REGIONAL SERVICES

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METRO

December 7, 1998

Carol Durand
City of Portland
Office of Transportation
1220 S.W. 5th Ave, Room 802
Portland, OR 97204-1914

**Subject:** **N. Marine Drive Extension**
**Smith and Bybee Lakes Wildlife Area Access**

Dear Ms. Durand,

In reply to your letter date December 2,1998 concerning the parking lot for Smith and Bybee Lakes Wildlife Area, Metro is not considering relocating it. After the first of the year Metro and the Smith and Bybee Lakes Management Committee will be starting a process to locate a boat launch, vault toilet and small education shelter. We anticipate the siting and design process will take 4-5 months. One of the options will look at redesigning the present parking lot to allow for an extension road to a boat launch area.

The siting and design process will be completed before the final design date stated in your letter. However, the process will not be completed before March 1, 1999. We hope to be able to work with the City and their design team to coordinate any changes decided upon during the process for the new facilities at the wildlife area.

I would appreciate if you would send me and the others that worked on the N. Marine Drive alignment the revised engineering, design, permit and construction schedule. When the alignment was approved by City Council, they ensure us that public involvement would continue throughout the process and that there would be a public hearing on the final design, before the construction contract is issued.

The Smith and Bybee Lakes Management Committee discussed and approved (except the Port of Portland) design criteria for the extension at the August 1998 meeting. That list was sent to Ms. Caswell. Encase you have not received it, I have enclosed a copy.

Thank you in advance for sending a copy of the revised schedule. I look forward to working with you and the City's design team on the extension project.

Sincerely,

Emily Roth

Emily Roth, P.W.S.
Wildlife Area Manager

C: Smith and Bybee Lakes Management Co.

enclosure

To: Smith & Bybee Lakes Management Committee
From: Nancy Hendrickson
Re: Stormwater treatment recommendations for Marine Drive
Date: August 10, 1999

Metro is looking to the Management Committee to provide a recommendation for the discharge from the widening of N. Marine Drive, which will go into Smith Lake. They need this recommendation sooner rather than later, so it has been put it on the agenda for the next meeting, August 24th. For your review, I have prepared a summary of my opinion, based on recent information from the literature on stormwater treatment.

In short, my opinion is that capturing BES' recommended volume (1/3 of a 2-year storm) should work fine. The water captured should be treated with a filtration technology preceded by a sedimentation vault. The following summary is why I hold this opinion:

Volume:
1/3 of 2-year storm actually seems adequate. It is defined as 0.833 inches in 24 hours, 2.5 inches in 24 hours being the full 2-year storm. This represents a capture of:

- 75% of all rainfall for an "average" year
- all the rainfall for 95% of storm events in an "average" year
- the first ½ inch (at least) of all the other storms in an "average" year

Using the premise that most pollutants are in the first flush of the storm, capturing this volume is smart, because the only water that is not captured is the more dilute portions of a very few storms. Some high intensity rain events can cause very turbid runoff because of scouring and erosion. Since this land use is a paved road with curbs, etc, I don't think highly turbid runoff from the larger storms will be a problem.

Pollutant transport:
Pollutants of concern for transportation land uses are heavy metals, organic compounds such as poly aromatic hydrocarbons, phosphorus, and temperature. Metals and organics are hydrophobic, so they tend to stick to particles instead of dissolving in the water. (Phosphorus likes to be in both places: the water and the sediments.)

Recent research has shown that 75% to 90% (by weight) of particles from road runoff are <50 um in size. This is very small – in the silt category rather than the sand or grit category. Furthermore, these particles, because of their higher cation exchange capacity and higher surface area, hold more pollutants than larger particles. Therefore the treatment technology should focus on these smaller particles.

