize the many values of the City's natural drainage system, including water quality, open space, fish and wildlife habitat, recreation, education, urban separation and drainage facilities; and to provide for the comprehensive management and administration of surface and storm water.

The parties agree that the update of the SWM fees described in Item 1 below is not intended to provide the basis for modifying or changing the policy underlying the City's SWM program. The parties agree that any adjustments to fees or charges paid by the Port will occur if:

(1) any of the conditions contained in KCC 9.08.080 are present;

(2) any of the conditions contained in RCW 35.67.020 are present; or

(3) the City may grant a credit pursuant to RCW 90.03.510 if the Port has storm water facilities that mitigate or lessen the impact of stormwater.

1. **UPDATED SWM FEES**

The City has indicated to the Port that it will conduct a study of its SWM fees to (1) study whether the fees are accurately and fairly applied to all property in the City, including the Port's property, and (2) study the feasibility of creating a special rate classification for the Port property looking at the factors set forth in RCW 35.67.020. The Port has in turn indicated to the City that it has several particular issues related to SWM fees applicable to its properties that it would like the City to address. If the parties are unable to produce the study in sufficient time for the Port to evaluate the data for use in a fee appeal, the Port plans to file a fee appeal to preserve its rights to the 1995 fee year and the parties agree to stay the hearing until the earlier of the following: (a) completion of the study; (b) September 30, 1998; or (c) the City's failure to adopt a budget appropriation in its 1998 City budget for the SWM study. The Port shall be considered to be acting in good faith if it independently pursues information regarding the data for its fee appeal.

Accordingly, as part of the City's study, the parties shall mutually select and retain a consultant, whose scope of work will include, among other things as agreed, tasks to support the following:

ACTION	PARTY
• Determine acreage and percent impervious surface of Port property draining into City's SWM system.	See below**
• Determine acreage, land use, and quantity of City runoff draining into the following facilities: Miller Creek Regional Detention Facility (which includes Little Lake Reba), NW Ponds and Tyee Pond.	See below**
• Determine Port's costs of O&M for the following detention facilities: Miller Creek Regional Detention Facility (which includes Little Lake Reba), NW Ponds and Tyee Pond.	Port
• Joint meeting(s) to discuss results	Port and City
• Implement fee updates (and reductions/rebates for Port if appropriate)	City

** The Port may proceed with the consultant HDR Engineering at its expense under the scope of work previously provided to the City on March 7, 1997 (copy attached as Attachment B-5). The City may elect to request HDR to perform some or all of the City's full SWM fee study. Alternatively, the City may select a different consultant for the full SWM fee study. The Port shall pay all of the cost of HDR for the March 7, 1997 scope of work (Attachment B-5). The City shall pay all of the costs of the City's full SWM fee study, and the Port shall provide relevant portions of the HDR work that relates to the City's SWM fee study as it affects Port property at no additional cost to the City.

Using the information obtained above along with other relevant information, the Port and City shall review and jointly discuss whether rate adjustments are appropriate and whether any fee reduction or rebate should be owed the Port for City drainage detained and treated by the Port facilities. The City shall implement a fee update based on mutually agreed adjustments for the Port.

SCHEDULE: The Port may proceed with the scope as described above. The City's full SWM fee study shall be completed no later than September 30, 1998, unless the Port and City mutually agree to extend the deadline.

2. WATER QUALITY REVIEW

The Port has provided the City with existing data on sediment contamination and water quality in Port, City and regional surface water management facilities, including its annual reports and monitoring data from storm drains, and the Port shall provide the Receiving Environment Monitoring Study which the Port expects to complete in June 1997. Although the City is not required to obtain a federal NPDES municipal permit, it shall, in consultation with the Port, review data provided by the Port and otherwise available, and consider adopting KCC Chapter 9.12 and new BMP's in addition to those now implemented by the City under its SWM program. A list of the BMP's and water quality measures now undertaken by the Port and City are included as Attachment B-1 and B-2, respectively. The City shall exercise reasonable discretion in determining the timing and level of review and consideration of new BMP's.

SCHEDULE: The review shall be completed by December 31, 1997.

3. COORDINATED COMPREHENSIVE DRAINAGE PLANS AND BASIN PLANNING

3.1 Comprehensive Drainage Plans. The Port and City acknowledge that each party is undertaking a Comprehensive Drainage Plan, and that they will coordinate their respective plans and exchange information to the fullest extent reasonably possible to achieve consistent final plans.

3.2 Des Moines Creek Basin. The Port and City shall complete and implement appropriate measures from the on-going Des Moines Creek Basin Interlocal Agreement with the City of Des Moines and King County. Attachment B-3 contains information provided by the Port regarding design of the NW Ponds and Tyee Pond. Since the original design of the Tyee Pond assumed substantially more acres of Port impervious surface drained into the Tyee Pond than actually now discharge (estimated at over 100 acres discharging into the Port's IWS system rather than into the Tyee Pond), the City does not object to the Port's discharge of surface water into this facility without additional on-site detention. The Port shall confirm to the City that none of the assumed acreage has in fact discharged into the Tyee Pond since the original design. The Port shall hold the City harmless from any claims by any other jurisdiction or person relating to the Port's additional discharge to the Tyee Pond. The NW Ponds were not designed as regional detention facilities, although surface water from the City does and shall continue to flow through the NW Ponds. If additional capacity is built for the NW Ponds, the Port and City shall evaluate the sources of surface water intended to be received.

3.3 Miller Creek Basin. Attachment B-3 contains information provided by the Port regarding design of the Miller Creek Regional Detention Facility. Since the original design assumed 27 acres of Port impervious surface drained into the Miller Creek Regional Detention Facility that in fact discharges into the Port's IWS system, the City does not object to the Port's discharge of surface water from up to 27 acres of impervious Port surfaces into this facility without additional on-site detention. The Port shall confirm to the City that none of the 27 acres has in fact discharged into the Miller Creek Detention Facility since the original design. The Port shall notify the City as any portion of that 27-acre credit is utilized in the future.
The Port shall hold the City harmless from any claims by any other jurisdiction or person relating to the Port's additional discharge from 27 acres. Except for the Port's discharge from the 27 acres, the Port shall provide on-site detention prior to surface water reaching the Miller Creek Regional Detention Facility in accordance with the "SWM Threshold" described in ¶ 5.3 below unless the Port and City amend this Agreement in writing.

The Port and City shall seek participation by the City of Burien, the City of Normandy Park and King County to do a Miller Creek Basin Plan to consider the following:

- Allocation of flows for future development for the jurisdictions within the basin.
- Whether additional capacity should be developed in the Miller Creek Regional Detention Facility or other facilities.
- The level of protection needed to protect resources of Miller Creek.
- Stream flows, flood plain issues and groundwater hydrology and recharge.

The basin plan shall indicate the capital improvements or operational changes to be undertaken by the respective jurisdictions.

If not all of these other parties are willing to participate in the basin plan, then the Port and City shall determine an appropriate course of action. At a minimum, the Port and City shall review their respective contributions to Miller Creek drainage and potential measures to protect and enhance resources.

4. SWM DESIGN STANDARDS

The Port shall adopt, and the City has adopted, and both will follow, the standards and requirements for surface water management as contained in the King County Surface Water Design Manual and King County Code Chapters 9.04 and 9.08 as existing on the date of this Agreement, except (a) specific County permitting procedures (e.g. KCC 9.04.090), and (b) to the extent FAA or other federal requirements take precedence over local surface water requirements. See Attachment B-4. In certain circumstances, such as its NPDES Permit, the Port is required to follow Department of Ecology SWM standards.

If King County amends its surface water requirements and standards after the date of this agreement, then the Port and City shall meet to discuss adoption of the revised King County Standards. Those King County revised standards are presumed appropriate and should be adopted by the Port and City, unless adopting those revisions creates serious practical difficulties or incompatibilities with either party's existing drainage system (e.g. if the revisions would require retrofit or significant revision of the planned surface water systems of either).

5. COORDINATED PROJECT REVIEW/APPROVAL

The Port and City adopt a cooperative process for reviewing the SWM components of projects as set forth herein. Each party shall use the SWM standards set forth in ¶ 4 above.

5.1 Port Projects. The Port shall be responsible for the surface water design and requirements for projects on Port land, including implementation of the Port's Master Plan, that discharge directly into Port facilities, and no permit or approval from the City is required. Notwithstanding the preceding sentence, SWM Consultation shall be required if any of the flows will exceed the "SWM Threshold" defined in ¶ 5.3 below. The parties acknowledge the Miller Creek Regional Detention Facility, the Tyee Pond and portions of the NW Ponds are owned, operated and maintained by the Port for its own use and use by the City and other agencies. No SWM Consultation shall be required for any surface water from Port property that discharges into its Industrial Waste System, except SWM Consultation shall be required if the IWS discharge results in a diversion from one drainage sub-basin to another or would result in a significant reduction of stream flows that would have a likely impact on habitat.

5.2 City Projects. The City shall be responsible for the surface water design and requirements for projects on City land that discharge directly into City facilities, and no approval from the Port is required (including no approval to use the detention facilities located on Port property). Notwithstanding the preceding sentence, SWM consultation shall be required if any of the flows will exceed the "SWM Threshold" defined in ¶ 5.3 below. The parties acknowledge the Miller Creek Regional Detention Facility, the Tyee Pond and portions of the NW Ponds are owned, operated and maintained by the Port for its own use and use by the City and other agencies.

5.3 Definitions. "SWM Threshold" means runoff or impacts that exceed any of the following standards: (a) an increase in the runoff between the 100-year, 24-hour pre-development site conditions and the 100-year, 24-hour post-development site conditions, as calculated for each discharge location, of 0.5 cubic feet per second or greater, (b) diversion from one drainage sub-basin to another, (c) any variance from the SWM design manual, or (d) a diversion that would result in a significant reduction or would result in a significant reduction of stream flows that would have a likely impact on habitat. "SWM Consultation" means a meeting between the Port and City officials charged with implementing SWM design and that shall occur within 14 days after either party requests consultation. Each party shall consider in good faith the comments or revisions requested by the other party.

5.4 Dispute Resolution. If any disagreement or dispute arises regarding interpretation or application of the SWM standards, then the dispute shall be resolved through the Dispute Resolution procedures set forth in Section 11.1 of the Interlocal Agreement.

5.5 Notice; Information. The Port shall include drainage design information with each "Port Project Notice" submitted to the City as part of the Port's "Project Notice" under the Land Use Agreement (Exhibit A to this Agreement). As a method of providing notice to the Port of City-approved drainage design for projects, the City shall deliver to the Port a copy of any SEPA determination on a project that involves discharge of surface water into either Miller Creek Regional Detention Facility, the Tyee Pond or the NW Ponds (even if the SWM threshold is not exceeded). Upon a request by either party, the other party shall provide an explanation, data and documentation regarding the SWM design of any project approved by a party.

ATTACHMENTS:

Attachment B-1 -	List of City's Existing BMPs and Water Quality Measures
Attachment B-2 -	List of Port's Existing BMPs and Water Quality Measures
Attachment B-3 -	Port's Information on Detention Facilities
Attachment B-4 -	Federal Regulations Affecting SWM Standards
Attachment B-5 -	Scope of Work

ATTACHMENT B-1

LIST OF CITY'S EXISTING BMPS AND WATER QUALITY MEASURES

1. City adoption of King County Surface Water Design Manual with:

   - Drainage review required with specified permits;
   - Core requirements;
   - Special requirements.

2. Engineering Division of Public Works Department review of drainage, utility and site improvements on public and private development proposals.

3. On-going Public Works projects utilizing surface water management fund.

4. Surface water management operation and maintenance program.

[Copies of the above were provided by the City to the Port.]

ATTACHMENT B-2

LIST OF PORT'S EXISTING BMPS AND WATER QUALITY MEASURES

1. Stormwater Pollution Prevention Plan (SWPPP)
2. Operation and maintenance (O&M) plan for the drainage system.
3. Erosion/sedimentation control plan (ESC) for all development.
4. Monitoring of outfalls for both quantity and quality.
5. Procedures manual analysis by a state-certified laboratory.
6. Spill control containment and countermeasures plan (SPCCC).
7. Comprehensive drainage plan.

