To preserve or not to preserve

■ American Indians are urging the city to acknowledge the value of artifact-rich sites that may stymie development

By KERI BRENNER
Correspondent, The Oregonian

The city of Portland has the remnants of at least 19 artifact-rich American Indian camping and fishing sites along the Columbia River.

They are, however, right in the heart of land destined for industrial and commercial development.

The trove of archaeological sites presents the Portland City Council with the difficult problem of finding a way to both promote economic development and preserve history. The council takes up the issue at 2 p.m. Thursday in City Hall.

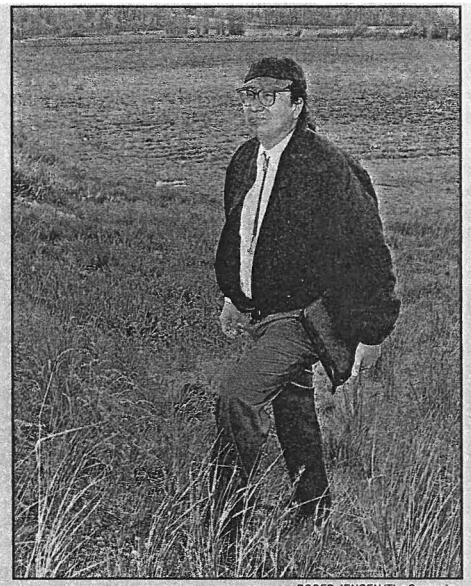
Experts say the former campgrounds contain some of the richest sources of information about life in the Northwest before the coming of whites. American Indians and environmentalists are urging the city to acknowledge the value of those sites and come up with a plan to record and possibly preserve some of them.

Until last fall, the city had some requirements for cataloging and protecting the sites. The requirements were included in a natural resources management plan for the urban renewal area.

Developers succeeded in getting the requirements dropped from the plan last fall. They say the city would discourage the development it has spent millions to promote with what they believe are unreasonable requirements to excavate and preserve the sites.

Paul Shirey of the Portland Development Commission said it was the consensus of the development community, including PDC, that cultural resources such as the archaeological sites should be "dealt with elsewhere"

Please turn to INDIANS, Page A9



ROGER JENSEN/The Oregonian

Louie Pitt Jr. of the Confederated Tribes of the Warm Springs is among those concerned about what course the Portland City Council will take concerning ancient campsites along the Columbia River.

Indians: Protection for artifacts still sought

■ Continued from Page One

— meaning someplace other than combined with natural resources.

"We need to get the protections for the slough and wildlife areas put to bed. We've been delaying on these too long," Shirey said. "The archaeological questions are too tough. It bogs everything down."

Lyn Mattei, a spokeswoman for the Sierra Club, was not satisfied with the compromise that eliminated protection for the ancient Indian sites. She notified the Grand Ronde tribal council, which represents several Indian tribes in the Northwest.

The Indian tribes had not been consulted earlier, although PDC had contracted for an archaeological survey of the Columbia South Shore in 1990 to fulfill federal requirements for a regional fill permit.

About a dozen American Indians and supporters showed up at the Portland City Council meeting March 10 to protest the decision to omit protection for the archaeological sites. The council members, meeting to review mundane development issues such as sidewalks and setbacks, were caught off-guard by the protest.

It was the first time the City Council had heard of the issue.

Both Warm Springs and Grand Ronde tribal councils — whose tribes include descendants of the Chinook Indians and other prehistoric Columbia River dwellers — say they are watching the city closely.

"We assume the city will do the neighborly thing and the legally proper thing to protect what's there," says Louie Pitt Jr., director of government affairs and planning for Warm Springs.

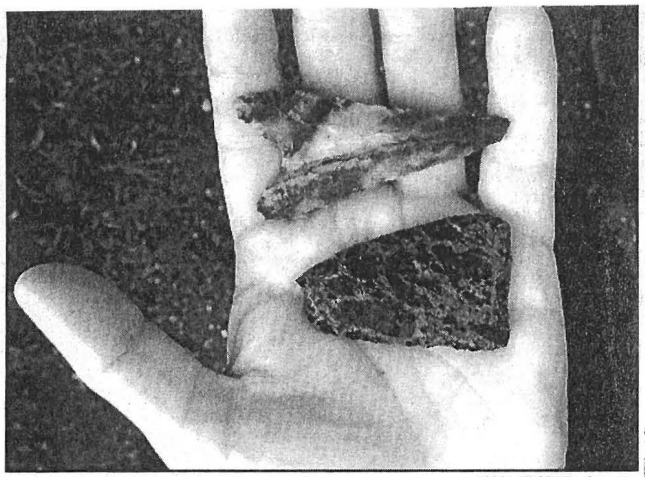
Michael Mason, tribal attorney of the Grand Ronde, says the cultural resources are "exhaustible and so much is already lost.

"I don't think it's too much to ask to preserve what's remaining," he said.

Maria Tenorio, executive director of the Native American program of Oregon Legal Services, appealed to the city's soul.

"The Columbia South Shore contains the vestiges of one of the most populated Indian settlements in this continent," she said in a statement. How the city protects the rich history of this area may prove to be a barometer of how it survives unprecedented challenges in the future.

"The voice of the people indigenous to this area can no longer be ignored. . . . If we have learned nothing else, we must acknowledge that the blind pursuit of commercial development is no longer an intelligent option.



ROGER JENSEN/The Oregonian

Arrowheads are among artifacts caught up in a tough question: How does Portland promote economic development while preserving history?

"Perhaps by protecting the burials and values of the indigenous people who have survived the past 500 years, can the city of Portland protect its future survival."

Meanwhile, the council directed city planners to take another look at the archaeological sites to determine what could be done to protect them. The planners have asked for two delays since then, indicating that it hasn't been easy to find a solution.

"Cultural resources are not something that you can see, and not something that most citizens demand be protected," said city planner Bob Glascock.

Glascock, who has written three to four options for the council's review, says the city could wait to look at cultural resources when it completes the Columbia Corridor or Outer Northeast Community District Plan — scheduled for about five years from now. Or, the city could do more archaeological inventories and case-by-case reviews during the next year or two at a cost of anywhere between $50,000 and $120,000.

Another option, Glascock says, is to include archaeological resources as part of a historic preservation plan being completed by the city.

Ken Ames, a professor of anthropology at Portland State University, says an areawide plan is vital to avoid piecemeal attention to archaeological issues.

Whatever course the city takes, it is under state order to handle the matter. Goal 5, a statewide planning goal, requires that natural and cultural resources be addressed.

The PDC's Shirey agrees the issue should be addressed, but that requirements shouldn't be so vague and open-ended they become a burden on developers.

"No one is saying that these artifacts and things are not worthy of cultural protection," he said. "The question is how to do that without unduly burdening the private sector, so that development can continue and the city can get a yield on its public investment in that area in the form of jobs and tax base."

The city has invested about $70 million in the 2,800-acre tract south of the river known as the Columbia South Shore. The area, between Northeast 82nd and 185th avenues, is being developed as an industrial zone called the Airport Way Urban Renewal area.

One property owner, Winmar Inc., spent more than $100,000 on archaeological discovery before it was able to develop in the urban renewal area because of federal wetlands requirements.

"There are no established criteria on how far to go" with archaeological exploration, says Anne Nickel, executive director of the Columbia Corridor Association, a landowners and business group.

"The way it's been, developers just say to the archaeologists, 'Go out there and spend whatever you think and keep going until you think you're done.'

"Is that fair to development?" she asked. "There's two things we always ask for: clear and objective standards; and the economic ability to develop our projects."

Commissioner Charlie Hales, who oversees the Planning Bureau, said he doesn't want to put off making a decision for five years. Hales said the issue is not whether the Columbia South Shore will be developed.

"That day has come and gone," he said. "The South Shore is committed to industrial development.

"On the other hand, we're talking about an important archaeological resource," Hales said. "We have to do a responsible job of inventorying the land, and do as thorough a job as possible of inventorying up front, so that we can give property owners clear signals."

For Ames, the bottom line is the view that the city needs a plan that requires site by site inventory before development proceeds.

"If we don't do it, what would be lost?" Ames said. "That would be like asking me if we have a library of one-of-a-kind books, and what would happen if we lost four or five shelves."

Indian sites along river threatened

■ Development in the Columbia South Shore area concerns archaeologists and Indian groups

By JAMES MAYER
of The Oregonian staff

and KERI BRENNER
Correspondent, The Oregonian

American Indian groups and archaeologists fear that the city of Portland will allow developers to wipe out much of the remaining evidence of the earliest humans to live on the banks of the Columbia River.

American Indian archaeological sites pepper the entire Columbia South Shore, a 3,000-acre urban renewal district along the river in Northeast Portland between 82nd and 185th avenues where the city is trying to foster development.

At one time city planners had prepared a natural resources plan that included a process for identifying and protecting significant cultural sites in the area, but the plan was dumped earlier this year in the face of opposition from developers and environmentalists.

The city now is creating a replacement plan that does not include any consideration of archaeological and cultural sites.

Please turn to SITES, Page A13

Sites: Council delays action on plan

■ Continued from Page One

A contingent of Indians and their supporters showed up last week to protest the lack of protection for such sites at a Portland City Council hearing on development standards.

Caught off guard by the issue, the council delayed action on the plan until April 8.

In the meantime, city planners are scrambling to find a solution to the controversy.

Bob Stacey, Portland planning director, concedes that he was caught flatfooted by the sudden emergence of the issue last week.

Stacey said he had expected to deal with cultural preservation as part of a series of community plans to be done during the next several years.

But that may be too late to save sites on the Columbia South Shore, he said.

"We'll have to develop a new approach," he said.

Any new approach will take time and money, two commodities in short supply in the budget-squeezed Planning Bureau.

Stacey said the City Council made it clear it wanted some answers by the April 8 meeting. "We'll give it a shot," he said.

A 1989 study done by Greg Burtchard, a Portland State University archaeologist, and a 1992 report prepared by David Ellis, public issues coordinator for the Association of Oregon Archaeologists, both cite various Indian resources in the area.

"That area represents the most complete collection of prehistoric sites left in the Portland area," Ellis said. "I think it's our last opportunity to look at what was going on prehistorically."

The area already has been the scene of more than four years of debate and lawsuits over competing economic and environmental interests. The city has been less than successful in resolving those conflicts, and the political quagmire only will thicken with the addition of cultural preservation as yet another high-profile competing interest.

State planning goals, though vague, do require that cultural resources be dealt with in some way.

"It does appear to us the city has been remiss in its protection of sites in that area," said Michael Mason, an attorney for the Confederated Tribes of Grand Ronde, whose members lived along the river for thousands of years.

"Let's face it, the people moving into the area are newcomers," Mason said. "They can't begin to understand our total history without some attention to and preservation of sites inhabited for 8,000 or more years before Portland was founded."

Rick Holt, a developer for Winmar Co. in the South Shore, said the controversy was more perceived than real.

