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Coordinated by:

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

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

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**Smith & Bybee Lakes Management Committee Meeting**

5:30 p.m. - 7:00 p.m., Tuesday, September 26, 2000  
Metro Regional Center, Room 270  
600 N E Grand Ave.  
Portland, Oregon 97232

**AGENDA**

<i>Welcome; Introductions Review and approval of August meeting notes</i>	<b>5:30 - 5:35 pm</b>
<i>Discussion - Budget sub-committee for 2001-02 budget - Elaine Stewart</i>	<b>5:35 - 5:45 pm</b>
<i>Presentation – Water &amp; sediment quality at Smith &amp; Bybee Lakes &amp; surrounding sloughs - Paul Vandenberg, Frank Wildensee, &amp; Nancy Hendrickson</i>	<b>5:45 - 6:15 pm</b>
<i>Report - Water control structure sub-committee - Troy Clark</i>	<b>6:15 - 6:45 pm</b>
<i>Updates</i>	<b>6:45 – 6:55 pm</b>
<i>Discussion - Setting agenda items for October meeting</i>	<b>6:55- 7:00 pm</b>

Enclosures:  
August Meeting Notes  
Copy of letter from PDOT dated 8/23/00

## Smith & Bybee Lakes Management Committee Summary Meeting Notes

Smith & Bybee Lakes Wildlife Area  
September 26, 2000  
5:30 PM

### In Attendance:

Nancy Hendrickson *	City of Portland, BES
Jim Morgan *	Metro Parks & Greenspaces
Denise Rennis *	Port of Portland
Patt Opdyke *	North Portland Neighborhoods
Peter Teneau *	Friends of Smith & Bybee Lakes
Jim Sjulín *	City of Portland Parks
Dennis O'Neil	Metro Regional Environmental Management (REM)
Paul Vandenberg	Metro Regional Environmental Management (REM)
Troy Clark *	Portland Audubon Society
Janice Newton	Portland Dept of Transportation
Mikey Jones	Citizen
Patricia Sullivan	Metro Parks & Greenspaces
Frank Wildensee	City of Portland, BES
Bill Briggs *	Merit USA Inc
Elaine Stewart	Metro Wildlife Area Mgr
Pam Arden *	40 Mile Loop Trust

\* - voting member

### Welcome; Introductions

Chair Nancy Hendrickson, suggested a 5:15 pm "early arrive time" to meet and mingle, if members so choose, so that the meeting can begin promptly at 5:30 pm.

### Budget Sub-Committee for FY 2001-2002

In response to Elaine Stewart's request for volunteers for a sub-committee on the FY2000-2001 budget, Patt Opdyke volunteered her services. With a committee of only two, Stewart may "draft" additional members.

### Water & Sediment Quality at Smith & Bybee Lakes and Surrounding Sloughs

Paul Vandenberg, a Senior Planner in Metro's REM Department, gave a detailed presentation on environmental monitoring within the wildlife area. He divided his presentation into three parts: 1) water quality, 2) sediment quality and 3) landfill leachate (see attachments). The data presented as graphs included water/sediment quality contaminants that were selected based on criteria such as: consistency of detection, potential concern based on the 1994 risk assessment of the wildlife area, Columbia Slough TMDLs, available standards, and representative of the areas of interest.

### Water Quality

Metro monitors surface water quality in two ways: continuous monitoring of standard indicators of water quality, and periodic grab sampling of surface water for nutrients, biological parameters and metals.

Continuous monitoring is done at the Lombard Avenue Bridge, the east end of the North Slough (N. Slough East) and the North Portland Road Bridge. Monitoring instruments record data every thirty minutes. Data from October 1998 through December 1999 were summarized. Violations of dissolved oxygen (DO) standards for the Willamette River Basin (Oregon Administrative Rules) occurred most frequently at N. Slough East, and those were during the dry season when shallow and stagnant water

conditions exist at that location. DO violations at N. Portland Bridge were fewer, and were least at Lombard Bridge, occurring only in the wet season at both of those locations.