ATTACHMENT B-3

Memo PORT'S INFORMATION ON DETENTION FACILITIES

April 10, 1997

To: Traci Goodwin
From: Tom Hubbard
cc: Gina Marie Lindsey, Charles Blood, Diane Summerhays, Virginia Kirk, Bob Riley and Michael Cheyne

Re: Tom Goeltz's questions

Tom Goeltz has attached six questions to the interlocal agreement for the City of SeaTac jurisdictional law suit. The issues have been studied by our consultants, and we have preliminary answers to some of them.

1. What is the design and actual capacity for (the) Miller Creek Detention (Facility), the Northwest Ponds and the Tyee Pond?

The words 'actual capacity' implies peak flow attenuation performance. 'Physical storage volume' is a more appropriate term.

The existing physical storage volume for each of the three Port facilities are: Miller Creek Detention Facility 90 acre feet, Tyee Pond 23 acre feet, Northwest Ponds 46.5 acre feet. These numbers are preliminary. Port surveyors have checked the elevation of the control structure on the Miller Creek detention facility and found that it is within 0.2 feet of the original design.

2. What allocation of capacity or land use assumptions were made when those facilities were designed or built (e.g. existing land use plans)?

Specific capacity allocation by jurisdiction was not done for any of the detention facilities.

Land use assumptions, however, were documented by King County and by Parametrix, consultants for King County, in the Miller Creek Detention Facility design report. (A copy of this consultant report was provided to the City in February.) There is not a land use break-out per jurisdiction although this could be determined by our consultants.

The Northwest Ponds are not designed nor planned as regional detention facilities, therefore, design and land use assumptions do not exist.

A Tyee Detention Pond 'design report' has yet to be located and may not exist. Therefore, it may be impossible to definitively determine 'design' land use

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assumptions. However, the Des Moines Creek Watershed Management Plan (DMCWMP) (Herrera, 1989) indicates land use assumptions made for the initial model development. This model (KC - Tseng, 1989) was used to design the Tyee Detention Pond (Tyee Pond). The land use, as shown in DMCWMP, indicates that approximately 231 acres of Port property drains to the Tyee Pond. However, today through detailed basin reconnaissance performed for the Sea-Tac International Airport Storm Drainage System Comprehensive Plan, only 118 acres of Port property discharges to the Tyee Pond. This difference, although not definitive, is dramatic. This difference is believed to be caused by the area which is tributary to the Port's IWS system. The area within the hand drawn basin map, shown in the DMCWMP, that drains to the IWS is approximate 120 acres.

When these facilities were designed by King County, Port drainage that had been diverted to the Port's Industrial Waste System (IWS) was not factored into the designs. The Port has spent millions of dollars in capital and O&M expenditures to build and operate the IWS. The Port maintains it should use that the volume of runoff diverted from the storm drainage system to the IWS in lieu of on-site detention for new Port projects.

3. How much of that capacity is now used and by whom?

The question should be restated as "What were the original land use assumptions compared to today's actual land use?"

The difference between design land use assumptions and today's actual land use has not been determined for areas outside of Port property although this could be determined by our consultants.

The difference between design land use assumptions and today's actual land use has not been specifically determined for the Port's Miller Creek Detention Facility and the Tyee Pond. The information has been culled and pieced together through review of previous reports. For the Miller Creek facility, the original design report assumed that 27 acres of Port impervious surface drains to the Miller Creek detention facility via the Port's storm drainage system. However, those acres of development discharge to the Port's Industrial Waste System (IWS) and therefore remains available for future Port development.

The Tyee Pond, as discussed above in the response to question 2, has significantly less Port area draining to it than originally assumed in the design. The exact acreage and exact percent imperviousness of that acreage can not be determined because a final design report has yet to be located and may not exist. However, the Port intends to use the facility in lieu of project-specific on-site detention on a project by project basis.

Although they do provide for some detention, the Northwest Ponds were never designed as detention facilities

4. What portion of the regional facility capacity would the Port use?

The Miller Creek detention facility is owned operated and maintained by the Port of Seattle. Stormwater flows from other jurisdictions (City of SeaTac, City of Burien, Washington Department of Transportation, and King County) discharge to it. Similarly, the Port owns operates and maintains the Tyee Pond and the Northwest Ponds. Port and City of SeaTac drainage discharge to both of them.

Based on the differences in land use and design assumptions, the Port intends to use portions of the volume of the Miller Creek and Tyee Pond detention facility in lieu of project-specific on-site detention on a project by project basis. These differences are outlined in the Miller Creek detention facility design report and the design assumptions for the Tyee Pond.

The Northwest Ponds are not designed as a Port detention facility. Therefore, future Port development which drains to the Northwest Ponds will be analyzed per the King County Surface Design Manual for compliance with on-site detention requirements, unless a negotiated regional detention facility can be constructed at the Northwest Ponds that would take into account future Port development as well as future development on non-Port property.

The Port and the City of SeaTac have signed an Interlocal Agreement to develop a basin plan for Des Moines Creek. The recent 'Draft Des Moines Creek Basin Plan' (KC 1997) includes a discussion for enhancing both the Tyee and Northwest Ponds to account for future development (Port and non-Port).

5. Is the Port able to control the amount it uses by diversion to IWS or by on-site detention prior to discharge into the regional facility?

No, the IWS is designed to treat runoff from areas adjacent to the terminal where runoff can become contaminated by aviation activities. It was never designed to function as a stormwater detention facility for general airport runoff, especially the runways, taxiways and ground access (roads and parking).

With the exception a few small dry ponds built as part of the Boeing fill site north SR 518 and the Perimeter Road, there are no existing on-site detention facilities.

6. What are the terms of the King County transfer agreement for capacity allocation among the jurisdictions for the facilities?

The Interlocal Agreement simply revokes the easement granted by the Port to King County to build and maintain the Miller Creek and Tyee Pond detention facilities. There were no capacity allocations in the original Inter-local Agreements for these facilities.

ATTACHMENT B-4

FEDERAL REGULATIONS AFFECTING SWM STANDARDS

Note: The following list is intended to be a representative sample of applicable federal environmental regulations. Attempts have been made to ensure that it is comprehensive, but it is not necessarily all-inclusive. The SWM and sensitive areas agreements should acknowledge that other federal regulations not listed here may apply and that the regulations may be amended or new regulations adopted from time-to-time.

I. GENERAL ENVIRONMENTAL - Typically are addressed during planning:

- National Environmental Policy Act of 1969 (NEPA) - established a broad national policy to improve the relationship between man and the environment and set out policies and goals to ensure that environmental considerations are given careful attention and appropriate emphasis in all Federal decisions.
- Council on Environmental Quality (CEQ) Regulations - Regulations established by the President's Council on Environmental Quality to implement the NEPA.
- FAA Airport Environmental Handbook. 5050.4A

II. WATER

- Federal Water Pollution Control Act/Clean Water Act - regulates pollutant discharges into the waters of the U.S. including discharges from retention basins, wastewater treatment units, stormwater, etc. Established a permit process (Section 404) for the dredge and fill of navigable waters.
- Safe Drinking Water Act - regulates on-site water wells supplying water for public consumption.

- Executive Order 11990 Protection of Wetlands - defines wetlands and the importance of wetlands to the nation.

- Executive Order 11988 Floodplain Management - links the need to protect lives and property with the need to restore and preserve natural and beneficial floodplain values.

III. WILDLIFE HAZARDS, LANDFILLS, CLEAN AIR

- 14 CFR Part 139.337 (FAR Part 139.337) - Requires the certificated airports provide an ecological study when potentially hazardous birds or other wildlife are observed or if a serious bird strike occurs.

- 40 CFR Part 258 - provide landfill site criteria concerning the establishment, elimination or monitoring of waste disposal facilities in the vicinity of an airport (Included in FAA Order 5200.5A).

- Clean Air Act - requires the EPA to set ambient air quality standards, to control emissions from stationary and mobile sources, to establish new source standards and to control hazardous air pollutants. Including 40 CFR Part 51 and 93 which govern conformity with a State Implementation Plan - Projects involving federal funding must show that they conform to the objectives of the SIP.

IV. NOISE

- Airport Noise and Capacity Act of 1990 - Requires the transition to a Stage 3 fleet (for aircraft weighing more than 75,000 pounds) by December 31, 1999 with exemptions possible on a case-by-case basis through December 31, 2003.

- FAR Part 91 (14 CFR Part 91) - Establishes a phased transition to an all Stage 3 aircraft fleet.

- FAR Part 161 (14 CFR Part 161) - Establishes a program for reviewing airport noise and access restrictions on the operations of Stage 2 and Stage 3 aircraft.

- FAR Part 150 (14 CFR Part 150) - Airport Noise Compatibility Planning process establishes a framework for preparing airport noise and land use compatibility plans. Contains the FAA land use compatibility guidelines.

V. HAZARDOUS WASTE

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 - also known as the superfund law. Enacted to address past and present national problems of hazardous substances. It finances the clean-up by the government of waste spi ills and uncontrolled disposal of past industrial practices.

- Resource Conservation and Recovery Act (RCRA) of 1976 - regulates the management and disposal of newly created industrial hazardous waste.

- Toxic Substances Control Act (TSCA) of 1976 - established a system for identifying and evaluating environmental and health effects of chemicals. TSCA established controls for such substances as asbestos-containing building materials. PCB capacitors, transformers, etc.

- 40 CFR Part 261 - Identification and Listing of hazardous Waste.

VI. FEDERAL GRANT ASSURANCES

- As a condition for federal funding of airport developments, FAA requires airports to sign Grant Assurances which require, among other actions, 1) to not cause or permit any activity or action that would interfere with the use of the Airport for Airport purposes; 2) to mitigate or prevent the establishment of flight hazards; and 3) to carry out developments in accordance with federal policies, standards, and specifications including but not limited to the FAA Advisory Circulars (Grant Assurances 19, 20, 21, 34).

OTHERS

- 29 CFR 1926 Federal Occupational Safety and Health Act
- 40 CFR Part 61 National Emission Standard for Hazardous Air Pollutants
- Fish and Wildlife Coordination Act
- Endangered Species Act of 1974
- Farmland Protection Policy Act
- Federal Insecticide, Fungicide and Rodenticide Act

- E.O. 11514 Protection and Enhancement of environmental Quality
- E, 0. II 593 Protection and Enhancement of Cultural Environment
- E. 0. I 1 990 Preservation of Wetlands
- E. 0. 123 72 Intergovernmental Review of Federal Programs
- E.O. 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- E.O. 11998 Floodplain Management
- Section 4(f) of the Department of transportation Act of 1966 (49 USC 303(c))
- National Historic Preservation Act of 1966 (31 CFR 800)
- Archaeological and Historic Preservation Act of 1974 (16 USC 469 et seq.)
- Aviation Safety and Noise Abatement Act of 1979
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- FAR Part 77 - Height limitations near airports

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Attachment "G"
Scope of Work
for Amendment to
Professional Service Agreement No. P-940432

1. Background. The Port of Seattle requires additional engineering services to support its Surface Water Management (SWM) Program. The next steps of development of the Program are to: 1) analyze the SWM fees paid by the Airport, 2) analyze SWM fees that would be appropriate for major Airport tenants, and 3) Use available information to determine the amount of capacity in regional detention facilities that should be allocated for Airport facility development.

2. Engineering Services. The Consultant will provide the following services.

a. **Current Airport SWM Fees.** Check with County to see if information is available showing how the current SWM fee is calculated. Summarize any available information regarding calculation of the current SWM fee. Calculate the appropriate SWM fee for the existing Airport. Compare calculated fee with the existing fee (approx. $450,000). If necessary, provide possible reasons for discrepancy.

