Smith & Bybee Lakes Wildlife Area Management Committee
Patt Opdyke, Chair

Coordinated by:

Metro

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

Smith & Bybee Lakes Management Committee Meeting

Tuesday, January 25, 2005

5:30 p.m. – 7:00 p.m.
(NOTE: THIS WILL BE A 90 MIN. MEETING)

Metro Regional Center, 600 NE Grand Ave., Room 270
Portland, Oregon 97232

AGENDA

Welcome, introductions	(Opdyke)	5:30 - 5:35 pm
Review/Approve Dec. meeting notes	(Opdyke)	5:35 – 5:40 pm
Trails feasibility study		5:40 – 7:00 pm
• Evaluation process and results	(Stewart)	
• Straw alignments chosen by Technical Working Group	(Stewart)	
• Review of pros, cons and stakeholder perspectives	(Stewart, Arden, Clark, Vandenberg)	
• Review of SBLMC's previous recommendations	(Clark, Stewart)	
• **ACTION ITEM**: Decision whether to make recommendations and/or comments to Metro	(Opdyke)	

Summary Meeting Notes
Smith & Bybee Lakes Management Committee
January 25, 2005

In attendance:

Patt Opdyke, Chair *	North Portland Neighborhoods
Troy Clark *	Portland Audubon Society
Larry Devroy *	Port of Portland
Brenda Hanke *	St. Johns Neighborhood Assn
Nancy Hendrickson *	Portland Bureau of Environmental Services
Jim Morgan *	Metro
Jim Sjulin *	Portland Bureau of Parks
Dale Svart *	Friends of Smith & Bybee Lakes
Bill Egan	Oregon Bass & Panfish Club
Elaine Stewart	Smith & Bybee Lakes Wildlife Area Manager
Paul Vandenberg	Metro Solid Waste & Recycling
Pat Sullivan	Metro Regional Parks & Greenspaces

* denotes voting SBLMC member

Introductions

Introductions included new member to the Committee Larry Devroy of the Port of Portland.

Consideration of December 7, 2004 meeting notes

Two amendments were made to the meeting notes: 1) Hanke requested that the notes include her statements that the St. Johns NA does not support Metro's "no pets" policy for Smith-Bybee, and 2) Svart requested that the notes include his statements that the Friends organization does not support kiosks, interpretive displays or other constructed elements within the Smith-Bybee area boundary. The meeting notes were approved as amended. (Five in favor, none in opposition and two abstentions – Troy Clark and Larry Devroy)

Trails Feasibility Study

The Management Committee reviewed the trails feasibility study progress and its own recommendations. The committee then decided whether or not to make additional recommendations or comments to Metro.

Elaine Stewart began the process by providing some background on the trails feasibility study. The main goal of the study is to examine potential alignments and to gather pertinent facts for evaluating each of the potential trail segments. Maps of the alternative trail alignments were displayed for the committee's reference.

Included in the display were existing trail sections at North Marine Drive, Peninsula Crossing Trail, and the stretch of the Slough Trail that was recently completed by the Port of Portland as part of the Rivergate consent decree work. In the feasibility study, several potential routes to connect these existing sections were evaluated. Only one trail segment was completely eliminated and that was the Columbia Boulevard segment which was not wide enough along parts of it to accommodate pedestrian and bicycle lanes.

A copy of a letter dated April 11, 2003 from the Smith & Bybee Lakes Management Committee to David Bragdon was distributed in which a recommendation was made for a trail alignment onto and around the St. Johns Landfill connecting to the community of St. Johns. There was also a recommendation for a feasibility study be done to determine whether a trail segment is necessary and feasible between the landfill and N. Portland Road (Peninsula Crossing Trail) and what alignment it should follow. Stewart pointed out that Metro's feasibility study implemented this recommendation, however, Metro did not include a "no-build" option.

Stewart led the committee through the following process: looking at the evaluation process used by the technical working group convened for the feasibility study, looking at the four alignments that the technical working group forwarded for further review and consideration by the Metro Council, and deciding whether the Management Committee will provide further comment to Metro.

The technical working group and the consultants worked through dozens of criteria and rated each of the potential trail segments against those criteria. The technical working group included members representing the Management Committee, the 40-Mile Loop Land Trust, the St. Johns Neighborhood Association, Metro's Solid Waste & Recycling Dept., Metro's Parks and Greenspaces Dept., Portland Parks, and the Friends of Smith and Bybee Lakes. Elaine briefed the committee on the represented groups' perspectives.