"I think everyone needs to look at archaeological sites and have them surveyed, but the question is — to what extent do you survey?" said Holt, who is developing two business parks along the river on 197 acres in Portland and 239 acres in Gresham.

"I've spent $100,000 on archaeological discovery," he said. "We found the remnants of a longhouse on the Portland site, and elsewhere some campfire stones, arrow tips and fishing weights."

Ellis, whose company, Archaeological Investigations Northwest, did the work for Winmar, has recommended that the company donate the artifacts to the Grand Ronde tribe.

Holt said all the information was submitted to Portland and Gresham officials, the U.S. Army Corps of Engineers and the Oregon state historical preservation office. He said he has complied with all recording of those sites.

Paul Shirey of the Portland Development Commission said the extensive archaeological reviews had not uncovered what could be called sacred sites.

"What Burtchard found was seasonal activity, because the river was flooded for part of the year," he said. "When the waters receded, the Native Americans set up camps and cooked and smoked fish.

"Once you do discovery and uncover the site, and it's not preservable, then you record it and leave it there," Shirey said.

Ellis, however, said some sites should be preserved — the question is which ones.

Indian sites along river threatened

■ Development in the Columbia South Shore area concerns archaeologists and Indian groups

By JAMES MAYER 3/17/93
of The Oregonian staff

and KERI BRENNER
Correspondent, The Oregonian

American Indian groups and archaeologists fear that the city of Portland will allow developers to wipe out much of the remaining evidence of the earliest humans to live on the banks of the Columbia River.

American Indian archaeological sites pepper the entire Columbia South Shore, a 3,000-acre urban renewal district along the river in Northeast Portland between 82nd and 185th avenues where the city is trying to foster development.

At one time city planners had prepared a natural resources plan that included a process for identifying and protecting significant cultural sites in the area, but the plan was dumped earlier this year in the face of opposition from developers and environmentalists.

The city now is creating a replacement plan that does not include any consideration of archaeological and cultural sites.

Please turn to SITES, Page A13

Sites: Council delays action on plan

■ Continued from Page One

A contingent of Indians and their supporters showed up last week to protest the lack of protection for such sites at a Portland City Council hearing on development standards.

Caught off guard by the issue, the council delayed action on the plan until April 8.

In the meantime, city planners are scrambling to find a solution to the controversy.

Bob Stacey, Portland planning director, concedes that he was caught flatfooted by the sudden emergence of the issue last week.

Stacey said he had expected to deal with cultural preservation as part of a series of community plans to be done during the next several years.

But that may be too late to save sites on the Columbia South Shore, he said.

"We'll have to develop a new approach," he said.

Any new approach will take time and money, two commodities in short supply in the budget-squeezed Planning Bureau.

Stacey said the City Council made it clear it wanted some answers by the April 8 meeting. "We'll give it a shot," he said.

A 1989 study done by Greg Burtchard, a Portland State University archaeologist, and a 1992 report prepared by David Ellis, public issues coordinator for the Association of Oregon Archaeologists, both cite various Indian resources in the area.

"That area represents the most complete collection of prehistoric sites left in the Portland area," Ellis said. "I think it's our last opportunity to look at what was going on prehistorically."

The area already has been the scene of more than four years of debate and lawsuits over competing economic and environmental interests. The city has been less than successful in resolving those conflicts, and the political quagmire only will thicken with the addition of cultural preservation as yet another high-profile competing interest.

State planning goals, though vague, do require that cultural resources be dealt with in some way.

"It does appear to us the city has been remiss in its protection of sites in that area," said Michael Mason, an attorney for the Confederated Tribes of Grand Ronde, whose members lived along the river for thousands of years.

"Let's face it, the people moving into the area are newcomers," Mason said. "They can't begin to understand our total history without some attention to and preservation of sites inhabited for 8,000 or more years before Portland was founded."

Rick Holt, a developer for Winmar Co. in the South Shore, said the controversy was more perceived than real.

"I think everyone needs to look at archaeological sites and have them surveyed, but the question is — to what extent do you survey?" said Holt, who is developing two business parks along the river on 197 acres in Portland and 239 acres in Gresham.

"I've spent $100,000 on archaeological discovery," he said. "We found the remnants of a longhouse on the Portland site, and elsewhere some campfire stones, arrow tips and fishing weights."

Ellis, whose company, Archa logical Investigations Northwest, the work for Winmar, has reco mended that the company dona the artifacts to the Grand Ron tribe.

Holt said all the information w submitted to Portland and Gresha officials, the U.S. Army Corps of E gineers and the Oregon state histo cal preservation office. He said has complied with all recording those sites.

Paul Shirey of the Portland Dev opment Commission said the ext sive archaeological reviews had uncovered what could be called cred sites.

"What Burtchard found was s sonal activity, because the river w flooded for part of the year," he sa "When the waters receded, the N tive Americans set up camps a cooked and smoked fish.

"Once you do discovery and cover the site, and it's not prese able, then you record it and leave there," Shirey said.

Ellis, however, said some si should be preserved — the questi is which ones.

to protect S. Shore in works

6/1993

An advisory panel would include both environmentalists and developers' representatives

By KERI BRENNER
Correspondent, The Oregonian

The city of Portland wants to form a committee to make sure both development and environmental interests are protected in the Columbia South Shore.

The seven-member advisory committee is proposed in a draft resource protection plan under review by city planners and the public.

The plan, the result of months of talks and negotiation, sets forth city code amendments that would control or limit development around certain wetlands, forested areas or wildlife habitats in the South Shore, also called the Airport Way Urbar Renewal Area.

The Columbia South Shore is 2,800-acre tract south of the Colun bia River, between 82nd and 185tl avenues and between Northeast Marine Drive and Northeast Sandy Boulevard. It is intended for large-scale industrial development.

The proposal would supersede the former natural resources management plan, a regional project coordinated with state and federal agencies. That regional plan was dropped last fall during talks among the city, environmental groups and developers.

The new plan protects the natural resources already identified by the city on a case-by-case basis.

It keeps a 50-foot planted buffer zone around specific natural resources, such as the Columbia Slough. Also, for properties where developers have already built over the buffer zone, the plan says they must comply by removing the structures when they have improved their property by a total of 35 percent.

The draft plan was discussed at a workshop last week by city planners, environmentalists and South Shore property owners.

A public hearing on the final version of the plan is set for July 13 before the Portland Planning Commission. If approved, it would come before the Portland City Council in August.

The seven-member advisory committee would include one person appointed by each of the following: the East Portland District Coalition, the Columbia Corridor Association, the Portland Development Commission and the East County Coordinating Committee.

The members appointed by the last three organizations would be people with wetlands or biology expertise or people who have knowledge of the Columbia South Shore. Each of those persons must be acceptable to three of the four other members.

Wetlands mitigation project under way

Ecologists say there are better sites than the one chosen in the Columbia South Shore

6/17/93

By KERI BRENNER
Correspondent, The Oregonian

The Portland Office of Transportation on Wednesday began clearing about seven acres in a natural area of Columbia South Shore. The plans to build three artificial ponds as mitigation for wetlands filled in during the construction of Airport Way three years ago.

Environmentalists said the project was a poor tradeoff for the wetlands, and other locations in the area would be more appropriate.

"It's one of the only areas zoned for the most protection, and it's the most important area of the Columbia South Shore," said Lyn Mattei of the Oregon Natural Resources Council.

The transportation staff countered criticism by describing the project as a "model resource enhancement project" designed to protect and improve the habitat and provide extra clean, fresh water.

The idea that one piece of land can be used to compensate for the loss of another by development is called mitigation, and the procedure is required by law.

Mattei said the spot being cleared is in an upland forest area called Four Corners. Four Corners, south of Northeast Marine Drive and between Northeast 158th and 181st avenues, is the section of the Columbia South Shore identified as deserving the highest level of protection for its environmental value and animal habitats, she said.

But Doug MacCourt of the transportation office said the mitigation project was designed to improve the habitat in Four Corners. He said it has gone through years of environmental review and study.

"We're proud of it, and we believe it's going to work," he said. A long, public process has been followed to select the site and design the ponds, he said.

The ponds will be built near a 1.7-acre forested section where 30 to 40 trees out of about 1,000 trees will be removed, MacCourt said. Another 5.2 acres are grassy wetlands.

An old, stagnant slough channel in the last seven-tenths of an acre will be reopened and rebuilt.

The mitigation area is near what would be Northeast 178th avenue. Mattei said the Transportation Office chose the forested area to avoid using other land that has potential for development.

MacCourt disagreed. He said the Four Corners section was chosen because it had potential to house new wetlands that would work well.

The authority to use the Four Corners area for mitigation comes from a 1989 Airport Way fill permit from the U.S. Army Corps of Engineers, said Burt Paynter, chief of the corps' regulatory and environmental review section.

Paynter said his office filled in the details on the 1989 mitigation plans and they were approved in 1991. However, early this year, Mattei, the Oregon Department of Fish and Wildlife and others began raising concerns about them.

Paynter said he listened to the concerns and the plan was modified to protect larger trees. He said the mitigation plan is a sound one.

"We think there has been a good faith effort to address the concerns," Paynter said.

The Columbia South Shore, south of Marine Drive and between Northeast 82nd and 185th avenues, is a 2,800-acre tract also called the Airport Way urban renewal area. The city has made it a target for large scale industrial development, but has said it would protect specific natural areas within the tract.

Environmentalists have said the city's checks and balances on the mitigation process were inadequate.

Cultural Resource Investigation Series
Number 2

THE COLUMBIA SOUTH SHORE PROJECT

A Sample Archaeological Reconnaissance of the Airport Way Urban Renewal Area Portland, Oregon

by
Greg C. Burtchard

Report Completed Under Contract to:

Portland Development Commission, 1120 SW Fifth Avenue
Portland, Oregon

Laboratory of Archaeology and Anthropology
Department of Anthropology
Portland State University
Portland, Oregon 97207-0751