Perform alternative analysis to determine if there may be more advantageous ways to divide the acreage for purposes of calculating the fee. This alternative analysis should include all of the Ports property (approx. 2,500 acres), and will consider parcel grouping via lot line adjustments to reduce percent impervious. Consider grouping non-tenant parcels as an alternative simply to reduce the number of utility billings the Port currently pays.

b. **Cost Sharing Alternatives.** Look at upstream basins to determine relative area and percentage impervious contributions of the Port and outside municipal jurisdictions to the three regional detention facilities: the Miller Creek Regional Detention Facility, the Northwest Ponds, and the Tyee Pond. Recommend if the Port would be entitled to and/or should charge other jurisdictions for the cost of providing stormwater management in regional facilities that are located on Port property. Specifically, is the Port entitled to solicit sharing the cost of their SWM fee with tributary jurisdictions or should the cost sharing be based on actual Port maintenance costs and benefits received. It is expected that the Port attorney will have input to this recommendation.

c. **Reports.** Report the results in a letter report with color graphics of the drainage areas by jurisdiction and type of development. Five copies of a draft report will be provided for Port review and comment. Limited and editorial comments will be incorporated into a final report. Five copies and an original reproducible copy will be provided of the final report.

Scope Assumptions. It is assumed that the Port will provide AutoCAD or GIS files and/or hard copies of base maps of Port property. It is also assumed that basin delineation, and land use maps will be available from local sources for use by HDR

to do the above analysis and for their subconsultant to prepare color graphics for the report. Outside of Port property, the percent impervious will be assumed based upon land use within each basin. Within the STIA - NPDES permit area, the percent impervious area will be taken from previous stormwater system analysis. Outside the STIA - NPDES area but within the 2,500 acres of STIA Port property, the percent impervious will be grossly determined for each area based upon mapped land use.

Because the extent and nature of existing available mapping is not known, it is assumed for initial budgeting that researching and development of basin base, land use, and drainage area maps will require approximately the following hours from HDR and subconsultant Gambrell Urban, Inc. (GUI):

GIS/Mapping tech time	120 hours (GUI)
Professional Engineer	20 hours
Project Principal/manager	8 hours
Expenses/Map Costs	$2,500

Because the extent of property research required for this task is not specifically determined, subconsultant - Jerry Sidwell w/ Appraisal Group of the Northwest, LLP will be initially contracted to provide 40 hours of property research support to Port staff in consolidating parcels for Soil Conservation fees.

d. **Tenant SWM Fees.** Work with Port engineers, legal, and policy making staff to recommend the amount that would represent an appropriation of the total SWM fee for each major tenant of the Airport. The amount should be based on the Airport's overall SWM fee, the annual internal cost to the Port for operation of its SWM Program, the tenant lease areas, and the type of surface (pervious/impervious). Port staff will categorized tenants by type of business they are engaged in and make policy decisions regarding appropriate level of fees for each tenant category.

e. **Reports.** Report the results in a draft letter report, spreadsheet of tenant, category, area, percent impervious, and proposed fee. The report will include a colored map showing major tenant areas. Five copies of the draft report will be provided for review. Limited and editorial comments will be incorporated into a final report. Five copies and an original reproducible copy will be provided of the final report.

Scope Assumptions. It is assumed that the Port will provide the listing of major tenants, information about the categories of businesses, a tabulation of leases and areas, a set of real estate maps showing the areas used by each major tenant, and lease information related to calculation of fees. The Port will also provide an AutoCAD or GIS base map for showing tenant areas and information about internal costs to operate and maintain the SDS for allocation of costs to the tenants. IWS fees will not be included in this analysis.

f. **Detention.** Determine appropriate detention allocation for STIA in the Miller Creek Regional Detention Facility, NW Ponds and the Tyee Pond based on the initial design intent, each jurisdiction's contributing acreage and type of development. HDR and Port staff will meet with King County to determine what information is available regarding the design criteria used for these regional ponds and to determine what additional information may be available regarding operation of these facilities. The work is to research existing available feasibility studies, design agency/firm, and other background information.

g. **Reports.** Prepare five copies of draft letter report summarizing the findings and making recommendations for detention allocation or for additional studies to determine detention allocations. Limited and editorial comments will be incorporated into a final report. Five copies and an original reproducible copy will be provided of the final report.

Scope Assumptions. It is assumed that the analysis will be completed using existing available information regarding the design of the three regional detention facilities. It is also understood that, in some cases, this information may be limited. If the initial design criteria can not be located, then an analysis to determine allocation of detention storage will be performed based upon tributary area and percent impervious. However, this will only determine the current percentage of the storage available to each user. It will not determine if there is "excess" available storage for the Port to use to mitigate for detention requirements. If design criteria is not available, the only way to determine if storage is available to offset current or future detention needs would be to model the basins tributary to the three regional detention facilities. This modeling is not currently included but could be done as an addition to this scope of work.

3. Support Services. The Consultant will attend meetings with Port staff and will support for Port staff at meetings with other jurisdictions and/or agencies. There will be five meetings with the Port including chartering of the project team, reporting progress, and briefing the final results. There will be two meetings with outside groups.

MASTER PLAN DEVELOPMENT ACTIONS

SEATTLE-TACOMA INTERNATIONAL AIRPORT

SUMMARY OF AMENDED WETLAND MITIGATION APPROACH

Prepared for

Port of Seattle

Prepared by

PARAMETRIX, INC.
5808 Lake Washington Blvd. N.E.
Kirkland, Washington 98033

May 1998
55-2912-01 (03)

1 INTRODUCTION

The Port of Seattle has applied for a Section 404 Individual Permit from the U.S. Army Corps of Engineers to allow fill of wetlands at Seattle-Tacoma International Airport for implementation of Master Plan Update development projects. Through the public notice, public hearings, and associated comment periods, on the Section 404 permit application and the Section 401 Water Quality Certification, numerous comments from the public at large, community groups, municipalities, and resource agencies with review authority over the permit (Army Corps of Engineers, Environmental Protection Agency, Fish and Wildlife Service, Washington Department of Ecology, Washington Department of Fish and Wildlife, and King County Department of Natural Resources) have been received.

In direct response to these comments the Port prepared a revised mitigation plan that proposes significant additional in-basin mitigation to compensate for potential impacts to the hydrology and aquatic habitat of Miller and Des Moines Creeks. The plan addresses specific requests for increased in-basin mitigation through:

- Reduced impacts to wetlands
- Preservation of stream and riparian habitat
- Protection of stream habitat functions through management of storm water runoff, and
- Enhancement of fish and aquatic habitat conditions.

The amendments to the compensatory mitigation plan are summarized in this document. Included in the summary are a description of the proposed mitigation element, its associated benefits (environmental goals), and the implementation approach. Also included are performance standards, a monitoring approach, and contingency actions to assure that the intended environmental goals are ultimately achieved.

Advisory Circular 150/5200-33 (Appendix B) describes FAA policy regarding wildlife attractants near airports. The circular states that any activity or land use on or near an airport that threatens aircraft safety by attracting or sustaining hazardous wildlife is an incompatible land use. The Advisory Circular recommends that when siting mitigation, wildlife attractants be no closer than 10,000 ft from turbine aircraft movement areas, and 5 miles from approach or departure airspace.

The FAA and the Port of Seattle believe that wildlife habitat mitigation is a land use that should not occur near Sea-Tac Airport. Even if habitat mitigation did occur near the Airport, the Port would have to maintain the ability to control potential wildlife hazards in these areas. The use of mitigation project by wildlife species frequenting the airfield could require management actions by the Port and FAA (such as removal of vegetation or other habitat modifications to the mitigation site to discourage wildlife use.) These vegetation management and habitat modifications to a mitigation site would clearly be contrary to federal and state requirements to maintain mitigation in perpetuity.

For the above reasons, the amended mitigation plan does not propose wildlife habitat, including wetland enhancement, or creation within 10,000 feet of runways.

2 SUMMARY OF AMMENDED MITIGATION PLAN

2.1 PROPOSED IN-BASIN MITIGATION

Several in-basin mitigation elements are proposed to compensate for hydrologic impacts of the Master Plan projects on stream hydrology and aquatic habitat. While some of these mitigation elements were part of the mitigation described in the FEIS, FSEIS and other documents supporting the JARPA application (Table 1), the quantity of mitigation has been increased in direct response to requests for greater in-basin mitigation.

In addition to implementing the mitigation identified in Table 1, additional mitigation is described in Section 2.2.

2.2 INFILTRATION IN PROPOSED STORM WATER MANAGEMENT FACILITIES

In response to concerns over base flows in Miller and Des Moines Creeks due to new impervious surfaces for Master Plan projects, the Port will review the feasibility of providing infiltration facilities for storm water management.

2.2.1 Goals

The goal of the infiltration feasibility analyses is to determine opportunities to minimize the potential affect of new impervious surfaces on base flows in Miller and Des Moines Creeks.

2.2.2 Description

Hydrologic modeling of storm water runoff and stream flows in Miller and Des Moines Creeks has determined that there could be modest affects on summer low stream flows. The analysis did not account for the positive influence of reduced water use from the streams (i.e. farm irrigation), and the potential for additional recharge from the new fill embankment. Ecology has indicated that infiltration is the highest priority for storm water control, provided that proper soil conditions exist and ground water quality is protected.

The Port has identified storm water management facility locations in the design planning effort. The locations were selected based on hydrologic and hydraulic conditions; i.e. the sites are downstream of development and mitigate peak flows prior to discharge to surface water. The sites will be further analyzed for their feasibility as infiltration sites. Four conditions must exist for infiltration to be further considered:

- The soils naturally infiltrate at rates required by the Ecology Stormwater Management manual;
- There is no potential for groundwater impacts;
- The water table is sufficiently below the surface to provide adequate infiltration rates during prolonged storms; and
- Long periods of standing water do not exceed the requirement to prevent wildlife attractants.

Table 1. Summary of on- and off-site mitigation for wetland and stream impacts proposed in the FEIS, FSEIS and other documents supporting the JARPA Application.

Potential Impact	Mitigation Action	Explanation And Comments
On-Site Mitigation		
Miller Creek Habitat	Relocate creek channel	Channel relocation will enhance aquatic habitat by providing stream buffers, instream habitat, and increased channel length.
Miller Creek Floodplain	Create new floodplain	New floodplain equivalent storage will be excavated from the Vacca Farm site.
Riparian Function	Provide protective buffers	Vegetated riparian buffers to protect instream habitat and water quality will be established as follows: Miller Creek – 50-ft minimum along 3,900 linear ft of channel resulting in about 9 acres of buffer habitat. Des Moines Creek – 25-50 ft along 1,800 ft of channel resulting in 1.5 acres of buffer habitat. Drainage Channels – 15 ft along about 2,000 linear ft of channel resulting in about 1.5 acres of buffer habitat.
Ground Water Discharge	Design internal drainage and conveyance channels	Subsurface drain system and surface conveyance channels will continue to collect and distribute ground water currently surfacing near 12th Avenue to Miller Creek and wetlands.
Storm Water Quality	Meet current water quality standards for new development	Storm water quality facilities will be developed to meet or exceed Department of Ecology requirements. These facilities will also replace storm water management functions provided by wetlands. Areas in the buyout area that lack storm water management facilities will be retrofitted as development occurs.
Storm Water Quantity	Meet current water quantity standards for new development	Storm water detention facilities will be developed to meet or exceed Department of Ecology requirements. These facilities will also replace storm water management functions provided by wetlands.
Indirect and Cumulative	Participate in Miller Creek and Des Moines Creek Basin Plans	These planning processes will identify effective, long-term solutions to restore fish habitat to Miller and Des Moines Creeks. The Port contributes both staffing resources and funds and with other cooperating jurisdictions will continue to plan and implement appropriate watershed restoration projects.
	Monitor wetland and streams	Hydrologic conditions in Miller and Des Moines Creeks will be monitored to verify mitigation is effective. Wetlands subject to indirect impacts will be monitored to determine if unmitigated indirect impacts have occurred.
Off-Site Mitigation		
Wildlife Habitat	Replace habitat function off-site at a ratio of 2:1	Flooded emergent and open water wetlands (out-of-kind mitigation) will be incorporated into the plan to increase overall wildlife use and diversity.