This size of particle is not likely to settle out in a detention basin or swale; it is more likely to remain in solution, discharging to Smith Lake. Capturing just the larger particles by sedimentation vaults, stormceptors, or vortechnics units won't really buy us that much in terms of removal of smaller particles and their associated pollutants. A filtration technology should be used with appropriate pre-settlement to avoid overloading the filters. This filtration system would of course have to be maintained regularly, according to manufacturer's instructions. Just as an example, there is a company in town that makes filtration systems which contain cartridges

or canisters. Different combinations of canisters can be used to aim for different types of pollutants, such as organics, metals, and phosphorus. I believe the maintenance for these facilities would be contracted out to the company that makes them.

This type of approach would satisfy several of the concerns the Management Committee has expressed:

- Treating 1/3 of a 2-year storm with filtration technology should be very effective in removing pollutants from the stormwater runoff before they are discharged to the Lake.
- Contracting the maintenance of the filtration facility out should avoid lack of maintenance problems.
- These types of facilities are underground, or enclosed, so they will not be open ponds breeding bullfrogs, etc.

References:

M.C. Andral, S. Roger, M. Montrejaud-Vignoles, L. Herremans (1999) Particle Size Distribution and Hydrodynamic Characteristics of Solid Matter Carried By Runoff from Motorways. *Water Environment Research*, vol. 71, no. 4, pg. 398.

J.J. Sansalone, S.G. Buchberger (1997) Characterization of Solid and Metal Element Distributions in Urban Highway Stormwater. *Wat. Sci. Tech.*, vol 36, no. 8-9, pg. 155.

M E M O R A N D U M

METRO

Date: August 12, 1999

To: Smith and Bybee Lakes Management Committee Members

From: Emily Roth Emr

RE: Facilities Plan and N. Marine Dr. Widening Project

Forget the paperwork reduction act!!!

Enclosed are:
1. DRAFT Facility Plan
2. 50% Drawings for N. Marine Dr. widening project
3. Memo from Nancy Hendrickson concerning stormwater and a recommendation to the committee.
4. DRAFT letter to Stacy Bluhm from the Management Committee concerning N. Marine Dr. Project.

Please review all the material before the next management committee meeting, which is Tuesday, August 24 starting at 5:30 p.m. at Metro in room 270.

We had originally planned to spend the entire meeting on the Facility Plan, but Metro has asked the Management Committee make a formal recommendation to them on the N. Marine Dr. stormwater treatment design. As stated in Nancy's memo, the committee will discuss her recommendation first and then start discussion of the facility plan.

I will be out of town until Monday, August 23. However, if you have comment on the stormwater recommendation, facility plan and/or the draft letter to Ms. Blumh, please send them to me electronically at: rothe@metro.dst.or.us or through the mail. I will put comments together in time for the meeting on Tuesday. There should also be plenty of time for discussion at the meeting. If you have questions about the stormwater recommendation, please call Nancy at 823-6001. Dean Apostol can answer questions on the facility plan. He can be reached at 661-6152 or by email at wordland@mail.aracnet.com.

The Agenda and last meeting's notes will be sent under separate cover.

See you on Tuesday, August 24 at 5:30pm.

M E M O R A N D U M

METRO

Date: August 25, 1999

To: Charles Ciecko, Director
Regional Parks and Greenspaces

From: Emily Roth, Wildlife Area Manager
Smith and Bybee Lakes Wildlife Area

RE: Stormwater Recommendation for the N. Marine Dr. Widening Project

C: Smith and Bybee Lakes Management Committee

At the regular meeting of the Smith and Bybee Lakes Management Committee on August 24, 1999 the committee discussed the treatment of stormwater runoff into the wildlife area from the N. Marine Dr. Widening Project. The discussion coupled stormwater and spill containment.

The committee recommends that:
The City of Portland, Bureau of Environmental Services' recommended volume (treatment of 1/3 of a 2-year storm event) is sufficient provided the water captured is treated with a filtration technology preceded by a sedimentation system. The filtration treatment should remove the vast majority of heavy metals, organics and phosphorus from the stormwater before it enters the lakes. The maintenance of the filtration facility should be contracted to ensure the manufacturer's recommended maintenance requirements are met. The sedimentation system could also serve as a spill containment facility if engineered appropriately. Through the design process, the committee also strongly encourages the city to address the feasibility of intercepting all untreated public and private outfalls entering the lakes.