Specific conductance and temperature are also measured continuously. Higher levels of these parameters are associated with poor water quality. N. Portland Bridge data showed the highest average for both specific conductance and temperature. Average specific conductance was lowest at N. Slough East. Average temperature was lowest at Lombard Bridge, reflecting Willamette River water at that location. Temperature violations occurred at all three locations in the dry season.

Surface water grab sample data from 1996 to 2000 for the lakes were compared with data for Lombard Bridge, N. Portland Bridge and N. Slough East. Vandenberg noted that samples from Lombard Bridge were collected at high tide and therefore represent Willamette River water. Phosphorus levels in the lakes and Columbia Slough were similar and generally above a DEQ (not-to-exceed) target level, with the exception of Lombard Bridge where levels were generally lower and consistently below the target level. Phosphorus was identified in the 1994 risk assessment as a pollutant of concern because of its potential to increase eutrophication of the lakes. Like the phosphorus data, total dissolved solids were generally lower at Lombard Bridge than the other locations, and more frequently below a guideline for the Willamette Basin. Nitrate levels were highest at N. Portland Bridge and Lombard Bridge.

#### Sediment Quality

Metro collects sediment samples once per year at various locations in the wildlife area. Data from 1993-2000 for the lakes and the North Slough were compared. Data from the main channel of the Columbia Slough collected during the 1994 Columbia Slough Sediment Study were also shown. Lead, arsenic and chromium were similar or higher in the lakes compared to the west end of the North Slough and main channel Columbia Slough. At N. Slough East, levels for all three metals were consistently lower and more frequently below freshwater sediment standards than the other locations.

Vandenberg noted that data from Landfill bridge showed substantially higher levels for these metals than the locations represented on the graphs, and that those high levels were assumed to be associated with a CSO (combined sewer outflow) close to that sampling location.

Organic contaminants are detected inconsistently and at low levels, and standards are generally not available. Data for the contaminant DDE was presented because it was detected relatively consistently, a standard is available, and DDT/DDE is a Columbia Slough TMDL parameter. DDE levels in the lakes and North Slough were similar. Levels in Pond-1 ("Turtle Pond" near Marine Drive) were elevated well above those at the other locations and appear to be increasing.

#### Landfill Leachate

To give the committee an idea of available information related to the potential effects on lake water quality resulting from reconnection of the lakes to tidal flow, Vandenberg presented information compiled from various cited sources, including groundwater and surface water models, the 1994 risk assessment, and groundwater monitoring data (see attachments). He noted that the cited sources contain a great deal of technical information and are available for reference. It was emphasized that information from the models is based on simulation and is therefore hypothetical.

Vandenberg stated that monitoring in the wildlife area can provide a tool for decisions related to hydrology management and project planning. During a question and answer period, he described two main objectives of the monitoring, including: 1) To assess effects of the landfill on the surrounding environment, consistent with permit-based regulatory procedures; and 2) To meet policy-based objectives of the Smith & Bybee Lakes Natural Resources Management Plan. Stewart added that she and Vandenberg have discussed monitoring related to meeting the second objective, including "stepping up" data collection, if necessary, through seasonal monitoring in selected areas.

Nancy Hendrickson stated that, if the sub-committee has specific questions concerning the modeling projects, the questions should be directed to those persons or groups which completed the projects. It is possible to invite them to a future meeting for that purpose.

### **Water Control Structure Sub-Committee**

Troy Clark reported that this sub-committee had been unable to decide on parameters for producing a scope of work for the feasibility study on the so-called "fifth option" of the water control project. That fifth option is to directly connect the western arm of Bybee Lake to the Columbia Slough with an adjustable weir/tide gate. The purpose of this is to create a circular water flow to prevent North Slough water from entering the lakes, if this were necessary. The most important of the parameters to be modeled, according to Clark, are hydrology and sediment transport. A discussion followed concerning objectives and evaluation methods.

Stewart reminded the sub-committee members that the following materials are important reading: "Natural Resources Management Plan for Smith & Bybee Lakes", "Diagnostic and Feasibility Study of Smith & Bybee Lakes" and the packet Stewart prepared for the first sub-committee meeting. She emphasized that the management plan is very clear on the restoration goal for the lakes, and the science and technical information are also very clear on how to restore the lakes. The references cited above will assist members in understanding the restoration plans and the reasons that staff is not recommending a second structure at the southwest arm of Bybee Lake.