2.2.3 Implementation

The proposed storm water facility locations will be investigated for feasibility as infiltration facilities as part of the storm water management design report.

2.2.4 Monitoring

If infiltration facilities are constructed, a monitoring plan will be developed during design that will include water table and pond water level monitoring. Inflation rates, pond stages, and discharges will be revised to verify operation.

2.2.5 Contingency

Proposed facilities will be designed and constructed as if no infiltration would occur, therefore they would be large enough to reduce peak flows as required. Because expected base flow impacts are minimal, reduced infiltration would not adversely affect the success of the proposed mitigation.

2.3 INCREASED STORMWATER MANAGEMENT

In response to concerns over peak flows in Miller and Des Moines Creeks, the general need for increased detention on most developed lands in the watershed, and the benefits of additional detention on habitat conditions in Miller and Des Moines Creeks, the Port will implement a wide range of stormwater management projects. These project will not only mitigate the impacts of new construction, as required by current stormwater regulations (and reiterated in the Governor's Certificate), but will also help reduce current flood peaks in these basins.

2.3.1 Goals

The overall goals of the Port's stormwater management program are as follows:

- Design the Master Plan projects in accordance with all applicable stormwater management regulations.
- Verify that proposed projects do not cause increased flood peaks in Miller and Des Moines Creek at key points downstream (including the mouth).
- When opportunities exist, construct expanded stormwater detention facilities to help reduce current flood peaks on these streams.
- Reduce wildlife atraction through innovative control outlet design and pond covering.

Implementation of these goals is described below.

2.3.2 Description

The following table describes the total quantity of stormwater detention storage that would be required for all Master Plan projects to meet the stormwater management goals. These detention storage volumes are based on initial hydrologic modeling of the proposed projects. This analysis is largely consistent with the results of the HSPF modeling that was conducted for the Master Plan Update EIS. As discussed in the EIS, in order to prevent stormwater flows from increasing at downstream points, the amount of stormwater detention provided must be increased significantly over that which is required

by Ecology's Stormwater Management manual. This provides additional mitigation of potential stormwater impacts.

Table 2. Minimum Amount of New Detention Storage Required for Master Plan Projects

Location	Storage (ac-ft)	Areas Served
Miller Creek Basin		
North Employee Parking Lot vault	4.0	Parking lot (constructed 1997)
Expanded Miller Creek Detention Facility (MCDF)	16.4[a]	Master Plan projects in north Terminal/Air Cargo area
Upper Miller Creek (below MCDF)	11.2	3rd Runway/taxiway
Lower Miller Creek (above SR-509	12.5	3rd Runway/taxiway
Walker Creek	6.0	3rd Runway/taxiway
Des Moines Creek Basin		
Northwest Pond area	17.0[b]	3rd Runway/taxiway
SASA Detention Facility (includes replacement of 14.9 acre-feet in Tyee Pond)	24.0[c]	SASA, Master Plan projects in south Terminal area
TOTAL	91.1	

a Miller Creek Detention Facility can be expanded by additional 24 acre-feet, and will be examined as part of the upcoming Miller Creek Basin Plan. This would provide increased stormwater detention in Miller Creek.

b The total storage volume in Northwest Ponds would be up to 240 acre-feet when the Des Moines Creek Basin Plan is implemented. The purpose of the increased detention is to mitigate existing impacts.

c The volume of detention storage available at the SASA detention facility site may possibly be expanded to 45 acre-feet. This would provide increased stormwater detention in Des Moines Creek.

The Port is currently working with King County to design and construct a regional detention pond at the Northwest Ponds, located at the head of the west branch of Des Moines Creek. The Des Moines Creek Basin Plan determined that up to 240 acre-feet of detention storage can be developed at that site. The Port is actively working with the County to implement that project as a plan participant (the Port has been responsible for funding 40 percent of the plan). The facility will serve the needs of reducing existing peak flood impacts in the Des Moines Creek basin. The Port would fund additional storage to wholly mitigate the impacts of the Third Runway Project. In addition, the opportunity exists for increasing the size of the proposed stormwater detention pond for the South Aviation Support Area, thereby further reducing existing flood peaks.

An upcoming basin plan for Miller Creek will identify additional stormwater detention opportunities to mitigate existing hydrologic impacts in Miller Creek. The Port will participate in the basin plan process with funding and in-kind services (i.e., technical assistance, staff time, and maintenance), while advocating designs that do not attract water fowl.

2.3.3 Implementation

The Port of Seattle has established stormwater management procedures for all Master Plan projects. These procedures will ensure that all regulatory requirements for stormwater control and treatment are met, and potential downstream impacts from the projects are mitigated in accordance with the adopted Final Environmental Impact Statement for the Master Plan Update and the Governor's Certificate. The management procedures are implemented through a process that includes periodic meetings with Port staff and consultants to discuss stormwater management requirements in current and upcoming projects, review of all proposed projects by an oversight consultant, and development of watershed hydrologic models using the HSPF continuous simulation model to verify the performance of proposed facilities and ensure that peak flow rates do not increase in Miller Creek and Des Moines Creek.

Water quality BMPs will also be incorporated into the stormwater facilities. These designs will be based on requirements and guidance contained in Ecology's Stormwater Management manual.

2.3.4 Monitoring

The Port, through its NPDES permits, is monitoring stream flow rates at the major stormwater outfalls. This data will be used to periodically assess the performance of the stormwater conveyance and detention systems, improve the hydrologic and hydraulic models of those systems, and maintain those facilities. Should the performance of the stormwater detention facilities not meet their design expectations, changes could be made to the outlets to optimize their functions. Accordingly, the facilities will be designed and constructed to allow flexibility in their operation.

2.3.5 Contingency

The Port is actively working with King County to implement the recommendations of the Des Moines Creek Basin Plan, and will also support a similar basin planning process for the Miller Creek basin. The Port is committed to supporting the recommendations of these studies to improve the management of stormwater runoff in Miller and Des Moines Creek, help implement those that are found to be feasible, and explore opportunities to increase the performance of existing facilities, provided that the proposed enhancement does not create a safety hazard.

2.4 BASEFLOW AUGMENTATION IN DES MOINES CREEK

Concerns have been expressed about the impacts of the Master Plan projects on the base flow of Des Moines Creek. Studies have concluded that unmitigated construction of the Master Plan projects may reduce the minimum baseflow in Des Moines Creek. The Port will mitigate this impact by implementing a recommendation of the Des Moines Creek basin plan to augment the flow of the stream with water pumped from a well.

2.4.1 Goals

The goal of the Port to mitigate the impacts of the Master Plan projects on Des Moines Creek baseflows is as follows:

- Mitigate the potential impacts to low flows by providing low flow augmentation in Des Moines Creek.

2.4.2 Description

The 1997 Des Moines Creek Basin Plan recommended that a well and pump system be constructed near South 200th Street. The flow augmentation to the stream will help with current water quality problems in the stream during periods of critical low base flows. The water supply for this project will come from an existing Port well that supplies irrigation water to the Tyee Golf Course. It is planned that the well will supply about 400 gpm (about 0.8 cfs) of water to the stream for several weeks during the normal summer low-flow period. The flow augmentation project will not only compensate for the projected decrease in base flows caused by the Master Plan projects, but also significantly improve the existing conditions in the stream.

2.4.3 Implementation

The flow augmentation project can be constructed relatively quickly. The Port will work with King County to implement the flow augmentation project by the summer of 2000. However, the project would require either a modification to the existing water right for the Port's well or a new water right. Ecology has indicated its support of this project. Therefore, timing of the project is probably contingent on when the water right can be obtained.

2.4.4 Monitoring

An operation plan will be developed to determine the most appropriate and effective methods for operating the low flow augmentation pump. The objective will be to pump water into the stream when the stream reaches a predetermined critical low flow.

2.4.5 Contingency

Should the flow augmentation project not succeed, such as due to the inability to obtain a new water right, other options for low flow augmentation to mitigate minor Master Plan project impacts will be pursued. This would include looking into acquiring other water rights in the basin, or transferring a portion of the existing golf course water right.

2.5 MILLER CREEK BUFFER SIZE AND ENHANCEMENT

The JARPA application and supporting documents identify that, within the mandatory buyout area, each side of Miller Creek will be protected with 50-foot buffers which would preserve about 6-acres of riparian habitat. In response to public and agency concerns, the Port will increase buffer widths

protecting about 12-acres of riparian habitat. In addition to increasing the size of these buffers, the areas will be enhanced with native vegetation to increase their riparian function.

2.5.1 Description

Within the mandatory buyout area, Miller Creek will be protected with a 50-foot riparian buffer on both sides of the creek. The 50-foot buffer area will be protected from clearing and other human impacts. In response to public and agency concerns, the Port will add an additional 50-foot buffer (for a total of 100 feet) on both sides of the creek. Within the additional 50-foot buffer, a public trail, stormwater management facilities, and temporary construction areas will be allowed. Buffer averaging will be used on the east side of the creek where storm water management facilities will be located for optimal function. Open space for storm water facilities would be included in the outer buffer.

In addition to the buffer enhancement, the Port will provide in-stream habitat enhancements, such as bank repairs and woody debris, to be constructed concurrently with the buffer enhancement.

2.5.2 Goals

The primary environmental goal of the buffer mitigation is to remove existing impacts associated with residential development in the riparian area. These include over 35 homes and other structures, maintained lawns and other landscaping, potential water quality impacts from household and yard chemicals, potential failed septic systems, and untreated storm water runoff.

A second goal of the mitigation project is to increase the function value of the riparian habitat to Miller Creek. This goal will be met through revegetating areas with native woody vegetation to increase stream shading and to increase detritus (dead leaves, branches etc.) input to the creek, which is necessary to support stream invertebrates that are an important food source for fish.

2.5.3 Implementation

This mitigation will be implemented as the Port acquires land within the acquisition area and existing residents are relocated. Structures will be demolished following BMPs presented in the SWPPP prepared by the Port and approved by Ecology. Within the creek buffer areas demolition will also be conducted in such a manner to minimize removal or damage of vegetation.

Following demolition, parcels will be evaluated for the value of existing native and non-native vegetation. Areas dominated by invasive non-native woody plants will also be identified. The inventory will be used to develop enhancement plans to revegetate buffer areas with native vegetation. Revegetation plans will be developed that focus on providing shade to the creek and stabilize bank erosion.

Plants used in revegetation plans are listed in Table 3.

2.5.4 Monitoring

During the acquisition period, quarterly inspections of demolition areas will be completed. Examination of demolition sites will confirm that all structures, and debris have been removed and that excessive vegetation has not been removed.

New planting will be monitored annually for 5 years to determine plant survival and growth. Plant survival will be calculated as percent survival. Measurements of growth will include estimates of

annual shoot elongation and leaf vigor. A photographic record documenting buffer conditions will also be made.

Any redevelopment plans for the buyout area will be reviewed by the Port Environmental Specialist to assure that adequate buffers are planned and maintained. If redevelopment in the buyout area occurs, buffers adjacent to new development will be clearly signed at 50-foot intervals and fenced.

Table 3. Suggested plants for riparian buffer and floodplain enhancement.

Scientific Name	Common Name	Streamside Zone	Upland Buffer Zone
Trees			
Acer circinatum	Vine maple	X	X
Alus rubra	Red alder	X	X
Corylus cornuta	Western hazelnut		X
Fraxinus latifolia	Oregon ash	X	
Rhamnus purshina	Cascara		X
Salix Scoulerana	Scouler willow	X	
Shrubs			
Cornus stolonifera	Red-osier dogwood	X	
Gaultheria shallon	Salal		X
Physocarpus capitatus	Pacific ninebark	X	X
Rosa woodsii	Wood's rose		X
Salix sitchensis	Sitka willow	X	
Salix lasiandra	Pacific willow	X	
Salix hookeriana	Hooker willow	X	
Spiraea douglasii	Hardhack spirea	X	

2.5.5 Contingency

If structures or debris are found to remain within the buffer area, the Port will take action to remove them. If average plant survival is less than 80 percent contingency actions will be implemented. These measures will include, after review of site conditions and monitoring data, selection of new species and replanting.