Present at the meeting were representatives from the Port of Portland, City of Portland – Bureau of Environmental Services, Audubon Society of Portland, Friends of Smith and Bybee Lakes, the 40-Mile Loop Land Trust, North Portland Neighborhood Association, Private Landowners, and Metro Executive Office. The recommendation was approved 7 in favor and 1 abstention (the representative of the Private Landowners). Representatives from the Oregon Department of Fish and Wildlife and City of Portland – Parks and Recreation Department were not present at the meeting.

If you have any questions about the recommendation, please let me know.

coordinated by:

**Smith & Bybee Lakes Wildlife Area Management Committee**
*Nancy Hendrickson, Chair*

**Metro**
600 NE Grand Ave.
Portland, OR 97232
(503) 797-1870

September 3, 1999

Stacy Bluhm
City of Portland
Department of Transportation
1120 SW 5th Ave
Portland, OR 97204

Dear Ms. Bluhm,

Members of the Smith and Bybee Lakes Management Committee (SBLMC) and Metro Regional Parks and Greenspaces staff have been involved in the location and design of the North Marine Drive widening and extension project since October 1996. Through participation in technical and citizen advisory committees, open houses and numerous meetings the concerns of the management committee for the protection of the lakes have been articulated and discussed. In various letters addressed to Ms. Jeanne Caswell, Metro and the SBLMC listed their priority issues as:

- Habitat Conservation – wildlife and native vegetation protection and enhancements, with special attention on the western painted turtle. Noise abatement, buffers and wildlife corridors were given extra consideration.
- Stormwater Management – listed as a 303(d) water quality limited body by the Oregon Department of Environmental Quality, it is important that the any stormwater discharging into the lakes is treated to remove organics, heavy metals and nutrients such as phosphorus.
- Spill Containment – ensure that a spill on any toxic or hazardous material from trains and trucks will be contained and will not enter the wildlife area.
- Public Access – the wildlife area parking and Interlakes Trail access not be blocked or limited.
- Public Safety – safe access for all users entering from and exiting to N. Marine Dr. The committee requested that a traffic signal be installed at the entrance to the parking lot.
- Recreational and Educational Use – the experience of the users not be adversely impacted by increased noise levels from the road.
- Construction – that the road work, habitat protection and recreation facilities be built concurrently to minimize the impacts to the wildlife and users of the area.
- Lighting – minimal light entering the buffer and wildlife areas.

The agreed upon alignment, widening the road substantially to the north and building a bridge over the railroad tracks, addressed many of the SBLMC priority issues. The consequent design meetings with members of the technical and citizen advisory committees have also been beneficial in working out the details for the alignment. The berm-wall noise buffer with the 40-Mile Loop Trail built on top of the berm reduces the noise impacts and reduces encroachment into the wildlife area. Underground stormwater facilities also reduces impacts to the wildlife area and eliminates the potential problems associated with above ground bioswales. The use of native vegetation along the south side will enhance habitat values.

The SBLMC still has design concerns with the proposed stormwater treatment, length of the berm-wall noise buffer and public safety.

*Stormwater*
The City of Portland, Bureau of Environmental Services' recommended volume (treatment of 1/3 of a 2-year storm event) is sufficient provided the water captured is treated with a filtration technology preceded by a sedimentation system. The filtration treatment should remove the vast majority of heavy metals, organics and phosphorus from the stormwater before it enters the lakes. The maintenance of the filtration facility should be contracted to ensure the manufacturer's recommended maintenance requirements are met. The sedimentation system could also serve as a spill containment facility if engineered appropriately. Through the design process, the committee also strongly encourages the city to address the feasibility of intercepting all untreated public and private outfalls entering the lakes.