Friends of S & B Lakes did not feel that the trails should be considered in isolation; they wanted the larger perspective to be considered in looking at the overall alignment issue. They feel paddling is the best way to see the wildlife area and that there are existing viewpoints at the canoe launch and the viewing blinds. The only trail need is to somehow connect the Port Trail over to Peninsula Crossing. They Friends were concerned about sensitive habitat and especially concerned about the south side of Smith Lake and its importance as a wildlife corridor. They also thought that Metro did not have adequate resources to manage additional public access.

St. Johns Neighborhood Association's greatest concern is access, concern about whether Metro is going to begin to charge fees to the site, and about the permissibility of bicycling and fishing. Their desire is for good access from the neighborhoods onto the landfill, good connection to the Port's recently completed slough trail segment and to Peninsula Crossing Trail. Ideally, that access would be multi-modal. A perimeter trail going around the landfill would be acceptable; they preferred going through the ash grove on the south of Bybee Lake but would not insist on disrupting sensitive habitat. Any segment would be acceptable as long as it provided good access from Chimney Park into the wildlife area and multi-modal trail connections.

The City of Portland commented on the three components of a trail most important to them: 1) connection to Kelley Point Park, 2) access to St. Johns neighborhood and 3) and a slough trail / connection along the slough. The City considered impacts to the ash grove area would be too great, preferring a route that would go around the north side of the landfill. They also prefer a multi-modal route that would connect into the neighborhood and would consider putting some kind of a placeholder trail segment along the slough, but would not build it if it would be too close to the eagle or heron nests. They prefer a multi-modal trail on the south side of the slough but realize that it may take years to negotiate an alignment through private property.

40-Mile Loop Land Trust's first preference was an alignment through the ash forest, along the east side of the landfill, and along the south side of Smith Lake. The ability to see views from various vantage points is important to this group. Neighborhood connections were very important, including those to Peninsula Crossing, to N Marine Drive and to Delta Park.

Metro's recommended alignment passes through the ash forest, along the east side of the landfill, into the neighborhood, and over to Peninsula Crossing via Fessenden or Smith. The ideal situation, according to Metro, would not be to place trails into either of the habitat patches (ash forest or south side of Smith Lake), but Metro felt the above-described route would be a compromise to all of the interests involved. Metro also considered a trail near either the eagle or heron nests was not the best option. Metro wants to forward an option that doesn't involve a bridge over North Slough, because the bridge may not be feasible.

After sifting through the input from the various member groups, the technical working group settled on four possible trail alignments to be advanced for further consideration.

1) South slough alignment – crosses to the landfill via a bridge over North Slough, traverses the landfill's north and east sides on the existing perimeter road, crosses Columbia Slough via the landfill bridge, follows the slough upstream to N Portland Rd., crosses the slough again at the N Portland Rd Bridge and connects to Peninsula Crossing. There would also be a neighborhood connection going at least to Pier Park.

It was noted that in every alignment still under consideration there is going to be recommended a connection that goes at least from the landfill to Chimney Park.

2) Landfill alignment – crosses to the landfill via a bridge over North Slough, traverses the landfill's north and east sides on the existing perimeter road, crosses Columbia Slough via the landfill bridge, goes into the neighborhood via Chimney and Pier parks and would go either via Fessenden or Smith street to connect with the Peninsula Crossing Trail.

3) South Lake Shore alignment – crosses to the landfill via a bridge over North Slough, traverses the landfill's north and east sides on the existing perimeter road, makes the same connection into the neighborhood. This alignment differs from the "south slough" by connecting with the Peninsula Crossing Trail via the south side of Smith Lake (= north side of slough).

4) Ash Grove alignment – this alignment goes through the ash grove, crosses the water control structure, traverses the east side of the landfill, crosses Columbia Slough via the landfill bridge, goes into the neighborhood via Chimney and Pier parks and would go either via Fessenden or Smith street to connect with the Peninsula Crossing Trail.

Stewart noted that as the discussion progressed among the members of the technical working group, there seemed to be near consensus on the "south slough" route; six out of the seven representatives would have been satisfied with that alternative.