2.6 DES MOINES CREEK BUFFERS ENHANCEMENT

Des Moines Creek, above South 200th Street, has riparian buffers that consist of a narrow fringe of woody and emergent vegetation. The remaining area is mowed for Tyee golf course maintenance. In response to agency and public concerns over fish and riparian habitat in Des Moines Creek, the Port will enhance these buffer areas with native trees and shrubs to provide shade and enhance the condition of the riparian area.

2.6.1 Description

On the Tyee Golf Course, riparian 50-foot riparian buffers will be established between the confluence of the two Des Moines Creek tributaries west to Wetland 28. Between the confluence of the two tributaries and South 200th Street, 50-foot buffers will be established on the west side of the Creek and 25-foot buffers will be established on the east side of the Creek. Between Tyee pond and the Alaska airlines' parking lots (along the east tributary) the creek channel will have 25-foot buffers.[1] The total area of buffer established by this plan is about 10 acres.

2.6.2 Goals

The primary environmental goal of the buffer mitigation is to remove existing impacts associated with the Tyee Golf Course to the creek riparian areas. These impacts include mowing and vegetation removal.

A second environmental goal of the mitigation project is to increase the functional value of the riparian habitat to Des Moines Creek. This goal will be met through revegetating areas with native woody vegetation to increase stream shading and to increase detritus (dead leaves, branches etc.) input to the creek, which is necessary to support stream invertebrates that are important forage to fish.

2.6.3 Implementation

This mitigation will be implemented as the SASA project is developed and Tyee Golf Course is closed. Planting plans will be developed for the areas similar to those shown in the Miller Creek Relocation Plan as part of the JARPA application. Plants used in revegetation plans are listed in Table 3.

2.6.4 Monitoring

New plantings will be monitored annually for a period of 5 years to determine plant survival and growth. Plant survival will be calculated as percent survival. Measurements of growth will include estimates of annual shoot elongation and leaf vigor. A photographic record documenting buffer conditions will also be made.

Any redevelopment of areas adjacent to the creek buffers will be reviewed by the Port Environmental Specialist to assure that adequate buffers are planned and maintained. If redevelopment in the buyout area occurs, buffers adjacent to new development will be clearly signed at 50-foot intervals and fenced.

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[1] The various widths of buffers provided for the creek represent potential constraints associated with the proposed Highway 509 project sponsored by WSDOT, the South Access Freeway project, and the SASA project area.

2.6.5 Contingency

If plant survival in the buffer area is less than 80 percent after 5 years, contingency actions will be implemented. These measures will include, after review of site conditions and monitoring data, selection of new species and replanting.

2.7 MILLER CREEK/LORA LAKE FLOODPLAIN ENHANCEMENT

The area near the northeast corner of the buyout area (known as Vacca Farms or the "pumpkin patch") has been actively farmed for many decades. The soils on much of the site are organic muck soils, indicating that the area was historically wetland, and most of the area is within the 100-year floodplain of Miller Creek. The Port will remove this area (about 3-acres) from future farming and land disturbance to enhance the floodplain of Miller Creek.

Adjacent to the Vacca Farm is Lora Lake, a 3.5 acre manmade pond. This pond is also in the floodplain of Miller Creek, and bordered by houses on the north and west side. The Port will demolish houses around the lake and establish a 25-foot buffer of native vegetation around the lake, which will create about 4.5 acres of aquatic habitat enhancement.

2.7.1 Goals

The primary environmental goal of the enhancement action is to remove existing impacts associated with farming from the floodplain areas and the impacts of residential uses next to Lora Lake. These impacts include soil erosion and potential runoff of nutrients and agricultural chemicals. The mitigation project will increase the functional value of the floodplain to Miller Creek by providing plant detritus to the creek during flood events to support stream invertebrates that are important forage to fish.

2.7.2 Implementation

This mitigation will be implemented following the relocation of Miller Creek. The site will be hydroseeded with native grasses adapted to moist soil conditions and planted native trees and shrubs as shown in Table 3.

2.7.3 Monitoring

New plantings will be monitored annually for a period of 5 years to determine plant survival and growth. Plant survival will be calculated as percent survival. Measurements of growth will include estimates of annual shoot elongation and leaf vigor. A photographic record documenting buffer conditions will also be made.

Any redevelopment of areas adjacent to the creek floodplain will be reviewed by the Port Environmental Specialist to assure that adequate buffers are planned and maintained.

2.7.4 Contingency

If plant survival in the buffer area is less than 80 percent after 5 years contingency actions will be implemented. These measures will include, after review of site conditions and monitoring data, selection of new species and replanting.

2.8 TRUST FUND FOR WATERSHED REHABILITATION

The Port will establish a trust fund for watershed rehabilitation projects in the Miller Creek and Des Moines Creek basins. Establishment of this fund is in direct response to requests by the public and agencies to implement mitigation actions that would enhance stream and aquatic habitat throughout the Miller and Des Moines Creek watersheds. The trust fund would focus on portions of Miller and Des Moines Creeks not owned by the Port.

2.8.1 Description

A trust fund of $300,000 would be established by the Port to fund watershed projects that result in direct habitat benefits to aquatic life in the creeks, or remove documented water quality impacts. The details of trust administration have not yet been specified; however, potential administrators include the Miller or Des Moines Creek Basin Committees or King County Watershed Coordinators.

Examples of projects eligible for full or partial funding could include instream fisheries habitat improvements, riparian buffer enhancement, removal of fish passage barriers, and removal of failed septic systems.

A condition of any project is that it does not create or substantially enhance wildlife hazards within 10,000 feet of active runways at Seattle-Tacoma International Airport.

2.8.2 Goals

The goal of this mitigation action is to enhance instream or riparian habitat for salmonids and other aquatic organisms of Miller and Des Moines Creeks on land not owned by the Port.

2.8.3 Implementation

The Miller or Des Moines Creek Basin Committees, the King County Watershed Coordinator, or other responsible entity would administer the fund. The administrator would establish eligible project criteria, application forms, project cost limits, implementation and monitoring requirements, etc.

2.8.4 Monitoring

The Fund Administrator would review project design, implementation, and as-built plan to verify intended benefits had been built.

2.8.5 Contingency

The trust fund would have a sunset clause of 3 years. If after a 3-year period the fund had not been spent, the Port would use the money to implement an identified project in the Miller or Des Moines Creek Basin plans that would provide water quality or aquatic habitat benefits. The project to be implemented would be at the discretion of the Port.

The trust fund would generally focus on portions of Miller Creek and Des Moines Creek not on Port-owned land. Actual restoration/enhancement project funding would be encouraged over studies, plans, and reports.

3 SUMMARY

3.1 AVOIDANCE AND MINIMIZATION OF IMPACTS TO WETLANDS

Since issuance of the Public Notice the Port has continued to evaluate engineering alternatives to filling wetlands, and wetland impacts have been reduced in several areas. At the north end of the Airport, wetland impacts from runway safety area improvements, South 154th Street relocation, and new runway construction are reduced or eliminated by the use of retaining walls. Additional wetland impacts can be avoided in the south end of the airport by a reduction in the size of Borrow Area 1. As a result, the amount of wetland fill for the project is now about 8.59 acres. The Port considers the remaining wetland impacts to be a result of the least environmental damaging practicable alternative.

3.2 OVERALL MITIGATION RATIO

In-basin mitigation will result in the preservation and enhancement of about 29.5 acres of Port-owned property as enhanced stream buffers and enhanced floodplain areas. This represents in-basin mitigation ratios of about 3.4:1 (acres of mitigation:acres of impact). Additional mitigation cannot be easily quantified in terms of acres, however they represent substantial investments to make significant in-basin aquatic habitat improvements. These mitigation measures include:

- additional storm water detention to reduce existing hydrologic impacts;
- baseflow augmentation and storm water infiltration;
- buffer and in-stream habitat enhancements;
- Trust Fund for Watershed Restoration.

As a result of reduced wetland impact and increased in-basin mitigation, the off-site mitigation project designed to replace habitat functions of the impacted wetlands will be modified. Wetland mitigation in the off-site wetland is proposed to occur at a ratio of 2:1 (about 18 acres). Thus, the total project mitigation considering all forms of habitat enhancement area is provided at a ratio of approximately 5.5:1. This ratio does not include or quantify additional in-basin mitigation such as hydrologic enhancements.

This mitigation ratio exceeds that typically applied to wetland fill projects and should fully mitigate for direct wetland filling, potential indirect impacts to wetlands, and cumulative impacts associated with the project. Replacement of wetland functions (i.e. hydrology, water quality) would occur over a relatively short time. Considering the condition of the impacted wetlands -- relatively low quality, high degree of on-going or past human disturbance, and the relatively young age of forest and shrub vegetation -- high mitigation ratios for replacement of wetlands are not justified. The proposed ratios are further justified in that the wetland mitigation plan will establish a large wetland area (off-site) with greater habitat function than the impacted wetlands, as well as in-basin enhancement directly adjacent to aquatic habitat.

APPENDIX

EVALUTION OF BASE FLOW IMPACTS TO MILLER AND DES MOINES CREEKS

SEA-TAC AIRPORT MASTER PLAN UPDATE

SUMMARY

POTENTIAL BASE FLOW IMPACTS

The hydrologic analysis of the potential impacts of the Sea-Tac Airport Master Plan Update Development projects on Miller Creek and Des Moines Creek was originally presented in the Master Plan Update EIS based on studies conducted in 1995. These studies have been updated using the HSPF model to reevaluate the potential project impacts on base flows in these streams given new information that has become available since that time. This analysis is attached as Appendix A.

Using a watershed water budget approach of changes to groundwater infiltration, the 1995 EIS studies concluded that, due to the proposed land use changes, potential base flow rates may decrease by about 7 percent in Miller Creek and by about 11 percent in Des Moines Creek. For Miller Creek in particular, the EIS estimates differed sharply from the results of the annual flow duration and seasonal flow exceedence analyses that were derived from the HSPF modeling. Those analyses predicted a potential drop in base flows of about 4 percent in Miller Creek and about 10 percent in Des Moines Creek.

To update the water budget analysis, estimates of groundwater recharge potential were developed using the HSPF model. HSPF uses complex mathematical functions to model the travel of water through shallow and deep soil layers. When calibrated to a watershed, the HSPF model can simulate the travel of water in soil by separately tracking evapotranspiration, surface water runoff, interflow (shallow subsurface runoff), percolation to groundwater, and the corresponding discharge of these components to the receiving stream. The 1995 EIS analysis used gross infiltration rates to estimate infiltration potential, which is less accurate because it does not account for the effects of actual rainfall intensities and soil moisture capacity on infiltration.

From the HSPF model, the amount of water entering groundwater for each soil type was predicted. The analysis of runoff from airport fill was improved by streamflow monitoring data collected from the airport stormwater drainage system outfalls during 1995 and 1996. Modeling indicated that existing airport fill acts much more similar to outwash soil than till soil (outwash is generally more permeable than till) because a large amount of rainfall percolates to

groundwater though the fill. In the 1995 EIS analysis, airport fill was assumed to be similar to till (no monitoring data for the outfall were available at that time), which has a lower potential to infiltrate rainfall to groundwater. Since the structural fill that will be placed for the new runway will be a well-sorted soil mixture, it would have similar infiltration properties to existing fill and should provide a relatively permeable soil zone that absorbs rainfall for subsequent discharge to groundwater.

