BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE CONCEPT DESIGN FOR SMITH AND BYBEE LAKES INTERPRETIVE CENTER	))))	RESOLUTION NO. 94-1978 Introduced by Rena Cusma Executive Officer

WHEREAS, in the *Natural Resouces Management Plan for Smith and Bybee Lakes,* adopted by Metro Council on November 8, 1990, via Resolution No.90-367, construction of an interpretive center for the Smith and Bybee Lakes Natural Area was identified; and,

WHEREAS, in the *Recreation Master Plan for Smith and Bybee Lakes* adopted by Council via Resolution No.92-1695, in November, 1992, the need for the interpretive center in the lakes area was outlined; and,

WHEREAS, a concept design for the interpretive center was developed through a public process, including participation of the Interpretive Center Concept Design Advisory Committee and two public hearings; and,

WHEREAS, on September 27, 1994, the Smith and Bybee Lakes Management Committee recommended that the Council adopt the proposed concept design for the interpretive center; now, therefore,

BE IT RESOLVED,

That Metro Council adopts the concept design for the interpretive center proposed for Smith and Bybee Lakes as attached in Exhibit A; and,

That Council supports staff efforts to develop funding sources external to the Lakes Trust Fund for the purpose of funding construction of the interpretive center.

ADOPTED by Metro Council this 22nd day of November, 1994.

Judy Wyers, Presiding Officer

REGIONAL FACILITIES COMMITTEE REPORT

RESOLUTION NO. 94-1978, ADOPTING THE CONCEPT DESIGN FOR SMITH AND BYBEE LAKES INTERPRETIVE CENTER

Date: November 17, 1994 Presented by: Councilor Washington

COMMITTEE RECOMMENDATION: At its November 16, 1994 meeting the Regional Facilities Committee voted 3-0 to recommend Council adoption of Resolution No. 94-1978. Councilors Hansen, McFarland, and Moore voted in favor. Councilors Gates and Washington were absent.

COMMITTEE DISCUSSION/ISSUES: Senior Regional Planner Jim Morgan presented the staff report. He reviewed the development of the proposal for the interpretive center over the past couple of years, and noted the design is only conceptual at this point. He said the purpose of the resolution is to adopt the conceptual design and allow staff to begin developing outside funding sources to build the facility. Ideally, the entire $3.8 million estimated cost would come at one time to build the entire facility, but that is not likely so he expects the facility to be built in phases, based on available funding. He added that the Smith & Bybee Lakes Trust Fund will provide operating funds for the facility through its interest earnings.

Councilor Hansen asked if the focus will be on local visitors or as a tourist facility. Mr. Morgan said the primary focus is on environmental education for local school groups and other members of the local community. The site's proximity to I-5 will promote some tourism, but that isn't expected to be a primary source of attendance.

Mr. Morgan discussed the site of the interpretive center, saying it is at the southeast corner of the overall site, next to Portland Road. He noted that this is the only place that's high enough to be out of the flood plain, thus avoiding the need to fill the wetland.

In response to a question from Councilor Hansen, Mr. Morgan said there is no firm timeline for construction. Development of a construction schedule will depend on funding.

STAFF REPORT

ADOPTION OF CONCEPT DESIGN FOR SMITH AND BYBEE LAKES INTERPRETIVE CENTER

Date: November 16, 1994 Presented by: Jim Morgan

HISTORICAL DEVELOPMENT

As part of Metro's responsibilities in managing the Smith and Bybee Lakes Natural Area, an interpretive center will be designed and built within the area. Construction of an interpretive center was identified in the *Natural Resources Management Plan for Smith and Bybee Lakes*, adopted by Metro Council in November, 1990, and in the *Recreation Master Plan for Smith and Bybee Lakes* adopted by Council in November, 1992. As outlined in both plans, the primary function of the interpretive center is to provide education about the natural resources of the Smith and Bybee Lakes area: its history, its present conditions, and what can be done to enhance it. Conveying the natural and cultural history of the lakes area and offering opportunities for environmental education to schools and the public were clearly the major functions of the interpretive center as identified in the public process during development of the concept design.

The concept design and the design process were presented to the Council's Regional Facilities Committee August 3, 1994. Members of the committee raised issues regarding the concept design and implementation procedures, to which are addressed below.

FUNCTION AND SIZE OF BASE BUILDING

In determining the total size of the interpretive center, the first step taken was to determine specific needs for the interpretive center, thereby, determining the desired functions and space allocation that needed to be incorporated into the design of the building.

Demand Analysis

The potential demand for a facility as proposed for Smith and Bybee Lakes will extend beyond the immediate vicinity. According to a study by Envirosphere Company, viewing and studying nature is one of the fastest growing recreational activities in the state of Oregon. Oregon State Parks projects an 8.5% annual growth rate in nature study, which includes interpretive displays and viewing wildlife, and reports 68% of visitors to Oregon Parks participate in wildlife viewing. The regional trend in nature study is reflected in information on national interest. According to U.S. Fish and Wildlife Service, 70% of the U.S. population enjoys wildlife viewing and studying as least as part of another activity.

Comparable Facilities

Within the Portland metropolitan region, there is no facility that is a clearly analogous to the Smith and Bybee Lakes proposed development. The facility most analogous is Tryon Creek State Park, located in southwest Portland and northwest Clackamas County. Readily accessible to downtown Portland and from Interstate 5, the park features Tryon Creek running through forest habitat. Interviews with the director and volunteers indicate that demand exceeds supply in terms of on-site educational programs, and the current nature center space is inadequate for meeting all other use demands.

Tryon Creek State Park		Smith/Bybee Lakes Area	
Total Area:	625 acres	Total Area:	2,000 acres
Nature Center:	5000 sq. ft.	Interpretive Center	15,000 sq.ft.
Instructional Shelter	2000 sq. ft.		
Resident Ranger House:	1200 sq. ft.	Caretaker's Residence	1,500 sq.ft.
Shop + Storage Shed	1500 sq. ft.	Workshop/Storage	1,500 sq.ft.
Visitors:	430,000/yr.		
School Use:	1 to 2 groups/day		

Regional Facilities

Comparing the proposed facility at Smith and Bybee Lakes Natural Area to other facilities in Oregon provides perspective of space allocation for specific purposes.

Facility	Annual Attendance	Total Bldg. (sf)	Interpretive Space (sf)	Education Space (sf)
Tryon State Park	430,000 (1993)	5,000	1,120	1,000 (classroom, shelter)
Inskeep Center	120,000 (1991)	1,600	1,600	2,400 (shelter)
High Desert Museum	196,000 (1991)	40,000	25,000	1,000 (classroom)
Warm Springs Museum	NA	25,700		
Oregon Trail Museum	NA	23,000		
Smith/Bybee	--	15,000	7,600	2,650 (classrooms, library, education shop)

Environmental Education

The current demand from local schools for facilities and access to the lakes area is very high. For example, Roosevelt High School, which is approximately one mile from the proposed site for the center, has formally adopted Smith and Bybee Lakes Natural Area as the focal point for their Natural Resources Pathway in their Renaissance 2000 Program, and included the resource area as a focal point in a number of their other pathways. In this program, freshman students chose a tract that they follow throughout high school, graduating with an advanced degree focus, such as Natural Resources.

Less than 4500 feet from the proposed interpretive center site lies George Middle School, where current cirriculum for a number of classes focus on the lakes area. These teachers anticipate additional utilization of the resource area if there were protection from the weather, classroom/lab facilities on-site, and greater accessibility available.

The public schools within four miles of the interpretive center site are two high schools (Roosevelt and Jefferson), three middle schools, and eleven elementary schools. With increasing budgetary restrictions, especially regarding travel allocations, it is anticipated that more public schools will want to utilize local resources for curriculum development. Private schools within this radius include University of Portland, as well as several private middle and high schools.

Staff has received many requests for on-site interpretive tours and curricula development from at least one-half of the local schools, with additional requests coming in from schools throughout the region. A more thorough assessment of present and projected demands from local schools and communities, as well as the region, for environmental education utilizing the lakes area will be made by the environmental education intern recently employed in the Smith and Bybee Lakes Management Program.

APPURTENANT BUILDINGS

Buildings in proximity to the interpretive center that are necessary for maintaining both the center and the entire natural area include the caretaker's residence and the maintenance facility. A caretaker's residence is needed on-site to insure there is 24-hour security provided for the interpretive center investment. Providing the caretaker with a residence on-site, at a reduced rental rate, has proven to be a cost-effective means to providing security in relatively remote locations, such as that found at Powell Butte. Since a permanent staff member is envisioned for managing the entire natural area, locating a ranger/caretaker's residence adjacent to the interpretive center will provide security during hours when the interpretive center is closed. A 1,500 square foot residence is assumed,

with a two-bay garage for storing both work and personal vehicles. This is comparable to those at Oxbow Regional Park and Tryon State Park.

A maintenance building is essential for providing workshop and storage space for maintenance vehicles and tools. This facility will serve the entire management area as well as the interpretive center and its associated facilities, similar to facilities at Oxbow Regional Park and Tryon State Park.

OPERATIONS AND MAINTENANCE

Projected operations and maintenance costs for the interpretive center and caretaker's residence were made using the most recent data available from Building Owners and Managers Association (BOMA). Using 1994 BOMA Experience Exchange Report, data was used for those building in the Portland area less than 50,000 square feet.

Estimated Annual Maintenance Expenses:

	Area (ft2)	$/ft2	Total
Base Building	15,300	$3.91	$59,823
Caretaker Residence	1,500	$3.91	$ 5,865
			$65,688

This annual estimate includes cleaning, repair and maintenance, utilities, security, and administration costs. The primary source of revenue for meeting operations and maintenance costs is the interest generated annually from the Smith and Bybee Lakes Trust Fund. With the current fund at approximately $3.2 million, and assuming an annual interest rate of 3.5% (conservative), approximately $111,200/yr. would be available from the trust fund without depleting the principal. Other funding sources for annual operation and maintenance costs may be user fees associated with renting interpretive center facilities (i.e. meeting room, classrooms, concert space). Educational institutions, such as Portland School District, may fund specific educational programs at the site that would contribute to on-going maintenance needs.

Other management responsibilities will also compete for interest funds generated from the trust fund principal each year, such as personnel (natural area manager) and operations and maintenance for other facilities within the management area (i.e. trails, signs, parking areas, boat launch). At this time, it is envisioned that the environmental education program staff will depend, to a large extent, on sources external to the Lakes Trust Fund and volunteers.

Projected Staffing Needs

For the functions envisioned for the interpretive center, a bare-bones staff would include:

1 full-time director
1 9-month position
1 3-month position
15-20 regular volunteers with 4-hr. shift/week.

The director and 9-month seasonal staff would teach classrooms groups (15 students per group) 5 days a week. The volunteers staff the information/desk/bookstore. The 3-month seasonal staff person helps cover interpretive programs in the summer, while the director takes vacation, raises funds, and conducts administrative responsibilities. Funding for these positions may come from the interest generated from the trust fund after other expenses are met. Based on the current principal, every 1% increase in the annual interest rate yields an additional $32,000 in interests. With educational programs focusing on local schools, additional grants or fees may be obtained for providing specific educational services.

PROJECT SCHEDULE

Much of the project schedule is dependent on the availability of funds for design and construction. It is anticipated that most of the funding sources will be external to the Lakes Trust Fund for the following reasons:

(1) a project of this magnitude could deplete the trust fund severely or entirely, thus, leaving little to no principal for generating interest earnings to meet operations and maintenance needs;

(2) presenting a funding request to potential contributors where an operations and maintenance fund is clearly provided for perpetuity is more likely to be successful; and,

(3) the public support and attractive attributes of this project makes it highly eligible for many potential funding sources.

Fund Raising

Fund raising for the project will focus for public as well as private sources. Potential sources for which this projects may be eligible for funding include, but not limited to:

Public
Smith and Bybee Lakes Trust Fund
North Portland Enhancement Fund
St. Johns Landfill funds (generated from gas exploitation)
Portland Bureau of Environmental Services (sewer improvement projects)

Port of Portland (mitigation obligations)
Federal appropriation (supported by Oregon delegation)

Private
Meyer Memorial Trust
Lila Wallace-Readers Digest Fund
Bullit Foundation

The fund-raising strategy will be developed in more detail with the assistance of a contractor with experience in developing a funding program. In the FY94-95 adopted budget, $10,000 was allocated for a personal services contract ("B" Council designation) for funding development.

Options

The base footprint of the interpretive center building is limited by the amount of land above the flood plain. Any expansion of the building base beyond current design will require filling of wetlands, which will require additional permits and is philosophically in opposition to the focus of the center. The base building could be downsized if certain functions were deemed inappropriate or not cost-effective.

Assuming all the functions included in the design are appropriate and necessary, the size of each area according to the intended function can be adjusted independently only at the expense of changing the entire building design. Maintaining the same relative proportions, a proportional downsizing of the entire building is limited to what is the smallest acceptable area for certain functions that have either lower legal limits (i.e. bathrooms) or practical limits (i.e. office, kitchen).

There are different scenarios, based on the availability of funds, that will dictate the implementation schedule.

Scenario 1 - Total Funds Available

Nov. '94 - Oct. '95	Total Funding Secured
Nov.'95 - April '96	Final design with construction drawings Select Contractor
May '96 - Sept.'97	Construct base building, caretakers residence, maintenance building, trails, canoe launches, parking lot and walkways
Oct.'97	Open to Public

Scenario 2 - Limited Funds

If construction of the project is limited by cost, construction may be phased according to a rational implementation plan and available funds. A construction schedule may be phased similar to the manner outlined in the *Recreation Master Plan*, as suggested below.

Phase I Residence and Maintenance Buildings, Boat Launch, Trails

Rationale: A caretaker/ranger is needed on-site immediately following completion of what is outlined in the recreation plan as Phases I and II. These phases include completion of the Interlakes Trail, two observation platforms, boardwalks, and signs (Phase I); and completion of the trail circumventing the lakes, a boat launch, and parking lot (Phase II). With complete access to all parts of the management area, a boat launch, and a parking lot available to the public, security and maintenance needs will require a caretaker and maintenance facilities.