Morgan mentioned that for a number of years, a significant number of bird surveys had been conducted of both Smith and Bybee Lakes and a great deal of important data had been collected. Much of the wildlife, particularly shorebirds and waterfowl, use the south side of Smith Lake extensively. He did not see that reflected, however, in the materials reviewed by the technical committee. It would seem like a good use of resources to inject that data into the equation when weighing the pros and cons of trail alignment. Stewart responded that much of the data was given to the consultants and it should be included in their final report.

Svart added, for the record, that he has some of the same concerns as Morgan. He knew all the data had been collected over the years and would like to see all that data evaluated.

Vandenberg said that any trail alignment which is limited to the perimeter road and secured by fencing would be acceptable. If any of these alignments is taken to the Metro Council, there should be qualifying language with respect to the North Slough bridge that further study is required because of uncertainties regarding bank stability and groundwater movement.

Brenda Hanke echoed the summation described by Stewart earlier as to the most important criteria to the St. Johns Neighborhood – access. This has been noted in the record. The South Lake Shore alignment may be the most appealing to neighborhood residents but if the alignment selected has access through Pier Park and Chimney Park that would likely be adequate.

Patt Opdyke expressed her continuing concern about any northern alignment of the trail because of the proximity to Bybee Lake and she would like to think something could be created on the western side which would be the original alignment. If the landfill could not sustain the weight of a bridge perhaps there could be a bridge that goes from the trailhead over to BES property. To Patt, it's very important to protect Bybee Lake; she pointed out that the Natural Resources Management Plan calls out Bybee Lake for added protection.

Moving forward, Sjulin felt it was important to vote on what had been presented. Morgan stated that it was important to recognize and to have on record that the committee is seeking alternatives because there are sentiments that even the preferred alignment is a compromise and that even the alignment that seems to have the most support is difficult to accept.

ACTION ITEM: Decision whether to make recommendations and/or comments to Metro.

It was moved and seconded that the committee endorse the South Slough alignment as the preferred alignment of the four options.

Discussion on the motion: the question was raised as to whether there should be an amendment to the original motion that if the footing of the bridge onto St. Johns Landfill is not feasible, the route to the west be considered. There was no further support expressed for that amendment. A point of clarification was then made that the motion that was moved and seconded contained no "what ifs". If, therefore, that alignment is not feasible, the committee will consider another recommendation.

The motion passed. Five were in favor: Sjulin, Clark, Svart, Devroy, and Morgan; two were in opposition: Hendrickson and Hanke. The Chair abstained.

Additional comments:

Bill Egan suggested the Metro staff recommend to the Oregon State Marine Board that electric ~~motor powered craft only be allowed~~ in the North Slough from the junction with the Columbia Slough.

the only motor-powered craft allowed be (clarify)

An open house for the Trails Feasibility Study will be held on Feb. 16 from 4:30 to 7:30 pm at the City of Portland's Water Pollution Control Laboratory in North Portland. Flyers will be sent to committee members and interested persons in the next few days.

The meeting was adjourned.

Criteria used to evaluate potential trail segments

Safety
- Road crossings
- Rail crossings
- Proximity to landfill facilities
- On-road distance
- Commercial driveway crossings

Environmental
- Habitat impacts
- Loss of existing and potential riparian area
- Proximity to bald eagle nest
- Proximity to great blue heron rookery
- Proximity to painted turtle habitat
- Wetlands

Cost
- Bridges
- Fencing needs
- Grading needs
- Acquisitions and easements
- Road and railroad crossings
- Funding opportunities
- Maintenance cost
- Mitigation cost

Multi-use Potential
- 8-foot paved trail opportunities

User experience
- Foreground views
- Background views
- Sounds
- On-road distance
- Potential trail closures
- Wildlife viewing opportunities
- Interpretive education opportunities
- Flood potential

Permitting/approvals
- Corps of Engineers
- NOAA Fisheries
- DEQ
- DSL
- ODOT
- Environmental zone review
- Other Portland permits

Management
- Disruptions to landfill operations
- Ease of patrol
- Emergency services access

Trail connectivity
- Neighborhood
- Port of Portland trail
- Peninsula Crossing Trail
- Regional trails

ems notes from TWG

don't look @ these trails in isolation

FOSB – "bigger perspective" from launch

1. Ex. exp. – views @ blinds, from ex trails
2. Need is only to connect Port → Pen Xing
3. Sensitive habitats, impt of corridor, sensitive spp.
4. Mgt issue – inadequate mgt ~~for~~ & resources for add'l access

Prefs: 1. Neighborhood
2. W LF to S slough
3. N LF to S Slough

New facility offers the best user exp, padding is best user exp.