The results of the revised water budget analysis indicate that the average annual reduction in base flow would be approximately 2 percent in Miller Creek and approximately 7 percent in Des Moines Creek. These percentages correspond to 0.05 cfs and 0.13 cfs, respectively, during a 1-in-10 dry year. If it was conservatively assumed that these flow rate decreases would occur uniformly throughout the year, as opposed to more during the winter and less during the summer, a 0.05 cfs reduction in Miller Creek would be equivalent to 4 percent of the late summer base flow rate, the relative percent decrease in flow would be higher during the late summer low flow period. It is estimated that a 0.13 cfs reduction in Des Moines Creek would be equivalent to 13 percent of the late summer base flow rate.

BENEFITS OF WATER RIGHTS RELIQUISHMENT

Acquisition of private properties along Miller Creek for the Third Runway would include acquiring the surface water rights that are associated with those properties. These surface water rights allow the property owners to divert flow from Miller Creek for domestic use, lawn and yard watering, and irrigation. As a mitigation measure to offset base flow impacts, the Port of Seattle would relinquish these water rights back to the State of Washington, thereby eliminating these withdrawals and improving base flows. The detailed analysis of the benefits of relinquishing these water rights is attached as Appendix B.

Based on water rights records obtained from the Department of Ecology, there are at least 17 residential properties with recorded surface water right certificates or claims along Miller Creek. Properties with water right permits or certificates can legally divert water from Miller Creek. In addition, 5.2 acres of farm property below Lake Reba have been identified as diverting water for irrigation from Miller Creek (a registered water right or claim could not be found for these properties). Although the legal status of a water right claim is less certain, a claim must be based on a current active use of the water. It is assumed that all of these properties are actively diverting surface water from Miller Creek, thereby creating an impact to base flows.

A calculation was made to determine the total amount of water being withdrawn by these surface water users. Assuming that 50 percent of the 17 domestic users are diverting 0.01 cfs (for a total of 0.09 cfs) from the stream at any given time, and that the commercial farms irrigate a total of 24 inches over 4 months (for a total of 0.04 cfs), the total quantity of water being diverted from Miller Creek is 0.13 cfs. This amount compares to the estimated potential reduction of base flow from the Master Plan projects of 0.05 cfs. Therefore, relinquishment of the water rights would adequately compensate for the potential base flow impacts caused by the Master Plan projects.

APPENDIX A

EVALUATION OF POTENTIAL BASE FLOW IMPACTS

SEA-TAC AIRPORT MASTER PLAN UPDATE

A hydrologic analysis of Miller Creek and Des Moines Creek was performed for the proposed Sea-Tac International Airport Master Plan Update Development Action projects to update the analyses contained in the Environmental Impact Statement (EIS). The purpose of this analysis was to reevaluate the potential project impacts on base flows in these streams given new information that has become available since the EIS was prepared in 1995. This information includes more accurate site data and an improved methodology for evaluating potential impacts to groundwater recharge.

NEW DATA AND INFORMATION

The HSPF hydrologic models of Miller and Des Moines Creeks that were prepared for the EIS have been recently updated to support the ongoing design studies. New and updated information available for these models include a revised layout for the Third Runway, better mapping data (based on aerial topographic mapping), and development of a geographic information system (GIS) database to calculate land use parameters for the airport subbasins. In addition, streamflow monitoring that was conducted during 1995-1996 at airport stormwater outfalls was used to calibrate HSPF parameters that describe runoff from airport areas. Previously, no streamflow monitoring data was available for airport drainage. From this monitoring data it was found that drainage from airport fill areas have a hydrologic runoff response characterized by rapid runoff (from impervious areas) followed by a very rapid recession in base flow. This response is similar to what is typically found in areas with outwash soils. In the previous model, airport fill was assumed to be equivalent to till soil.

PREVIOUS EIS ANALYSES OF POTENTIAL BASE FLOW IMPACTS

In the 1995 EIS, the potential impacts of the Master Plan projects on stream base flows were evaluated using three different methodologies. These analyses are summarized below.

ANNUAL FLOW DURATION

The annual flow duration analysis was based on the predictions of the HSPF models of Miller and Des Moines Creeks. From those models, the total low flow volume below the 6 cfs flow magnitude was predicted to decrease by about 3 percent in Miller Creek, and the total low flow volume below the 10 cfs flow magnitude was predicted to decrease by about 6 percent in Des Moines Creek.

SEASONAL FLOW EXCEEDENCE

The seasonal flow exceedence analysis evaluates changes in flows during different months of the years, and also during low (90 percent exceedence), median (50 percent exceedence), and high (10 percent exceedence) streamflow conditions. In this analysis, the calendar year is divided into 48 periods, or 4 per month. A statistical analysis of streamflows is then conducted on each period to determine the low, median, and high flow magnitudes for time segment of the year. The analysis concluded that, due to the proposed land use change, summer stream flows during low flow years may decrease by 0.05 cfs or less in Miller Creek and by about 0.10 cfs or less in Des Moines Creek. Both of these values represent flow rates averaged over August and September. These compare to typical minimum base flows of about 1.4 cfs (or 4 percent) in lower Miller Creek and about 1.0 cfs (or 10 percent) in Des Moines Creek below S. 208th Street.

WATER BUDGET USING GROUNDWATER RECHARGE POTENTIAL

The third analysis of evaluating potential impacts to base flows took a different approach. Rather than relying on the HSPF for predicting impacts to streamflows, a water budget method was used to determine the potential effects of land use changes on groundwater recharge. The basis of the analysis was an assumption that land use changes that increase the impervious area within a basin will result in a proportional reduction in rainfall infiltration to groundwater aquifers. Since summer low flows are supplied by groundwater sources, a change in groundwater recharge will most likely have a similar effect on the magnitude of low flows in the streams.

The recharge potential for different land uses was based on the infiltration capacity of each soil type. The assumed infiltration rates for different soils were: 0.06 inches/hour for till soil and 1.4 inches/hour for outwash soil, and 0.0 for impervious surface. Airport fill areas were assumed to be equivalent to till. The total groundwater infiltration potential for the entire watershed was calculated by multiplying these maximum infiltration rates by the total land areas of each soil. This resulted in an area-weighted index of infiltration capacity. The relative change in the index between existing and proposed conditions gave the percent change in potential groundwater recharge rate and, by direct correlation, its assumed change on stream base flow rates.

The analysis concluded that, due to the proposed land use changes, potential groundwater recharge rates might decrease by about 7 percent in Miller Creek and by about 11 percent in Des Moines Creek.

UPDATED ANALYSES OF POTENTIAL BASE FLOW IMPACTS

In the EIS analysis, the analysis of groundwater recharge potential predicted up to a 7 percent decrease in base flows in Miller Creek, and up to an 11 percent decrease in Des Moines Creek. For Miller Creek in particular, these estimates differed sharply from the results of the annual flow duration and seasonal flow exceedence analyses that were derived from the HSPF modeling. Those analyses predicted a potential drop in base flows of about 4 percent in Miller Creek and about 10 percent in Des Moines Creek.

Since the 7 percent drop in Miller Creek flows has been frequently referenced in agency correspondence regarding the impacts of the Master Plan projects on Miller Creek, the groundwater recharge analysis was updated and revised. The new analysis incorporated HSPF-derived estimates of groundwater recharge rates for the different soil types and updated estimates of land use areas.

Revised Infiltration Rates. In the original analysis, potential infiltration of a soil type was based on that soil's maximum infiltration rate. In retrospect, this was an overly simplified approach that overestimated the actual infiltration rates for the soils, particularly for outwash. In reality, the intensity of rainfall and characteristics of the soil, such as soil moisture capacity limit the rate of infiltration to an amount is much less than the maximum potential rate.

To derive more accurate estimates of potential infiltration rates for different soils, the HSPF model was run using unit runoff areas to determine where rainfall goes after it reaches the ground. Table A-1 summarizes that analysis. HSPF uses the mathematical functions from the Stanford Watershed Model to model the travel of water through shallow and deep soil layers. When calibrated to a watershed, the HSPF model can simulate the travel of water in soil by separately tracking evapotranspiration, surface water runoff, interflow (shallow subsurface runoff), percolation to groundwater, and the corresponding discharge of these components to the receiving stream.

Base flows in streams are normally supplied by only the groundwater component of the soil moisture zone. The other two components – interflow and surface runoff – are relatively rapid runoff mechanisms that reduce to zero during the dry season. This is not the case, however, for airport fill. For that soil type rainfall entering the groundwater includes interflow in addition to groundwater. This is because the new fill will cover mostly outwash soils, which currently provide a direct connection to the groundwater aquifer. This is currently occurring from the existing runway fill east of Miller Creek, as shown by the many seeps of groundwater in that area. In addition, the structural fill that will be placed for the new runway will be a well-sorted soil mixture that will have good infiltration properties. Thus, the new fill will provide a relatively permeable soil zone that absorbs rainfall for subsequent discharge to groundwater.

Table A-1 describes the amount of water entering groundwater for each soil type as predicted by the HSPF model. For example, about 34.4 percent of rainfall hitting a till-forest land cover will eventually enter groundwater. For outwash-grass, the amount is much higher – 73.7 percent – because there is less evapotranspiration and there are no shallow impermeable layers (till) in the soil to intercept the water before it reaches the groundwater aquifer. For airport

fill, it is estimated that about 63.6 percent of the rainfall will enter the groundwater, which is more similar to outwash soil than till soil. It is noted that very little surface water runoff occurs off of pervious surfaces. Between 3 percent and 7 percent of the total rainfall on the fill surface will drain to the stormwater system as stormwater runoff; the remainder infiltrates or is lost to evapotranspiration. Thus, land use changes (other than paving with an impervious surface) should have a minimal impact on groundwater recharge.

Updated Land Use Areas. Updated land use areas area summarized in Table A-2. These areas were based on a GIS mapping analysis of the airport area using detailed 1"=200' aerial topography. In the original analysis the land use was differentiated only by soil type (i.e., till, outwash, and wetland/saturated); in the current analysis the land cover (forested vs. grass) was also included.

The impervious surface in Table A-1 includes that portion that is considered effective. All roads, existing airport areas, and new airport impervious surfaces were considered to be 100 percent effective. Only the residential houses in the acquisition area were assumed to be less effective (assumed to be 50 percent).

Two tabulations are shown for Miller Creek: the entire watershed and the watershed below SR-518. The purpose of this is explained below.

Water Budget for Groundwater Recharge. Table A-3 summarizes the results of the water budget for determining the potential impacts to groundwater recharge rates. Based on a water budget for the entire Miller Creek watershed, the Master Plan projects are predicted to reduce the stream base flow by an annual average of 1.8 percent. For the Des Moines Creek watershed, the Master Plan projects are predicted to reduce the stream base flow by an annual average of about 7 percent.

However, in the Miller Creek basin, the portion of the watershed that will be affected by the Master Plan projects may contribute a greater share of base flow to Miller Creek compared to the watershed-wide average. Streamflow monitoring conducted by King County indicates that about 80 percent of the base flow in Miller Creek originates in the watershed below SR-518, even though this area represents only about 70 percent of the total watershed area. The upper watershed above SR-518 contributes a relatively smaller contribution of base flow (i.e., 20 percent of the base flow from 30 percent of the basin) due to the greater amount of deep percolation in that portion of the watershed. If only the lower watershed area is used in the water budget calculation, and the resultant multiplied by 80 percent (to reflect that portion of the watershed's share of the base flow), the Master Plan projects are predicted to reduce the stream base flow by a slightly higher amount, or 2.0 percent.

Potential Monthly Changes in Minimum Flow. Review of HSPF modeling output indicates that, during dry years, the potential decrease in stream base flow may be relatively constant throughout the year. If it is assumed that reductions in base flow described in Table A-3 follow that pattern, the base flows in Miller Creek will decrease by 0.05 cfs in all months (based on 2 percent of the average annual dry year flow of 2.4 cfs) and the relative percent

decrease in flows would be lower in the winter and higher in the summer. During December, when the dry year base flow is about 4 cfs, the relative decrease is about 1.3 percent. During August, when the dry year flow is about 1.4 cfs, the relative decrease is about 4 percent. In Des Moines Creek, the 7 percent average annual drop in recharge translates to a reduction of 0.13 cfs (based on an average annual dry year flow of 1.8 cfs). The December and August streamflow reductions are about 5 percent and 13 percent, based on flows of 2.8 cfs and 1.0 cfs, respectively.

