**Peter Goldmark**
Washington State
Commissioner of Public Lands

July 7, 2009

Mark Leatham, Vice President & General Manager
Northwest Aggregates
P.O. Box 1730
Seattle, WA 98111

Dear Mr. Leatham:

As Commissioner of Public Lands, I take the sustainable management of Puget Sound very seriously. My obligation to the people of the state of Washington is to provide strong oversight of activities that affect our natural resources. The Department of Natural Resources (DNR) is responsible for the management of 2.6 million acres of state-owned aquatic lands; we work to protect the environment, provide opportunities for recreation, support water-dependent uses, and promote the sustainable use of natural resources. Since taking office, I have directed my staff to ensure all activities authorized under my administration are consistent with guiding principles for sustainable management, based on sound science, in a manner that is transparent to the public and in the public's best interests. During my administration, DNR will work collaboratively with its sister agencies, local, tribal, and federal governments, our stakeholders, and the public, to ensure that our activities as a land manager do not degrade the health of any ecosystem in Washington.

One of DNR's higher priorities is the protection and restoration of Puget Sound. The Puget Sound Partnership's Action Agenda provides a broad framework from which to consider our role and responsibilities. Given the dire environmental health of Puget Sound and the predicted cost to recover it, DNR has serious reservations about the long-term wisdom of expanding industrial development in Puget Sound, particularly within aquatic reserves and other sensitive areas. In the instance of Maury Island and its environs, the Maury Island Environmental Aquatic Reserve Final Management Plan[1] (Management Plan) provides site-specific guidance for measuring all aquatic uses in the area.

The guiding principles, goals and objectives for this unique aquatic reserve affect the manner in which NW Aggregate will be able to commence and conduct its dock and gravel loading operations authorized under the lease signed on December 2, 2008. Ongoing lease authorization is premised upon the assumption that NW Aggregate will be able to adaptively manage its operations so as not to diminish the unique attributes of the Maury Island Environmental Aquatic

[1] *Washington Department of Natural Resources. 2004. Maury Island Environmental Aquatic Reserve Management Plan, October 2004.*

Department of Natural Resources
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Reserve (Reserve). The lease specifically contemplates an ongoing, iterative review of the operations of your project – both at the time of construction and during the entire term of the lease. DNR will actively and closely monitor your activities to ensure that your operations do not degrade the Reserve and its environs, or the Puget Sound in general. Our ultimate and overriding objective is to restore the lease area to its natural condition by the end of the lease term without any loss of aquatic species or important habitat functions and values.

My staff has reviewed the lease, related regulatory permits, and the revised mitigation plan, in the context of the Management Plan. Given this review, I have grave concerns about how your dock and gravel loading operation may affect the health of Puget Sound and the Reserve. The lease requires compliance with the Management Plan which in turn requires the protection, preservation and restoration of the important aquatic ecosystem in the lease area for the entire lease term through performance measures, monitoring, reporting, and adaptive management. NW Aggregate has not submitted sufficient information to demonstrate lease compliance. Your immediate attention to the "Lease Compliance Requirements" enclosed with this letter will assure lease compliance now and make possible mid-course corrections should monitoring identify operational issues that put the Aquatic Reserve and attaining the objectives of the Management Plan at risk. Please submit all required information prior to July 30, or provide an alternative deadline that you will be able to meet and explain the reasons for delay. DNR requests that no further activities proceed in the lease area until DNR is satisfied that NW Aggregate has complied and can comply with lease requirements over the full term of the lease.

After you have had the opportunity to review and respond to the Lease Compliance Requirements, we welcome the opportunity to address any concerns you may have. Your response will reflect your commitment to safeguard the unique aquatic reserve in which you presently have the privilege to operate. Please direct any questions you have to Bridget Moran, DNR's Deputy Supervisor for Aquatics & Agency Resources (bridget.moran@dnr.wa.gov, 360-902-1034).