SJNA

#1 Concern is access
- fees?
- bikes?
- fishing?

1. As much as poss
   - LF
   - Fort trail
   - Pen Xing
2. Multi-modal
3. LF trail OK, like ash grove but won't push sens. habitat
   * any segments fine as long as good access Pier/Chimney Parks and multi-modal; they also prefer a connect^{n} along Col. St. to Pen Xing but don't really care which side.

City

3 legs to access

1. Connect to Kelley Pt
2. Access to SOJA
3. Connect^{n} along Slough

Ash grove big impact, so N LF

↳ multi-modal trail inappropriate since 12' (too wide)

1. multi-modal route

N LF to E LF to Pier/Chimney

2. Placeholder/Plan trail along slough but not build if eagle/heron nests w/i ___ ft. of it

✓ prefer S. Slough multi-modal but fear it's not feasible

✓ if S Smith, (narrow) smaller trail & major multi-modal connect^{n} w/o thru neighborhood

40-mi. Loop

"Stayed the course"

1. First pref = "scenic"
2. 2nd = N LF to E LF to S lake shore "Landfill"
   - multi-modal

Position paper & list of docs where trail route prescribed

Neighborhood connect^{n} –

Mar Dr Delta Pk

Pen Xing

Ability to see things from various vantage pts is >mpt

SBMC - unanimous rec:
1. NSl br, W LF, to SJLF bridge
2. Feas. study - LF br. to Pen Xing

Troy - if you build it they will come -
what will be vol. of use @ SB?

- context - orig. trail alignments predicated on visitor ctr in SE cnr Smith - trail view has not changed since
✓ Troy suggest neighborhood connect^{n}, does not rec trail S side Smith.
rel. cmptc. of SB incr. thru time

S Sl preferable but may not get acquisitions etc.

Smith & Bybee Lakes Wildlife Area Management Committee

Coordinated by:

Metro

600 NE Grand Ave.
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(503) 797-1515

April 11, 2003

David Bragdon
President, Metro Council
Metro
600 NE Grand Avenue
Portland, Oregon 97232-2736

Dear President Bragdon,

The Smith and Bybee Lakes Management Committee (SBLMC) has been interested in the issues surrounding public trails and their alignment, construction and management for some time. Metro, the City of Portland, and the Port of Portland have discussed the trail issue for many years without resolution. In order to assist in finding a solution, the SBLMC designated a trail subcommittee, which met four times between October 2002 and February 2003. The subcommittee forwarded its unanimous recommendations to the SBLMC, which adopted them unanimously on February 25, 2003.

The recommendations include:

- A suggested alignment onto and around the St. Johns Landfill, connecting to the community of St. Johns,
- A feasibility study to determine whether a trail segment is necessary between the landfill and North Portland Road, and what alignment it should follow,
- Best management practices and performance standards to be followed in aligning, building and managing trails.

Our recommendations are the result of considerable time, effort and compromise by people on all sides of the trail issue. We hope that these recommendations can provide Metro with a framework within which to find the solution. The SBLMC encourages Metro to work with the City of Portland on the feasibility study as soon as possible – this issue has languished for many years and a resolution is needed.

Please do not hesitate to contact me at (503) 249-0482 if you would like to discuss this further.

Sincerely,

Troy Clark
Vice Chair

Trail Subcommittee
Recommendations to Management Committee
February 25, 2003

Trail subcommittee members (attending at least 1 of 4 meetings):

Pam Arden	40-mile Loop Trust
Troy Clark	Audubon Society of Portland
Nancy Hendrickson	Portland Bureau of Environmental Services
Holly Michael	Oregon Dept. Fish and Wildlife
Emily Roth	The Wetlands Conservancy
Denise Rennis	Port of Portland
Jim Sjulin	Portland Parks and Recreation

1. Alignment – segment from the confluence of North and Columbia sloughs to the landfill bridge

Subcommittee members reached consensus regarding alignment of the trail segment from the confluence of North and Columbia sloughs to the landfill bridge. This segment would pass over the North Slough and along the west side of the St. Johns Landfill, on the landfill perimeter road. A loop or spur could be used to take trail users a short distance onto the landfill dome in the northwest corner, using another existing road on the landfill. This consensus alignment has several important positive points:

- Minimizes habitat fragmentation (leaving most of the landfill untouched)
- Avoids sensitive habitat on the south side of Bybee Lake
- Provides a good view opportunity from the landfill dome
- Provides a good experience for trail users
- Has connectivity to St. Johns and a trail to be routed in that community.