However, it is more likely that groundwater does not outflow to the streams at a uniform rate throughout the year. Instead, outflow from groundwater can vary significantly throughout the year, with summer outflow considerably less than the winter outflow. A reasonable assumption would be that base flow rates would decrease at a rate proportional to the base flow rate in the stream. Since the Miller Creek base flow ranges between 4.0 cfs in December and 1.4 cfs in August, with an annual average of 2.4 cfs, it follows that the base flow reductions would follow a similar pattern. Thus, the December base flow in Miller Creek should drop by 3.3 percent (i.e., 4.0/2.4*2.0 percent) and the August base flow should drop by 1.1 percent (i.e., 1.4/2.4*2.0 percent), assuming an average annual decrease of 2 percent. These percentages correspond to 0.13 cfs in December and 0.015 cfs in August. In Des Moines Creek, the 7 percent annual decrease in flows corresponds to an 11 percent drop in December and a 3.1 percent drop in August (0.31 cfs and 0.025 cfs, respectively).

For the purposes of determining the maximum potential reduction of base flows in Miller and Des Moines Creek from the Master Plan projects, it is assumed that base flows will decrease uniformly throughout the year (the more conservative of the two scenarios). Therefore, late summer base flow rates may decrease by up to 4 percent (0.05 cfs) in Miller Creek and up to 13 percent (0.13 cfs) in Des Moines Creek, assuming average annual reductions of 2 percent and 7 percent, respectively. These estimates are consistent with the HSPF modeling results presented in the EIS.

POTENTIAL IMPACT ON WATER LEVELS IN MILLER CREEK

A HEC-2 hydraulic model of Miller Creek was developed several years ago for a FEMA floodplain mapping project. This model was converted to HEC-RAS and then run to determine how much the water level would decrease if the base flow in the stream is reduced. For this analysis, water surface elevations under a flow of 2.0 cfs were compared to the water surface elevations under a flow of 1.9 cfs (a drop in 0.1 cfs, or 4 percent) to simulate the reduced base flow. The 2.0 cfs flow rate represents a typical late summer base flow in the lower reaches of Miller Creek during an average year.

This analysis concluded that water surface elevations in Miller Creek may reduce by 0.01 - 0.02 foot (1/8-1/4 inch) or less if the stream flow is reduced by 4 percent. A hydraulic model of Des Moines Creek is not available, and therefore a hydraulic analysis of that stream could not be performed.

APPENDIX B

BENEFITS OF ACQUIRING WATER RIGHTS ON MILLER CREEK

SEA-TAC AIRPORT MASTER PLAN UPDATE

As part of the acquisition of private properties along Miller Creek, the Port of Seattle will be acquiring the water right permits, certificates and claims associated with those properties. Existing water rights along Miller Creek give the property owners the right to withdraw water from Miller Creek for the purposes of domestic personal use, lawn and yard watering, and commercial irrigation. After acquiring these rights through the process of property acquisition, the Port of Seattle proposes to relinquish them back to the State of Washington as part of the mitigation for the Master Plan projects. Because the water rights allow property owners to divert water directly from Miller Creek during the summer when stream flows are at a minimum, there will be a direct and immediate benefit to the stream when the stream diversions are eliminated.

DEFINITIONS

The terms water right permit, certificate, and claim (from Ecology) are defined as follows:

> **Water Right Permit**: A water right permit is permission given to water right applicants by the state to develop a water right. Water right permits remain in effect until the water right certificate is issued, if all terms of the permit are met, or the permit has been canceled.
>
> **Water Right Certificate**: A water right certificate is issued by the Department of Ecology to certify that water users have the authority to use a specific amount of water for the beneficial use of water specified in the permit.
>
> **Water Right Claim:** A water right claim is a statement of claim to a water use that began before the State Water Codes were adopted and is not covered by a permit or certificate (i.e., vested right).

For the purposes of this analysis, it is assumed that all holders of permits, certificates and claims have equal likelihood of withdrawing water from Miller Creek. Although a water right claim is not a specific legal authorization to use water from the stream, the validity of whether the claim is legal cannot be determined until those vested rights are confirmed through a process known as a general water right adjudication, which is conducted through the Superior Court. Only a relatively few watersheds in Washington have undergone this process. In the meantime, persons with water right claims are assumed to continue to withdraw water. This is

a valid assumption because, for a property owner to file a claim, they must have a current documented water use. Although most claims were filed in the 1970's during claims registration period, it is likely that this water use is still occurring. In addition, it is very likely that more individuals are withdrawing water from Miller Creek, but did not file a water right claim with the State at the time when they had a opportunity to do so.

WATER RIGHTS RECORDED BY STATE

Ecology maintains a database of recorded water right permits, certificates, and claims. A search of those files at the Northwest Regional Office identified five water right certificates and 13 water right claims in the acquisition area. These are listed in Table B-1 along with the current parcel number and property owner. Not all certificate and claims reference a street address or tax parcel number. Also, the name on the certificate or claim often was not the same as the current property owner due to transfer of ownership since the water right documents were filed (the water right typically stays with the property). Therefore, a few of the certificates and claims could not be located precisely. However, it is highly likely that all certificates and claims in Table 1 are located within the acquisition area.

Table 1 lists surface water rights only. The water rights database was also reviewed for groundwater, but it was determined that most or all uses were for domestic use only. It also cannot be determined if these groundwater withdrawals are affecting streamflows. Therefore, the potential benefits of relinquishment of groundwater rights was not evaluated.

ESTIMATE OF WATER USE BY CURRENT WATER RIGHTS HOLDERS

The amount of water currently being withdrawn by the water rights holders along Miller Creek was estimated from the information recorded on the certificates and claims. In general, the documents should identify the maximum instantaneous withdrawal rate, the annual quantity, and the number of acres of irrigation. Because information on the water right claim forms was often incomplete (e.g., the quantity of water used was not specified), the quantity of water being used had to be assumed in many cases. Also, if the rate of withdrawal was specified, it represents only the maximum instantaneous rate that the property owner can divert from the stream. The actual average rate of withdrawal is probably less than the maximum rate allowed.

Of the 18 identified water rights certificates and claims on Miller Creek, all but one are for domestic use or irrigation of about 1 acre or less of land. The allowed instantaneous withdrawal rates for these mostly vary between 5 gpm (0.01 cfs) and 20 gpm. Typically, a water right for a single domestic use is set to 0.01 cfs when a certificate is issued.

Of the five large properties that commercially irrigated (i.e., Genzales, Raffo, Scarsella, Vacca, and Mason), only Raffo has a recorded water right claim. Although the remaining properties do not appear to have a recorded water right or claim in Ecology's files, it is

assumed that the farmer either has a permit that is not filed with Ecology, or feels that they have a valid vested right for the water.

Phil Vacca, whose family has farmed their property (known locally as the "pumpkin patch") along with Mason's and Raffo's property for many years, said that they irrigate their property with municipal water. Although the Raffo property has a water right claim, Mr. Vacca said it has been at least 30 years since they pumped from the stream. These low-lying properties are naturally wet and require only infrequent watering. Mr. Vacca said that the Genzales and Scarsella properties (farmed by Genzales) are irrigated on a regular basis by water that is pumped from Miller Creek. At least one, and probably two (according to Mr. Vacca) pump stations with 5 horsepower pumps are located on the stream. Because they are on private property that cannot be accessed by the Port, the pumps could not be inspected to verify their capacities. The Genzales and Scarsella properties are on higher ground and require more irrigation.

To estimate the average rate of withdrawal from Miller Creek by the property owners, the following was assumed:

- For the 17 domestic users, it is assumed that 50 percent of them are withdrawing at a 0.01 cfs rate at any given time during the critical low flow period in August.
- For the commercial irrigation users, it is assumed that 5.2 acres (the amount of farm area on the Genzales and Scarsella parcels) are irrigated at a rate of 0.008 cfs per acre. This rate is the amount needed to apply of 24 inches of total water use over a 4-month irrigation season. No water use was assumed under the Raffo claim.

Based on these assumptions, the estimated total quantity of water used by the identified water rights holders and the commercial irrigation users is 0.13 cfs. Of this amount, 0.09 cfs is from the domestic users and 0.04 cfs is from the commercial irrigation users. The calculation is summarized in Table B-1.

.ble A-1. Runoff Response for Various Land Cover Types

Total Percentage of Rainfall Entering Surface Water and Groundwater Pathways

	Till Forest					Till Grass					Outwash Forest				
Month	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water
JAN	16.4	2.4	0.1	6.7	7.2	16.4	1.5	0.6	10.1	4.1	16.4	3.6	0.0	0.0	12.8
FEB	11.9	0.5	0.1	5.6	5.7	11.9	0.3	0.5	7.7	3.4	11.9	0.6	0.0	0.0	11.3
MAR	9.0	0.5	0.0	3.8	4.7	9.0	0.5	0.3	5.3	3.0	9.0	-0.5	0.0	0.0	9.5
APR	5.5	0.8	0.0	1.8	2.9	5.5	0.9	0.2	2.5	2.0	5.5	-0.6	0.0	0.0	6.1
MAY	3.0	1.0	0.0	0.2	1.7	3.0	1.3	0.0	0.4	1.3	3.0	-0.6	0.0	0.0	3.6
JUN	2.7	1.4	0.0	0.1	1.2	2.7	1.4	0.0	0.4	0.9	2.7	0.4	0.0	0.0	2.2
JUL	1.3	0.5	0.0	0.0	0.8	1.3	0.7	0.0	0.0	0.7	1.3	0.1	0.0	0.0	1.2
AUG	2.3	1.8	0.0	0.0	0.4	2.3	1.7	0.0	0.1	0.5	2.3	1.7	0.0	0.0	0.6
SEP	4.0	3.7	0.0	0.0	0.3	4.0	3.3	0.0	0.2	0.5	4.0	3.6	0.0	0.0	0.3
OCT	9.1	8.5	0.0	0.0	0.5	9.1	6.9	0.0	1.2	0.9	9.1	8.5	0.0	0.0	0.5
NOV	17.5	13.7	0.0	1.2	2.6	17.5	7.7	0.3	7.1	2.4	17.5	14.2	0.0	0.0	3.3
DEC	17.5	6.2	0.1	4.6	6.6	17.5	2.9	0.4	10.1	4.0	17.5	7.3	0.0	0.0	10.2
TOTAL	100.0	41.1	0.3	24.1	34.4	100.0	29.1	2.4	45.0	23.4	100.0	38.3	0.1	0.0	61.7
Total Entering Streams (percent):					58.9					70.9					61.7
Total Potential Groundwater Recharge (percent):					34.4					23.4					61.7