Facility	**Est. Cost**
Parking Lot	$ 91,000
Canoe Launches	$ 47,000
Caretakers Residence	$ 97,500
Maintenance Building	$ 90,000
Sub-Total	$325,500
Soft Costs (20%)	$ 65,100
Total Phase I	**$390,600**

Phase II Construct Interpretive Center Base Building

Rationale: A functional interpretive center could go on-line without all the exhibits and site improvements available. Given more time for implementation, some of these features may be obtained through contributions and volunteer efforts (i.e. plantings, test plots, rooftop features).

Facility	**Est. Cost**
Base Building	$ 1,760,000
Walkways	$ 35,000
Site Lighting	$ 30,000
Signs	$ 55,000
Fixtures, furniture, equipment	$ 100,000
Sub-Total	$1,980,000
Soft costs (20%)	396,000
Total Phase II	**$2,376,000**

Phase III Exhibits and Remaining Features

Rationale: Flat panels, 3-dimensional and diorama exhibits may be developed during the completion of Phase II or as funds become available, while being able to provide a quality experience at the interpretive center. Rooftop planting features and the test plots can be nurtured over time with community service groups and volunteers. Much of the plants and materials required for landscaping will be obtained from native plant sources that are readily available. However, cost estimates are provided to be consistent with cost estimates given in the interpretive center concept design report.

Facility	**Est. Cost**
Flat panels	$250,000
3D	$144,000
Dioramas	$132,000
Planting/Irrigation	$ 50,000
Wetland Interpret.	$ 40,000
Sub-Total	$616,000
Soft Cost (20%)	$123,000
Total Phase III	**$739,000**

Adoption of the concept design does not obligate any additional funds at this time. There will be no anticipated budgetary impacts for FY95-96 as a result of adoption of the concept plan. The development of a funding strategy will initially focus on obtaining funds exclusively external to the Lakes Trust Fund for construction of the interpretive center. After a reasonable period (through FY95-96) of using this strategy, the fundraising strategy will evaluated with the guidance of the Council.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends that Council adopts Resolution No. 94-1978.

EXHIBIT A

METRO

PORTLAND PARKS AND RECREATION

SMITH & BYBEE LAKES INTERPRETIVE CENTER

CONCEPTUAL DESIGN

ERRATA

The Skywalk, the ramp leading over the backbone of the interpretive center to the lookout tower, is described incorrectly in the Smith and Bybee Lakes Interpretive Center Conceptual Design report. On pages 14, 15, and 26, the Skywalk is described or illustrated as supporting vegetation that simulates changes in climatic zones at different elevations, such as those from the slopes of the Cascades down to Smith and Bybee Lakes. Establishment of these vegetation communities will be difficult, the maintenance intense, and the appropriateness questionable. The Interpretive Center Concept Design Advisory Committee and the Smith and Bybee Lakes Management Committee recommended the design be changed to that which supports plants found in the Smith and Bybee Lakes Natural Area. This change was not incorporated in the final report prior to its initial printing.

A more appropriate, instructional, and cost-effective planting strategy for the Skywalk would focus on establishing plant communities found in the lakes area. This portion of the project will most likely be done with materials gathered locally and implemented with students and volunteers. This could result in cost savings from the total estimate of approximately $100,000.

The final report will be changed to reflect (1) the deletion of the establishment of vegetation associated with different climatic zones and (2) the addition of native plant communities along the Skywalk that are associated with the natural area. The budget will be adjusted to reflect this change.

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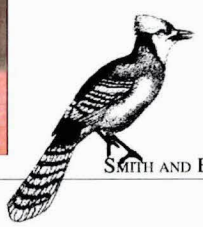
Don Stastny at
Architect Selection Interview



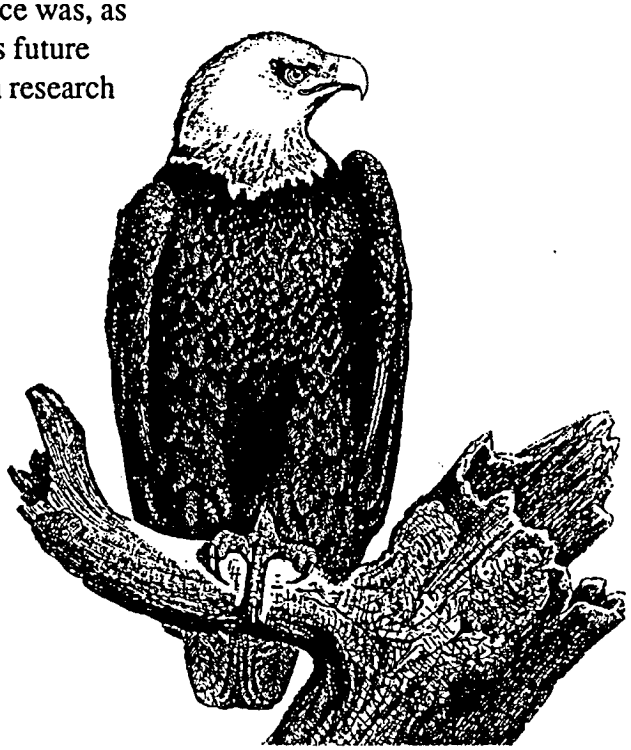
I. Introduction

Why are Smith & Bybee Lakes Significant?

Smith and Bybee Lakes is the largest lake system within Portland's city limits. It is the only remnant of what was once a series of tidally influenced shallow lakes and wetland areas located along the southern edge of the Columbia River. Though surrounded by industrial and residential uses and a landfill, its natural resource value as wildlife habitat remains high. Smith and Bybee Lakes offer a unique opportunity in the metropolitan area for recreation and environmental education.

Why is an Interpretive Center Necessary?

An Interpretive Center incorporating educational, recreational and research components has the potential to become the central tool in fulfilling the goals of the Natural Resources Management Plan for Smith and Bybee Lakes, adopted November 8, 1990, by the Portland City Council. Smith and Bybee Lakes are ideally situated to provide metropolitan residents the opportunity to enjoy a wildlife sanctuary while learning about the site's history and environmental concerns. The center can be used to teach about the resource as it once was, as it has become and how our current efforts can influence its future health. As an experimental station, the center can perform research in wetland environmental restoration.



"Why do we need Smith and Bybee Lakes anyway?" *- Public Forum Comment*

II. The Building Concept

Planning Process

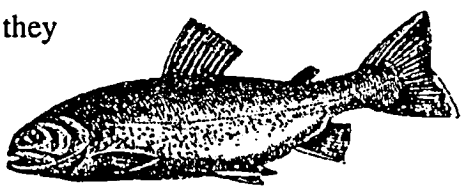
The conceptual design for the interpretive center was prepared over eight months, from January to August of 1994. Many people were involved in the process, representing a variety of organizations, including the St. John and Portsmouth Neighborhood Associations, Friends of Tryon Creek, Friends of Smith and Bybee Lakes, the lakes' management committee, Metro, Portland Parks and Recreation, and the USDA Forest Service. Students from Benson High School, Roosevelt High School and George Middle School also participated. Metro is responsible for overall management of the lakes and contracted with Portland Parks and Recreation to serve as project manager for the interpretive center project. Stastny Architects pc was retained, through a competitive selection process, as the prime consultant for the conceptual design.

"For local people the fishing here is not just sport, it is basic to their livelihood and should be recognized and supported by interpretive exhibits. Make sure the locals have input."

- Public Forum Comment

The conceptual design for the interpretive center represents another step in the long-term improvement of Smith and Bybee Lakes. This effort was initiated in 1986 when an advisory committee was formed by the Port of Portland to create an overall Management Plan. The plan, which was adopted in 1990, outlines a broad strategy for managing the lakes and provides the basis for subsequent plans and projects, including the interpretive center.

A Recreation Master Plan was prepared and adopted in 1993. That plan focused on the "recreational" use of the lakes — where trails should be located, how they should be built, and where an interpretive center might be sited.



Planning for the interpretive center began in early 1994 when an advisory committee was formed and a prime consultant (Stastny Architects pc) was selected. Through a series of meetings with the advisory committee, agency staff, and the consultants, an initial building program and floorplan emerged. A public meeting was held on April 13, 1994 to review the center's

A Place in the Region

The regional resource of the Smith and Bybee Lakes reserve is an "anchor" as well as a "partner" in the evolving regional natural and recreation system. As an anchor, it must set a standard for interpretive environments that explains "what is here" and "how to use it". As a part of the system, it should provide opportunities that are both complimentary to, and unique to, its counterparts and partner institutions.

The Site

Smith and Bybee Lakes are located on the peninsula of the St. John's district of Portland, at the confluence of the Columbia and Willamette rivers, and the Columbia Slough. Historically, the lakes and the surrounding area were a tidally influenced wetlands area. The Interpretive Center is located at the southeast corner of the reserve, off North Portland Road. The 40-Mile Loop Trail passes by on the southern edge of the site along the Columbia Slough. Canoe access to Smith Lake and the Slough are provided from the parking area. Service access to the building is from the south to reduce impact. Parking is located near N. Portland Road, away from the building. The lot is designed to accommodate 62 cars and eight oversized vehicles.

Moving through the buffer of trees between the parking area and the wetlands, one encounters a pathway made of recycled material. The pathway leads through an area bordered by natural areas and restoration experiments, allowing the visitor to first experience these features and natural phenomena as an introductory procession to the center.

Plantings are indigenous wetland species. Benches are distributed along the pathway to provide resting places. A public telephone is provided for visitors convenience and/or emergency use.

preliminary design concepts. After a few more meetings with the advisory committee, on June 28, 1994, there was another public meeting to review the recommended concept design. The final step was the preparation of this summary report.

PLACEMAKING

Before beginning any design process, the team worked to define a sense of *Place* for the interpretive center. Our remaining natural environment is a very precious thing and the Smith and Bybee Lakes are a unique resource that must not be ignored. The site is ancient, to be respected; it is the *poetry* of the site that must be captured in any built structure.

A PLACE IN THE ENVIRONMENT

The interpretive center should respect the natural features, materials and systems found on the site. The most appropriate form of the structure should be as a "non-building", a structure so integrated with the land that it is an extension of the land.

A PLACE IN THE COMMUNITY

Introducing a facility like an interpretive center into a local community must be done in a very careful way. The interpretive center can become *a part of* the community, *not just in* the community. Citizen ownership and empowerment leads to a sustainable facility, both in function as well as spirit.

A PLACE OF EDUCATION AND RESEARCH

The interpretive center has the capability of bringing learners of all ages to a location for *full immersion* into a situation. Tied with the site's natural resources and ongoing scientific and environmental experimentation, this facility could become a regional educational and research facility.

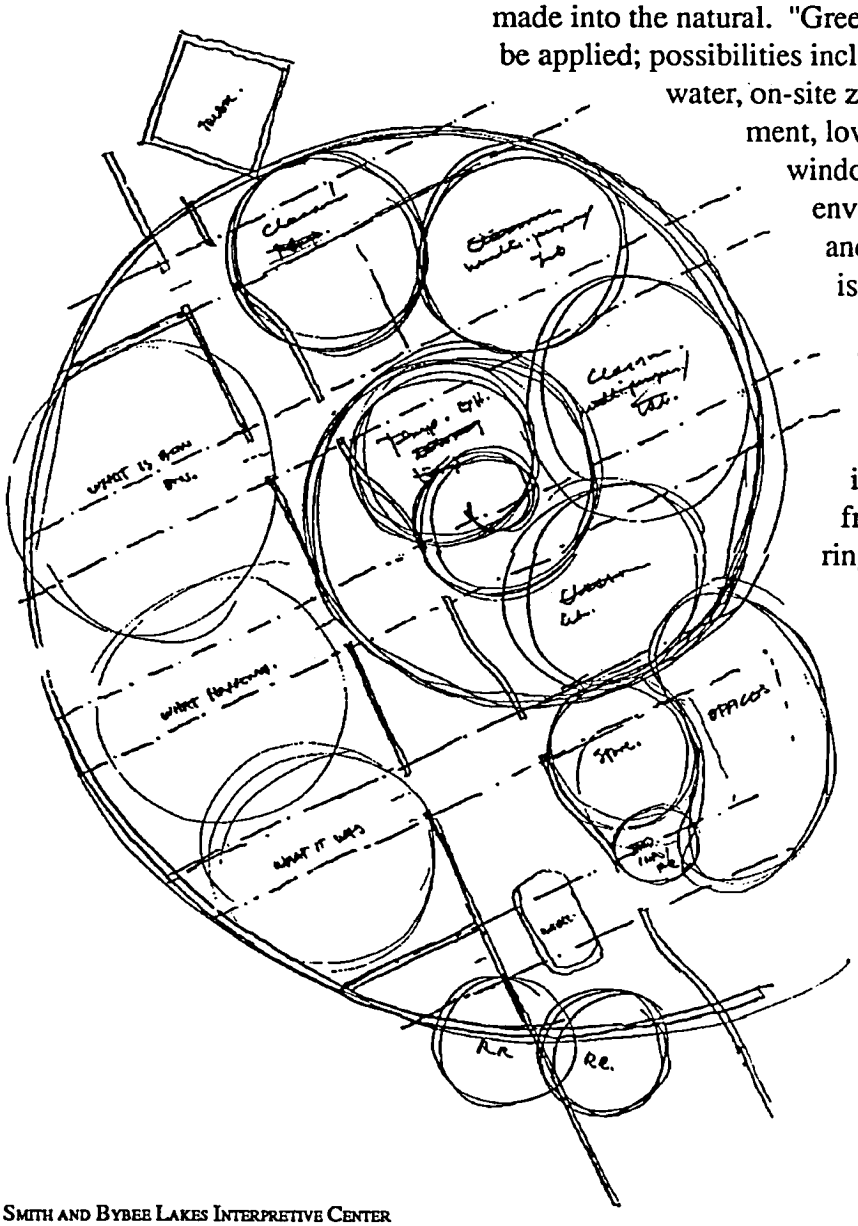
A PLACE IN TIME

As a place of cultural interaction, the interpretive center should tell the stories of those who have walked this ground, of those that have lived here before, during, and after industrialization, of those who are spiritually tied to this place. Native Americans lived for many generations in harmony with the seasonal rhythm of the region. Specifically, they harvested Wapato and Camas from these wetland areas along the rivers. Theirs was a sustainable use of this fragile environment. Their story needs to be told both in its historical context and in relation to our current and future efforts to establish a sustainable relationship with Smith and Bybee Lakes.