The aerial photo used in the meeting shows the trail alignment around the west side of the landfill, with a zone outlined where the trail could go one of three ways in the northwest corner:

1. Spur trail up onto the dome
2. Main trail up onto the dome
3. Trail stays on perimeter road and does not go up onto the dome.

2. Alignment – segment from the landfill bridge to North Portland Road

The group did not reach consensus regarding this segment, or even the need for it. The discussion began with a question whether this trail segment was necessary. On the "pro" side, it would provide a quality experience for trail users and take them along the slough as it does for much of the rest of the route in the Columbia Slough watershed. On the "con" side, it would cause fragmentation of important riparian habitat, taking trail users right through the riparian zone of the slough.

A route along the south side of the Columbia Slough was discussed, with questions regarding its viability. For example, there are many property owners involved. The group agreed that this route would need more investigation.

The group saw four options for this trail segment:
1. No trail segment in this area
2. Mode split, with the south side of Smith Lake pedestrian-only (bicycles go over the landfill bridge to another alignment)
3. Mode split, pedestrian trail follows south side of Columbia Slough (bicycles go to another alignment)
4. No mode split, pedestrians and bicyclists follow trail on south side of Columbia Slough.

Issues identified for the alignment on the south side of Smith Lake included the grade change from the landfill to the natural area (how to make it ADA-accessible), questions regarding the cooperation of property owners, and potential issues of wetland fill. Other issues included what standards would be appropriate for this segment (width, surface type) and what ADA requirements might be. The group also discussed whether this trail alignment could be different than the route taken by maintenance vehicles, and whether this segment could be open seasonally.

Some of the same issues were identified for siting a trail on the south side of the Columbia Slough, including questions regarding the cooperation of property owners. The bridge at North Portland Road was seen as a potential major obstacle to a trail alignment in this area. The group was unsure whether it would be logistically possible to locate the trail on the south side of the slough. Allowing bicycles on the south side remains an open question also.

The trail subcommittee recommended that additional work be done to evaluate four alternatives:
1. No trail connection from the landfill to North Portland Road (allow another trail alignment through the community of St. Johns to provide connectivity),
2. Trail alignment on the south side of Smith Lake (north side of Columbia Slough),
3. Trail alignment on the south side of the Columbia Slough,
4. Trail alignment along Columbia Boulevard.

The group acknowledged that evaluating the feasibility of these four options is more work than could be done by staff and the subcommittee. They recommended that Metro work with the City of Portland, via the IGA under discussion or some other manner, to perform this feasibility study.

3. Best Management Practices and Performance Standards

The subcommittee began a list of BMPs at its meeting on November 20, 2002. All of the concepts discussed at that meeting are important, and the subcommittee agreed that they require careful balancing of sometimes-conflicting needs.

Below is the list from November 20, 2002, with new concepts added from the February 6, 2003, meeting. The practices (or sometimes concepts) are arranged by relevant area – general principles, alignment, design, construction and management.

General principles

- From the Colorado trail planning guide*:
  - Any trail will have at least some negative impacts on wildlife, which must be weighed with the benefits of the trail.
  - Don't focus solely on the narrow width of the trail's treadway – also consider the wider area it may influence.
  - Trail corridors may encourage edge-loving generalists, but these species are already increasing across the landscape and may not need encouraging.
  - Trails may negatively affect species that need conditions that are altered in trail construction.
  - It is easier to balance competing wildlife and recreation needs across a landscape or region than it is on a specific trail project within a smaller area.
  - Plan a trail consistent with a regional or landscape-wide plan that identifies where trails should go and which areas should be conserved for wildlife.
  - Enlist the help of conservation advocates in planning trails, and find opportunities to integrate trails and open space planning.
  - Determine which species of interest actually occur in the area you are studying.
  - Use public support of trails to protect riparian corridors.
  - Because there isn't much detailed knowledge about the effects of human disturbance on wildlife, be cautious in planning a trail, carefully weighing the alternatives.
  - Use the best wildlife information available, even if it is scarce.
  - Generally, it is better to concentrate recreational use rather than disperse it.
  - Don't assume all wildlife impacts can be resolved through management.
  - In discussing trails and wildlife, avoid sweeping generalities about wildlife impacts that may not be possible to substantiate or even be true in a specific situation.
  - Scientific study doesn't reveal how the public values wildlife.
  - Invite broad public participation on every trail project.