	Outwash Grass					Airport Fill					Impervious				
Month	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water	Total	Evapo-Transp.	Surface Runoff	Interflow	Ground-water
JAN	16.4	2.5	0.1	0.0	13.8	16.4	4.9	1.7	3.4	6.5	16.4	0.0	16.4	0.0	0.0
FEB	11.9	0.2	0.1	0.0	11.6	11.9	1.9	1.2	2.7	6.1	11.9	0.0	11.9	0.0	0.0
MAR	9.0	-0.7	0.1	0.0	9.7	9.0	0.5	0.5	1.8	6.2	9.0	0.0	9.0	0.0	0.0
APR	5.5	-0.6	0.0	0.0	6.1	5.5	-0.5	0.3	0.8	4.9	5.5	0.0	5.5	0.0	0.0
MAY	3.0	-0.7	0.0	0.0	3.7	3.0	-1.1	0.0	0.1	4.0	3.0	0.0	3.0	0.0	0.0
JUN	2.7	0.0	0.0	0.0	2.7	2.7	-0.6	0.0	0.1	3.2	2.7	0.0	2.7	0.0	0.0
JUL	1.3	-0.5	0.0	0.0	1.8	1.3	-1.5	0.0	0.0	2.8	1.3	0.0	1.3	0.0	0.0
AUG	2.3	1.1	0.0	0.0	1.2	2.3	-0.2	0.0	0.0	2.4	2.3	0.0	2.3	0.0	0.0
SEP	4.0	2.8	0.0	0.0	1.2	4.0	1.7	0.0	0.0	2.2	4.0	0.0	4.0	0.0	0.0
OCT	9.1	6.7	0.0	0.0	2.3	9.1	6.2	0.2	0.3	2.4	9.1	0.0	9.1	0.0	0.0
NOV	17.5	10.7	0.0	0.0	6.8	17.5	11.2	1.1	1.7	3.5	17.5	0.0	17.5	0.0	0.0
DEC	17.5	4.6	0.0	0.0	12.9	17.5	7.5	1.4	3.0	5.5	17.5	0.0	17.5	0.0	0.0
TOTAL	100.0	26.0	0.3	0.0	73.7	100.0	29.9	6.6	13.7	49.8	100.0	0.0	100.0	0.0	0.0
Total Entering Streams (percent):					74.0					70.1					100.0
Total Potential Groundwater Recharge (percent):					73.7					63.6					0.0

Notes:

1. Totals are normalized to total annual impervious surface runoff of 100.
2. Monthly evapotransporation includes upper zone soil moisture that is temporarily stored and released as ET in later months (negative values refer to ET usage from storage).
3. Evaporation from impervious surface and deep percolation to lower aquifers that discharge directly to Puget Sound are not included.
4. "Total Entering Streams" includes surface runoff, interflow and groundwater components.
5. "Total potential groundwater recharge" includes groundwater component only, except for Airport Fill. Potential groundwater recharge for Airport Fill also includes interflow component (in addition to groundwater) because underlying soil is outwash, which provides a direct connection of Airport Fill interflow to the outwash groundwater.

Table A-2. Change in Watershed Land Use Coverage

	Miller Creek (entire watershed)			Miller Creek (below SR-518 only)		
Land Use Type	Existing (acres)	Proposed (acres)	Change (acres)	Existing (acres)	Proposed (acres)	Change (acres)
Till Forest	162.9	108.2	-54.7	162.9	108.2	-54.7
Till Grass	1723.9	1662.9	-61.0	954.9	893.9	-61.0
Outwash Forest	510.6	450.2	-60.4	510.6	450.2	-60.4
Outwash Grass	1312.7	1238.2	-74.5	856.0	782.2	-73.8
Airport Fill	79.2	225.7	146.5	79.2	225.7	146.5
Wetland	99.7	96.6	-3.1	84.7	82.6	-2.1
Effective Impervious Area	1202.2	1313.0	110.8	859.2	970.0	110.8
Total	5091.2	5094.8	3.6	3507.5	3512.8	5.3

	Des Moines Creek (entire watershed)		
Land Use Type	Existing (acres)	Proposed (acres)	Change (acres)
Till Forest	231.8	201.4	-30.4
Till Grass	853.9	809.8	-44.1
Outwash Forest	207.3	205.5	-1.8
Outwash Grass	657.6	645.8	-11.8
Airport Fill	408.3	332.8	-75.5
Wetland	56.7	56.7	0.0
Effective Impervious Area	1409.2	1568.7	159.5
Total	3824.8	3820.7	-4.1

Notes:

1. Existing land use based on 1994 conditions.
2. Proposed land use based on most recent information on Master Plan buildout.
3. Land use data based on detailed aerial topographic mapping for POS properties and acquisition areas, generalized land use data for remaining areas of the watershed, and on regional soil and geologic mapping.
4. For the purposes of this analysis the IWS is included in the Des Moines Creek watershed tabulation under effective impervious area, where nearly all new IWS area will be located.
5. The approx. 4 acre change in total watershed area between existing and proposed condition is due to IWS reroutes.

Table A-3. Water Budget for Potential Changes to Groundwater Recharge and Stream Baseflows

	Miller Creek (entire watershed)					
	Existing Condition (1994)			Proposed Condition (2004)		
Land Use Type	Area (acres)	Recharge Index	Weighted Index	Area (acres)	Recharge Index	Weighted Index
Till Forest	162.9	34.4	56.0	108.2	34.4	37.2
Till Grass	1723.9	23.4	403.4	1662.9	23.4	389.1
Outwash Forest	510.6	61.7	315.0	450.2	61.7	277.8
Outwash Grass	1312.7	73.7	967.5	1238.2	73.7	912.6
Airport Fill	79.2	63.6	50.4	225.7	63.6	143.5
Wetland	99.7	0.0	0.0	96.6	0.0	0.0
Impervious	1202.2	0.0	0.0	1313.0	0.0	0.0
Total	5091.2	—	1792.3	5094.8	—	1760.2

Total Percentage Change in Groundwater Recharge that supplies baseflow to Miller Creek (based on total watershed area): **-1.8%**

	Miller Creek (below SR-518 only)					
	Existing Condition (1994)			Proposed Condition (2004)		
Land Use Type	Area (acres)	Recharge Index	Weighted Index	Area (acres)	Recharge Index	Weighted Index
Till Forest	162.9	34.4	56.0	108.2	34.4	37.2
Till Grass	954.9	23.4	223.4	893.9	23.4	209.2
Outwash Forest	510.6	61.7	315.0	450.2	61.7	277.8
Outwash Grass	856.0	73.7	630.9	782.2	73.7	576.5
Airport Fill	79.2	63.6	50.4	225.7	63.6	143.5
Wetland	84.7	0.0	0.0	82.6	0.0	0.0
Impervious	859.2	0.0	0.0	970.0	0.0	0.0
Total	3507.5	—	1275.8	3512.8	—	1244.2

Total Percentage Change in Groundwater Recharge that supplies baseflow to Miller Creek (based on watershed below SR-518): **-2.5% x (80% of watershed) = -2.0%**

	Des Moines Creek					
	Existing Condition (1994)			Proposed Condition (2004)		
Land Use Type	Area (acres)	Recharge Index	Weighted Index	Area (acres)	Recharge Index	Weighted Index
Till Forest	231.8	34.4	79.7	201.4	34.4	69.3
Till Grass	853.9	23.4	199.8	809.8	23.4	189.5
Outwash Forest	207.3	61.7	127.9	205.5	61.7	126.8
Outwash Grass	657.6	73.7	484.7	645.8	73.7	476.0
Airport Fill	408.3	63.6	259.7	332.8	63.6	211.7
Wetland	56.7	0.0	0.0	56.7	0.0	0.0
Impervious	1409.2	0.0	0.0	1568.7	0.0	0.0
Total	3824.8	—	1151.8	3820.7	—	1073.2

Total Percentage Change in Groundwater Recharge that supplies baseflow to Des Moines Creek: **-6.8%**

Notes:

1. Groundwater recharge index (from Table 2) is a relative measure of a particular soil's capacity to recharge rainfall to groundwater. It is based on a HSPF hydrologic simulation of rainfall runoff from unit-sized parcels of land.
2. The weighted index is calculated by multiplying the acreage of each soil type by its groundwater recharge index, dividing by 100, and then summing the total for all land use types.
3. The total percentage change in groundwater recharge is calculated by dividing the weighted index for the proposed condition by the weighted index for the existing condition, and then subtracting 1.0 from that value to obtain the percent change.
4. For Miller Creek, the recharge rate based on watershed area below SR-518 is based on observation that lower watershed area contributes approximately 80% of the baseflow to Miller Creek, even though this area represents only 70% of the total watershed area.

Table B-1. Water Rights, Claims and Uses in Port of Seattle Acquisition Area

Water Right Certificate	Water Right Claim	Rate (Qi)	Quantity (Qa)	Acres	Parcel	Tax ID.	Site Address	First Name	Owner's Last Name
RESIDENTIAL PROPPERTIES									
	121808 (Lora Lake)	—	—	—	060R	202304-9347	15016 Des Moines Memorial Dr.	William F.	Eisminger
	98247 (Miller Creek)	20 gpm	6.1 acft	1	143R	202304-9060	15618 Des Moines Memorial Dr.	David P. & Frances	Brate
	14424 (Miller Creek)	20 gpm	3 acft	1	214R	725120-0015	15914 Des Moines Memorial Dr.	Karla A.	Kamp, Martin D. Martinez & Thresa
	106884 (Miller Creek)	—	—	—	088R	369680-0015	15419 9th Place S.	Helen V.	Goodmansen
	115026 (Miller Creek)	—	—	—	185R	725120-0045	15823 9th Ave. S.	Carl M. & Nanny E.	Berry
	160107 (Miller Creek)	120 gpm	1 acft	0.6	097R	202304-9071	15454 Des Moines Memorial Dr.	Roy C.	Smith
	117834 (Miller Creek)	15 gpm	1.5 acft	0.75	142R	947530-0010-0100	15600 Des Moines Memorial Dr.		Wind of the Willows Condos
s1-20949c (Miller Creek)		0.01 cfs	1.0 acft		322R	384680-0060	16628 8th Ave. S.	David C.	Longridge
s1-05991c (Miller Creek)		0.01 cfs	—	1.7	311R	384680-0145	16422 8th Ave. S.	Clifford C.	Rhoton
	42012 (Miller Creek)	20 gpm	1.0 acft	0.75	321R	384680-0115	16616 8th Ave. S.	Commander F.X.	Beaudin II
	41157 (Miller Creek)	—	—	—	298R	292304-9196	849 S. 164th St.	Lee & Bonnie J.	Warner
	112315 (Miller Creek)	10 gpm	2.0 acft	0.5	253R	384680-0060	632 S. 168th St.	Pegi	Kobela
	137915 (Miller Creek)	20 gpm	1.0 acft	0.75	246R	384680-0035	16463 8th Ave. S.	John & Joseph	Galando
	14425 (Miller Creek)	5 gpm	1.0 acft	1	182R	202304-9426	actual: 15836, closest: 15820 Des Moines Memorial Dr.	Paul R.	Illes
s1-04903c (Miller Creek)		0.01 cfs	—	0.25	316R	384680-0125	raw land	Richard H./Bette M.	Roullard/Markley
s1-04904c (Miller Creek)		0.01 cfs	—	0.50 ac	244R	384680-0030	16609 8th Ave. S.	Earl D.	Randall & Vearl Sandback
s1-06355c (Miller Creek)		0.01 cfs	—	—	302R	292304-9270	16429 12th Ave. S.	Alfredo & Roberta	Lopez

Total water use: Assume 17 certificates/claims at minimum rate of 0.01 cfs each, assuming only 50% are continuously active.
Q = 17 * 0.01 cfs * 50% = 0.09 cfs

FARM PROPERTIES

55350 (Miller Creek)	25 gpm (not used)	7 acft (not used)	3.5	093R	202304-9229	15416 Des Moines Memorial Dr.	attn: Ray Rosatto	RST Enterprises (Nick Raffo)
none (city water)				055R	202304-9068	15127 12th Ave. S.		Port of Seattle (Mason)
none (city water)				060R	202304-9100	15206 Des Moines Memorial Dr.		Port of Seattle (Vacca)
none (city water)				061R	202304-9099	raw land		Port of Seattle (Vacca)
No permit, but pumps from Miller Creek				062R	202304-9144	raw land	Tony	Scarsella
No permit, but pumps from Miller Creek				068R	202304-9122	15225 12th Ave. S.	Anthony	Genzale, Trustee

Total water use: Assume 5.2 acres total farm (based on 1988 aerial photo) pumped from stream for Genzale and Scarsella properties.
Water consumption: assume 0.008 cfs/acre (equal to 2 acre-feet per acre over 4 month irrigation season)
Q = 5.2 acres * 0.008 cfs/acre = 0.04 cfs

TOTAL WATER USE TO BE RELINQUISHED INSIDE ACQUISTION AREA = 0.13 CFS