Smith & Bybee Lakes Reserve
Site Plan

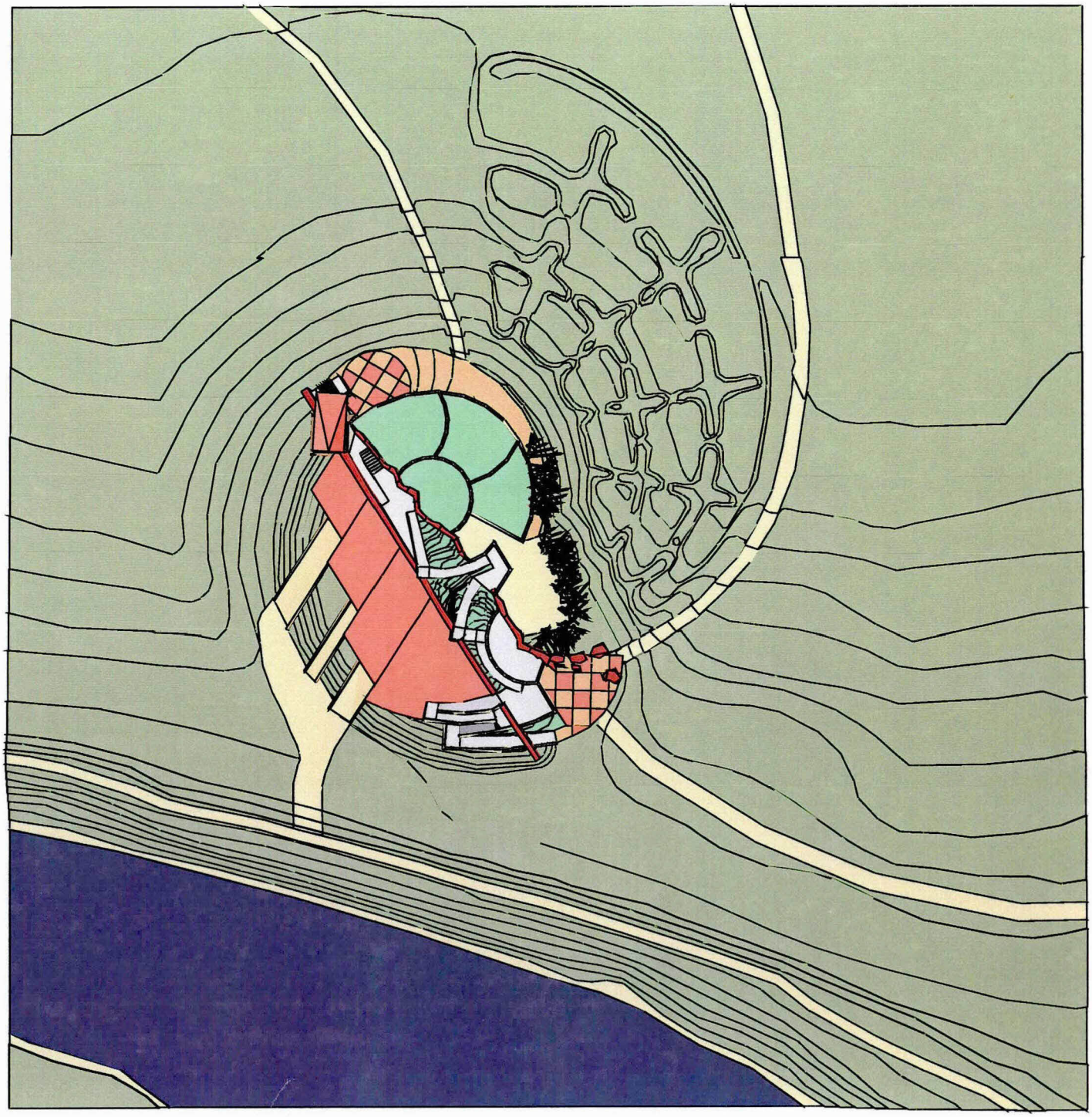
THE BUILDING

The Interpretive Center is to educate about the resource: what *was* there, what *is* there, and how to protect it. Keeping this in mind, the team created a building that educates, as well. A foremost theme in the building concept is a *non-intrusion* onto the site. The building is to be made of materials found in the vicinity; a better alternative is to use recycled materials. Possibilities include recycled timbers and decking from warehouses, lumber products made from recycled and manufacturing by-products, recycled cellulose board and insulation products, carpet made from recycled soda bottles (PET), and natural linoleum sheet flooring. To decrease intrusion onto the site, the design will blend into the surroundings, and will ease the visitor from the man-made into the natural. "Green" building systems and finishes can also be applied; possibilities include solar hot water heating for domestic water, on-site zero-discharge bio-active sewage treatment, low flow plumbing components, operable windows in all areas which do not require strict environmental controls, natural daylighting, and low VOC adhesives, sealants and finishes.



The building systems and materials are not the only features that can educate; the building design can as well. In this instance the building design is derived from the shell of a snail, a naturally occurring creature found on the site.

The form unfolds as the fisitor enters, and "clues" in the floor, ceiling, and wall patterns inform the observer of the organic inspiration for the structure.



Aerial Site View

"What kind of connections, programs, space and money and equipment resources are planned for students to visit and learn and see and do science? Educational facilities, storage, labs, people, etc.? Tables for microscopes with outlets, storage area for plants/test plots, sinks, on-line computers, small library, reading room?"

- Public Forum Comment

BUILDING PROGRAM

The Building Program describes the functions envisioned in the Interpretive Center and assigns area allotments and spaces necessary to accommodate these functions.

1.0 Entrance Lobby and Related Spaces

1.1 Information/Reception 100 sf

The information/reception area must provide visual control for the entry, education shop and main public circulation areas. The reception desk will be configured to allow a single staff member to operate both the reception function and the education shop.

1.2 Public Circulation/Display 2,200 sf

The main public circulation zone also serves as additional interpretive display area. The display material in this area will be a mixture of temporary/seasonal and permanent orientation materials. This space provides glimpses into the Smith and Bybee landscape beyond.

1.3 Education Shop 300 sf

The education shop offers books, gifts and art of an educational nature relating to the Smith and Bybee environment and it's regional context. The education shop is both an interpretive resource and a source of income for the facility. It is adjacent to the reception area to reduce staffing needs during slow periods. A ceiling-mounted, rolling grille will provide off-hour security.

1.4 Auditorium/Film 1,200 sf

The auditorium is an orientation device for the permanent exhibits and the overall Smith and Bybee resource. Seating will be flexible to accommodate alternative uses such as community meetings or seminars. Located near the reception area, the auditorium is on the circulation sequence to the permanent exhibit, but can also be used when the permanent exhibits are secured.

1.5 Temporary Exhibit 400 sf

The Temporary Exhibit Gallery is located at the end of the main public circulation. This is a special room to house a variety of temporary shows, ranging from exhibits loaned by other interpretive facilities to programs at the Smith and Bybee Lakes Interpretive Center. This space will have strict environmental and security controls to accommodate a wide variety of exhibit types and sources.

1.6 Gallery 1,000 sf

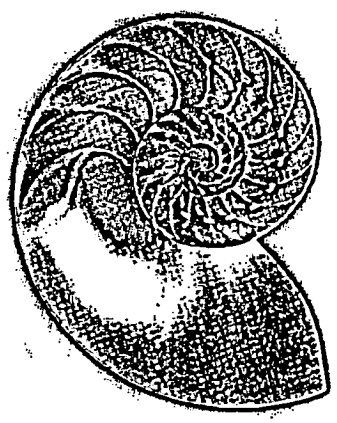
The Gallery is an extension of the main public circulation/ display area adjacent to the educational functions of the facility. Displays in this area can include material generated by the classroom users, temporary shows with less stringent security needs, and semi-permanent displays about the Smith and Bybee resource. As a public room along the main public circulation, the gallery also is the "living room" of the facility, used as a program "staging" area and for gatherings associated with functions in the multi-use room and/or classrooms.

1.7 Public Toilet Rooms 900 sf

The main public rest rooms are located centrally in the facility. Additional rest rooms are provided near the entrance for visitors not using the indoor parts of the facility.

1.8 Mud Room 300 sf

The Mud Room is located near the entry and is accessible from the exterior. It provides a place for visitors, particularly school groups, to clean up after visiting the outdoor exhibits and trails. It also serves as initial staging space for school groups and includes storage for brown-bag lunches, jackets etc.



1.0 Sub-Total 6,400 sf

2.0 Permanent Exhibit Gallery

2.1 Main Exhibit Gallery 2,800 sf

The Main Exhibit Gallery is a "black box". Located along the main public circulation and adjacent to the auditorium, it contains the permanent exhibits of the center. The exhibits include display types ranging from flat panels to audio-visual and diorama displays. The gallery has a clear span space to provide maximum flexibility for exhibits. Electrical supply and environmental design must allow for similar flexibility and varied loads. A grid of raceways at both floor and ceiling levels can provide maximum flexibility. Permanent exhibits accommodate unique environmental requirements within the micro-climate of the each display.

2.2 Exhibit Storage 650 sf

Exhibit Storage is a storage and staging area for both the permanent and temporary exhibit components of the facility. This area has strict security needs and will provide similar environmental conditions as the Temporary Exhibit Hall to protect exhibits during temporary storage.

2.0 Sub-Total 3,450 sf

3.0 Educational/Multi-use

3.1 Multi-use Room 900 sf

The Multi-use Room is adjacent to the classrooms and Gallery. It is attached by a movable partition to one of the classrooms. This room is visually connected to the gallery and has largely unobstructed views out to the Smith and Bybee landscape. The space includes storage for flexible seating and a mixture of shelving and cabinets for storage of books and other materials used by the interpretive staff in their programs. The Multi-use Room is equipped with a built-in projection screen and chalk/marker board.

3.2 Classrooms (2 @ 450 sf each) 900 sf

The classrooms also have visual continuity with the Gallery and open out into the landscape. The classroom design will communicate the unique learning experience. Each classroom is equipped with a deep sink, cabinets, countertops, shelves/cubbies, projection screen and chalk/marker board.

3.3 Kitchenette 140 sf

Support space for snack preparation or light catering. Will contain counter space, microwave, small refrigerator and sink. Accessible to gallery, classrooms, and outdoor amphitheater.

3.0 Sub-Total 1,940 sf

4.0 Shipping and Receiving/Mechanical

4.1 Shipping and Receiving (Loading Area) 650 sf

Shipping and Receiving is located adjacent to the mechanical and shop functions. It is also intended to serve the entire facility, though traveling and some other exhibit materials may be directly delivered to the Exhibit Storage, and some small items may be delivered through the main entry. Equipped with a 10'x10' roll-up door and a loading dock, it is accessible by vehicle for deliveries. A standard swing door is adjacent to the roll-up door.

4.2 Mechanical/Shop 1,000 sf

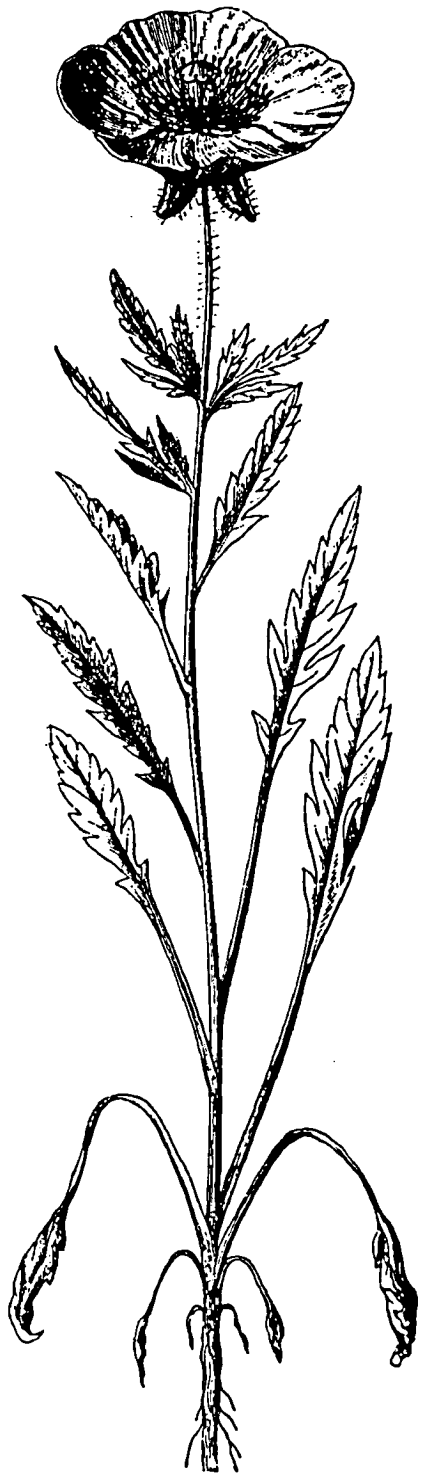
The main mechanical area will house the mechanical equipment and domestic and fire-suppression water equipment. The shop would accommodate activities too small to justify being carried out in the maintenance facility. The mechanical equipment should be located to take advantage of the zone between the public circulation and the dark functions of the building (exhibit galleries and the auditorium) for efficient distribution of heating, ventilating and air conditioning. The shop should be acoustically isolated from other functions.

4.0 Sub-Total 1,650 sf

5.0 Administration/Library

5.1 Library 550 sf

The library serves both visitors and staff research needs. It is adjacent to both administrative and educational functions on the main public circulation. It can be secured separately from the rest of the facility. A partial glass wall and full glass door connect the library to the administrative area.



5.2 Clerical 200 sf

The Clerical area is an open office area which accommodates four workstations. It is located adjacent to the main entry and is open to the Reception/Information area, allowing staff to operate the reception desk while engaged in other administrative duties. The clerical area is also adjacent to the offices and staff work room. It has good natural light from a generous array of exterior windows, which also provide a view of the entry area. A rolling grille will provide off-hour separation from the public areas.

5.3 Office I 200 sf

Connected to the Clerical area, Office I is a private office with a full view out to the site.

5.4 Office II 150 sf

Slightly smaller than Office I, Office II is also connected to the Clerical area with views of the site.