Sincerely,

Peter Goldmark
Commissioner of Public Lands

Enclosure: Lease Compliance Requirements

cc: The Honorable Governor Chris Gregoire, Washington State
The Honorable U.S. Congressman Jim McDermott

The Honorable Senator Lisa Brown, Washington State
The Honorable Senator Joe McDermott, Washington State
The Honorable Representative Sharon Nelson, Washington State
The Honorable Eileen Cody, Washington State
Bridget Moran, Deputy Supervisor of Aquatics & Agency Resources
David Dicks, Executive Director - Puget Sound Partnership
Phil Anderson, Director – Dept of Fish & Wildlife
Jay Manning, Director – Dept of Ecology
Mary C. Selecky, Director – Dept of Health
Colonel Anthony Wright, Army Corps of Engineers Commander
Captain Suzanne Englebert, USCG/Sector Seattle (Marine Safety Office) Commander
Kirk Triplett, King County Executive
Stephanie Warden, Director-King County Dept of Development & Enviro Services
Scott Moore, Chairman-King County Noxious Weed Control Board
Jeffrey Possinger, Director – King County conservation District
David Fleming, Director - Seattle/King County Environmental Health Division
Ken Berg, USFS, WA ST Field Office Manager
Steve Landino, NOAA WA Habitat Branch Chief
Herman Dillion Sr., Puyallup Tribe Chairman
Mike Collins, Commission Chair – Vashon Parks District
Kathy Fletcher, Director – People for Puget Sound
Jean Bosch, President – Vashon Community Council
Tom Dean, Executive Director – Vashon Maury Island Land Trust
Amy Carey, President – Preserve Our Island
Sue Trevathan, Co-President – Vashon Audubon
John Friars, Co-President – Vashon Audubon
Kristin Swenddal, Acting Aquatic Resources Division Manager
Derrick Toba, Aquatic Resources Assistant Division Manager, Shoreline District

## Lease Compliance Requirements

DNR below outlines substantial concerns and requests the following actions in order to better meet requirements in the Aquatic Lease (Section I), and, with it, the Maury Island Environmental Aquatic Reserve Management Plan (Section II).

### I. Compliance with Surveying, Monitoring, Reporting, Mitigation and Adaptive Management Requirements of the Aquatic Lease

DNR recognizes the submission of the revised Mitigation Plan on January 29, 2009. This submission was an attempt to comply with the additional requirements identified to date:

1. ... macroalgal monitoring surveys....determination of whether significant changes occurs to macroalgae after the facility is built and operating.
2. Extend eelgrass surveys to -30' to "determine whether there is eelgrass out to -30' and confirm (via data points) the farthest waterward extent of eelgrass at the site."
3. "monitor 100% of the eelgrass at the site"
4. Provide revised sampling plan and revised Mitigation Plan to DNR within 60 days.
5. "...provide annual monitoring results to DNR for review."

However, on its own, the Mitigation Plan does not sufficiently describe how the Tenant intends to comply with the obligations imposed by the Mitigation Plan and the lease. While DNR is one of the many authorizing authorities, DNR's interest in assuring lease compliance is paramount because DNR is responsible for managing Tenant's compliance over the entire term of the lease – not just during construction and an initial monitoring period. As such, DNR has the following substantial concerns. These generally relate to: setting performance standards for meeting the goal of "no net loss of function"; designing a statistically rigorous sampling and analysis method that will assure that these standards are being met over the full term of the lease; identifying what constitutes a trigger to begin any needed corrective actions; and finally, identifying actions that will assure no net loss of function is met over the term of the lease.

The following illustrates some of the current deficiencies or gaps in submitted plans and information with respect to eelgrass impacts. The memorandum "Eelgrass data analysis technical memorandum for the Maury Island Gravel Dock Project" (10/16/08, Grette and Assoc.) was submitted to King County to fulfill Condition #49 of the Shoreline Management Substantial Development Permit. It is inadequate for assuring compliance with the lease because it 1) proposes inappropriate density thresholds, 2) does not consider reference data, 3) does not utilize statistical tests to consider variability, 4) does not consider temporal aspects of effect threshold, and 5) limits the analysis to

"core" eelgrass beds. Each of the following sections will address the types of deficiencies and gaps that still need to be addressed to meet the lease requirements.

a) *Need for Performance Standards to Address Compensatory Mitigation if Unanticipated Impacts Occur.*

The Mitigation Plan is being used to meet the requirements of several agencies. It is designed for compliance with the Washington Fish and Wildlife Hydraulic Project Approval, with King County Shoreline Management Substantial Development and Conditional Use Permits, the Washington Department of Ecology Water Quality Certification and Coastal Zone Management Consistency Determination, a Section 10 Permit from the U.S. Army Corps of Engineers and the lease conditions specified by the Washington Department of Natural Resources. DNR recognizes the need to coordinate closely with other agencies.