February 1990

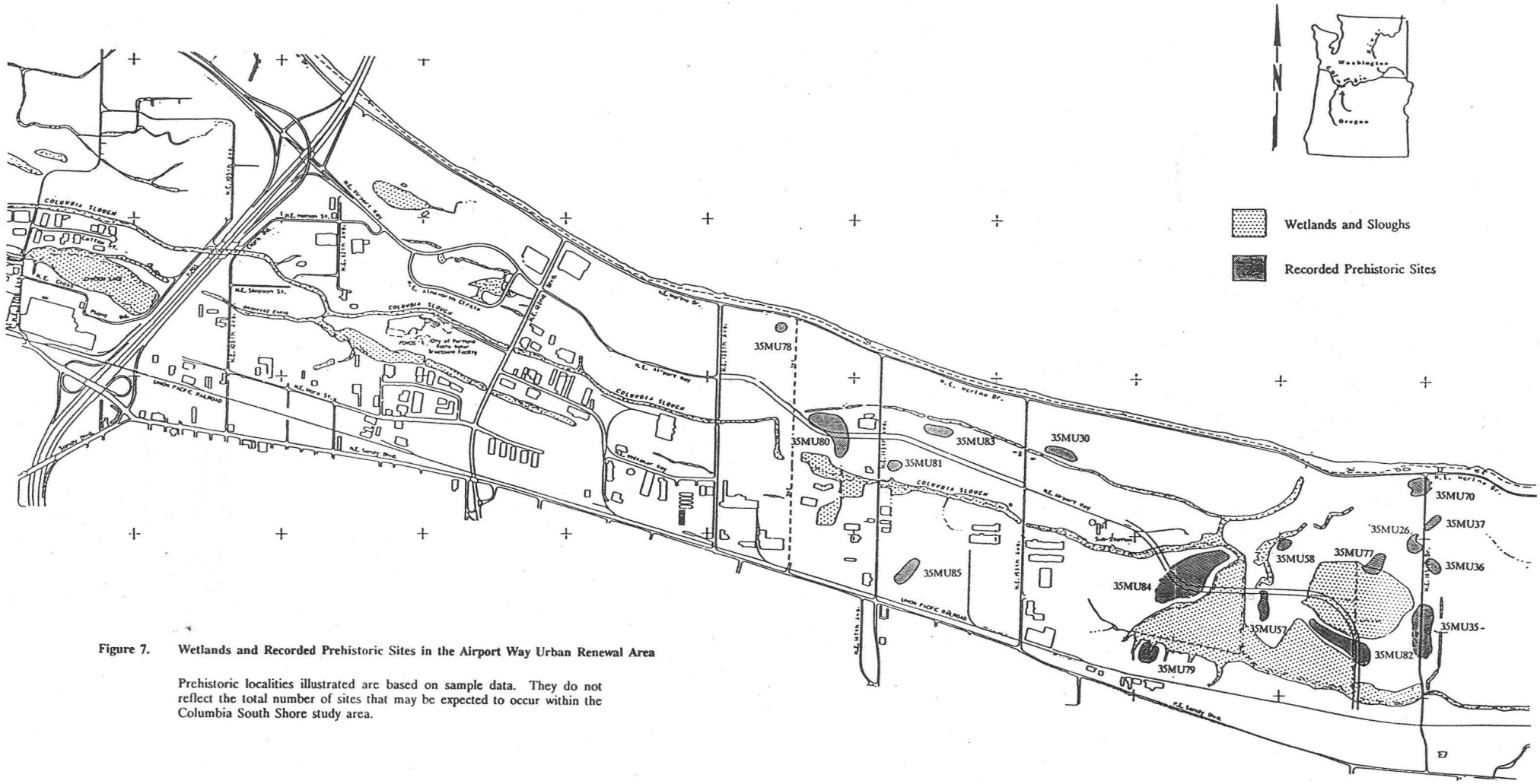


Figure 7. **Wetlands and Recorded Prehistoric Sites in the Airport Way Urban Renewal Area**

Prehistoric localities illustrated are based on sample data. They do not reflect the total number of sites that may be expected to occur within the Columbia South Shore study area.

DATA RECOVERY EXCAVATIONS AT 35MU29/32
GRESHAM, OREGON

David V. Ellis

November 1992

Final Report Submitted to
Scientific Resources, Inc.
Lake Oswego, Oregon

Archaeological Investigations Northwest REPORT No. 27

1034 S.E. 122nd Ave. • Portland, Oregon 97233
(503) 252-5140

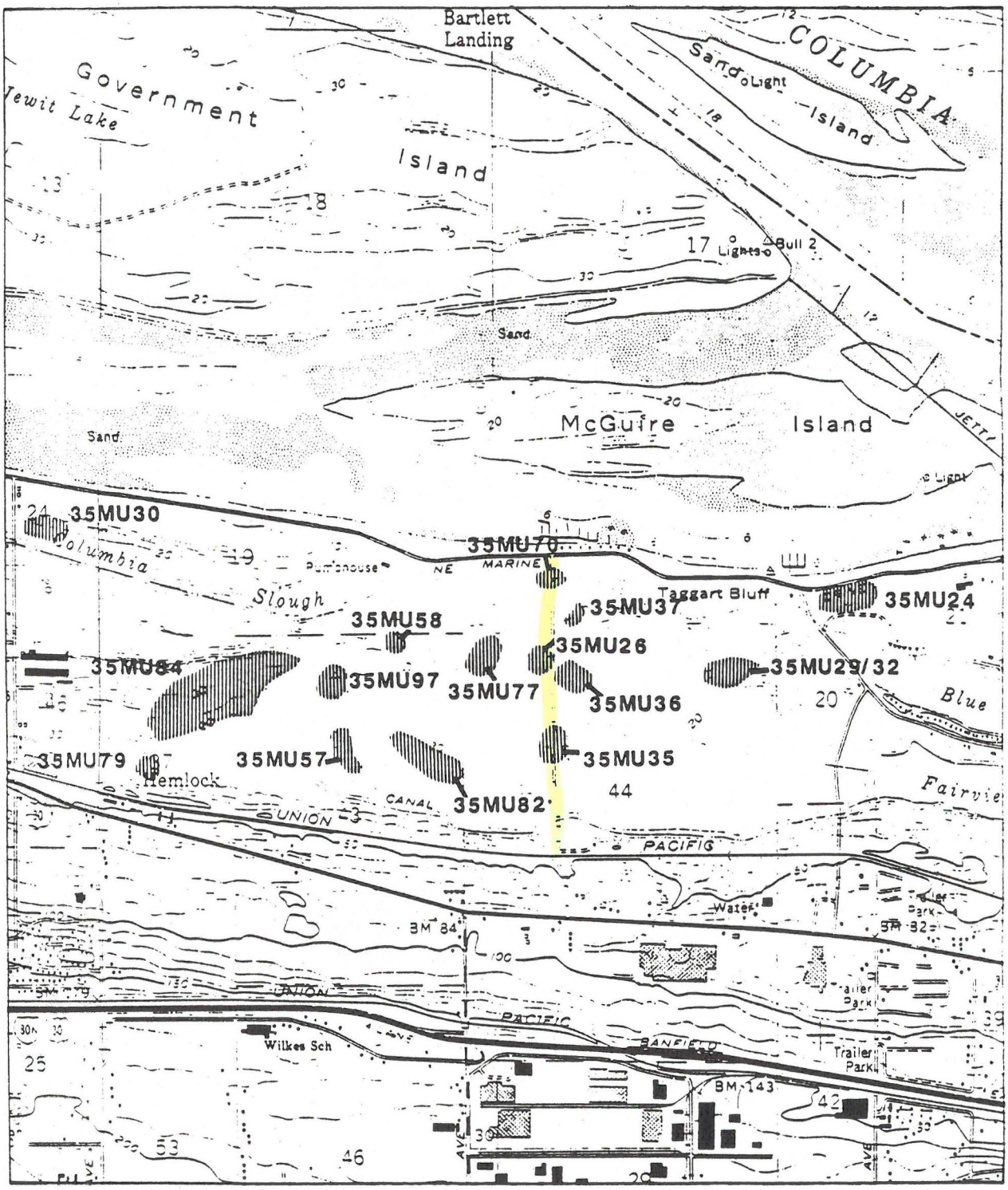


FIGURE 8. Recorded archaeological sites in the vicinity of 35MU29/32.

Native American Program

OREGON LEGAL SERVICES CORPORATION

917 S.W. Oak, Suite 410
Portland, OR 97205
(503) 223-9483
FAX: (503) 294-1429

TESTIMONY OF TIM SIMMONS REPRESENTING THE CONFEDERATED TRIBES OF GRANDE RONDE

Good afternoon Mayor Katz and Council Members.

My name is Tim Simmons and I am a staff attorney at the Native American Program Oregon Legal Services, 917 SW Oak, Suite 410, 97205. Our office has been retained by the Confederated Tribes of Grande Ronde to represent them in this matter.

The aboriginal land of the Confederated Tribes of Grand Ronde includes land on the south shore of the Columbia River. Because some of the ancestors of the Confederated Tribes of Grand Ronde lived in the Willamette Valley and on the south shore of the Columbia River, the Tribe is interested in the cultural and historical resources in the area, as they assume you are. And the Tribe is interested in establishing a good working relationship with the City of Portland, so the two governments can discuss the resources.

The Confederated Tribes of Grande Ronde first became involved in this matter last week. In that short time, the Tribe has been able to determine three things that they want to take place at this time regarding the Columbia South Shore development.

First, an archaeological inventory of the entire area should be completed as soon as possible. As you are probable aware, only 20% of the area has been inventoried to date. The kind of archaeological inventory set forth in Option 2 would be appropriate.

Secondly, appropriate standards should be established. Of course, burials and large significant sites will be different than a few pots or stones.

Finally, to have a government to government relationship with the Confederated Tribes of Grand Ronde in establishing and implementing those standards. There should be tribal involvement throughout the process. This type of tribal involvement and government to government relationship has been used and worked successfully with archeological sites on a federal level and in the Columbia Gorge

area. In addition, tribes have had successful working agreements with governments regarding issues as adverse as jurisdiction over Indian children and cross deputizing law enforcement officers.

The Confederated Tribes of Grand Ronde appreciate the City of Portland having more input from the public and the Tribes on this matter. The Confederated Tribes of Grand Ronde want to establish a good working relationship with the City of Portland because tribal members live here and Columbia South Shore falls within the service area of the Grande Ronde Tribe.

The Confederated Tribes of Grand Ronde look forward to working with the City of Portland and all the parties involved in this matter to reach an adequate solution to a very difficult problem.

Thank you Mayor and Council for your time and attention.

Suggested Rewrite of Proposed Draft of the Natural Resource Management Plan for the Columbia South Shore, Appendix F, Archaeological Requirements, submitted by the Bureau of Planning, City of Portland, October 26, 1992.

ARCHAEOLOGICAL REQUIREMENTS

Property owners must submit an archaeological report which includes the following:

1. A statement that the report was prepared by an archaeologist meeting professional qualification standards of the National Park Service Secretary of the Interior Standards and Guidelines (48 Fed. Reg. No. 190, 44,738-44,739 (1983)).

2. A report, based on existing literature and surface reconnaissance of archaeological resources, which includes all fill and mitigation sites, all known archaeological sites, and at all development sites containing **known archaeological sites or** protected resources. ~~for which the review is being conducted.~~ It must meet the standards, identification, evaluation, registration and treatment standards of the National Park Service, Secretary of the Interior Standards and Guidelines (48 Fed. Reg. No. 190. 44,738-44,739 (1983)).

3. A conclusion that:

   a. There are no known **or recently discovered** resources at the proposed development site; or

   b. There are resources, but are deemed not significant by the archaeologist's report, ~~and~~ State Historic Preservation Office **and affected Tribe(s)**; or

   c. There are resources deemed significant by the archaeologists's report , ~~or~~ State Historic Preservation Office **or affected Tribe(s).**

4. Where archaeological resources found at the site are deemed significant by the archaeologist's report, ~~or~~ State Historic Preservation Office **or affected Tribe(s)** and if the resource is **potentially** eligible for the National Register, the report shall include a mitigation plan for the protection or recovery of archaeological information prior to issuance of a building or development permit **which may require modification to protect the archaeological resource site(s).**

The report shall be reviewed by the State Historic Preservation Office **and affected Tribe(s)** prior to the Plan review process. Surface reconnaissance shall be supplemented by appropriate subsurface testing where deemed necessary by the qualified archaeologist, **tribal archaeologist** or State Historic Preservation Office prior to issuance of a building or development permit.