*Public Safety*
To facilitate public safety with the widening of N. Marine Drive to 4 lanes with a center turn lane, the SBLMC is proposing to relocate the parking lot and create one point of entry and exit onto N. Marine Dr. In working with you and the consultants on the project, it is anticipated that the entry road will be moved to the east of the present location, across from an existing driveway on the north. In addition to the planned pedestrian island and signage, the SBLMC recommends a vehicle, bicycle or pedestrian activated light be installed that would ensure that all users could safely enter and exit the wildlife area. In addition a reduction in the speed limit and strict enforcement would enhance safety in the area.

*Lighting*
There has not been any discussion on lighting during the design phase of the project. For the area adjacent to the wildlife area, all lights should be directional away from the lakes.

*Length of the Berm-Wall Noise Barrier*
As discussed in the design committee meetings, the SBLMC strongly endorses the recommendation that the berm-wall be built to the edge of the railroad tracks. The cost of extending the wall is a very small expense compared to many other aspects of the project. Since it is not known when the railroad overpass will be built, the berm-wall is important for noise reduction and wildlife protection.

The SBLMC appreciates the effort and attention you and the consultant team have put forward to protect the wildlife area with the widening of N. Marine Dr. We would like to continue working with you to resolve these final concerns. If you have any questions or comments, please contact Emily Roth, Wildlife Area Manager for Smith and Bybee Lakes, at 797-1515.

Sincerely,

Nancy Hendrickson

Nancy Hendrickson, Chair
Smith and Bybee Lakes Management Committee

C: Emily Roth, Metro Regional Parks and Greenspaces
Charles Ciecko, Metro Regional Parks and Greenspaces
Charles Hales, Commissioner, City of Portland
Mike Thorne, Port of Portland
Mike Burton, Metro

CITY of PORTLAND
OFFICE of TRANSPORTATION

Charlie Hales, Commissioner
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Brant Williams, City Engineer
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September 27, 1999

Nancy Hendrickson, Chair
Smith and Bybee Lakes
Wildlife Area Management Committee
Metro
600 NE Grand Avenue
Portland OR 97232

Dear Nancy:

Thanks so much for your letter earlier this month expressing your support of many elements of the North Marine Drive widening project that have been agreed upon to date and outlining those elements that are still a concern for you. I think that I can alleviate some of your concerns now while other concerns need further investigation or design before we will know the answers to them.

## Stormwater

### Sedimentation Systems

The proposed drainage system includes all catch basins along the roadway being constructed with an 18" sump, when utility conflicts can be avoided, to achieve sedimentation prior to stormwater entering the main storm drain. Further, the proposed water quality facility, the StormFilter, provides a measure of sedimentation in a forebay, prior to stormwater entering the filter chamber. The combination of sumped inlets and the StormFilter forebay will provide pre-treatment of storm runoff, and significantly reduce the sediment loading to the water quality facility, and consequently to the downstream receiving waters.

Due to the layout configuration of the proposed hazardous materials spill containment and water quality facilities (different branches off of the main storm drain) it would be difficult to utilize any storage volume for spill containment other than the spill containment vessel. However, in-line storage in the system upstream of the vessel would be available, and utilized, if the spill containment vessel volume were exceeded.

### Water Quality Treatment

BES establishes design criteria for treatment levels of stormwater, and the criteria call for facilities to achieve a given percentage removal of Total Suspended Solids (TSS), depending on specific treatment requirements. Any particular water quality treatment facility will be capable of removing a range of metals, organics, and phosphorus, depending on flow, pollutant loading, and numerous other factors. The BES water quality treatment requirements are designed to achieve a pollutant removal efficiency in excess of a majority of pollutants from storm runoff, for the design water quality storm. It is our assumption that our water quality treatment system, as proposed per BES design criteria, will meet the desired goals of Metro's Title 10.

Regular maintenance of water quality facilities is the best method to maintain the highest pollutant removal efficiencies, regardless of the facility type.