The revised Mitigation Plan identifies the sequence of actions described in WAC 197-11-768 of avoid, minimize, rectify, reduce, compensate and monitor as its framework and further identifies (on pages 2 and 42) the performance measure of the Mitigation Plan as "to achieve no net loss of habitat functions and values." The plan requires further refinement in order to assure this goal will be met and to provide clear thresholds to determine whether the performance measures will or can be met before operations commence and whether they have been met after they commence. Essentially, while detailed avoidance and minimization measures are incorporated into the barge loading operations, and detailed monitoring plans have been developed for eelgrass, macroalgae, herring spawn, and bathymetry, to date, ***thresholds or 'triggers' for comparing monitoring results and assessing whether impacts have occurred are vague, ill-defined, and in some cases non-existent***.

As the steward of state-owned aquatic lands, DNR has the responsibility to establish standards and outline acceptable mitigation responses. For this particular project, site specific goals and standards (performance measures) need to be set for eelgrass, macroalgae, herring spawn, shading, bathymetric changes, and prop wash. DNR will establish these standards following your response to this correspondence. Otherwise a great deal of effort and funding will be spent on data collection but it will be for naught, and there is a strong potential for disagreement between DNR and Tenant when issues arise. Resolving these issues in advance will facilitate management of the leasehold.

Further, "no net loss of function" for the habitat and species of concern is inadequately characterized. What habitat functions and values are to be considered and measured, over what spatial and temporal scale, and to what degree of accuracy must be defined and clarified. According to the Problem Recognition Process flow diagram contained in Figure 12 (appended), after monitoring analysis and reports are submitted to the agencies, *a determination is made of whether performance standards are met*. If no

performance standards exist, or if any that exist are poorly described, this is impossible to implement.

In addition, without establishing performance standards, DNR's ability to measure Tenant's compliance with the lease (and related regulatory permits) is hampered. The revised Mitigation Plan states that a "specific list of actions that will be taken to remedy specific types of failures at the mitigation site" are not presented in order to maintain flexibility and respond appropriately if impacts are observed. While refraining from identifying response actions may allow flexibility it is unclear how rapid and efficient the response may be. After development of 'triggers' or standards to determine if an impact occurs, it will be necessary to begin an exploration of the range of possible responses depending on the resource impacted and what is understood regarding the cause of impact.

To some extent, it appears that the Mitigation Plan equates "monitoring" with "mitigation" (p. 8, "F" in list). Monitoring is a tool to implement mitigation sequencing and adaptive management and cannot be considered an end in itself. The absence of standards and specific goals implies that monitoring is enough.

Design of a rigorous and efficient monitoring plan cannot be made unless these performance standards are created. Given the unique location in an environmental aquatic reserve, and the lease requirements for long-term compliance with the Management Plan, these performance standards need to be developed BEFORE dock operations commence.

<u>Tenant Action: Please describe Tenant's plan for designing proposed performance standards for meeting the goal of "no net loss of function" of eelgrass, forage fish spawning habitat, salmon migratory corridors, shading and bathymetric changes, and how to remedy failures to meet performance standards during operations, for DNR's review and approval.</u>

*b) Need for Meaningful Monitoring and Reporting for the Full Lease Term;*

The potential of project operations to cause both direct (propeller wash) and indirect (gravel spills, turbidity, sedimentation) impacts to eelgrass and macroalgae gives rise to the need for quantitative monitoring throughout the thirty (30) year term of the lease. Long-term sampling frequency can be adaptively managed through the contingency planning and response process, but needs to be explicitly linked to results of the monitoring. For example, Table 1, Schedule of Monitoring Activities and section 4.2.1 indicate the grid survey (quantitative) eelgrass and "qualitative/quantitative" macroalgae surveying is scheduled to occur only up to three years post-dock construction.