* * * * * * * * * *

Submitted to the Portland City Council 5-27-1993, by Lyn Mattei, Oregon Natural Resources Council.

Caveat: This proposal intends to supplement other more long term options, stress the importance of interim protection and suggest a way to accomplish this protection as soon as possible. This proposal has not been circulated and does not necessarily reflect the views of other interested parties.

Association of Oregon Archaeologists

Dedicated to the protection and enhancement of prehistoric and historic archaeological resources.

March 7, 1993

Portland City Council
1220 SW Fifth
Portland, Oregon 97204

Dear Mayor Katz and Council Members:

The Association of Oregon Archaeologists and other organizations have been working for several years in educating the Planning Bureau staff, the Planning Commission, and the Council on the irreplaceable heritage of archaeological resources within the City. Within the City, 35 to 40 archaeological sites have been recorded over the past 15-20 years with the Oregon State Historic Preservation Office, and many more are likely to be discovered in the future. These resources represent an important chapter in the history of Portland and are critical resources in the heritage of the Native peoples of Oregon.

Much of our concern has focused on the Columbia South Shore area, which contains the most intact group of archaeological resources within the City. Since annexation of this area by the City and creation of the Airport Way Urban Renewal District, we have worked hard to try to assure that development in the South Shore area would not lead to the destruction of important archaeological resources. The efforts were initially successful and some basic archaeological requirements were incorporated into the 1990 Natural Resource Management Plan. The resurrected and revised draft plan developed this past year, however, first included similar archaeological requirements and then eliminated all archaeological requirements. We are back to where we started almost ten years ago.

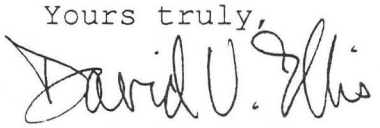
These developments with the new proposed NRMP raise serious questions about whether the City is either capable or willing to address its Goal 5 responsibilities regarding archaeological resources. In January 1992, after learning that a known archaeological site in the South Shore area had been destroyed through a City-permitted activity, I raised this question in a letter to Bob Stacey. In his reply, Mr. Stacey assured me that the Planning Bureau was working to assure that archaeological resources were accorded proper consideration in land-use decision-making. The Bureau's record since then offers little assurance.

P.O. Box 40327 Portland, Oregon 97240-0327

The formulation of development standards for the South Shore area offers almost the last opportunity at this time for archaeological resources to be brought back into the planning process. It also offers an important opportunity for the City to demonstrate that it intends to systematically implement its Comprehensive Plan policy protecting South Shore archaeological resources. The City enters the periodic review process this summer and the Association plans to play an active role in that process in regard to City policies and procedures regarding archaeological resources. We would much rather see the City adopt a pro-active and positive position regarding these resources than find itself in a reactive and defensive position. We hope that the Council sees the merits as well.

Thank you.

Yours truly,



David V. Ellis
Public Issues Coordinator

March 10, 1993

The Honorable Mayor Katz
Members of the Portland City Council
1120 SW 5th Ave., Rm. 1002
Portland, OR 97204-1966

RE: COMMENTS FOR MARCH 10, 1993 CITY COUNCIL HEARING
ON AMENDMENTS TO THE ZONING CODE
Development Standards in the Columbia South Shore Plan District

The Cascade Geographic Society (CGS) formed in 1979 in order to protect cultural resources, as well as natural resources, in the Pacific Northwest. Because of this concern, CGS opposes the proposed amendments to Title 33 which create new development standards in the Columbia South Shore Plan District. Gary Villa, Yakima Nation Portland Metropolitan Cultural Site Representative, and Native Americans for Enola join in this opposition. These three organizations oppose the amendments because proposed new standards do not include the protection of cultural resources. As a result, the proposed new standards violate Oregon Land Conservation and Development Commission's (LCDC) Goal 5 requirements.

Therefore, all three organizations request that the City Council postpone its decision on the Title 33 amendments until it has given appropriate consideration to the protection of cultural resources in the Columbia South Shore Plan District. Included in this consideration must be an adequate inventory of cultural resources in the entire area. This inventory must incorporate an ethnographic study which follows the National Register Bulletin 38 guidelines.

ORS 197.250 requires that "all comprehensive plans and land use regulations adopted by a local government . . . shall be in compliance with the [LCDC's land use] goals." ORS 197.250 (1991). Additionally, ORS 197.340 states that "local governments shall give the goals equal weight in the planning process." ORS 197.340 (1991). These goals are "<u>mandatory</u> statewide planning standards." ORS 197.005 (1991) (emphasis added).

Goal 5's mandatory standards provide that "[Land use p]rograms shall be provided that will: . . . (2) protect scenic and historic areas and natural resources for future generations." OAR 660-15-000(5) (Apr. 1978). This protection must include an inventory of the "location, quality, and quantity" of cultural areas and historic areas, sites, structures and objects. Id.

In its administrative rulings regarding compliance with Goal 5, LCDC adds that "a jurisdiction must 'develop a program to achieve the Goal.'" OAR 660-16-010 (Nov. 1992). The rules further state that "Compliance with Goal 5 shall also be based on the plan's overall ability to protect and conserve each Goal 5 resource." Id.

The Planning Commission has not developed an adequate program to achieve cultural resource protection. The proposed amendments provide no specific or "overall ability to protect and conserve" cultural resources in the Columbia South Shore area. The Planning Commission's Report and Recommendation implies that the Interim Resource Protection Zone or Significant Environmental Concern (sec) overlay zone protects only scenic resources for this area. PORTLAND BUREAU OF PLANNING, CITY OF PORTLAND, OREGON, DEVELOPMENT STANDARDS FOR COLUMBIA SOUTH SHORE: AMENDMENTS TO COLUMBIA SOUTH SHORE PLAN DISTRICT (Nov. 10, 1992) at 5 [hereinafter DEVELOPMENT STANDARDS REPORT]. The Cascade Geographic Society disagrees with this implication.

According to Portland Hearings Officer, Phillip Grillo, the sec overlay zone encompasses a great deal more. P. GRILLO, CITY OF PORTLAND, OREGON, HEARINGS OFFICE, REPORT AND DECISION OF THE HEARINGS OFFICER, FILE NO. 91-00468 SP IR (Oct. 28, 1991) at 4. The sec overlay zone includes preservation of archaeological areas "for their historic, scientific, and cultural value." Id. at 6.

Admittedly, Mr. Grillo's findings pertained to a particular piece of privately owned property. However, this property is located within the Columbia South Shore development area. Thus, Mr. Grillo's findings are applicable to the proposed Title 33 amendments.

In addition to ignoring the cultural resource protection within the sec overlay zone, the Development Standards Report states that the original sec overlay zones will be eliminated along Marine Drive and along cross-levee. DEVELOPMENT STANDARDS REPORT, *supra*, at 9 & 21. This eradicates what little protection the City has for cultural resources. By ignoring Mr. Grillo's report and by not including cultural resource protection, the proposed amendments violate LCDC's Goal 5.

A local government has the option of not including a particular site its plan without violating Goal 5. OAR 660-16-

000(5)(a) (Nov. 1992). If the local government determines that a site "is not important enough to warrant inclusion," the government does not have to justify the non-inclusion. Id.

On the other hand, the local government has this option only when no objectors contradictory information exist. Id. Cascade Geographic Society, the Yakima Nation and the Native Americans for Enola are objectors with contradictory information. The Columbia South Shore has cultural resources beyond having a clear view of Mt. Hood. Therefore, the City of Portland must justify its reasons for not including the cultural resources of the Columbia South Shore in its plan inventory.

Furthermore, once the City has chosen to include a resource site, it has "to include all of the relevant resource which exists on the site." Friends of the Columbia Gorge v. LCDC, 85 Or App. 249, 253, 736 P.2d 575 (1987). The City cannot attempt to protect scenic resources without an attempt to protect the cultural resources which are relevant Goal 5 resources which exist on the Columbia South Shore site.

Another option for a local government is to delay the Goal 5 process for a particular resource site. OAR 660-16-000(5)(b) (Nov. 1992). This option arises when some information indicating the possible existence of a resource is available, "but that information is not adequate to identify with particularity . . . the resource site." Id. If the local government chooses this option, it "must express its intent . . . to address that resource site . . . in the future." Id. This express intention must include a time frame. Id.

Some information is available relative to the existence of cultural resources in the Columbia South Shore. Two archaeologists, Greg Burtchard and David Ellis, surveyed the area and found extensive cultural resources. (See Lyn Mattei's testimony to the Portland City Council to be presented at the March 10, 1993 hearing). The Development Standards Report fails to adequately express the intent of the City to address the cultural resource sites in the future.

Granted, the report refers to an expectation of the City Council's adoption of a revised National Resources Management Plan for the Columbia South Shore" (NRMP). DEVELOPMENT STANDARDS REPORT, *supra*, at 6. The revised draft of the NRMP contains a section on archaeological requirements. BUREAU OF PLANNING, CITY OF PORTLAND, OR, NATIONAL RESOURCES MANAGEMENT PLAN FOR THE COLUMBIA SOUTH SHORE: PROPOSED DRAFT (Oct. 1992), Appendix F at 3.

However, merely stating that the NRMP will cover additional issues later is not adequate to comply with the LCDC's administrative rules requiring a specific time frame in which to

determine the inventory of cultural resources. As of November 1992, the NRMP no longer exists. Therefore, nothing in the Bureau of Planning's report indicates how the new development standards specifically addresses the City's intent to address the cultural resources Goal 5 process.

To aid a city in determining what this Goal 5 process entails, LCDC may promulgate guidelines for cultural resource protection. ORS 197.225 (1991). These guidelines are suggestions to aid local governments in their implementation of the Goals. ORS 197.015(9) (1991). According to LCDC's Goal 2, local governments must review these guidelines and either follow them or develop their own means of achieving the Goals. OAR 660-15-000(2)(Part III) (Apr. 1978). Currently, no LCDC guidelines exist for the implementation of Goal 5 cultural resource protection. (Per Lyn Mattei's conversation with LCDC's Doug White). Therefore, the City of Portland must develop its own Goal 5 guidelines. With the exception of a brief mention of the NRMP, the Development Standards Report makes no reference to any City Goal 5 cultural resource protection guidelines.

According to Pouchy, development standards might qualify as the City's own Goal 5 cultural resource protection guidelines. Pouchy, Goal 5, 3 Oregon Lands No. 5 at 3 (May 1980). However, the Bureau's Development Standards Report gives only "lip service" to the prospect that having specific development standards will bring more certainty to the resource protection process. The lip service, along with the elimination of the sec overlay zones, does not specifically address how cultural resources will be protected.