5.5 Staff Work Room 400 sf

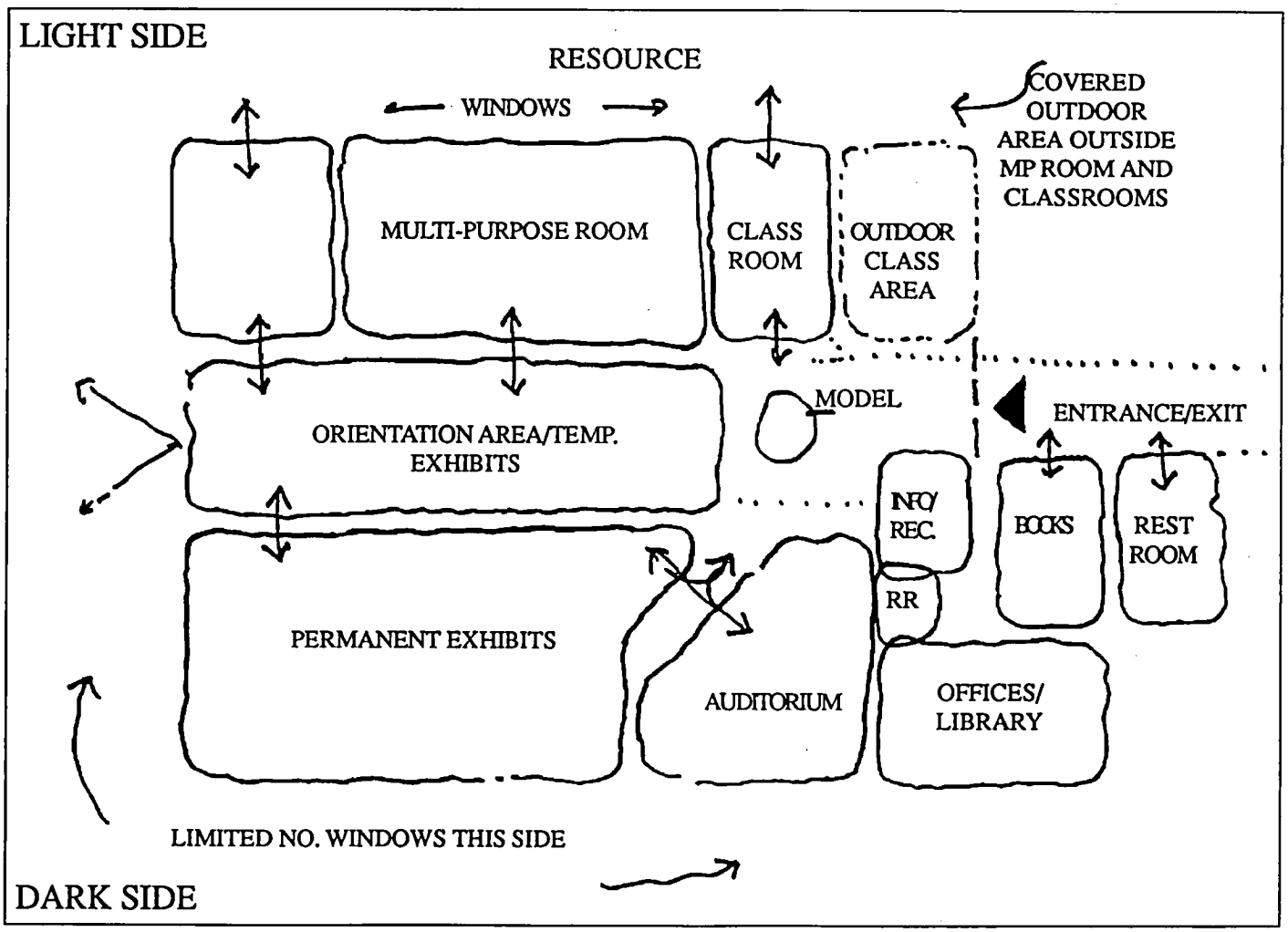
This staff work area houses the office copier, staff coat closet and storage for office supplies. A large work table and side counters provide layout space for staff projects.

5.6 Staff Toilet 50 sf

The Staff Toilet is a single uni-sex compartment accessible from the Staff Work Room.

	Sub-Total	**1,550 sf**
	Administrative Circulation @ 20%	310 sf
	Sub-Total	**1,860 sf**
TOTAL INTERPRETIVE CENTER		**15,300 sf**
6.0 Caretaker's Residence		
6.1 Residence		1,500 sf
6.2 Garage		500 sf
	Sub-Total	**2,000 sf**
7.0 Maintenance Facility		
7.1 Maintenance/Tool Storage		1,000 sf
7.2 Workshop(s)		500 sf
	Sub-Total	**1,500 sf**
TOTAL CARETAKERS AND MAINTENANCE		**3,500 sf**

The following diagram describes features which were observed to be effective in interpretive centers around the San Francisco Bay area, by Dave Yamashita during a research trip. The diagram portrays a "light side" and a "dark side" attached to a central spine of public circulation and temporary exhibits. A model of the Smith and Bybee Lakes area, just inside the entry, serves to orient visitors to the site. The educational component has ample windows opening into the site, while the exhibit and auditorium are "black boxes". The arrows indicate flow and connection between the different functions. These concepts have been expanded upon in the Building Program and incorporated in the Conceptual Design.



BUILDING IMAGES

The Smith and Bybee Lakes Interpretive Center is designed to create an atmosphere of learning and exploration for visitors to the wetlands reserve. The experience begins when the visitor arrives by car, transit or bike.

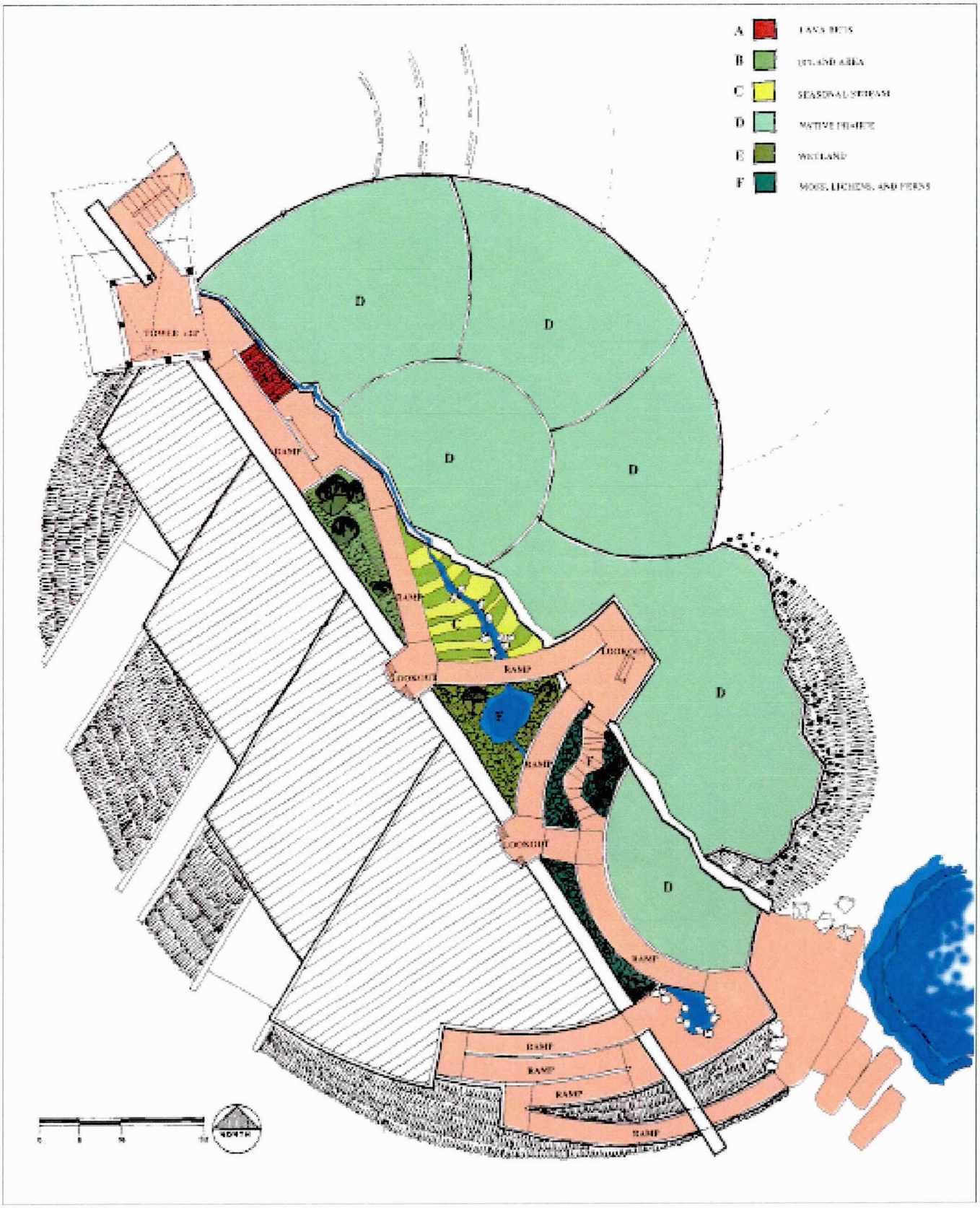
THE SKYWALK

The "signpost" of the center is the Skywalk, a wandering ramp that forms the backbone of the center. It is the most prominent built structure in the center, and forms an armature that all other uses attach to — in the same way fungi or other growths attach to their host plant or animal. Technically, the Skywalk structure contains the mechanical and electrical systems that service the center. Architecturally, it forms the central hallway and gallery that orients circulation through the center; on the roof, it becomes an interpretive exhibition itself. Moving up the Skywalk, the visitor will experience a number of micro-environments, reflecting the changing character of the land from the slopes of the Cascades down to Smith and Bybee Lakes, orienting the visitors to the regional context of these wetlands. As one moves upward, the Smith and Bybee area is gradually revealed, terminating in a lookout tower. The tower roof serves as a rain collector, mechanically activated to allow rainwater to flow down the levels of the Skywalk. This system provides water to each of the micro-environments down the ramp.

The form of the Skywalk is defined by two walls, one reflecting "man-made" technology and one representing a more "natural" configuration of stone cliffs and escarpments.

THE SNAIL

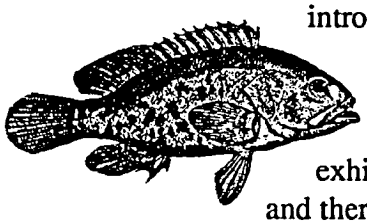
The building structure that attaches to the Skywalk armature evolves from the form of a snail shell indigenous to the site. Upon entry, the visitor passes by a central control/reception desk. This location is set up to allow a single individual to control the entire structure. Across from the reception desk, there will be a large interactive model of the entire Smith and Bybee area to orient the visitor to the site features, the center, and the Lakes.



Skywalk/Roof Plan

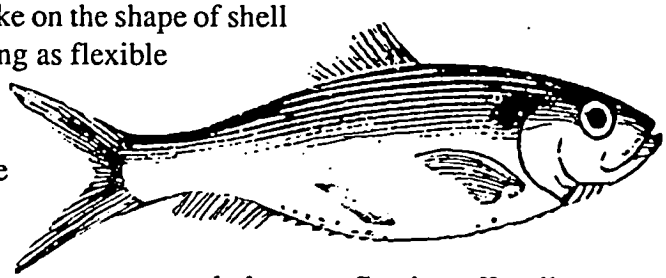
The Flow

The visitor then has the opportunity to view the permanent exhibit which will display the storyline: "What it Was, What Happened, and What is Being Done". Integrated into the exhibit area, yet functionally separate, is the small auditorium that can be used for an introductory show to the exhibit, as a separate program space, as a class room, or as a public meeting room. The entire exhibit sequence is enhanced by a temporary exhibit area at the far end of the main gallery and there are opportunities for display cases and informal displays.

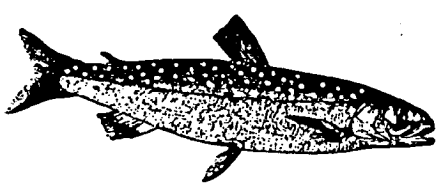


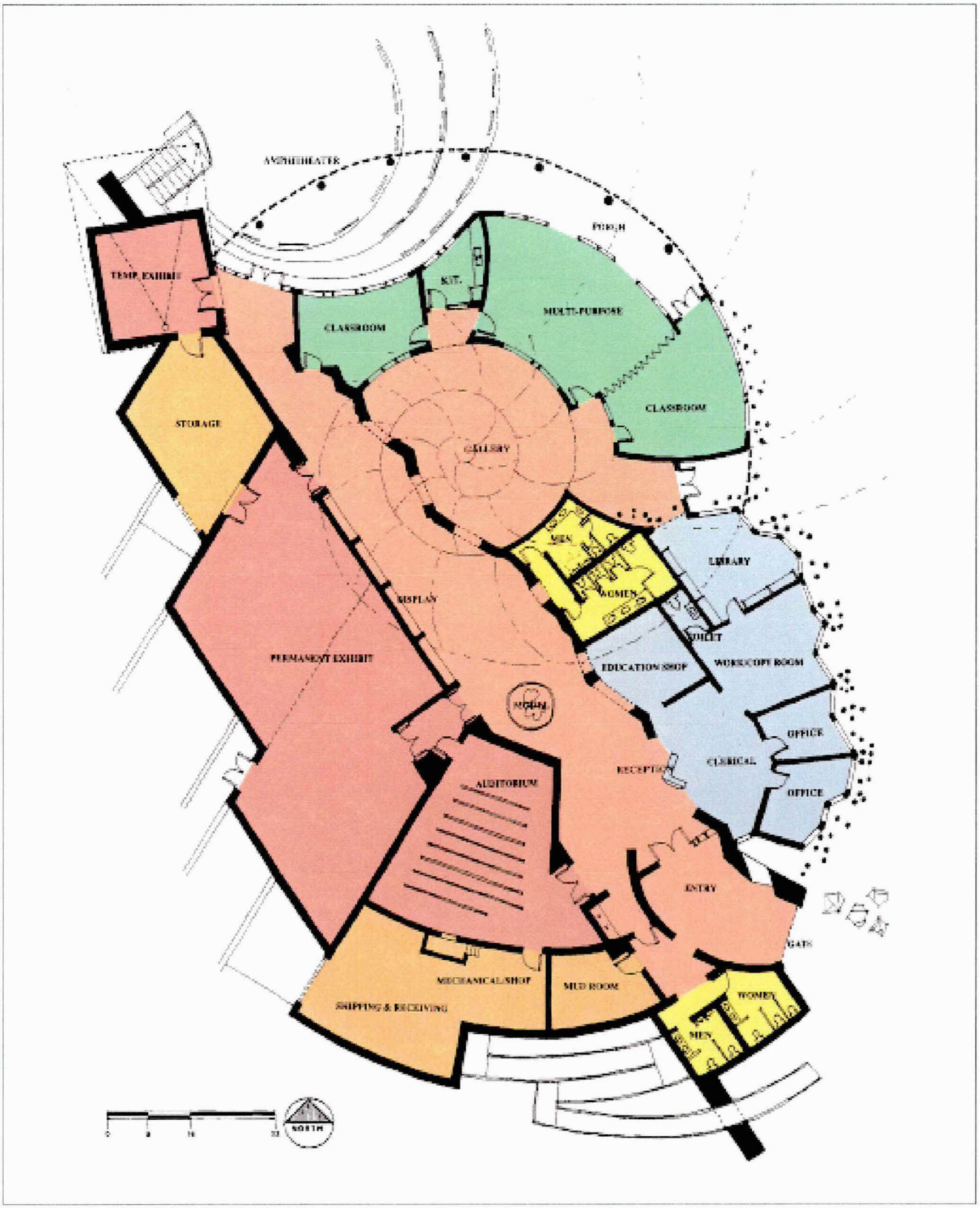
Unique Learning Experiences

The educational component is attached to the armature and opens directly out to the wetlands, both natural areas as well as experimental and interpretive exterior "test plots". The classrooms and multi-purpose rooms are designed to create an alternative to the "traditional" class room box. They take on the shape of shell segments and, while being as flexible and functional as a standard rectilinear room, provide a message that this is a "special place" for learning. Light filters in from unexpected places, reflecting off walls, providing natural illumination. Full glass walls and windows involve the outside features and activities as an extension of the classrooms.