The usefulness of the qualitative eelgrass and macroalgae surveys will depend largely on refining their purpose and establishing detection levels that trigger adaptive mitigation for impacts to aquatic resources. Lacking specific definitions for what "visual observations" constitutes "evidence of spills, prop scour or damage to eelgrass," it is not possible to expect consistency in reporting or being able to compare observations to an accepted scientifically defensible standard. It is unknown what constitutes a "substantial difference in eelgrass distribution or density" observed during dive surveys that will result in notification to the regulatory agencies. Another example is related to observed changes in PAR (Photosynthetically Active Radiation) (PAR), which are to be evaluated in the context of a "preponderance of evidence approach," but no specific criteria describe what will form the baseline for analysis and what variation is acceptable to assess when changes are needed. While PAR measurements may be used to determine if eelgrass is receiving enough ambient light, no instrumentation, method or sampling design has been identified to measure PAR. Therefore, it is unclear how and what kind of observations are to be included in this approach.

<u>Tenant Action: Please document how Tenant can extend the eelgrass and macroalgae surveying for the life of the project to ensure, "no additional impacts to habitat and species identified for conservation at the site" as required by the Maury Island Management Plan.</u>

*c) Need for Clearly Articulated Monitoring Data Interpretation Methods;*

Monitoring data interpretation methods are important because they provide the framework for evaluating monitoring results. For example, the "interpretive criteria" mentioned in the revised Mitigation Plan used to assess whether propeller wash velocities exceed "eelgrass damage thresholds" (page 1) is described in detail in the Barge Approach and Departure Protocol. The shoreline permit issued for the project uses a 5-second average method to measure velocity for determining this threshold. The range appears to be a 5-second mean velocity measurement between 50 and 75 cm/sec. If there was an empirical study where these values were estimated, it should be cited, along with the distance of eelgrass from propeller, and distance of propeller above sediment bed. More importantly, it is necessary to have an agreed upon description of what would be considered "eelgrass damage" that would terminate the Directed Propeller Wash Monitoring described on page 15.

It is not possible to determine whether a "substantial difference in eelgrass distribution or density" (page 23) has been observed without first defining what constitutes a substantial difference. For data interpretation to be useful, the baseline for future monitoring needs to be established. How reference area monitoring compared from year to year to track temporal variability (page 25) will be used to "determine whether changes in distributions and density observed in patches are consistent" is not explicitly described.

Tenant Action: Please provide DNR with a proposal of how monitoring data will be interpreted to serve the requirement that no net loss of habitat function will occur for each aquatic species and habitat being monitored.

*d) Need for Clarification on the Implementation of Operating Criteria*

Many of the operating criteria were developed to avoid direct and indirect impacts of propeller wash. These criteria are mentioned in both the revised Mitigation Plan and the Barge Approach Departure Protocol. Concern was raised on previous drafts of these documents by DNR regarding how the "minimum distance of three feet will be maintained between the bottom of barges and the seabed." This contact prohibition is restated in sections 3.2, 3.3.1, and 3.2.2 of the revised Mitigation Plan but without additional detail to describe how compliance will occur.

Tenant Action: Please document how Tenant will measure and document compliance with the above provisions, including, for example, provisions for on-site monitoring of barge operators and effective measures for preventing non-compliance whether through contracting requirements or otherwise.

DNR is also concerned that gravel barges and tugs may operate shoreward (where there are patches of eelgrass) of the dolphins (page 14 of Mitigation Plan), and is concerned with how this only will occur during "extreme emergency."

Tenant Action: Please clarify this section and describe what events constitute an "extreme emergency" and what controls Tenant has or will establish to keep tug operators waterward of the dolphins, as well as what notification procedure and response will occur in the event an emergency situation causes damage to the eelgrass and forage fish spawning habitat in the area that includes a definition of what constitutes damage.

Tenant Action: Please provide a copy of the Barge Operating Manual for DNR's review and to confirm its consistency with the lease and Management Plan.

**II. Consistency with the Maury Island Environmental Aquatic Reserve Management Plan**

Exhibit B of the lease states that the "tenant shall operate the Permitted Use in a manner consistent with the applicable provisions of the Maury Island Management Plan."