Because the City has not performed an adequate inventory of the Columbia South Shore area nor promulgated its own cultural resource protection guidelines, the City has violated its mandate to identify conflicting uses. "It is the responsibility of local government to identify conflicts with inventoried Goal 5 resource sites." OAR 660-16-005 (Nov. 1992). Conflicts are those uses which, "if allowed, could negatively impact a Goal 5 resource site." Id. Once these conflicts are identified, the City can decide to "(1) Protect the Resource Site . . . (2) Allow Conflicting Uses Fully . . . [or] (3) Limit Conflicting Uses." OAR 660-16-010 (Nov. 1992).

Industrial and commercial development along the Columbia South Shore could negatively impact the multitude of cultural resources in the area. Yet, the Development Standards Report makes no mention of this conflict or of how the City intends to handle the conflict between development and cultural resource protection.

Since the proposed Title 33 amendments do not specifically address cultural resource protection, the Cascade Geographic Society believes that the Portland City Council must postpone any decision on the amendments. During the period of postponement, the Bureau of Planning should conduct the appropriate inventory of cultural resources for the entire Columbia South Shore area. Once the Bureau completes the inventory, the City Council will have the necessary information to make more appropriate decisions affecting cultural resources in the Columbia South Shore Plan District.

Sincerely,

Laurie Craghead

Laurie Craghead
Representative for
Cascade Geographic Society, Columbia South Shore Project;
Gary Villa, Yakima Nation Portland Metropolitan Cultural Site Representative; and
Native Americans for Enola

PDC
PORTLAND
DEVELOPMENT
COMMISSION

PORTLAND DEVELOPMENT COMMISSION
MEMORANDUM

DATE: March 19, 1993

TO: Mayor Vera Katz
Commissioner Earl Blumenauer
Commissioner Charlie Hales
Commissioner Gretchen Kafoury
Commissioner Mike Lindberg

FROM: Paul F. Shirey, Project Coordinator
Portland Development Commission

SUBJECT: Transmittal of Columbia South Shore Archeological Survey Report

At the March 10, 1993 public hearing on the proposed Development Standards for the Columbia South Shore Plan District, City Council heard considerable testimony concerning the protection of archeological resources that may be located in the area. One of the speakers referenced the Columbia South Shore Cultural Resource Investigation Report and Council asked that copies be distributed to them for their information (see attached). The report was prepared in late 1989 by Portland State University for the Portland Development Commission. The purpose of the archeological survey was to meet one of many federal requirements necessary to obtain a regional wetland fill permit for the area. The survey covered approximately 20% of the land in the area and was intended to be used as a type of "predictive" model for the presence of prehistoric artifacts that may exist and to protect those artifacts found in the area.

120 S.W. Fifth Avenue
uite 1100
ortland, OR 97204
03/823-3200
AX 503/823-3368

astside Office
425 N.E. Irving Street
uite 200
ortland, OR 97232
03/823-3400
AX 503/823-3435

DD 503/823-6868

The Federal Regional Fill Permit ("Permit") was issued in late 1991 and subsequently withdrawn six months later at the request of the City of Portland in response to a lawsuit filed against the US Army Corps of Engineers by the Northwest Environmental Defense Council. The Permit required property owners to conduct surveys of the sites that were subject to both fill and mitigation activity and to take appropriate steps to record the presence of significant artifacts and protect those resources, if discovered. PDC has been sensitive to making the PSU report broadly available to the general public out of a concern for protecting evidence of pre-historic activity that still remains in the area.

We would like to point out that, simply because the Permit has been withdrawn does not mean that the archeological discovery requirements no longer apply. Applicants for individual wetland fill permits, under the federal Section 404 program, are required to do a similar type of cultural resource investigation prior to any fill or excavation activity. The City of Portland Bureau of Planning is currently developing a work program to further inventory cultural resources in the area and to protect those resources where warranted.

If you have any questions in regarding this information, please contact me at 823-3348 or Bob Glascock at the Bureau of Planning at 823-7845.

PFS:cw
Attachment

cc: Larry Dully, PDC
Kathryn Imperati, City Attorney
Bob Stacey, BOP
Bob Glascock, BOP
Dorothy Hall, PDC Commissioner
Robert McCracken, PDC Commissioner
Doug McGregor, PDC Commissioner
Vern Ryles, PDC Commissioner
Carl Talton, PDC Commissioner

DISPOSITION FORM Routed for comment 2-18-88

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
CENPP-PL-RM	Region Permit for South Shore Development Area, Portland

TO	FROM	DATE	CMT 1
Memo to the Files	John Fagan	18 Feb 88	

1. On February 9, 1988, Frank Flynn and I met with Dr. Leland Gilsen at the State Historic Preservation Office to discuss cultural resources within the area of the proposed regional permit.

2. We examined the cultural resources files and maps of the project area noting the locations of previously recorded prehistoric sites in adjacent areas which had been surveyed for cultural resources. The proposed permit area has not been inventoried, but it is expected to contain numerous sites. Site density is likely to be as high as for adjacent tracts with prehistoric sites expected to lie on high ground at elevation 14 feet and higher. Known sites in the general area are often found on the current and two previous river terraces, along natural levees and along present shorelines of sloughs and other drainages.

3. Due to the high density of sites in adjacent tracts, I recommend that an inventory be done after a predictive model has been developed using existing information, detailed mapping and aerial photographs. Such an inventory would best be done by the Corps with financial assistance from the City of Portland and the Oregon Division of State Lands. The purpose of such an investigation would be to provide information about potential for cultural resources impacts; design approaches for developing mitigation plans and cultural resources coordination required under the National Historic Preservation Act so that individual permit applicants can be provided with appropriate guidance in planning future development.

4. Completion of such a predictive model and cultural resources inventory would resolve cultural resource issues before problems occurred and would reduce the overall costs for cultural resources compliance work within the area of the regional permit.

5. Solution of such a potential coordination problem offers the following opportunities:

a. resolve cultural resources issues by a joint effort between the Corps, the City of Portland and the State of Oregon,

b. develop cooperative agreements with Portland State University to conduct cultural resources studies in the area; and develop agreements with the Oregon SHPO.

c. for in-house coordination of cultural resource investigations using available expertise and contracting capability,

d. to improve the overall final product by focusing on the solution of potential cultural resource problems before they occur.

2061

e. to provide a comprehensive plan with a better balanced Special Area Management Program,

f. for national and regional recognition for problem solving and comprehensive planning and coordination,

g. for recognition of quality work on complex regional permit issues and recognition of Portland District as a leader in this field.

h. for development of a specialized area of expertise for Portland District,

i. to provide guidance and leadership to north Pacific Division.

6. I remain available to discuss these ideas and to develop the concept for a cultural resources predictive model and inventory for the South Shore Development Area.

John L. Fagan

JOHN L. FAGAN
Archeologist

CITY OF
PORTLAND, OREGON
BUREAU OF PLANNING

Gretchen Kafoury, Commissioner
Robert E. Stacey, Jr., Director
1120 S.W. 5th, Room 1002
Portland, Oregon 97204-1966
Telephone: (503) 823-7700
FAX: (503) 823-7800

April 1, 1993

MEMORANDUM

TO: Susan Descamp

FROM: Duncan Brown, Bureau of Planning

SUBJECT: **Archaeological Resources in the Columbia South Shore**

This is in response to your request for information on archaeological resource planning in the Columbia South Shore resulting from public testimony on proposed development standards asking for more resource protection.

The Bureau of Planning is reviewing all testimony on proposed development standards, and is addressing archaeological resources as one of the issues to be brought back to the April 29th hearing for City Council consideration and action. The report to City Council is expected to describe several alternative programs for meeting Statewide Planning Goal 5 and its administrative rule. Probable budget and time schedules for alternatives will be included. A Bureau of Planning review document of all issues is expected to be available for public review by April 19th.

Bureau of Planning staff will discuss the issues document at the scheduled Commissioners' assistants briefing the Monday prior to the Council hearing. Additionally, we are available to meet on an individual basis for this or any other issues at your convenience. Please call either Bobn Glascock (x7845) or me (x7841) if we can be of help.

DB/

April 23, 1993

Mike Mason
Confederated Tribes of the Grand Ronde
9615 Grand Ronde Rd.
Grand Ronde, OR 97347

Dear Mr. Mason:

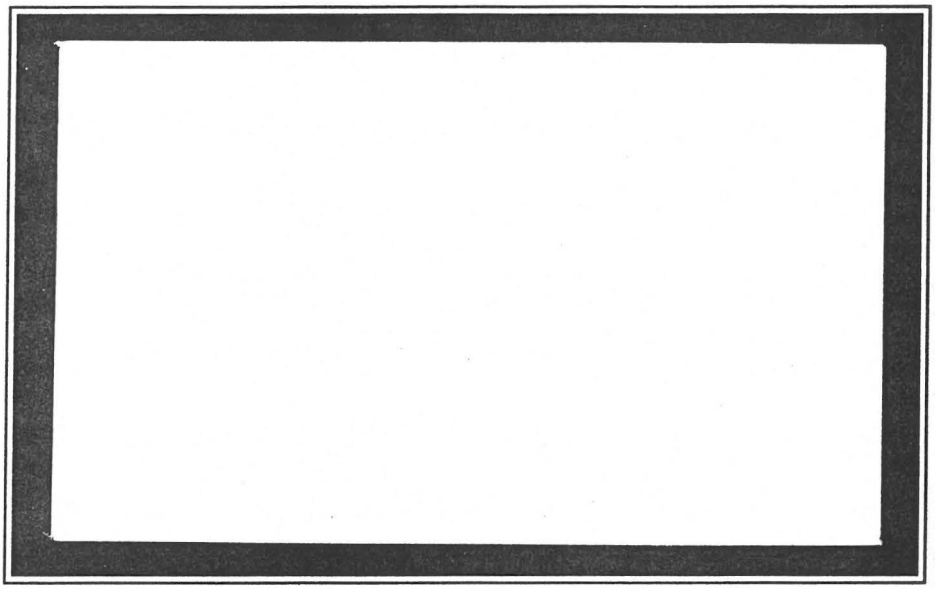
In response to the phone call from April in your office, I called the Planning Department to check on progress. Because of the City budget hearings the proposed development standards has been postponed until the end of May. According to the current schedule the Planning review document should be available for public review on May 17th.

The contact in Planning is Bob Glascock at 823-7845. I'm sorry about this delay. I was not aware until this morning.