Alignment

- Site trails along habitat edges – don't create new edges and fragment the habitat.
- Site trails where the area is already receiving disturbance from recreation.
- Trails need to have connectivity.
- Use spurs where you want lower traffic.
- Minimize impacts to riparian habitat.
- No net fill of wetlands.
- Consider what you want users to get out of the trail experience – e.g., take them through different habitats and educate them.
- Consider what people are coming to S&B for – e.g., bicycling for health and passing through, or coming to see the site itself.
- Keep education focused at one place.
- Alignments have to be truly viable.
- Look at the broad area – where else do trails go, where is the riparian area.
- For alignments on or near the landfill, minimize health and safety risks to the public.
- Minimize risks to the landfill infrastructure.

- Locate trails in a way that minimizes interference to landfill staff performing their duties.
- Incorporate the City of Portland's comprehensive plan objectives regarding wildlife and trails. These are:
  - Conserve significant areas and encourage the creation of new areas which increase the variety and quantity of fish and wildlife throughout the urban area in a manner compatible with other urban development and activities [overall goal].
  - Regulate activities in natural resource areas which are deemed to be detrimental to the provision of food, water, and cover for fish and wildlife [natural resource areas].
  - Encourage the creation or enhancement of fish and wildlife habitat throughout the city [city-wide].
  - Protect existing habitat and, where appropriate, incorporate new fish and wildlife habitat elements into park plans and landscaping [city parks].
- Incorporate the objectives in the 40-mile Loop master plan. These are:
  - Provide a trail and open space system that connects existing parks and future parks into a visually and mentally comprehensible park system for the region's citizens and visitors.
  - Plan and encourage neighborhood and community access to the 40 Mile Loop.
  - Serve as a "hub" for long distance regional and state trails including the Lower Elevation Columbia River Gorge Trail, the Portland to the Coast Trail and the Sandy River Gorge Trail.
  - Help protect and utilize the natural resources and physically attractive aspects of the urban environment.
- From the Colorado trail planning guide:
  - Seek out degraded areas that have the potential to be restored when aligning a trail, rather than creating another disturbed area.
  - Site a trail where there are already human-created disturbances or in areas of less sensitive habitat.
  - Align a trail along or near an existing human-created ecological edge, rather than bisecting undisturbed areas.
  - When possible, leave untouched large, undisturbed areas of wildlife habitat.
  - Keep a trail – and its zone of influence – away from specific areas of known sensitive species, populations, or communities.
  - Even within a single type of habitat, some elements may be of greater importance to wildlife than others.
  - Locate trails and supporting facilities in areas where they can be screened and separated from sensitive wildlife by vegetation or topography.
  - Provide trail experiences that are diverse and interesting enough that recreationists are less inclined to create their own trails and thereby expand the zone of influence.
  - Keep the density of trails lower within and near pristine or other high quality areas to reduce the contribution of trails to fragmentation.
  - Avoid small patches of high quality habitat in routing a trail.
  - Avoid smaller, isolated patches when laying out a trail, but do give users an experience of the varied landscape.
  - Avoid patches that are habitat for threatened, endangered, or other species of concern.
  - Analyze the landscape noting the patches, corridors, and matrix – the landscape structure – as they might be used by species of special interest.

- Minimize the number of times prominent landscape corridors – such as riparian zones – are crossed by a trail.
- For both habitat and maintenance reasons, it is better to run a trail just outside the riparian area (perhaps on a topographic bench) and bring it in at strategic places, than to keep it continuously close to a riparian area.
- In routing a trail near a pond or lake, don't run it completely around the body of water.
- Avoid crossings where two or more streams come together.
- In riparian areas of variable habitat quality, route a trail closer to a stream where habitat quality is poorer.
- Give trail users the opportunity to be near water or they will find ways themselves.
- When it is appropriate to provide access to a more sensitive area, use a spur trail instead of a through trail because spur trails tend to have lower volumes of traffic.
- In urban landscapes there are often few options for routing trails other than streetside (where there are not many ecological implications) and along streams.