Consistent with that requirement DNR staff reviewed the specific applicable requirements of the Management Plan, identified which portions are already covered by the Mitigation Plan (see above), and which remain to be addressed. Those that remain to be addressed fall into two primary categories; 1) those that relate to site specific

adaptive management required by Section 6.0 of the Management Plan, and 2) those that relate to providing DNR with documentation simultaneous with submissions required by other agencies. With respect to those that address adaptive management and updates to the Management Plan, they should be provided in the format approved by DNR in conjunction with Section III below. The Management Plan states:

> ***Glacier Northwest-Specific Management Provisions***
> *The Glacier Northwest gravel barge loading facility will be treated as an existing use within the reserve. As such, DNR will work cooperatively with the proponent to develop a site plan that over time meets the criteria established in the reserve management plan (Section 5.2). In addition, barge loading will be considered within the reserve if the facility secures all necessary local, state, and federal regulatory permits, and can successfully meet the criteria below:*

*a) Control of Discharges of Stormwater onto State-Owned Aquatic Lands*

Any stormwater, settling pond water, or any process water collected on site from upland facilities should be adequately treated and infiltrated in upland locations to eliminate any direct discharges to marine waters. These facilities should be designed to mimic the natural hydrology of subsurface water and natural surface water flows to receiving waters. The lease requires that stormwater will not be discharged onto state-owned aquatic lands. Environmental documents prepared for the proposal anticipate a stormwater management plan to address these issues, but DNR does not have a copy of this plan.

<u>Tenant's Action: Please provide copies of Tenant's stormwater management plan demonstrating that no stormwater will be discharged onto state-owned aquatic lands. Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.</u>

*b) Hazardous Substances*

Vessel and facility maintenance and repair materials, such as paints, solvents, and cleaners, should be stored and used in a manner and location that will not impact aquatic areas. The water quality certification requires several measures to prevent the project from causing an exceedance of water quality standards, and contains specific conditions for in-water and over-water construction activities.

<u>Tenant's Action: Please provide copies of all documentation and plans required by Ecology, and submit a schedule for ongoing submissions to enable DNR to contemporaneously review all information submitted to Ecology. Please include within</u>

this submission the related maintenance plan to ensure toxic materials are stored and used in a manner that will not result in contamination of the site, a spill management plan should a spill occur, and mitigation. Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*c) BMPs to Eliminate Impacts of Upland Mining and Loading*

All upland mining and loading operations should implement BMPs to eliminate impacts of turbidity on native aquatic vegetation, spawning substrate, and resident and migratory fish populations that utilize the surrounding aquatic areas. The water quality certification contains several requirements to address these impacts.

Tenant Action: Please provide copies of all documentation and plans required by Ecology, and submit a schedule for ongoing submissions to enable DNR to contemporaneously review all information submitted to Ecology. Please describe and document related BMPs that will be used to eliminate impacts of turbidity. Please describe how Ecology will require turbidity to be measured and mitigated to eliminate impacts on the surrounding aquatic area. Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*d) No Net Increase in Shading of the Euphotic Zone*

Existing and new facilities "should not" increase shading of the euphotic zone over existing levels. The euphotic zone was initially defined in the Management Plan as "...the uppermost portion of the water column where light levels are high enough for photosynthesis to occur." The Management Plan then goes on to define the euphotic zone as being the lower limit of eelgrass occurrence (-17.4') and as the compensation depths for eelgrass, diatoms, and phytoplankton as -46.9' MLLW (Battelle 2003). Additional monitoring has been required to -30'. Further refinement is needed for long-term adaptive management because the Management Plan criterion focuses on limiting shading to protect the euphotic zone with the goal of no net increase. After performance standards are developed, it will be important to clarify how this objective will be met.

Tenant's Action: Please propose an adaptive management methodology for defining and then monitoring shading in the euphotic zones over the term of the lease for the dock structure and facilities and gravel loading operations and provide the information relied upon. Please include a research and monitoring plan for this element of the site

specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*e) No Shoreline Hardening or Vegetation Removal*

Shoreline hardening and vegetation removal should be avoided and the lease and Conservation Easements contemplate limited hardening activities to allow for road access to the dock and bluffer protection.

Tenant Action: Please provide a monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*f) Protection of Nearshore Drift Cells*

Facilities should be constructed to minimize hydrologic alterations and disruption of nearshore drift cells and longshore currents.