Two additional enhancements to the educational component are a partially covered outdoor amphitheater and a research library. The amphitheater is located to allow orientation sessions prior to moving out into the trails of the Smith and Bybee Lakes as well as provide a place for performances that may be part of an artist/environmental extension program. The outside stairs to the observation tower (the terminus of the Skywalk) are placed to provide both a "speakers platform" as well as apparatus framework for lighting and audio enhancements to the amphitheater.




AMPHITHEATER
PORCH
TEMP. EXHIBIT
KIT.
CLASSROOM
MULTI-PURPOSE
CLASSROOM
STORAGE
GALLERY
MEN
WOMEN
LIBRARY
DISPLAY
QUIET
PERMANENT EXHIBIT
EDUCATION SHOP
WORK/COPY ROOM
OFFICE
CLERICAL
RECEPTION
OFFICE
AUDITORIUM
KIT.
ENTRY
GATE
MECHANICAL/SHOP
MUD ROOM
WOMEN
SHIPPING & RECEIVING
MEN
NORTH

Floor Plan

ADMINISTRATION

Adjoining the educational areas is the administrative area, consisting of open office areas and private offices. The administrative area contains the educational "store", supporting the educational and interpretive mission of the center. The administrative area is pictured as organic in form, with windows allowing views to the path from the parking area as well as the outdoor exhibit and test plot area. The outside of the form will have a series of random poles that will create a "beaver lodge" effect stacked against the articulated Skywalk wall. The roofs of the educational and administrative functions are planted in native grasses, giving the building a feeling of emerging from the wetlands, as well as providing another exhibit opportunity when viewed from the Skywalk above.

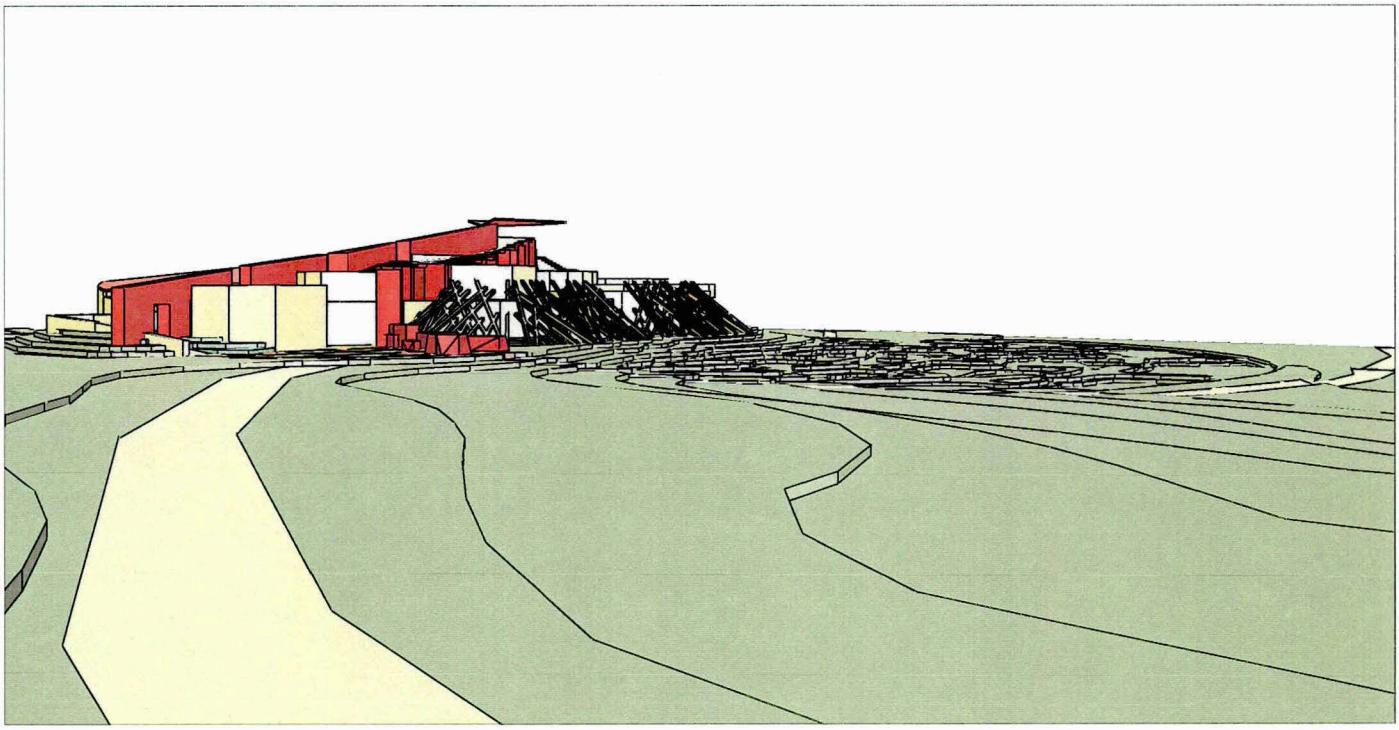
"The concept of restoration, that everything is habitat for something. When we 'restore' something, we are further manipulating a manipulated habitat. Some species adapted to today's habitat will be displaced (e.g. blackberry eaters). What do we restore it to? Or <u>when</u> do we restore it? And Why? We are placing values just as the past manipulation had to do with values. What is our value?"

- Public Forum Comment

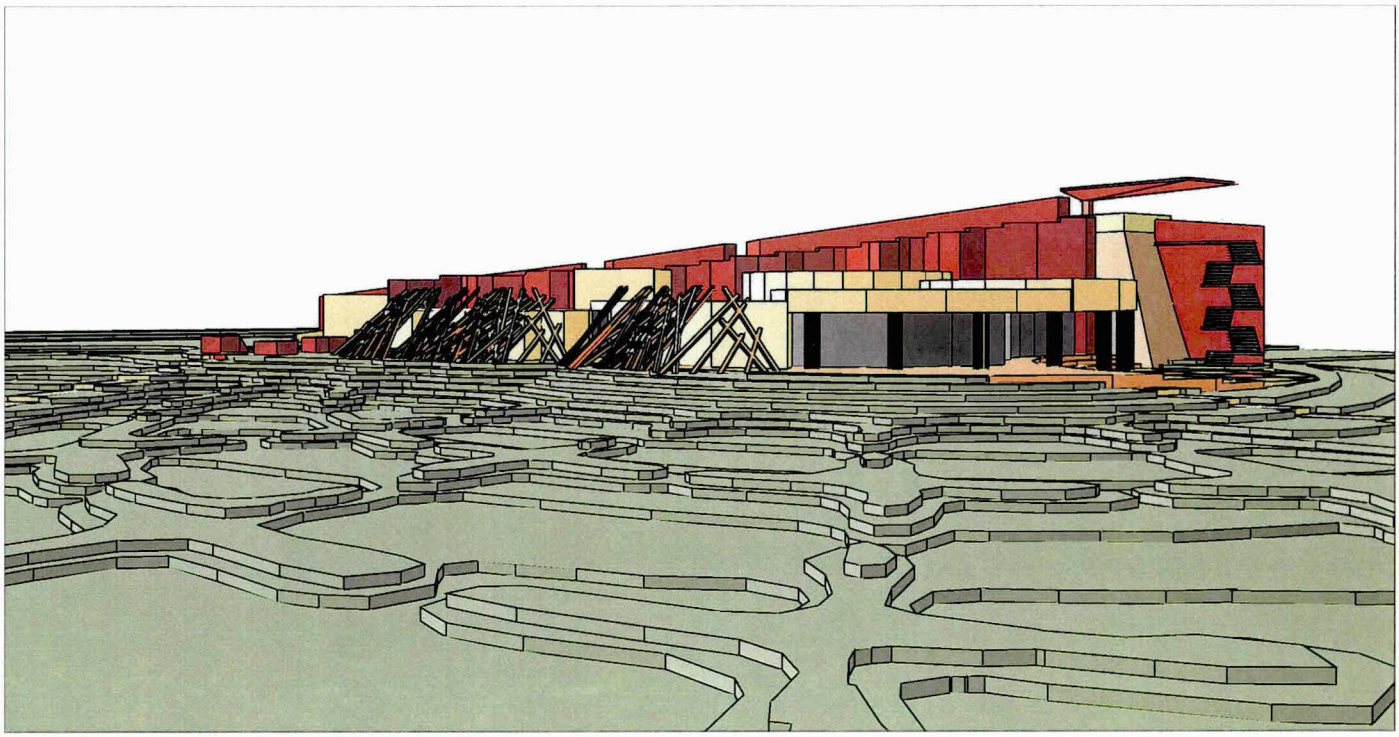
SUPPORT SPACES

Other support spaces including restrooms, student storage (i.e., lunches, coats, boots), and workshops are clustered around the exterior of the exhibit/auditorium areas. All support spaces are designed to be low maintenance areas, and toilets are accessible from the outside vestibule to allow use by visitors without tracking mud into the central gallery area. Wash-off areas will be provided for people coming in from a "wetlands excursion".

Overall, the structure and the outside exhibit areas meld into an orchestrated whole. The intent of the design is to create a building that is an interpretive exhibit itself — a building with symbology and meaning — a utilitarian structure that is made up of natural and recycled materials — a structure that appears to rise out of the land.



View from Entry Path



View from Loop Trail

III. What will the Center Offer?
An Interpretive Prospectus

Interpretive Themes

Discovery, Understanding and Restoration

The enduring meaning and value of Smith and Bybee Lakes will be recognized and rediscovered at different levels; the region, the surrounding communities and the place itself. It is a large wetland system in recovery; a place that possesses a history of human occupation, use and exploitation; a sanctuary for wildlife and a retreat for people; a place for exploration and understanding of the natural environment.

The following prospectus outlines potential topics for interpretation.

I. What it Was...

- The largest freshwater wetland on the Columbia River.
  - The lakes system's former hydrologic/hydraulic connection to the Columbia River (tidal influences).
  - Seasonal change. The different moods of the lake system.
  - How did ducks (any birds/all critters) thrive at Smith and Bybee Lakes (wildlife habitat)?
  - The natural evolution of flora and fauna without intervention.
  - Native peoples practicing their sustainable indigenous cultures.
- A sensual and spiritual experience.
- Imagine what you could experience and learn if it still was as it was before...
- How Smith and Bybee Lakes compare to other wetlands.

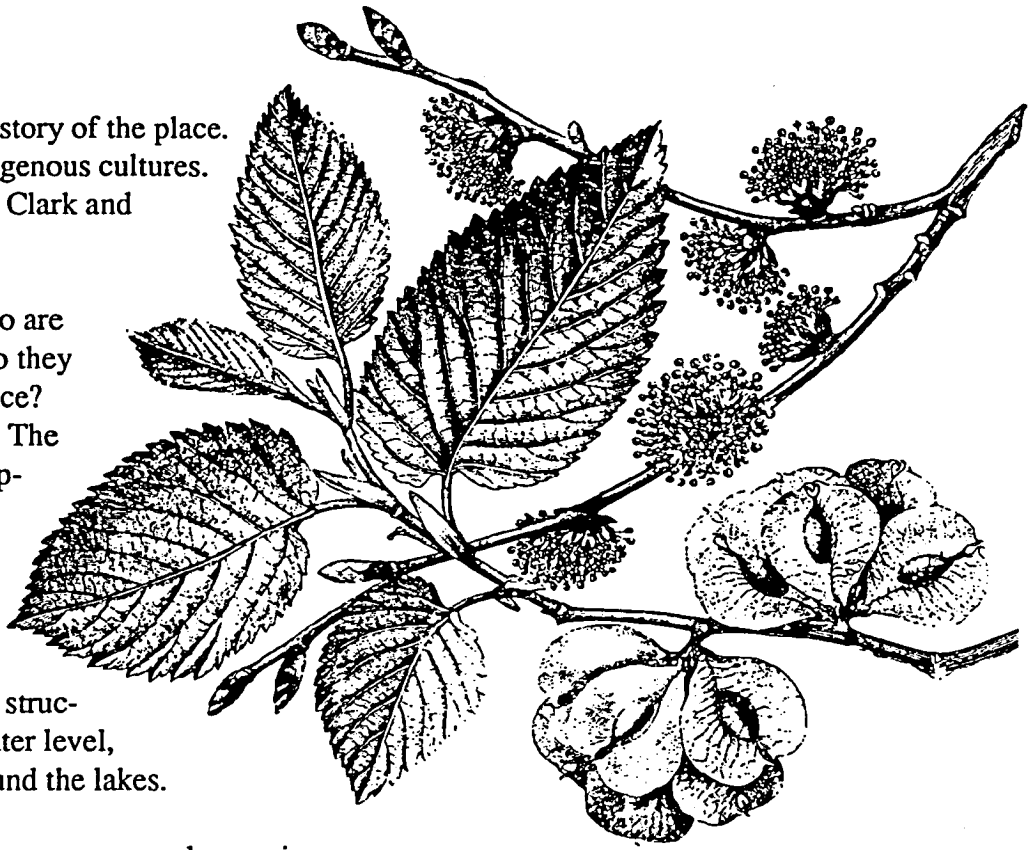
Message: A valuable resource that was undervalued.