**Treatment Facility Maintenance**
Maintenance of the proposed water quality facility can be performed by the manufacturer under contract with the owner. My understanding is that BES will require a three-year warranty on our project elements. I will initiate discussions with BOM and BES now on the subject, however, I am assuming that final resolution on maintenance arrangements will not be determined until we are in that contract warranty period. It is then that we would have a better understanding of the maintenance needs.

**Modification of Public and Private Stormwater Outfalls**
Preliminary design of the drainage system included an assessment of all public and private stormwater outfalls to the lakes, and a determination whether it was hydraulically feasible to intercept and treat the discharge. Runoff from all public outfalls will receive water quality treatment. Of the five public outfalls discharging to the lakes, three will be removed and the remaining two will be utilized as outfalls, subsequent to water quality treatment. All roadway runoff to the lakes will receive treatment. However, the private outfalls within the project area are too deep to intercept and route flows to a treatment facility with the proposed new storm drain system. This is because private outfalls were not designed as part of a water quality treatment system, but were designed to meet minimum cover requirements for pipes. The proposed system is relatively shallow, to compensate for the substantial hydraulic head drop that is necessary across filteration-type water quality facilities, and still utilize existing public outfalls.

**Public Safety**

Mike Coleman is the city's traffic engineer (@ 823-6838) that will be looking into the possibility of adding a traffic signal at the wildlife area's relocated driveway as well as the possibility of reducing the legal speed in the vicinity of the driveway. His desire is to provide an investigation that is broad and thorough enough to understand the severity of the future traffic conditions. Mike will give you or Emily Roth a call to arrange a time to look at the project area together. He tells me that a little bit of time with those who are most familiar with the area will be a big help to him in his review and that he will be in touch with you in the next week.

**Lighting**

We will require that lighting be designed to meet minimum City design standards, and will do what we can to minimize the light spillage into the E-zone. The proposal would be to install cobra heads similar to those that exist on the north side of the road today. Once we are further into the design, we will be better able to comment on light intrusion into the E-zone.

**Length of the Berm-Wall Noise Barrier**

In light of the fact that we do not have any guarantee of when the railroad overpass will be built, we felt that we should make every effort to acquire funds to extend the noise barrier to the rail. Thus, we are currently carrying it in our cost estimate and are trying to obtain monies to have it installed in our contract. Of course, because we are over-budget, we have had to evaluate many different cost reduction proposals. This information will be share with you at our upcoming workshop on September 29th.

In closing, I want to express my appreciation to you and other members of the Smith and Bybee Lakes Management Committee for all your assistance in helping us to develop a project that was a reasonable balance of environmental concerns and transportation safety and access. Pulling this project together has been a great challenge and I am thankful to have had so many persons that were willing to take the time to work with us to establish this balance. I hope that this adequately addressed some of your concerns. We will be in touch with you as we progress with the design so that the remaining issues can be better addressed. Please feel free to call me at 823-7723 if you need any further information.

Sincerely,

Stacy L Bluhm

Stacy L. Bluhm
Project Manager

c: Mike Burton, Metro
Charles Ciecko, Metro Regional parks and Greenspaces
Tammy Cleys, Bureau of Environmental Services
Charles Hales, Commissioner, City of Portland
Greg Jones, Bureau of Transportation Engineering & Development
Emily Roth, Metro Regional Parks and Greenspaces
Mike Thorne, Port of Portland
Brant Williams, Bureau of Transportation Engineering & Development

## Hendrickson, Nancy

**From:** Elaine Stewart [stewarte@metro.dst.or.us]
**Sent:** Friday, April 07, 2000 2:29 PM
**To:** Stacy@trans.ci.portland.or.us
**Cc:** Nancyh@bes.ci.portland.or.us
**Subject:** North Marine Drive

Hi Stacy:

Thank you for reviewing the 90 percent design specifications for North Marine Drive near Smith and Bybee lakes with Nancy Hendrickson, Peter Teneau and me. I was glad that Laura Herbon was there to discuss the landscaping part of the plans.