Jim Morgan spoke of the Smith & Bybee Lakes Technical Advisory Committee (TAC) and its contribution to this process. That group is made up of people with specific backgrounds in the various disciplines needed to make the type of technical decisions required for management of the lakes (including representatives of all state and federal natural resource agencies). The TAC spent four years reviewing and analyzing the technical data before generating its recommendation in 1995, which was then forwarded to this Management Committee (MC). Morgan perceived an effort by members of the MC to educate themselves (in a few, very condensed sessions) on issues that took the TAC many years of training and of examination to grasp. He felt the MC should be able to rely on the TAC and its recommendations and that the MC's short meeting time could be better spent moving forward on a number of other management issues.

A motion was made and passed that the Management Committee direct the water control structure sub-committee to articulate goals and focus the feasibility study to produce an outline for the scope of work by the next meeting. There was one abstention.

### **Updates**

- Suggestions are still being requested by Dennis O'Neil for the location of the removal of 5,000 to 6,000 cu. yds. of dirt or sand to balance the cut and fill caused by the bank stabilization effort at the landfill.
- The model airplaners sub-committee visited an existing model airplane site in Camas, WA. A report (including photos) will be tabled until the next meeting.
- Jim Sjulín reported work is continuing on the IGA between Metro and the City of Portland on the mini-master plan.
- Stewart distributed copies of an article on the landfill vegetation work in *Erosion Control* magazine. Discussions about landfill long term management will begin in the next few months.
- A map of documented sites of known Western painted turtle nests was displayed for anyone interested in perusing it after the meeting.
- Janice Newton, from PDOT, will have an update at the October meeting about the N Lombard Overpass.

To: Nancy Hendrickson, Elaine Stewart  
From: Paul Vandenberg  
Subject: Presentation Outline -- SBMC Meeting: September 26, 2000  
Est. time: 20 min.

### **Purpose**

Provide selected information from environmental monitoring of the lakes and Columbia Slough, and existing groundwater and surface water flow models, that may be useful in the implementation of the water control structure project. This information was selected primarily as it relates to potential effects of the North Slough on lake water quality.

### **Water Quality**

- Describe high frequency monitoring of surface water in lower Slough. Provide a few relevant characterizations based on that monitoring, including the relationship of water quality at Lombard and N. Portland Rd., as a function of the tide cycle, and poor water quality in North Slough, as a function of stagnant, shallow water conditions in the dry season. Note that data logged at Lombard at high tide represents Willamette River water.
- Describe low frequency monitoring (periodic grab sampling) of surface water. Show trend charts of selected standard parameters, comparing lake, Slough, and Willamette (Lombard @ high tide) data.

### **Sediment Quality**

- Describe sediment monitoring in lakes and Slough. Show charts for selected contaminants (e.g., heavy metals identified in 1994 Columbia Slough Sediment Study as risk to benthic organisms), comparing lakes and North Slough data, and comparing all selected data to Ontario guidelines for freshwater sediments.
- Mention issue of bioavailability, including results of Wapato Wetlands study showing that heavy metals identified in 1994 as COPC for benthics did not appear to be bioavailable (based on bioassays). Mention recent EPA/Corps agreement re sediment quality guidelines.
- Mention that sediment quality at reference sites used for Buffalo Slough and Wapato showed similar levels of contamination as study sites (if true), indicating "urban background" contamination.
- Describe any findings from the PSU study of sediment transport in lower Slough that are relevant to North Slough sediment/contaminant movement into lakes.

### **Landfill Leachate**

- Address question: Will groundwater upwell into Bybee L. if lakes are returned to former tidal conditions, thereby increasing the potential for leachate contaminants to migrate via that pathway into the lakes? Describe PSU (1995) model finding that upwelling of groundwater into Bybee L. would occur, but at very weak strength of water exchange, and that lake dynamics would have little or no influence on the rate of leachate plume migration in the sand/gravel regional aquifer.
- Describe PSU model's predicted area of greatest potential migration [of leachate contaminants] toward Bybee L. Mention that existing groundwater monitoring wells located in that pathway show little or no contamination, that contaminant migration (both laterally to Slough and downward to sand/gravel aquifer) tends to be blocked by low permeability soil under and around the solid waste, and that groundwater flow below the landfill interior is exceedingly small.