II. What Happened...

- Tracing the effects of environmental and land use changes to Smith and Bybee Lakes over time.

"How did the building of the landfill and railroads affect the lakes and wildlife?"

- Public Forum Comment



- The human and cultural history of the place.
  - Native people and indigenous cultures.
  - Discovery: Lewis and Clark and others.
  - Early settlers.
  - Smith and Bybee: Who are those guys and what do they have to do with the place?
  - Settlers to present day: The beginnings and development of St. Johns/ Portsmouth and industrial surroundings.
  - Corps of Engineers activities.
  - Port of Portland: Weir structure/stabilization of water level, filling of wetlands around the lakes.

- Modification of a dynamic system towards a static system.
  - Weir structure/stabilization of water level.
  - Inundation by foreign vegetation.
  - Systems are not static, either degrading or improving.

- The inescapable surroundings and primary influences.
  - The industrial edges
  - The railroads
  - The Columbia slough
  - The St. Johns landfill
  - The Port of Portland

Message: Ordinary people leading ordinary lives make mistakes.

III. What is Being Done...

- A sensual and spiritual exploration.
  - An immersion back into nature.
  - Still water and moving water have different spirits.
  - The basic concepts and conflicts of environmental resource management and visitor use and enjoyment of Smith and Bybee Lakes.
  - How can we all get along here? The potential presence of more people, in concentrated areas. Where do you emphasize wildlife "comfort" and buffer zones?

- A continuous experiment of ecological restoration.
  - The site as a center for wetland ecology, research and experimentation.
  - The site as a staging area for wetland restoration.
  - Creation of a richer and more dynamic wildlife habitat.
  - Selective experimental plots/restoration sites in and around the Interpretive Center.
  - A wetland plant nursery.
  - The center as an expression of the restoration ethic: Architectural design, siting of the structure, recycled building materials, etc.

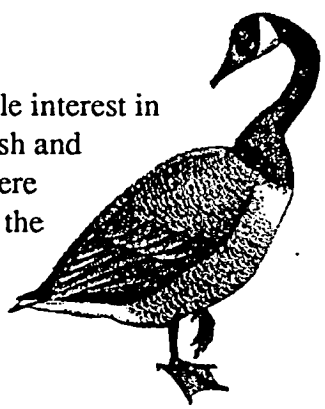
- An aquatic ecosystems learning center.
  - The importance of wetlands.
  - Accessible, "hands-on" biological science.
  - The variety and forms of the Lakes' wetland environments.
  - The concept of how long or how quickly environmental changes can take place.
  - Explain, see and participate in carrying out the intent of both the Water and Natural Resource Management Plans.
  - Environmental change.
  - Water quality and pollution monitoring station.

Message: Exploration, experimentation, learning.

EXHIBITRY PHILOSOPHY

An important concept for anyone interested in ecology or environmental restoration is that we can not always see all the ways in which things are interrelated. One theory suggests that the flap of a butterfly's wings may minutely affect the weather in the next state a day later. We may never fully grasp the complexity with which our world is configured. The following story about "dying ducks" illustrates this concept.

DYING DUCKS



Let's speculate that up until 1980 there was little interest in either Smith or Bybee Lake. Then the U. S. Fish and Wildlife Service (USFWS) found that ducks were dying in Smith Lake during late summer when the lakes were at their lowest (they were then in direct connection with the North Slough and the Columbia Slough, Willamette River, and

Columbia River). It appeared the waterfowl were dying from avian botulism. The warm, mud-flats resulting from lower water was optimum habitat for botulism. The concern of the USFWS was communicated to the Port of Portland. Bill Bach, a property manager for the Port, learned from USFWS that it would help to impound water in the lakes to avoid low water conditions and eliminate conditions leading to botulism and the threat of spreading this disease to Sauvies Island. A temporary dam was installed in September 1982 by the Port at the outlet of the lakes. Thus began a series of changes in the lakes that are continuing to occur. Prior to 1982 the lakes had stabilized as tidally influenced wetland systems.

'What you see is what you get' (WYSIWYG) might be a commendable aspiration for consistency between computer monitor and printer product, but it won't be nearly enough for the person who visits Smith and Bybee Lakes for the first time. For example, the visitor won't see the dying ducks that led to the dam that killed the willows, created more wetland and led to the dominance of smartweed in Smith Lake.

If we look at the "seeing" in WYSIWYG, and ignore for the moment the other senses, there are a wide variety of things that can be seen in one way or at one time or another. What follows is one taxonomy of what can be seen at Smith and Bybee Lakes.

THINGS BIG ENOUGH TO SEE WITHOUT ASSISTANCE
(eyeglasses and binoculars allowed)

- Easily Identified
  - There all the time
    - In the same place (reed canarygrass. Pacific red willow, smartweed)
    - In different places (gulls, carp, blue gill)
  - Come and go
    - In the same place (ephemeral ponds)
  - In different places (migrating waterfowl, salmonids)
- Hard to Identify
  - There all the time
    - In the same place (short-eared owls)
    - In different places (gambusia)
  - Come and go
    - In the same place (green-backed heron)
    - In different places (northern shoveler, pied billed grebes)

THINGS TOO SMALL TO SEE WITHOUT ASSISTANCE

- Easily Identified
  - There all the time
    - In the same place (species of spike-rush)
    - In different places (Mexican water-fern)
  - Come and go
    - In the same place (fungi)
  - In different places (spike rush seeds)
- Hard to Identify
  - There all the time
    - In the same place (species of chrysophyte algae, oligochaetes)
    - In different places (clams)
  - Come and go
    - In the same place (flowers-seeds of Columbia R. sedge)
    - In different places (species of liverwort)

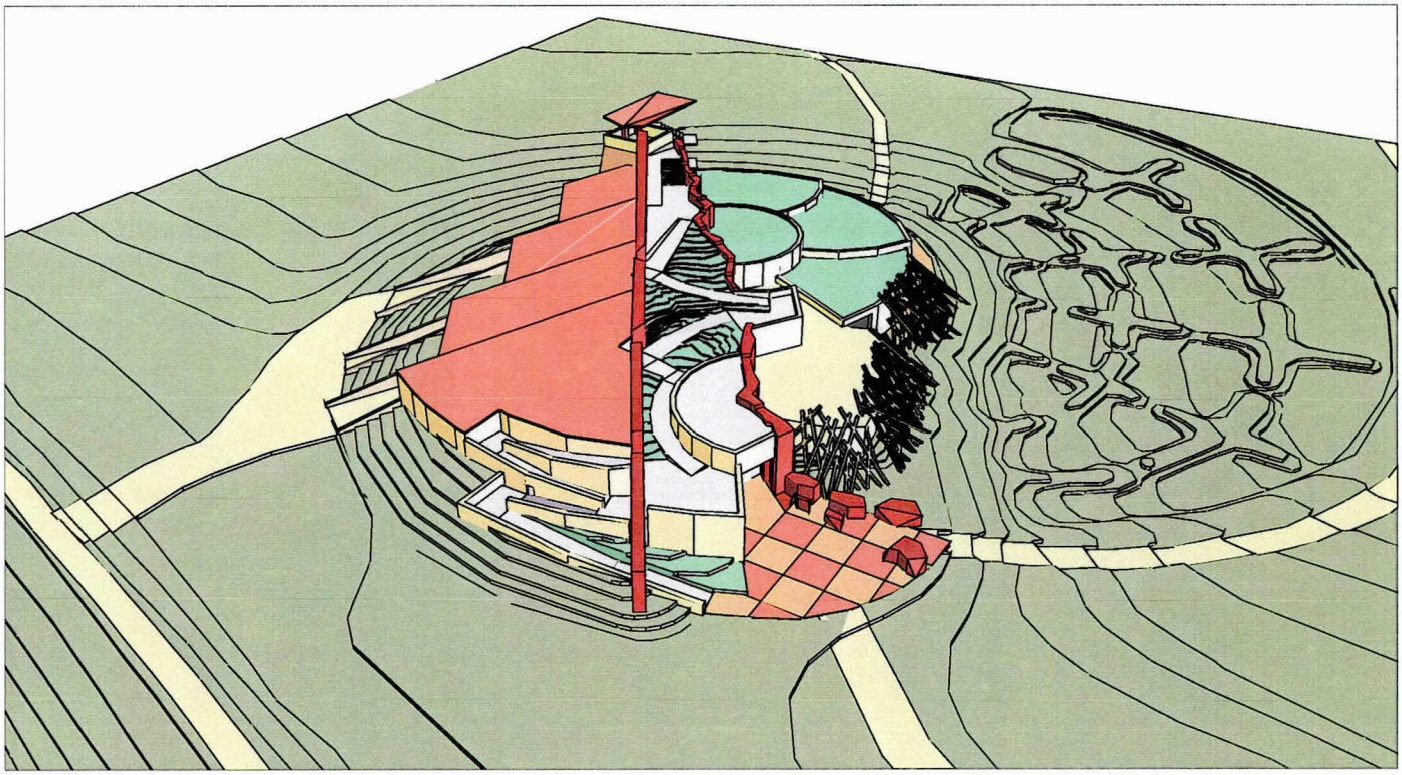
THINGS YOU CAN'T SEE EASILY

- Relationships of organisms to their environment (food webs, life cycles)
- Influence of the St. John's Landfill
- Influence of the 40-Mile Loop Trail
- Influence of the Port's adjacent development in Rivergate

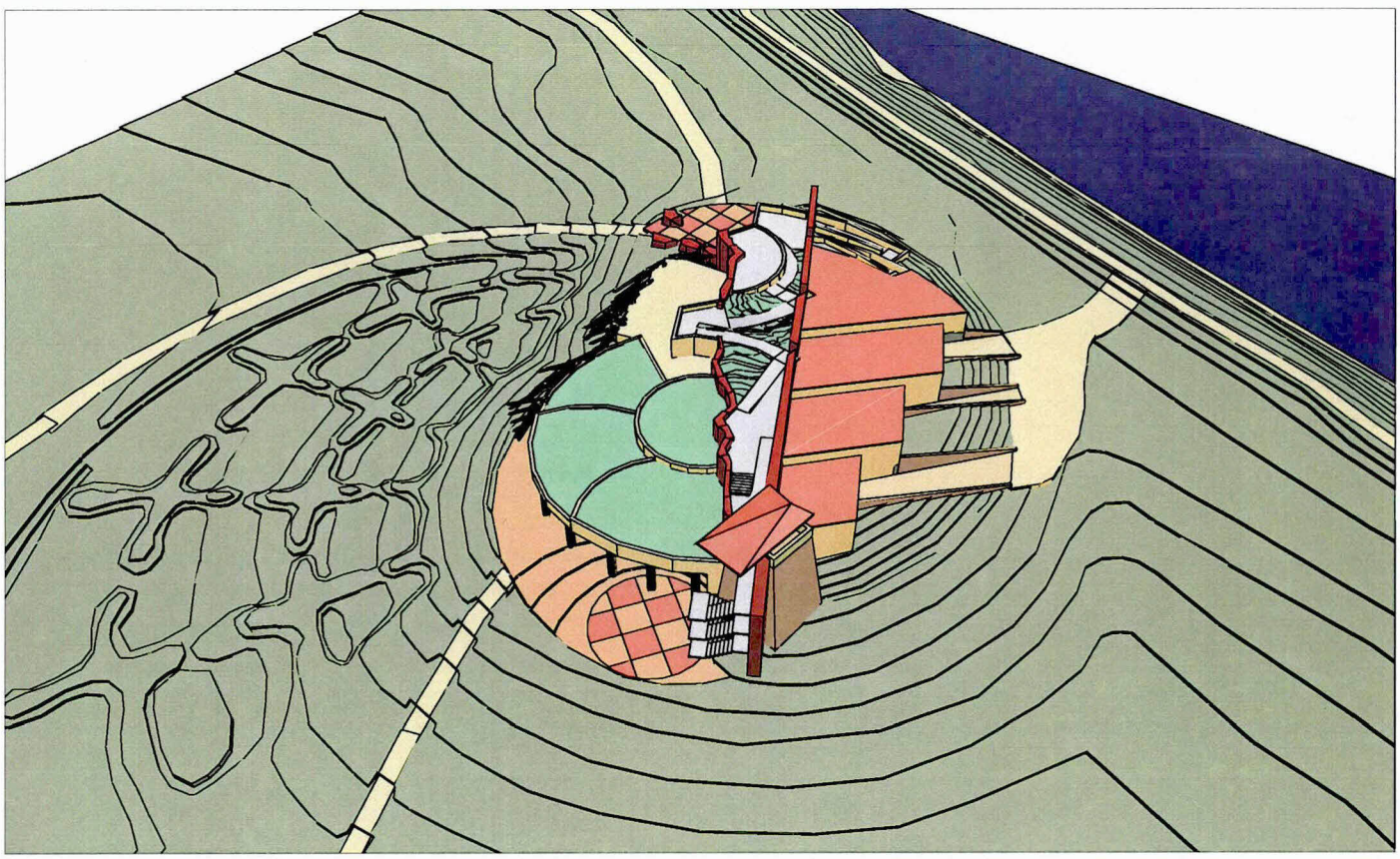
THINGS YOU CAN'T SEE

- The dying duck sequence
- The way the area looked at the turn of the century
- The way the area looked before Lewis and Clark visited the lower Columbia
- How the native Indians used the lakes
- Temperature
- Odor, scents
- Touch of something
- Sounds

Within the themes of "What is Was; What Happened; What is Being Done," we can apply the above taxonomy as an organizing tool. Our relative ability to "see" an element can be used to determine how best to design an interpretive center about it. If we approach the design this way, visitors will learn much about the complex interrelations of Smith and Bybee Lakes and their systems.