Sincerely,

Susan Des Camp
Commissioner Assistant

Laboratory of Archaeology and Anthropology



Department of Anthropology

Portland State University

Cultural Resource Investigation Series
Number 2

THE COLUMBIA SOUTH SHORE PROJECT

A Sample Archaeological Reconnaissance of the Airport Way Urban Renewal Area Portland, Oregon

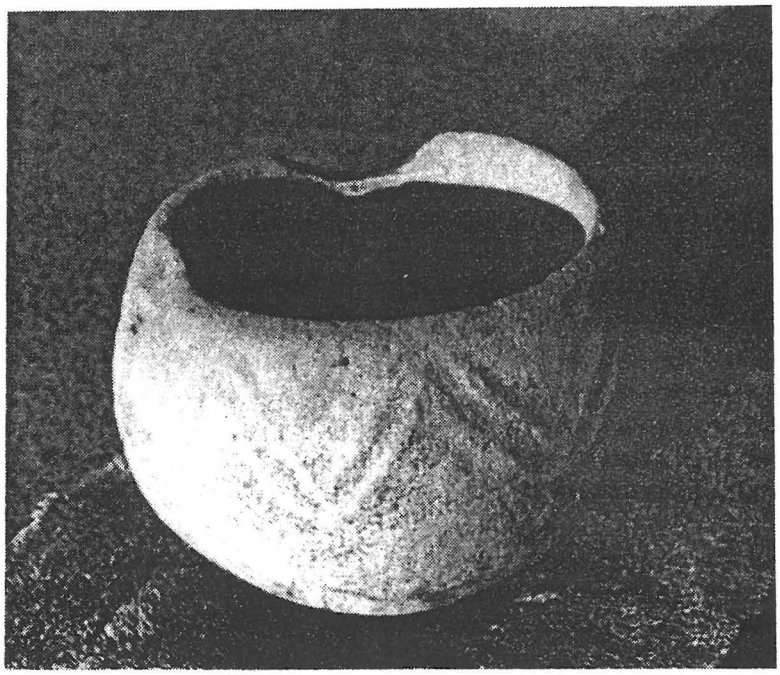
by
Greg C. Burtchard

Report Completed Under Contract to:

Portland Development Commission, 1120 SW Fifth Avenue
Portland, Oregon

Laboratory of Archaeology and Anthropology
Department of Anthropology
Portland State University
Portland, Oregon 97207-0751

February 1990



Stone bowl from site 35MU81 in the Airport Way Urban Renewal Area.

This document is printed on acid free, archival bond paper. It is intended to be a long-term record of the reconnaissance and its prehistoric cultural resources.

FOREWORD

This report presents results of a sample archaeological reconnaissance of the Airport Way Urban Renewal Area. The area is located on the south shore of the Columbia River east of the present site of Portland International Airport. The primary goal of the project is to identify patterns in the relative density of prehistoric cultural remains across the Columbia south shore floodplain upon which the urban renewal area is located. Information on patterned distribution of prehistoric materials is intended to assist U.S. Army Corps of Engineers, City of Portland and other planning officials with the management of cultural resources as the area is developed.

The report relates prehistoric human use of the floodplain environment to patterns in the distribution and abundance of critical plant and animal resources. To clarify those patterns, environmental and geological information are reviewed in relation to their effects on prehistoric occupants of the region. I suggest that variations in resource availability would have induced humans, over long stretches of time, to repeatedly focus their activities to particular places on the landscape. Those places are river levees and other areas of seasonally dry ground near floodplain lakes, marshes and sloughs. The archaeologically preserved remains of this land-use should reflect that same bias.

Techniques for the present reconnaissance were structured to examine the extent to which observable cultural remains fit the environmental model. Results of the reconnaissance combined with a review of previously reported prehistoric sites are consistent with the anticipated pattern. While conclusions should be considered tentative in lieu of more complete information, available data suggest that the highest density of undifferentiated archaeological localities tend to occur adjacent to the river and near inland floodplain wetlands.

Archaeologically preserved remains are a valuable part of the Columbia south shore environment. Information presented here only touches the range of research issues pertinent to this area. Informed management of the area's cultural resources during the development process can extend our knowledge of our shared human past and conserve an important part of our regional heritage.

I wish to express my gratitude for the help of a number of individuals. Rick Atwell and Erin Fleming assisted with the fieldwork. Their competence and drive enhanced the quality of the effort. Erin also prepared the site forms, maps and auger profiles in Appendix A and on file at the Oregon State Historic Preservation Office. Connie Lively, Paul Shirey, and Carla White coordinated efforts with the Portland Development Commission. Ms. Lively's help in securing land access from local owners on short notice was vital to the success of the project. Susan Horton provided background information on known prehistoric materials in the area. Both she and David Ellis continued to give useful advice throughout project. Mr. Ellis' map of the early historic floodplain provides a most useful view of the area prior to construction of dikes and related modification of the floodplain environment. Linda Freidenburg and Geoff Kleckner assisted with final preparation of this document. Linda also provided valuable editorial support.

I also wish to thank residents of the Airport Way Urban Renewal Area. They were kind enough to tolerate our intrusion onto their land and often showed genuine interest in the results of the effort. Amil and Ron Spada allowed us to store equipment at Spada Farms. Ron's strong interest in archaeology and knowledge gained from long residence in the area was most valuable to the success of the effort. Items for the photographs presented in Appendix B were loaned by Mr. Spada.

To these and other persons who showed genuine concern for the prehistory of the Columbia south shore, I extend my thanks. I hope that this report is of some benefit to our shared interest.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

THE COLUMBIA SOUTH SHORE PROJECT

A Sample Archaeological Reconnaissance
of the Airport Way Urban Renewal Area
Portland, Oregon

by
Greg C. Burtchard

This is a report of procedures and results of a sample archaeological reconnaissance undertaken on the southern floodplain of the Columbia River east of Portland, Oregon. Work was completed in 1989 under contract to the Portland Development Commission (PDC). The reconnaissance was designed to meet US Army Corps of Engineers (ACOE) requirements prior to issuing a regional wetland fill permit to facilitate industrial development of the area. Information presented here is intended to assist federal and state authorities in establishing continuing cultural resource guidelines during the development process.

The study area for this report comprises approximately 80% of the entire Airport Way Urban Renewal Area. The study area parallels the Columbia River for approximately four miles from Interstate 205 on the west to NE 185th Avenue on the east. Marine Drive and Union Pacific Railroad lines constitute the north and south boundaries respectively. Urban renewal boundaries extend somewhat further west to Portland's NE 82nd Avenue. Figure 1 shows the complete urban renewal area.

The fieldwork for this project was a sample reconnaissance of approximately 20% of the floodplain landform within the study area boundaries. Procedures included a pedestrian survey of transects and farmed fields, and augered sub-surface tests designed to locate buried archaeological sites. Our intent was not only to add to the descriptive data-base of archaeological sites on the floodplain, but also to investigate patterns in the distribution of such prehistoric localities across the landform. Information presented in this report should be evaluated both for its descriptive and predictive content. Be aware, however, that site prediction is far from precise. Apparent patterns in the distribution of archaeological remains discussed below should be considered preliminary indications of general variation in the relative density of these materials. Archaeological materials may be encountered anywhere on the floodplain. I suggest, however, that predictable differences exist in the relative abundance, depth and complexity of prehistoric remains. Humans have always tended to follow redundant patterns in the manner in which they use the landscape. Environmental factors such as access to critical food resources, transportation and elevation above flood line conditioned the manner in which humans used the floodplain in the past much as it continues to do so at the present. It is the primary goal of this report to clarify the environmental and empirical bases for such patterns on the Columbia south shore. This information may then be used to specify continuing work to further examine and refine patterns suggested here.

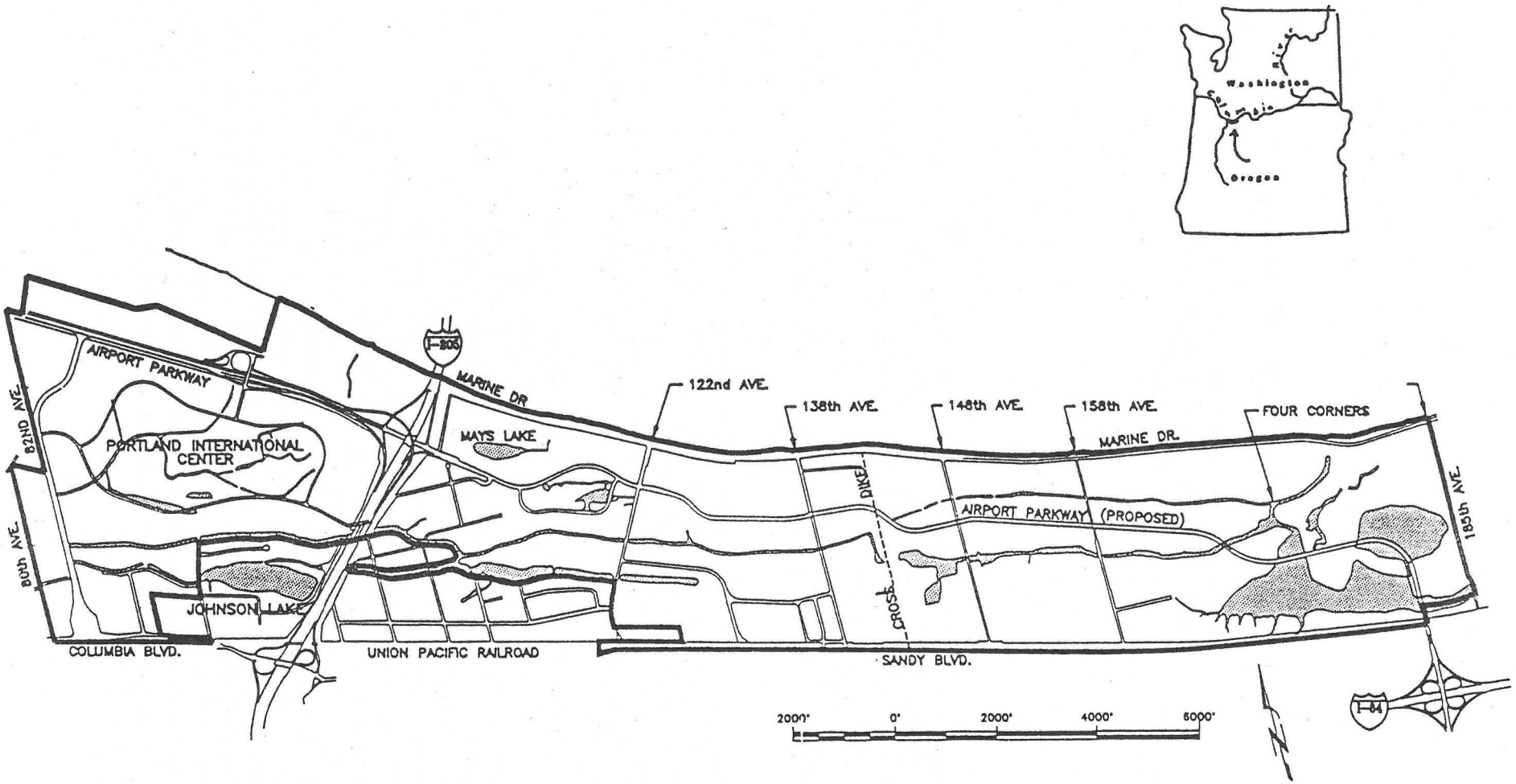


Figure 1. General Map of the Airport Way Urban Renewal Area

This report is divided into four main sections. The first section is a brief introduction into the environment of the Columbia south shore floodplain. It describes the modern landform, outlines the manner in which it was created, lists floral and faunal resources of use to local prehistoric populations, and considers the influence of those environmental features on archaeological site distribution. Second is a review of archaeological research in the vicinity of the urban renewal area. It outlines past work and specifies research design and techniques of the present study. The second section closes with a consideration of presently known site distribution patterns within the study area. The third section discusses the impact of proposed industrial development on prehistoric cultural resources on the floodplain. The fourth section presents research and management options designed to minimize information loss to these resources resulting from the development process. Auger test data and photographs of privately collected materials are included in appendices at the conclusion of the report. Site forms and maps are printed in a separate supplement to this report. I hope that the combined information presented here will further our understanding of past human use of the landscape and help preserve their research value as present land-use patterns shift from rural to industrial pursuits.