Design

- Minimize the impact of impervious surface.
- Locate trails away from the water.
- Preserve the existing hydrology (shallow water), via French drains, boardwalks or other methods.
- From the Colorado trail planning guide:
  - To maintain natural processes along a stream corridor, maintain an interior or upland buffer on both sides of a stream.
  - In areas with sensitive vegetation, provide a well-designed trail to encourage users to stay on the trail.
  - Provide toilets at trailheads and other key locations to reduce damage to surrounding vegetation.
  - Design trails with proper drainage and sustainable gradients so users are less likely to trample vegetation along alternate routes.
  - Route a trail around meadows and other wet areas and build up a dry trail in areas where seasonal water creates boggy soil.
  - To minimize ground disturbance and possible spread of weedy species, reconstruct an existing trail instead of rerouting it.
  - Provide facilities, such as blinds, viewing areas, and boardwalks, for visitors to see wildlife with minimal disturbance.

Construction

- Avoid removing trees.
- Minimize construction impacts, including permanent impacts from temporary activities (e.g., soil compaction from movement of heavy equipment).
- Work within the final trail footprint to the extent possible.
- Build during the appropriate season.
- From the Colorado trail planning guide:
  - In constructing or upgrading a trail, disturb as narrow an area as possible to help minimize the zone of influence.

Management

- Do not allow dogs or other pets on trails within the wildlife area.
- Allow bicycle use only on perimeter trails designed for multi-modal transportation; this does not include the south side of Smith Lake.
- From the Colorado trail planning guide:
  - Either avoid wildlife breeding areas or close trails through them at the times such wildlife are most sensitive to human disturbance.
  - If there won't be sufficient resources to enforce a trail closure during wildlife-sensitive seasons, consider rerouting the trail through another area.
  - Educate trail users about the results of direct impacts to vegetation and indirect impacts to wildlife.
  - To prevent weed spread, control aggressive weeds along trails.
  - Plan how to manage a trail's wildlife issues before its alignment is set.
  - Don't depend on management to resolve wildlife conflicts that can be avoided by careful alignment in the first place.
  - More careful management of resources will be required when a trail passes through or near sensitive habitat.
  - Wildlife accept the more predictable disturbances of people on trails more readily than off trails.
  - Encourage visitors not to leave food or garbage around to further support generalist species.
  - Use a combination of management techniques to facilitate the coexistence of recreationists and wildlife.
  - Enlist the help of trail users in monitoring wildlife use of the trail corridor and other activities.
  - To protect wildlife, when describing points of sensitive, ecological interest near a trail – sites you want people to know about, but not visit – don't indicate the direction or distance to the spot.
  - Interpretation and environmental education are very important management tools.

* Planning Trails with Wildlife in Mind: A Handbook for Trail Planners. Colorado State Parks, Trails and Wildlife Task Force. Available online at: http://www.coloradoparks.org/home/publications.asp#Trails%20Publications

Evaluating Future Uses of the St. Johns Landfill

Smith and Bybee Lakes Management Committee, December 2004

Vision of future uses of the landfill: it is generally a natural meadow habitat, managed to target native species that require this quickly disappearing habitat for their survival such as Western Meadowlark and Northern Harrier. The landfill can accommodate many elements of prairie and savanna systems and provide valuable habitat for plants and animals that are disappearing from the Willamette Valley landscape. Public use is directed to areas and activities that support people's desire to enjoy the natural landscape and views, promote public safety, protect wildlife and its habitat and provide educational opportunities. The landfill cover and other environmental protection systems are well-maintained to minimize human and ecological risks on the landfill surface that are associated with the buried waste.

Criteria:

These points were used to guide whether disturbances would be encouraged or avoided:

- Noise level – noise affects visitors to the natural area as well as the wildlife that occurs there. Excessive noise detracts from a visitor's experience at Smith-Bybee. People come to enjoy nature and get away from the urban environment. Wildlife often requires low ambient noise to conduct its daily business, e.g., songbirds need to hear each other's songs and calls to find mates. Current noise levels from industrial activity, air traffic and other surrounding uses already exceed desired background levels at various times and locations. Additional noise from artificial sources is undesirable.
- Amount and type of development – most additional development within Smith-Bybee is to be minimized. Development includes anything that cannot be classified as natural area vegetation, minor structures associated with an educational program (e.g., interpretive displays), or infrastructure required to manage the closed landfill. The geographic and visual impacts are important considerations in evaluating new development.
- Habitat continuity – habitat management should take advantage of the large blocks of contiguous habitat that are available at Smith-Bybee, including the landfill. Smaller, fragmented habitat patches have value for certain wildlife; however, many plants and animals suffer when their habitat is over-fragmented. Many of the latter species are in decline, and the landfill offers an opportunity to create, restore and/or protect habitat for sensitive, grassland-dependent species. Uses that increase the amount of habitat fragmentation or that disrupt habitat continuity are to be minimized.
- Public access – Smith-Bybee is a valuable natural resource for the people of the Portland metropolitan area. Providing opportunities for people to enjoy the site is an important objective in managing Smith-Bybee. In order to conserve these cherished natural resource values and avoid "loving it to death", public access needs to be directed to some areas and restricted in others. Human activity – even simply walking through an area – may disturb wildlife, spread invasive plants and reduce habitat value. Much of Smith-Bybee should remain "off limits" to attract and provide habitat for plants and animals that can spread into and be seen in public areas. Secure public access to the landfill offers a