Because the study[1] (Anchor, 2009) related to drift cell was qualitative in nature, it did not assess potential changes in shoreform, substrate, elevation, and resultant changes in habitat that may take years to observe. Although the Conservation Easements address drift cell protection, and it was an issue for dock design, in order to make effective adaptive management possible, DNR recommends that a set of hypotheses be made concerning possible changes in shoreform, elevation, and substrate from wave shading and obstruction of longshore drift in the context of the whole drift cell, and that a monitoring program be designed for the term of the lease (30 years) to test these hypotheses, and that Tenant develop the reference conditions for future analysis.

Tenant Action: Please provide a research and monitoring plan to protect and ensure "no additional impacts to habitat and species identified for conservation at the site" for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*g) The Elimination of Noise Impacts*

Impacts from construction, maintenance, and operational noise from the facility should be eliminated during known forage fish spawning periods (January through mid-April) if

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[1] *Drift Cell Evaluation, Maury Island Gravel Mining Facility January 15, 2009. Anchor Environmental.*

the facility is located in or near spawning areas.

Tenant Action: Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

Noise impacts from operation and barge traffic should be minimized to the point where it does not result in impacts to species identified for conservation in Section 4.0 and Appendix C, including critical fish and wildlife migratory periods.

Tenant Action: Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*h) The Elimination of Lighting Impacts*

Intermittent lighting on or near the water from barging operations must be minimized to the point where it does not result in impacts to behavior patterns during known forage fish spawning and migration periods.

Tenant Action: Please provide a research and monitoring plan for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

*i) Barge and Loading Operations*

"Propeller wash" especially from large vessels should not result in scouring of the tideland and bedland areas, which disturbs plant and animal life.

The permitting requirements are in the King County Shoreline Conditional Use Permit (DDES File L02SH012 and L02SH013; March 5m 2005, revised June 16, 2005) as set out in Condition 51i-xiv. The proponent will analyze new information from these studies and if impacts are observed, a multidisciplinary group will be formed to address the issue. As stated in the shoreline permit, the group includes King County DDES, WDFW, DNR, Ecology, and Tenant.

Loading operations must adopt practices to minimize spillage and recover any spillage during loading and off-loading to the point where it does not cause impacts to habitat and species identified for conservation in Section 4.0 and Appendix C. It is recognized that recovery of all lost gravel may not always be the most appropriate response and may inadvertently create additional environmental harm.

Tenant Action: Please include research and monitoring for operational management practices that minimize spillage for the enclosed conveyor to document that they will not cause impacts to species and habitats for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands. (See also Section I.d.).

While the issuance of the lease supports a predetermined water-dependent use, (i.e., shipping gravel for gravel mining operations), the lease requires Tenant to provide information, analysis, and documentation that operations do not interfere with the goals and the objectives of the Reserve.

The objectives of the Reserve are stated below. While the objectives of the Reserve were considered in the issuance of the lease, it is also important to understand how long-term operations under this lease can serve the objectives of the Reserve over the life of the lease:

1. *Preserve, or restore and enhance where there are opportunities, native habitats and associated plant and wildlife species, with a special emphasis on forage fish, salmonids, and migratory birds.*
2. *Preserve, or restore and enhance the functions and natural processes of nearshore ecosystems with special emphasis in support of natural resources of the reserve.*
3. *Promote stewardship of riparian and aquatic habitats and species by provided education and outreach opportunities and promoting coordination with other resource managers.*
4. *Support traditional recreational (i.e. boating, water skiing, fishing) commercial i.e. marinas) and cultural uses in and adjacent to the site and promote responsible management of these uses in a manner consistent with the other goals for the reserve.*

Tenant Action: Describe how Tenant can further the four primary Reserve goals in Section 3.0 of the Management Plan for its long-term operations, on a schedule that relates to Tenant's operations, taking into account each ecological feature in the area of Tenant's operations. Please include research and monitoring for this element of the site specific plan required by Section III, to enable adaptive management to integrate changes in scientific knowledge concerning the site, conditions of habitats and species, and experience with existing uses of state-owned aquatic lands.