To summarize the points we discussed:

- The project needs to include re-striping the Smith and Bybee lakes parking lot and post the bus-only parking area (at project's expense).
- Street lighting must be focused down and away from the wildlife area, and should include appropriate shielding to avoid light pollution of the wildlife area. The lighting need not shine directly into the wildlife area to affect wildlife; indirect artificial light can alter wildlife behavior.
- Catchment inserts such as "silt-sack" should be placed in catch-basins, and should be regularly maintained, inspected frequently (especially during rain events), and disposed of properly.
- Any fertilizer that is used near the wildlife area should be minimal, temperature-sensitive and slow-release.
- Road construction near Smith and Bybee lakes will occur outside the March-July time period (Emily Roth told me about this; I did not see it in the design specs).
- The construction contractors must be willing to work with me to establish protocols for interactions with turtles. I don't see this as a problem, especially since construction will occur largely outside the window of greatest turtle activity, but we need to have some arrangements in place for handling wayward and/or injured animals.

Please don't hesitate to call me at 797-1515 if you have any questions or need clarification about any of the items.

-Elaine Stewart
for Smith & Bybee Lakes Management Committee

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# Memorandum

May 15, 2000

To: Stacy Bluhm, 106/800
From: Lisa Elbert, 106/800

Subject: Marine Drive

In response to the issue of lighting adjacent to Smith and Bybee Lakes, I would like to volunteer the following comments regarding the design of the lighting system and fixture selection.

On Marine Drive, condition "E" of the Land Use Review indicates that *light fixtures placed within the environmental zone shall be shielded so as to prevent any unnatural light from entering the resource areas south of the proposed noise wall.* This condition is not practical. Light tends to reflect and bounce off of surfaces, resulting in areas that are lit, even though they are not directly exposed to the light. For this reason, even if shielding is installed in an effort to reduce light spillage into the E - Zone, nothing short of installing a 35 ft tall barrier wall will ensure that absolutely no light spills into this zone. The question is not if, but rather how much light will spill into the E-Zone.

Our calculations suggest that the presence of the 4 ft berm topped with a 4 ft barrier wall will result in a dark shadow being cast into the E-zone. Beyond this shadow, however, there will be some light. Most of the lighting that is expected to spill behind the wall is similar to the level of lighting that might be expected to be provided by the moon on a clear night, and is not considered to be extreme or an unnatural level of lighting. The area immediately behind the fixtures, would be somewhat brighter than naturally occurring light, but the lighting level would fade quickly moving away from the light.

The lighting fixture that has been selected is a "flat glass full-cutoff" cobrahead fixture that lacks an up-light component, therefore not contributing to light pollution of the dark sky. One feature of the flat glass fixture is that it is very difficult to see the light source from a distance, therefore helping to minimize the impact on wildlife in the area. The fixtures that are used will be 250W, high pressure sodium, with a resulting spacing of approximately 200 ft between fixtures.

The City provides lighting primarily to light the street area - not sidewalks or pedestrian pathways. Lighting generally does spill into the pedestrian areas, however, providing a more easily seen walkway. Lighting on a walkway can help to illuminate potential hazards or obstacles in a pedestrians path, and therefore is commonly thought to be beneficial. Pedestrians are a vulnerable user of the transportation network, and

providing easily seen pathways helps to minimize tripping hazards, and provides a feeling a security.

It is unknown what the impact of installing "shielding" on the cobrahead fixtures adjacent to the E-Zone would have. Shielding may reduce some light into the E-zone, but will NOT eliminate it. Shielding would also likely have a NEGATIVE impact on lighting on the pedestrian walkway - which in this area is set back from the curb a fair distance. To reduce light spillage into the E-zone, pedestrian safety and comfort levels may be compromised.

& it's a matter of how much, as you said before

The City has never installed shielding on lights, and with reductions in operating and maintenance funding, is not prepared to maintain such a fixture.