I. ENVIRONMENT AND ECONOMY OF THE COLUMBIA SOUTH SHORE

Historic Land-Use

Currently, the Airport Way Urban Renewal Area is characterized by an urban/rural mix of small farm holdings and growing business and industrial development. At present, most development is situated in the western portion of the project area. To the east, industrial and office complexes gradually give way to farmed fields, houses and outbuildings. Trees, brush, and blackberry thickets line the banks of Columbia Slough and choke low lying wetlands and abandoned fields. New housing and marinas are being developed between the river and Marine Drive. Heavy air traffic approaching Portland International Airport, combined with the new construction, is a constant reminder of the area's rapidly changing economy.

Until recently, farming has been the dominant historic economic pursuit on the south shore floodplain. Floodplain farming east of Portland extends back to the late 1800s. Sandy silt sediments deposited through frequent Columbia River flooding have been adequate to support a variety of agricultural pursuits. In the 1800s, however, that same flooding tendency limited the length of the crop growing season. Columbia flood cycles are determined largely by snow melt runoff in the Cascades and northern Rocky Mountains. Flood records indicate that runoff generally increases in May and peaks sharply in mid-June (ACOE 1986:11-19). Without freedom from June flooding, the most successful farmers were those who provided products that did not require a long, dry growing season. Dairy farming and grazing are relatively free of such constraints. As a result, cattle and especially dairy farming dominated early historic land-use in the area (cf. Kongas 1979:4-9).

Construction of artificial river levees, cross dikes, and Columbia River dams in the 1900s freed the south shore floodplain from all but the most severe spring floods. The Columbia slough channel was also altered and the water level regulated by pumps and gates at the river. A number of seasonally inundated wetland areas were dried by these projects, as well as by excavated drainage channels and tiled fields. Cumulatively, these environmental modifications extended both the effective growing season and the amount of arable land on the Columbia south shore. The ability to plant in May without substantial risk of flooding in June combined with a growing nearby Portland market to make produce farming on the south shore more profitable. During the early to mid-1900s, crop farming succeeded dairying as the dominant use of flood plain (Kongas 1979, 6).

Recent changes in local and national economies are inducing continuing change in the use of the south shore landform. Indeed, the planned urban renewal changes spawning this report are a part of this general process. Refinements in effective long distance transportation and marketing, enhanced food storage technology, supermarket shopping, and increasing land prices are among developments that have combined to reduce the economic viability of local small-scale agriculture. The growing season simply could not be made long enough, nor floodplain farms large enough, to compete with agricultural enterprises shipping from California and Mexico. Modern industrial development, on the other hand, is able to take advantage of the present dry floodplain environment, originally altered for farming, by maintaining economic ties that generally extend well beyond the local economy and maintaining income structures not keyed to agricultural prices.

The present environmental mosaic of natural and artificial levees, farmed fields, wetlands, woodlands, and commercial development reflects the current state in a rapidly changing land-use system. The current landform mimics that of the past, but twentieth century alteration of the floodplain somewhat distorts our understanding of how this environment would have conditioned its use by prehistoric human groups. Natural geological processes that created and, through time, modified the floodplain would have determined both when the landform could have been occupied and the locations at which human settlement would have been practical. The distribution of floral and faunal resources would have further conditioned the nature and seasonal timing of prehistoric use. Below, I consider the depositional processes that created the major natural floodplain features, and the character of plant and animal associations of greatest relevance to prehistoric populations in the area. These considerations set the stage for understanding the nature and general distribution of prehistoric human settlements and special use areas (now archaeological sites) on the south shore floodplain.

Creation of the Modern Floodplain

General geological creation processes relevant to understanding human use of the lower Columbia begin with the close of the Pleistocene about 15,000 years ago. During the Pleistocene, the Columbia River flowed through older basalt and sandstone formations at the Columbia gorge and emptied into the Pacific much as it does now. Low sea levels during the Pleistocene's glacial episodes should have created a relatively steep river gradient, causing the river to cut down through the older basal deposits. As both alpine and continental glaciers wasted away at the close of the Pleistocene, a series of massive floods deposited extensive delta gravels at the head of the valley near the Columbia gorge and in adjacent lowland areas (cf. Mundorff in ACOE 1986:20). The Portland delta was laid down by the last major glacial melt-water flood which cut through Washington's channelled scablands and into the Columbia River valley circa 13,000 years ago (Mullineaux et al. 1978, 178).[1] At flood crest, waters carrying a massive sediment load washed approximately 400 feet over the present Portland city site (Allen, Burns and Sargent 1986:159). The flood first scoured the local landscape; then deposited glacial gravels, sand and silt as water rushed through, lost momentum and gradually drained into the Pacific. Clearly, any evidence of very early human use of the lower Columbia floodplain would have been obliterated by the massive event.

---

[1] These terminal Pleistocene floods are most frequently referred to as the Missoula, Spokane, or Bretz floods. I use the Mullineaux et al. term "Scabland Floods" because of their significance in the creation of Washington's channelled scablands so characteristic of the central and eastern portion of that state.

Sediments from the Scabland Flood were deposited in the Portland Basin well above the present river channel and floodplain. Gravel deposits related to the flood, for example, can be found shallowly buried in Lake Oswego's ridge tops several hundred feet above the modern Willamette River. The Scabland Flood topography, however, was not stable. The Columbia, Willamette, and tributary rivers quickly began eroding the newly deposited flood sediments.

The basic topography of the area of interest here, the modern Columbia River floodplain, resulted from the combined action of two post glacial events: 1) the excavation of Scabland Flood and older sediments by the Columbia River as noted above; and 2) changes in post-glacial sea level that helped build a new floodplain and stabilized the Columbia river channel. A Corps of Engineers publication on bank erosion at Sauvie Island summarizes these processes (ACOE 1986:20-28). According to that report, the Columbia had cut through its lowest presently visible terrace by about 6,000 years ago.[2] At that time, the river was flowing well below its present level. In the Portland area, the level of the floodplain and river appear to have ranged from 70 to 35 feet below modern elevation.[3] Erosion of the flood sediments slowed as the river level approached sea level, lessening its gradient. Gradually rising sea levels between 6,000 and 3,500 years ago halted the down-cutting altogether and began a depositional process that once again raised the level of the floodplain and river. By the close of this period, the Columbia had deposited enough fine grained sediments to become effectively stabilized within its present banks (ACOE 1986:27 and Leonard Palmer, personal communication).

Geologically, the Columbia south shore floodplain at 3,500 years ago should not have appeared remarkably different than at the beginning of historic settlement. The major landform features between the river and its lowest terrace should already have been present. I suggest that predominant among those features have been 1) a natural levee adjacent to the river, 2) seasonal runoff channels and sloughs with their associated channel marginal levees, 3) depressions holding floodplain lakes and mashes, and 4) elevated Scabland Flood gravel bars.

Building of the modern floodplain, however, did not stop. Until controlled by dikes and dams, sediments continued to accumulate, gradually raising the level of the floodplain as the river and sloughs overflowed their banks during the spring flood peaks. Dirt washing down the Columbia and Sandy Rivers spread across the landform and was deposited as the flood water velocity lost momentum. A particularly large flood associated with possible temporary damming of the Columbia by the Bridge of the Gods landslide circa 700 years ago may have deposited a particularly massive sediment unit (cf. ACOE 1986:26, Allen, Burns and Sargent 1986:165-167 and Hemphill 1989). Even without this event, routine seasonal flooding would have continued to build the floodplain landform. Archaeological investigations for the original Airport Way route recovered radiocarbon dates ranging from 1220 +/- 65 (WSU-3472) to 1910 +/-60 (WSU-3470) radiocarbon years before the present (A.D. 40 to 730). These

---

[2]This terrace is now the location of the Union Pacific railroad lines (and the southern boundary of the Airport Way Urban Renewal Area). Indeed the terrace edge was used for construction of the rail line, in part, because of its freedom from flooding common to the floodplain just below.

[3]These figures are based on the depth of Mazama volcanic ash noted in well logs for the Columbia South Shore. Actual depth of early floodplain sediments varies across the floodplain. In some places, Scabland Flood gravels can be found near the modern ground surface. In general, however, post-Scabland Flood sediments are quite deep near the river and become shallower approaching the first terrace to the south. Archaeologically, the salient point here is that the depth of early prehistoric cultural deposits may vary widely across the landform.

dates were recovered from Columbia Slough marginal sediments 1 to 2.35 meters (3.28 to 7.7 feet) below the modern ground surface (Bland and Connolly 1989:14). They suggest that not only have substantial sediments been added during the past 1,900 years, but that humans have used the landform repeatedly during that period.