## III. Site Specific Plan for Lease Activities

The lease requires compliance with the Management Plan, and the Management Plan is to be updated every ten years taking into account Reserve uses, activities and needed improvements. Tenant will need to develop a plan and schedule to enable

lease reporting that coincides with Management Plan updating to enable updating to occur on schedule. It is anticipated that many of the requirements set forth above will help to identify the needed elements for this plan and schedule. DNR will work with Tenant to develop the appropriate plan following completion of these Lease Compliance Requirements.

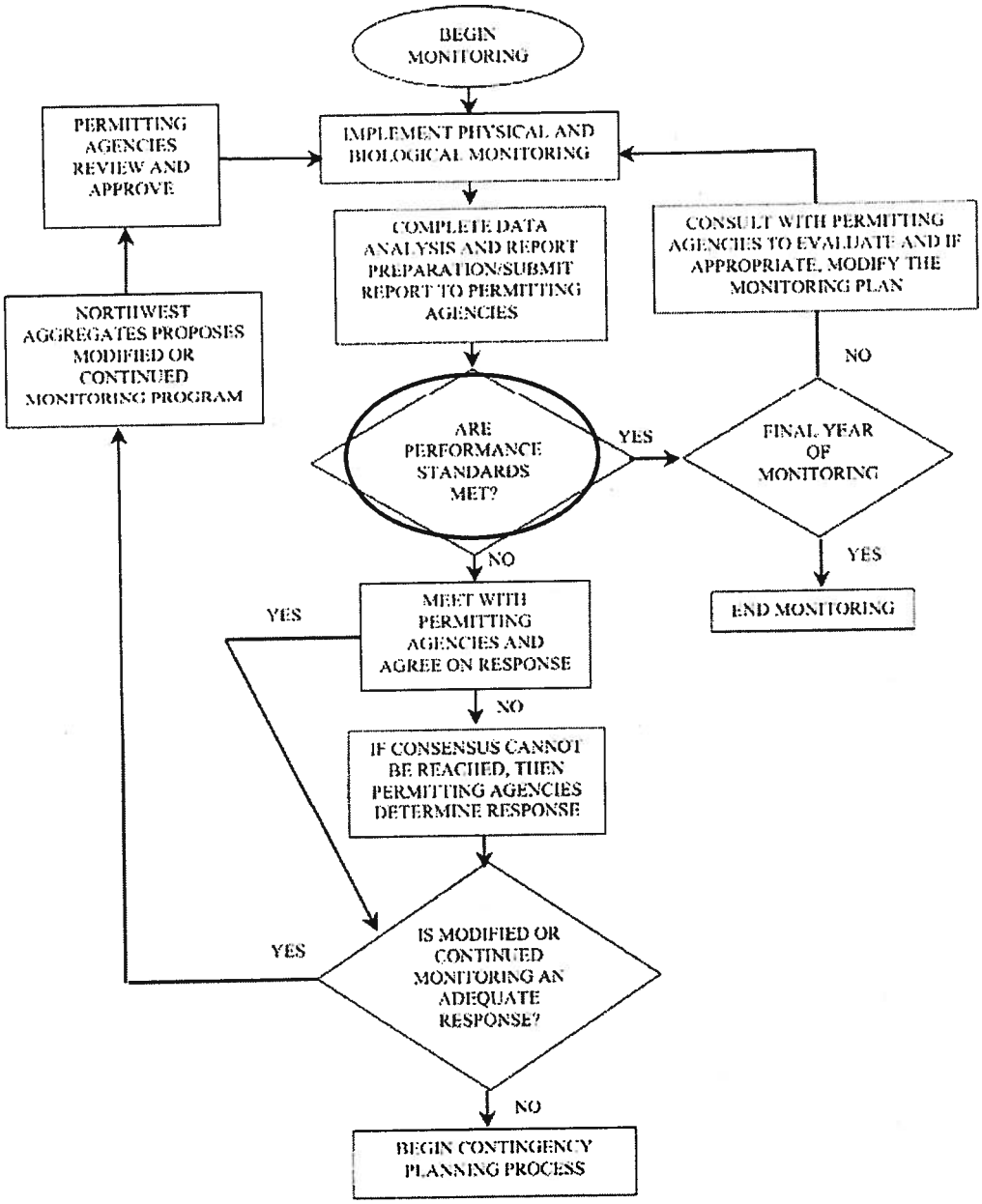


**Figure 12 Problem Recognition Process**