wildlife area experience, but with less disturbance to wildlife and habitat than may result from allowing public access to certain other parts of the wildlife area.

- Landfill operations – the landfill is actively managed by Metro, and closure operations are strictly regulated. There is considerable infrastructure on the site, including a multilayered cover system, collection systems for landfill gas, leachate, and stormwater, and a network of monitoring wells and piezometers. Landfill staff routinely inspect, maintain and repair all of these systems, and use the infrastructure for the routine environmental monitoring that is required by various permits. Public uses to be avoided are those that create uncontrolled risk of damage to infrastructure and interference with site management, and/or create unacceptable health and safety risks for visitors.

Activities to be Encouraged

These activities would be encouraged:

- Enhancement and/or creation of native meadow/prairie, scrub/shrub, savanna, riparian and wetland habitats.
- Increasing patch size and limiting "edge effects" of existing habitats.
- Habitat enhancement that discourages nuisance species.
- Monitoring and maintaining the landfill cover system, gas collection system, etc.
- Wildlife viewing.
- Environmental education, including public education regarding the landfill.
- Research related to the landfill, wildlife and plants.

Examples of disturbances that would be allowed include:

- A trail along the landfill's perimeter, which may include a single loop or spur trail to a viewpoint, as outlined in the April 11, 2003 letter from the SBLMC to Metro Council President David Bragdon.
- Natural resource-related recreational activities that interact with the natural environment with minimal negative impact. Examples include walking, wildlife viewing, sightseeing, and fishing.
- Landfill management activities – Metro will seek ways to minimize mowing and other habitat-disturbing activities to the extent possible and practical.
- Grazing – as an alternative to mowing for maintaining appropriate landfill cover vegetation and supporting grassland habitat restoration.
- Habitat management, including but not limited to seeding and planting native vegetation and controlling exotic plants.
- Monitoring activities such as plant surveys and bird counts.
- Research activities related to landfill operations, habitat restoration, wildlife use, etc.
- Environmental education, including small kiosks, interpretive displays and guided field trips.
- Volunteer habitat stewardship activities.

Activities to be Discouraged

These activities would be discouraged:

- Activities that introduce excessive noise.
- Activities that require extensive and/or visually intrusive development.
- Activities that result in habitat fragmentation.

- Unrestricted human access to protected natural areas.
- Activities that disrupt or interfere with landfill operations.
- Recreational activities that are not related to natural resources.

Examples of disturbances to be avoided include:

- Motorized equipment of any kind such as model airplanes, mopeds, cars, motorcycles, amplified speech/music, etc. (Vehicles and equipment used by staff and contractors to maintain and repair the landfill and improve wildlife habitat are acceptable disturbances.)
- Discharge of firearms (e.g., hunting, target-shooting, paintball, laser-tag).
- Large tracts of intensively managed landscape that are not primarily wildlife habitat (e.g., ball fields, golf courses, archery ranges, etc.).
- Large tracts of development such as parking lots and large buildings.
- Development that includes the expansion of utilities such as electricity and water, unless that development is required for landfill closure operations and/or to improve wildlife habitat.
- Dogs and other pets – Metro's current policy excludes pets, with the exception of special service dogs, from its parks and greenspaces. This policy should continue at the landfill.

Examples of disturbances that could conceivably be mitigated include:

- Bicycles, scooters and other non-motorized vehicles – if there is a fence blocking access to off-trail areas and the fence's construction allows target wildlife species to move as needed. Fencing would be necessary to control public access to landfill infrastructure, in order to protect health and safety, and to reduce risk of damage to the infrastructure.