### **Future Monitoring**

- Ongoing monitoring will allow Metro to identify changes in water quality, and to determine which changes are significant, thereby serving as a decision-making tool for and hydrology management and project planning. In the near term, we will begin to routinely measure standard surface water quality parameters in Bybee L. at a higher frequency, to provide baseline data for comparison to data collected after the water control structure project is completed.



CITY OF  
**PORTLAND**  
OFFICE OF  
**TRANSPORTATION**

**Charlie Hales, Commissioner**  
1120 S.W. 5th Avenue, Suite 800  
Portland, Oregon 97204-1914  
(503) 823-5185  
FAX (503) 823-7576 or 823-7371  
TDD 823-6868

**Victor F. Rhodes**  
Director

**Eileen Argentina**  
Information  
Technology

**Richard Steinbrugge**  
Finance

**Steve Dotterer**  
Planning

**Jeanne Nyquist**  
Maintenance

**Toby Widmer**  
System  
Management

**Brant Williams**  
Engineering &  
Development

August 23, 2000

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

Dear Ms. Hendrickson:

Thank you for your June 21, 2000, letter to Stacy Bluhm regarding shielding of the cobrahead fixtures adjacent to Smith and Bybee lakes. As the Street Lighting Manager, I was asked to provide a response on the concerns expressed by the Smith and Bybee Lakes Wildlife Area Management Committee.

The issue of shielding cobrahead lighting has been discussed in the street lighting section during recent years. The section historically has not supported the shielding of light fixtures in Portland for a variety of reasons, including lack of resources to maintain shielding, the minimal effectiveness of many types of shielding devices, and potential negative impacts on light levels behind the fixtures (such as in the sidewalk area).

I have discussed your request with Lisa Elbert, the Senior Engineering Associate assigned to review the lighting on this project. She has indicated that much is unknown about how much of an impact shielding will have on these fixtures, but that it is expected to be minimal at best. The light fixture that was selected for this location is a "cut-off" fixture, meaning that there is no "up-light" component. This fixture will not contribute to light pollution in the night sky in this area. It is also important to realize that any shielding that is installed will be limited to the back edge of the fixture. The lighting system in this area is two sided, and shielding the back of the fixture on the south side adjacent to the lakes will not have any impact on lighting that is projected from the north side of Marine Drive. Also, because light scatters and reflects off surfaces and dust particles in the air, the impact of installing a shield is not expected to be dramatic.

Despite our doubts regarding the effectiveness of shielding at this location, we have decided to support the Committees request for shielding in this area. The conditions of our support include the following:

- We will review the shielding proposed by the contractor, and approval of the design will be made by the City;
- The Committee will not be consulted for comments regarding the shielding design at any point during the review process;
- The shielding will be installed by the contractor as part of the original contract. In the event that the shielding is determined to have a dramatic negative impact on the sidewalk area, or pedestrian comfort levels in the area, we will consider removing the shielding. The decision to remove the shielding if this problem occurs will be made by the City, and the committee will be notified if it occurs within 1 year of the project;

Nancy Hendrickson  
August 23, 2000  
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- Any decisions made by the City requiring removal of the shielding will be final.

These conditions reflect the expectation by the public that the City will provide adequate lighting to facilitate the movement of all users of the right-of-way, including bicyclists and pedestrians. If reduced lighting levels can be achieved in the environmental zone while still providing adequate lighting for users of the facility, the shielding will remain.

Please call me at (503) 823-4096 if you have any questions regarding our position on shielding of the lights adjacent to Smith and Bybee Lakes on Marine Drive.

Sincerely,



Bill Graham  
BTSM - Section Manager  
Signals, Street Lighting, ITS

c: Lisa Elbert  
Stacy Bluhm