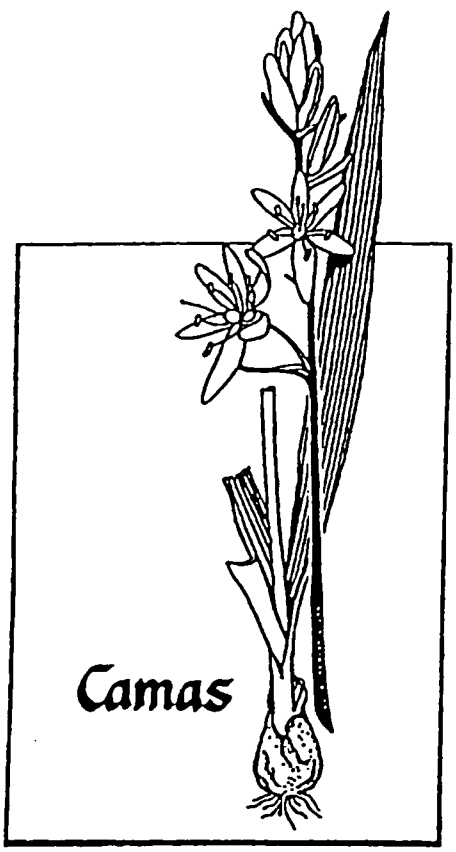


View from Southeast



View from Northwest

Specific Outdoor Interpretive Ideas



A Building you Learn From

The Interpretive Center tells stories as well as provides a way for stories to be told. As the "backbone" of the center, the Skywalk provides a variety of interpretive potential. As a visitor ascends the walk, the following "zones" can be discovered:

A. *Lava Beds*
Stair and well built of and in a bed of lava rock. This area would be nearly devoid of plant life, simulating the bareness of the lava fields of the Cascade range.

B. *Upland, Mesic Zone*
Shady, irrigated area planted with native small trees, shrubs, and groundcovers (willow, alder, salal, Oregon grape, oxalis, vancouveria)

C. *Seasonal Stream Zone*
Open, rocky area with a shallow defined stream channel for rainwater runoff, planted with wildflowers or herbaceous plants (rushes, sedges, blue-eyed grass)

D. *Native Prairie Zone*
Open irrigated grassy area planted with native grasses and wildflowers (camas, blue-eyed grass, tufted hairgrass, red fescue, sedges)

E. *Wetland Zone*
Permanent ponded area supplied by external water supply and planted with herbaceous wetland plants (rushes, sedges, wapato, bulrush)

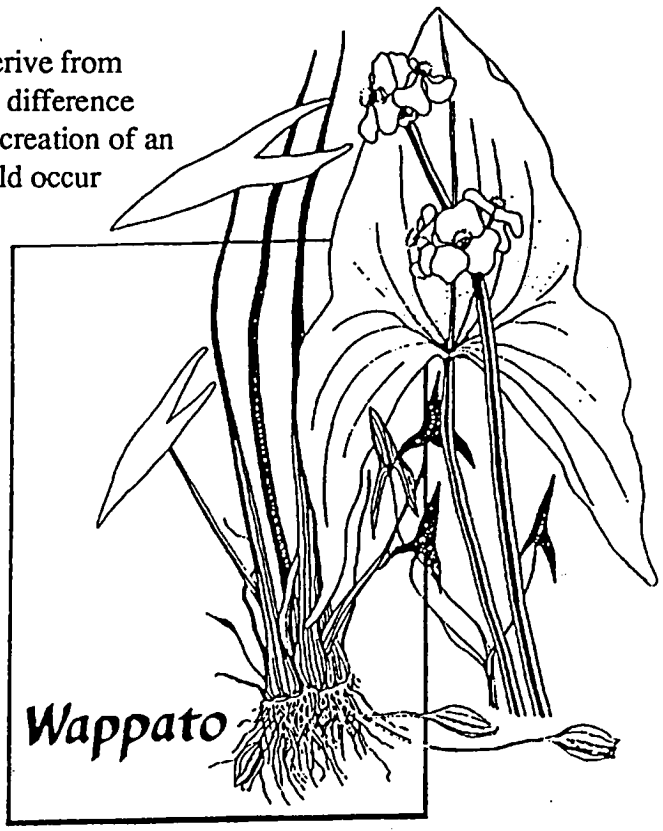
F. *Moss and Fern Zone*
Shady, moist, protected area planted with native mosses, ferns, and lichens

Demonstration Areas

The following experimental or demonstration areas, developed in the immediate vicinity of the Interpretive Center, would fan out from the Center, which would make them more accessible for students, or they could be nodes along a walkway near enough to the Center so that conveying tools, equipment, etc. to any of these areas would not be too burdensome. Since most of these areas will depend on or use water in some way for demonstrations or experiments, pumps and plumbing should be provided to obtain water, either from the Columbia Slough or from Smith Lake. This water could also be used to irrigate other plantings at the fringes of these ponds and swales.

Virtually all of these features require some excavation to create shallow depressions for what is proposed. Grading at the time of excavation could create some additional habitats for native plants at the fringes of these depressions.

Most of these ideas for demonstrations or experiments derive from elements of the Smith and Bybee management area. The difference between a "demonstration" and an "experiment" is the recreation of an existing condition versus hypothesis testing. Testing could occur in any of these depressional areas and could entail the use of the entire area or simply one portion of the area.



Each of these ideas should include interpretive signage that tells a story about the management of Smith and Bybee Lakes.

Varying Water Depths as Constraints on Wetland/ Aquatic Plant Growth
This ponded area requires a sealed bottom (e.g. bentonite), with one or three weirs for controlling water elevations along the length of the pond. Certain plants grow in certain depths of water. The idea of this pond unit would be to focus interest on the importance and effects of water level fluctuations on plant growth using plants from the project area.

The Importance of Soil Quality in Wetland Quality and Revegetation
This is an area where you've altered the soil of the pond-wetland bottom with various soil amendments. One important amendment is compost from the Columbia Boulevard Seage Treatment Plant. At the plant there is a composting facility that uses sludge from the plant mixed with sawdust, and it's an excellent soil amendment used to speed up revegetation of created wetlands. The compost speeds up plant growth and mimics the kind of organic conditions that you get in wetlands. You can have an area that has one kind of soil amendment and an area without the amendment with the same kind of hydraulic conditions for both.

Utility Wetland for Treating Stormwater Runoff from the Parking Lot
The facility would use a treatment wetland for stormwater run-off, with various appropriate kinds of vegetation. Regulated water levels would support a variety of plants rather than just reed canarygrass, but you could plant things like cattail and rush, hard stem bulrush and other types of plant materials that are suitable for this type of wetland.

Simulate Ephemeral Pond

This is a unique feature at Smith and Bybee Lake: depressions that get filled with water and then all summer as they evaporate, you get concentric colonizations as the water goes down by a variety of plant species. When it gets down to the bottom, the remaining tadpoles and catfish are eaten by blue herons (there is kind of a feeding frenzy at the end). Part of the time it would be a shore-bird habitat.

Construct a Columbia River Sedge Meadow

Another kind of experimental area or plot is the recreation of a *Carex aperta*, Columbia River sedge meadow. This sedge grows in meadows in certain places in the system, and it's probably the elevation as well as organically rich soils that encourage the growth of this plant, and it out-competes reed canarygrass. At Corvallis, the Soil Conservation Service's plant materials lab has found a way to geminate seeds from this Columbia River sedge (that's a story in itself). It'd make great signage, but if you could recreate that meadow on a small scale, presumably right up close to the center, you would actualize a type of restoration project.

Investigate Wapato Culture

Another possibility would be to create habitat for the growth of wapato (*Sagitaria latifolia*). This plant requires certain conditions like fluctuating water levels, now rare in this system, but used to be pretty common. There's a big story connected with wapato that goes back to the Native Americans and trading tubers.

Herptile Habitat

An area where you'd be looking at habitats for herptiles, kinds of amphibians and snakes, and what the elements are of this kind of habitat. Whether you can do this in a small area is worth some consideration.

Naturally Occurring Areas

The above analysis of what can be seen at the lakes disregards the appropriateness of proximate observation. An approach analysis helps us think about constraints on what we are able to see. It suggests what we do and do not lead people to see. There are areas at Smith and Bybee Lake that are sensitive to human intrusion, even if the activity is "passive" recreation. There are other areas that can tolerate limited intrusion without destroying habitats. Getting people to where they can see certain features of the lakes and their environs has different consequences for different species.

Sensitive Habitats

The proposed location of the Interpretive Center is not too distant from an ephemeral pond and a sedge meadow. Each of these features are unique and sensitive. It will require some ingenuity to deflect people from these areas, or expose them to the areas without damaging them. This latter is a design challenge. There is a suggested restoration opportunity in the scarceness of these features.

"Can it be opened to people even though it is {...} a wetland?" - *Public Forum Comment*

Tolerant Habitats

Smith Lake Smartweed Expanse

Introducing people to Smith Lake via boardwalks or by means of canoes during the non-breeding season for waterfowl, or by means of additional trails would provide an interesting immersion in the lake environment with its dominant macroscopic plant smartweed. Walk-ways could take people out to where they could fish in openings of the plants (created openings most likely).

Reed-Canary Grass Meadows

This invasive grass occupies a lot of territory in the management area. It is very tolerant of human intrusion.

Northside Eurasian Water-Milfoil Slough Pastures

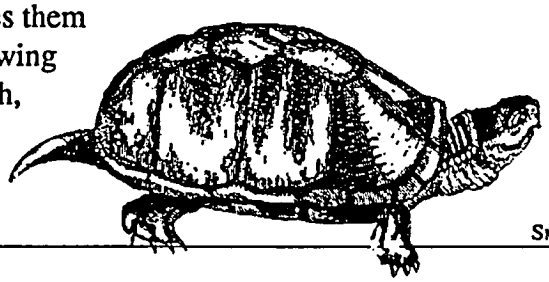
The hook-shaped relic slough on the north side of the area has been colonized by this other invasive plant species. It too will tolerate people but may be inadvertently carried from place to place.

Purple Loosestrife

The invasive plant purple loosestrife has colonized within the area. It prefers a slightly wetter habitat than reed-canary grass. The potential habitat for this is great, perhaps being similar to that occupied by Columbia River sedge.

Implications

Understanding how to approach the various life forms within the management area provides direction for what the Interpretive Center should offer the visitor. If the Center is intended to direct people to points of interest via trails or provides them direct connection to Smith Lake knowing what is there and how to see (or touch, smell, or hear) it will make the visitor's experience more valuable.



Because of the extensive colonization of the area by plants that are considered marginal habitat for wildlife, it is worth considering the opportunity this large area provides for habitat restoration. This is a unique opportunity for individual investment in this area. Note the amount of interest in the restoration of Fanno Creek. The Interpretive Center may well be visualized as a Staging Area for Restoration.

Guided Canoe Trail

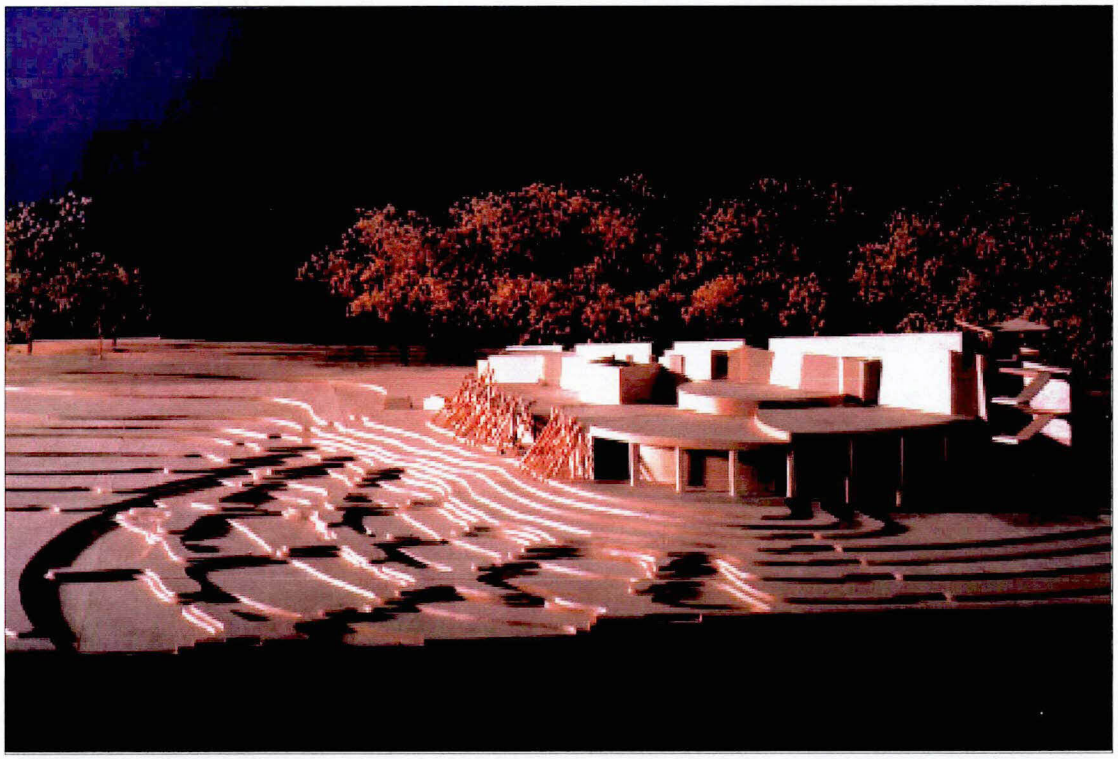
A guided canoe trail in the lakes, with tall guide poles (perhaps raptor platforms as well) that would help the canoeist navigate through the dense smartweed stands in summer, and enable him or her to get to the narrow channel between Smith and Bybee Lake. There is a lot of opportunity for signage en route. Renting rangefinders (now very inexpensive) and compasses could turn some canoeists into navigators who could opt for a more interesting exercise in getting through the maze.