The lights that have been selected to be used on Marine Drive will have a minimal impact on the surrounding area, light spillage behind the wall will be similar to moonlit levels, and will provide adequate lighting for pedestrians. While it is unknown what impact the installation of shielding would have on the lighting levels in the E-Zone, anything that would reduce lighting within the E-zone would most certainly also reduce lighting for pedestrians - perhaps below safe levels. For these reasons, it is our position that condition "E" of the Land Use Review should be modified to recognize the properties and importance of lighting, and the minimal impact on the E-Zone that the proposed lighting will provide.

cleverly written but does not △ the fact that a simple shield would do the job.

STL:/Lisa/Projects/N/Marine Drive/Memorandum.DOC

approximately 12 street lights

Bill Back has committed to putting up shields

**Smith & Bybee Lakes Wildlife Area Management Committee**

*Nancy Hendrickson, Chair*

Coordinated by:

**Metro**

600 NE Grand Ave.
Portland, OR 97232
(503) 797-1515

June 21, 2000

Stacy Bluhm
PDOT
1120 SW 5th Ave., Suite 800
Portland, OR 97204-1971

Dear Stacy:

The Smith and Bybee Lakes Management Committee would like to reiterate its concern about light pollution of Smith and Bybee Lakes Wildlife Area that would occur under the current design for the North Marine Drive widening project. This committee has expressed its concern repeatedly on several occasions during the design process, and we were surprised and disappointed to hear you say at our May meeting that there were no plans to modify the lighting design to minimize light pollution.

You told the committee that the streetlights would cast light into the wildlife area that is equivalent to a full moon. This is hardly a natural level of lighting – the Portland area experiences few clear nights with a full moon in any year. Casting this much light into the wildlife area every night is likely to have a significant effect on wildlife behavior and habitat use.

We would appreciate a response from PDOT including:

- Information on how far into the wildlife area the full moon effect would extend
- Alternative light fixtures that could minimize light pollution more than the selected fixtures
- Information on retrofitting options for the selected and other fixtures, particularly in light of the comment, made at the May 23rd Management Committee meeting, that the Port and PDOT have shielded streetlights in response to customer complaints. This shielding approach sounds like a potential solution.
- A commitment to retrofit the fixtures if PDOT does not change the current design.

It is difficult for us to believe that street lighting could not be designed to minimize light pollution at Smith and Bybee Lakes Wildlife Area. We would like to remind PDOT that preventing unnatural levels of light from penetrating the wildlife area was listed as a condition on the Land Use Review for this project. Simply dismissing it as impractical or inconvenient is not acceptable.

Sincerely,

Nancy Hendrickson

Nancy Hendrickson, Chair

N. Marine Drive Review
Issues Raised during Previous Meetings

1. Stormwater treatment throughout the project and water quality deterioration.
   - Area directly adjacent to the wildlife area: what standard to meet - the BES Water Quality standard in the new manual (treatment of 1/3 of the 2 year storm) or something more stringent? How does Metro's Title X for Parks and Greenspaces fit in?
   - Project past the RR tracks - stormwater will be discharged into the Columbia Slough section within the wildlife area. At the present time, only the stormwater from the new pavement will be treated, not from the existing pavement.
2. The committee requested a spreadsheet of costs – the City will have one available next week, August 2-6. Stacy Bluhm will be sending one over.
3. Concern for safety issues – Pam Arden brought up the possibility of a light at the entrance/exit to the wildlife area.
4. All components agreed upon in the *draft* document prepared by the City of Portland are considered part of the overall project design of the alignment.
5. Encroachment into the wildlife area with the road widening to the south.
6. Need for the final design to be approved by the Portland City Council.
7. Reduction in posted road speeds along Marine Dr.

The pre-application conference (PC99-180) for the North Marine Dr. project has been scheduled for:
**September 7, 1999 (Tuesday)**
**10:30 A.M.**
**1900 SW 4th Ave., Suite 4100**

The management committee discussed putting together a letter to the City expressing design components it is satisfied with, issues that still need to be resolved and other design requests to be considered in the project.

Linking of 2 projects
Budgeting
Stormwater