Hiking Trails

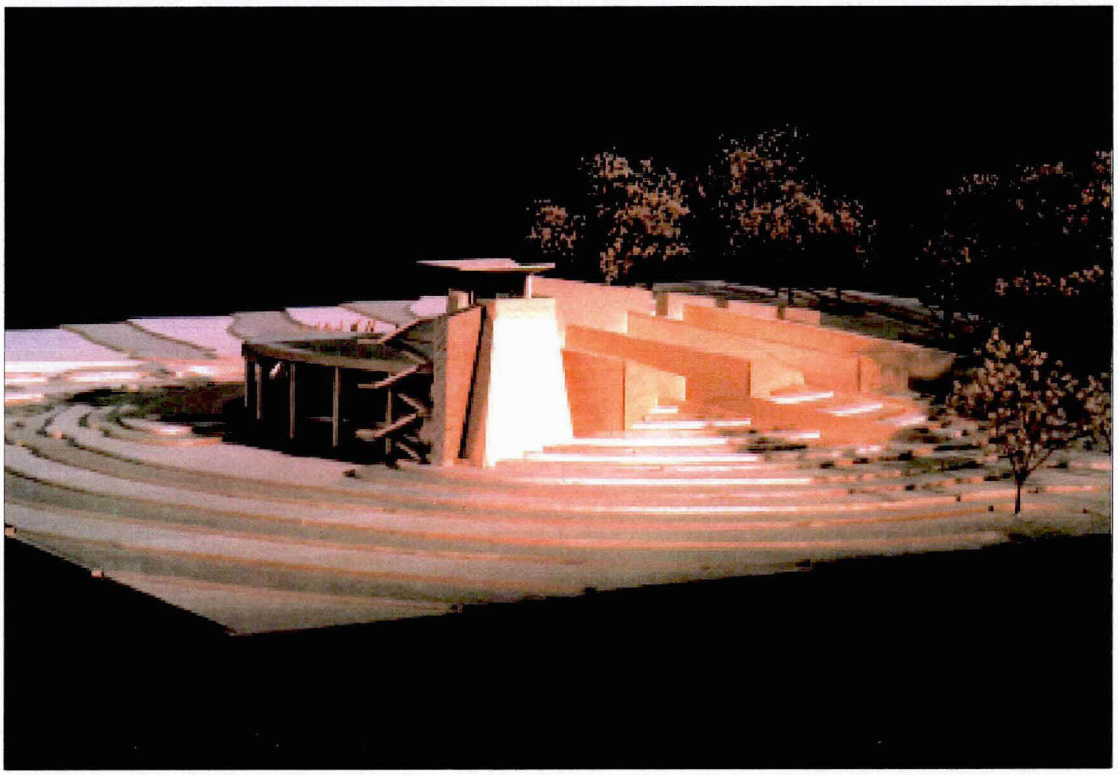
Loop trails go out into the resource area from the center, with interpretive signage and covered outdoor spaces along the way. The covered outdoor spaces are areas for outdoor education and include storage for tools used by staff and students when in the field. Boardwalks are used where the environment needs protection from the visitor.

The outline of the stone is round, having no end and no beginning; like the power of the stone is endless. The stone is perfect of its kind and is the work of nature, no artificial means being used in shaping it. Outwardly it is not beautiful, but its structure is solid, like a solid house in which one may safely dwell.

Chased-by-Bears (1843-1915)
Santee-Yanktonai Sioux



View of Center from the North



View of Center from the Northwest

IV. Appendix

Project Organization

Project Manager

David Yamashita	Portland Parks and Recreation

Advisory Committee

Jim Morgan	Metro
Jim Sjulin	Management Committee
Barry Messer	Portland State University
Lee Poe	Portsmouth Neighborhood Association
Jenny Butler	Benson High School Student
Leora Mahoney	St. John's Neighborhood Association
Kevin Mahoney	Roosevelt High School Student
Ginny Rosenberg	Educator, George Middle School
Mary McGuire	Friends of Smith and Bybee Lakes
Patricia Iron	Executive Director, Friends of Tryon Creek Park
Mike Abbate	USDA Forest Service

Project Consultants

Donald Stastny	Stastny Architects pc
Chris Boothby	Stastny Architects pc
Lynn Parker	Stastny Architects pc
Anne McLoughlin	Stastny Architects pc
Don Hanson	OTAK, Inc.
David Rehfeld	OTAK, Inc.
Stanley Geiger	SRI/Shapiro, Inc.

Meeting Schedule

Meeting 1: Orientation and Visioning — Tuesday, February 22, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

Meeting 2: Program Confirmation — Tuesday, March 15, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

Meeting 3: Public Forum — Tuesday, April 5, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee, Community, Students/Teachers from Local Schools

Meeting 4: Preliminary Floor Plan — Wednesday, April 27, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

During the month of May, Don Stastny and Jim Morgan held four additional "community" meetings. On May 9, 1994, two meetings were held with students of Roosevelt High School, and on May 12, two meetings were held at George Middle School. Students' comments were recorded and, where possible, integrated into the program.

Meeting 5: Preliminary Site Plan — Tuesday, May 17, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

Meeting 6: Draft Report Review — Tuesday, June 14, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

Meeting 7: Public Forum — Tuesday, June 28, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee, Community, Students/Teachers from Local Schools

Meeting 8: Final Report Decision — Tuesday, July 19, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

Meeting 9: Recommended Site and Building Concept — Tuesday, August 9, 1994
Participants: Project Team Representatives, Portland Parks & Recreation, METRO, Advisory Committee

The following thoughts were introduced at the community forums and student workshops. The purpose of these themes, ideas and issues was to provoke discussion and get people thinking about important aspects of the lakes, and perceived needs for the center. The themes include:

- THE HOPE FOR BETTER NEIGHBORS.
  - Making the Smith and Bybee Lakes Natural Resources and Management Plan work.
  - Featuring the Columbia Slough Clean Up plan and program (A center for water quality monitoring of the Slough and the Lakes?).
  - Community investment in preventing dumping and misuse.
  - Bring communities together through the common goal of Smith and Bybee Lakes restoration.

- OUTDOOR RECREATION: THE QUIET KIND
  - A unique form of close-to-home urban/wilderness experience
  - Birdwatching, bird counts.

- Monitoring of habitat change and wildlife response (long term).
- Canoeing/Kayaking/Boats with electric motors
- Hiking and Nature Appreciation (40-Mile Loop, boardwalk, trail system, observation blinds).
- Fishing: a different sport with the changing levels of the Lakes.
- Participation in the wetland revegetation process.

- CONNECTION OF THE COMMUNITY TO THE LAKES
  - Clear and meaningful ways to have St. Johns, Portsmouth, and other local communities identify with the Lakes.
  - Educational linkages and outreach programs to community schools.
  - Community "rooms" within the Center.
  - Annual community events at the Center.

These ideas, along with an outline of interpretive themes, began the discussion. Many comments were received and recorded. The community members and students involved in the visioning process were honest, direct and very thoughtful in many of their responses. These provided a starting point from which to develop the final interpretive prospectus. The following is a portion of what was heard:

COMMUNITY INPUT

- *The lakes are an important but misunderstood part of our natural environment. Great idea!*
  Deal with Fish survival. Make it multi-cultural. Definitely incorporate cultural relationships /use with and of area. Decomposition and wetlands filtering issues also.

- *How will this be funded after it is built? Maintenance costs will be born by the public that uses it? Otherwise -- Good idea!*

- *How much is the restoration going to cost? Is a fee for entrance going to be charged? I think it should be free. I think there should be a gift shop.*

- *Get rid of the dam.*

- *I think that this interpretive center would be good for Oregon. It may be good for tourism and definitely for our education, it would be good for N. Portland and St. Johns community.*

- *A sensual and spiritual experience? Why do we need Smith and Bybee lakes anyway?*

- *Was it once a part of the Columbia River? Was this really how it used to be and the way we want it?*

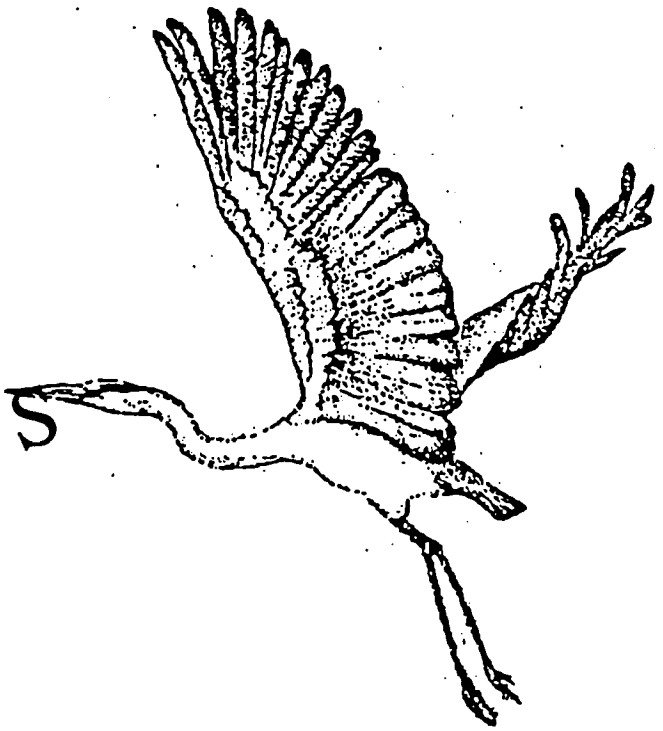
- *What kind of ducks used to be at the lakes? How many species of animals have lived there and are now gone?*
- *Who made the mistakes? People or organizations? Are they still going to happen? Tracing the effects of people on the lakes is very important.*
- *All organisms modify their environment eventually to the point that a particular site no longer supports them. That's what the natural succession through serial stages is about. However, natural succession usually tends toward biological diversity. The human influence or cultural succession that has occurred in the Smith & Bybee Lakes area has instead, moved the area away from biological diversity.*
- *Are any of the specific causes of losing this wetland being held responsible? Like the large factories they are helping.*
- *What is a weir structure?*
- *It has been destroyed, so we need to clean it up-how can we clean it up?*
- *How did the building of the landfill and railroads affect the lakes and wildlife?*
- *Find a way to incorporate visitor ideas and suggestions. Solar energy and at least water power. Compost toilets and relate to decomposition in wetlands.*
- *The concept of restoration, that everything is habitat for something. When we "restore" something, we are further manipulating a manipulated habitat. Some species adapted to today's habitat will be displaced (e.g. blackberry eaters). What we restore it to? Or <u>when</u> do we restore it to? and Why? We are placing values just as the past manipulation had to do w/values. What is our value?*
- *What kind of connections, programs, space and money & equipment resources are planned for students to visit and learn and see and do science? Educational facilities, storage, labs, people, etc.? Tables for microscopes w/outlets, storage area for plants/best plots, sinks, on-line computers, small library, reading room?*
- *What kind of "hands-on " activities will there be? I have seen other informational center and boards with writing and pictures on walls are not interesting.*
- *Can we get rid of the contamination and the dam so it will be moving water again?*
- *These activities must be made accessible to people with disabilities, otherwise, they are excellent.*
- *For local people the fishing here is not just sport, it is basic to their livelihood and should be recognized and supported by interpretive exhibits. Make sure locals have input.*
- *A good ending (or beginning) to go out and enjoy the lakes environment—somewhat of a call to action.*
- *This will be a good feature to get residents and non-residents informed about the area. We can only do this if we are able to get people to come on a regular basis.*

The following list of ideas was generated by students and teachers from George Middle School:

- *Look-out - estuary seaside - kids helped build*
- *Microscope room/for samples*
- *Water testing/how to do; water treatment info*
- *Insect aquarium/terrarium*
- *Petting and holding lab*
- *Underwater animals, amphibians, insects, animal pelts*
- *Place where you can see animals in the water*
- *Room for injured animals*
- *Trails/look, then return and see what it was*
- *Trail map*
- *Place to look at plants*
- *Plant display*
  - *native plants*
  - *introduced plants*
  - *effects of what happens*
- *Classroom for teaching faculty*
- *Table—build your own wetland*
- *TV show about what to do and what not to do at the Lakes*
- *Lab showing themes and how to save the lakes*
- *Film strips of what happened and why*
- *History (S&B) room*
- *Library for research/info on area*
- *A room on how to keep our habitat clean*
- *Recycling center-also recycle along trails.*
- *See the site, view from inside a tree for a day to see how it looks from their perspective*
- *Billboard showing native and non-native species*
- *Telescope in tower - birdwatching and animal spotting*
- *Boats*
- *Kids playroom*
- *Samples of life up close*
- *Weather room*
- *Animal skulls and bones*
- *Audio about earth and animals*
- *Snack room/hall*
- *Auditorium to create animal shows and habitat info*
- *Gift shop/educational items*
- *S&B posters with animals on it*
- *Bathrooms with toilets outside the building*
- *Natural, not a wall*
- *Open to the outside*
- *Be a part of nature*

Cost Estimate

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COST
Base Building	15,300	SF	115.00	1,759,500
Exhibits				
Flat Panels	2,000	SF	125.00	250,000
3D	800	SF	180.00	144,000
Dioramas	600	SF	220.00	132,000
Site Improvements				
Boardwalks/Stairs				
Wooden stairs to canoe launch	250	LF	80.00	20,000
Boardwalk on loop trail	160	LF	70.00	11,200
Canoe launch	1	LS	5,000.00	5,000
Paving/Surfaces				
Porous for parking, entry road	107,990	SF	0.85	91,792
Canoe access Boardwalk	600	LF	70.00	42,000
Walkways				
Walkway to entry/maintenance road	7,070	SF	5.00	35,350
Loop trails (does not include 40 mile loop)	3,445	LF	4.00	13,780
Walkways at test plots	205	LF	5.00	1,025
Planting/Irrigation				
Entry, parking	20,000	SF	2.50	50,000
Walkway to building	8,500	SF	3.50	29,750
Around building	4,200	SF	3.50	14,700
Rooftop Features				
Sod roof areas	7,300	SF	18.50	135,050
Skywalk-ramps &walkway	2,660	SF	10.00	26,600
Rooftop Exhibits	1,775	SF	7.50	13,313
Signage				
Entry	1	LS	7,500.00	7,500
Interpretive	1	LS	48,000.00	48,000
Wetlands Interpretation				
Test plots/hydrology	1	LS	40,000.00	40,000
Shelters	2	EA	38,575.00	77,150
Site Lighting				
Parking lot & Entry walk w/bollards	1	LS	30,000.00	30,000
Maintenance Facility	1,500	SF	60.00	90,000
Caretaker's residence	1,500	SF	65.00	97,500
Fixtures, furniture & equipment	1	LS	100,000.00	100,000
			Subtotal	3,265,209
Soft Costs: 20% of $3,265,209				653,042
			TOTAL	$3,918,251



"A good ending (or beginning) to go out and enjoy the lakes environment -- somewhat of a call to action."