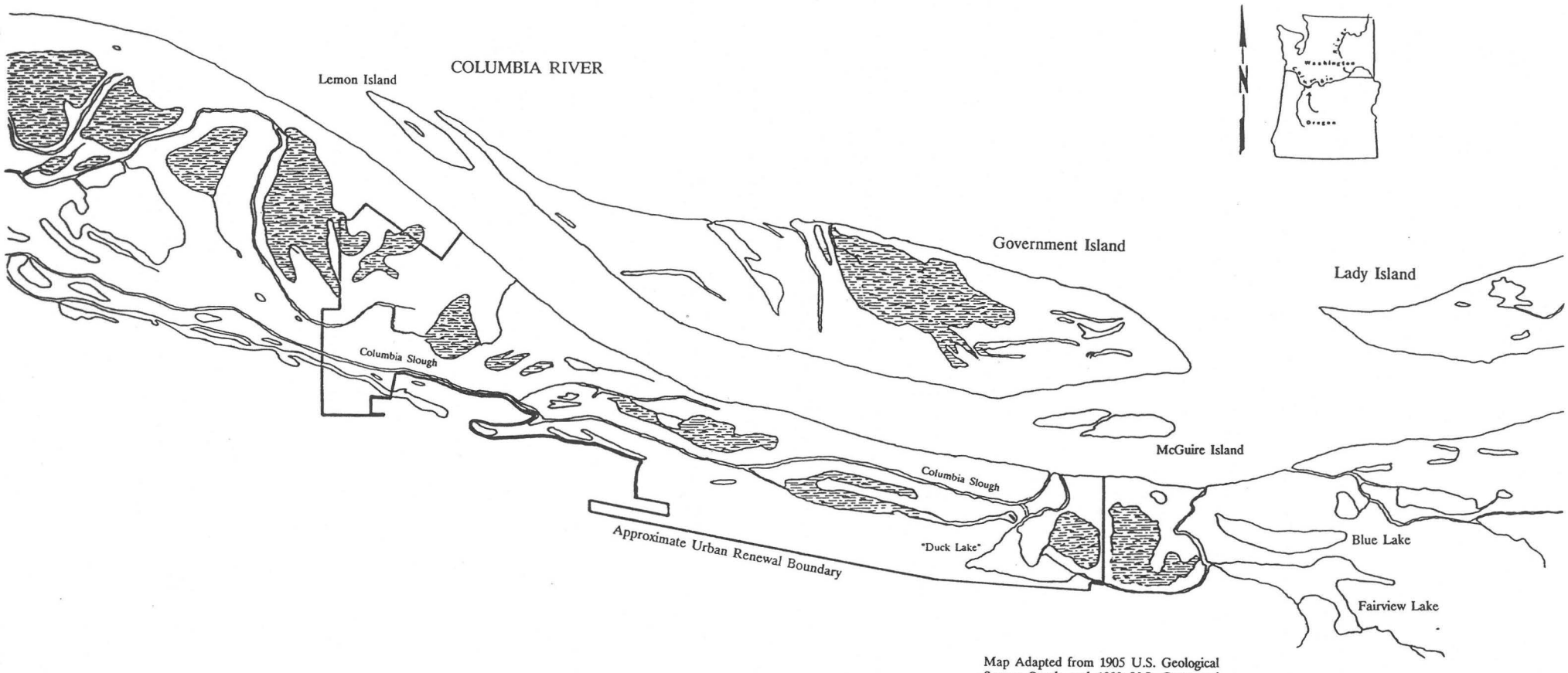
In short, both massive and seasonal Columbia river flood events first destroyed then reformed the Columbia river floodplain. Sediments deposited during the last 6,000 years gradually rebuilt the modern floodplain until halted by recent human barriers. Evidence of prehistoric human use of the landform could plausibly extend through the full 6,000 year process. Archaeological remains of this early use, however, may be quite deeply buried, especially near the river. Here, cultural deposits could be buried by as much as 35 to 70 feet (10.6 to 21.3 meters) of floodplain sediments. As the floodplain level rose, it gradually assumed its modern geological features. Water borne silts and sands from seasonal flooding spread unevenly over the floodplain. Sediments accumulated most rapidly immediately adjacent to the river and slough channels where flood waters first overtopped their banks. These deposits built the natural river and slough levees, which gradually stabilized the location of these features, reducing flood frequency, and providing relatively high, dry ground for longer-term human occupation.

The floodplain building process was dynamic, making the precise location and elevation of prehistoric features difficult to trace. Nonetheless, maps prepared prior to modern alteration of the landform provide a reasonable reflection of the landscape as it appeared to prehistoric human populations. Figure 2 is a map based on 1902 river survey and 1905 U.S. geological survey maps. It provides some notion of the character of the prehistoric landform. Among features illustrated are an abundance of floodplain lakes, marshes, seasonal drainage channels and sloughs. Levees, while not illustrated, border the river and slough channels. Remnants of Scabland Flood gravel bars also dotted the landscape, providing more high ground between wetlands. This is the landform to which the study area's archaeological site distribution patterns (at least for the last 3,500 years of use) is most plausibly related. I suggest that these riverine wetland and nearby elevated ground features were the primary focus of repeated prehistoric human activity. The character of floral and faunal resource distribution, coupled with the extant archaeological site distribution outlined below suggests that the highest density of prehistoric cultural features cluster on and around these floodplain geological features.

Figure 3 is a south facing photograph of the flood plain. What now appears as a grassy field (behind the corn field), is the location of the lake I have labeled "Duck Lake." Despite modern drainage, the land is still too wet to farm successfully. The tree line in the background is near the river's first terrace and is the southern boundary of the urban renewal area. The photograph is taken while standing on archaeological site 35MU84, a possible residential location between the lake and Columbia Slough. It is typical of the close association of wetlands and prehistoric settlement.

Prehistoric Floral and Faunal Resources

Before modern alteration of the landform, the Columbia south shore supported plant and animal communities typical of most of the lower Columbia riparian habitat. Major elements of that habitat include flora and fauna found in or immediately adjacent to the river itself, on seasonally dry riverine floodplains, and in floodplain wetlands (sloughs, lakes and marshes). Assuming that a similar association was relatively constant in the past, the south shore riparian habitat would have provided a number of important resources for its prehistoric human occupants. For at least the last several thousand years,



Map Adapted from 1905 U.S. Geological Survey Quads and 1902 U.S. Coast and Geodetic Survey Columbia River Navigation Maps; available in the map collection, Oregon Historical Society, Portland. Prepared by David Ellis.

Figure 2. **General Map of the Columbia River South Shore Before Construction of River Levees**

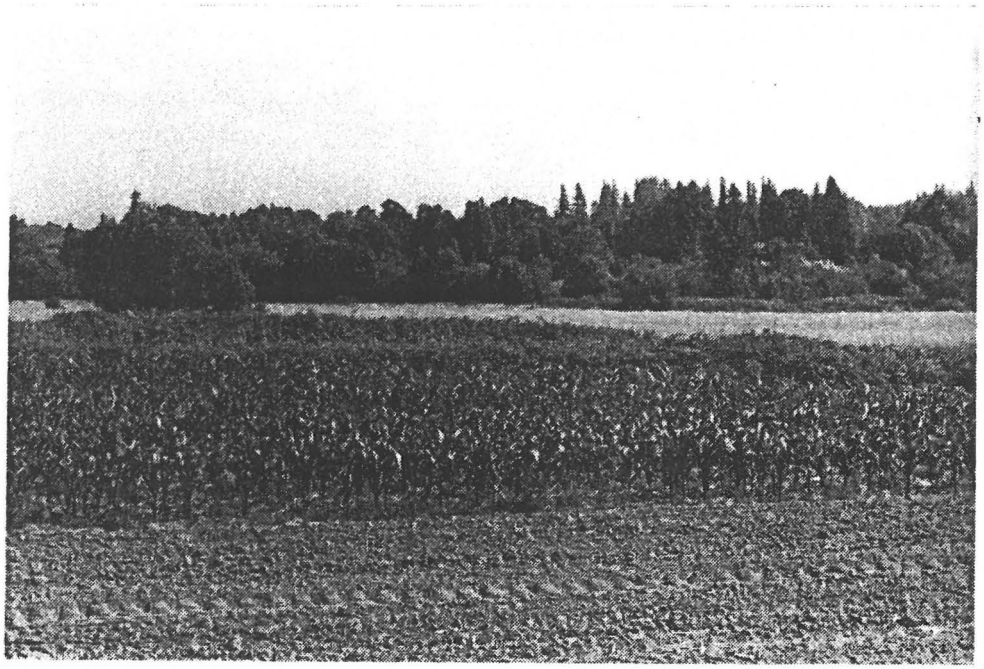


Figure 3. The South Shore Floodplain, Facing South from Site 35MU84

the Columbia River supported one of the heaviest runs of anadromous fish in the world. Other freshwater fish also inhabited the river as well as perennial lakes and sloughs on the floodplain. Floodplain wetlands supported a variety of nesting and migratory waterfowl. Vegetation such as cattails, rushes, and sedges would have ringed the lakes and marshes. Wapato (*Sagittaria latifolia*) thrived in lower Columbia wetlands and was a Native American staple at the time of historic contact. Frequent river flooding would have inhibited establishment of uniform forest communities on drier floodplain land, maintaining a relatively constant patchy association of open grasslands, brush and trees. Such a habitat would have afforded adequate seasonal forage for larger ungulates such as deer and elk, and facilitated the growth of edible plants such as camas.

Riverine and floodplain resources are not evenly distributed over the landscape. Accordingly, people whose economy depended on the exploitation of those resources would have directed their resource gathering activities to specific places on the landscape at specific harvest seasons. In long-term perspective, such redundant use should have resulted in observable patterns in the archaeological record. We can expect zones that received repeated human use to accumulate a greater density of refuse related to that use than less frequently used areas. I suggest that a consideration of resource patterns is not only useful for gaining a descriptive introduction into the region under consideration, but will help us understand prehistoric economic patterns as well.

Below, I outline floral and faunal resources that were plausibly of greatest economic significance to prehistoric populations living and/or collecting food on the floodplain. I have structured the division in terms of the riverine, floodplain and wetland division noted above. These zones should have occurred roughly in the same locations through much of the prehistoric past, and would have provided distinct resource opportunities and imposed varying exploitative requirements on prehistoric populations (Burtchard 1989:4). Material presented in the summary descriptions and in their associated tables draws heavily on Saleeby (1983) and Verne Ray's (1938) *Lower Chinook Ethnographic Notes.* Supplementary

resource and environmental data come from Hajda (1984), Netboy (1980), ODFW & WDF (1987), Chandler et al. (1966), and Uvardy (1977). The presentation is substantially the same as my earlier environmental summary for the Trojan Archaeological Project (Burtchard 1989:1-9), a report of a lower Columbia River residential site situated in similar floodplain context.

The Columbia River

The high productivity of the lower Columbia is due largely to the presence of dense runs of anadromous salmon (*Oncorhynchus sp.*), steelhead trout (*Salmo gairdneri*), eulachon (*Thaleichthys pacificus*), and smelt (*Spirinchus thaleichthys*) (cf., ODFW & WDF 1987). The continuously high productivity of these migratory species was due in large measure to the combination of freshwater spawning areas with an oceanic growth habitat. The Pacific Ocean could support a high fish population free of human predation during the maturation period. Freshwater spawning runs were so large that they arguably were difficult to over-exploit prior to the development of modern fishing technology and physical alteration of the rivers. Prior to these modern changes, the lower Columbia was a major trunk stream that channeled a substantial, relatively predictable, unearned resource past the "doorstep" of human populations that were able to exploit it.

Chinook speakers inhabiting the lower Columbia at the time of historic contact relied heavily on the Columbia's resources. In his *Chinook Ethnographic Notes*, Ray (1938:107) reports exploitation not only of anadromous fish but sturgeon (*Acipenser transmontanus*) and herring (*Clupea pallasii*) as well. Given their size and abundance, salmon, steelhead and sturgeon arguably were of the greatest prehistoric economic importance. Ray pays particular attention to salmon, outlining use of Chinook salmon from January through March; Chinook and Sockeye salmon from May to early July; and Coho, Chinook and Dog (Chum) salmon in overlapping runs from mid-July through December (Ray 1938:107). It is not likely that all of these runs were equally productive or available to prehistoric populations. Summer Chinook and Sockeye are upriver stock and may have been difficult to exploit on the lower river. Chum presently are not abundant and may also have been of limited importance in the past (ODFW & WDF 1987). Taking into account fish size and availability, spring and late autumn to winter were probably the major acquisition times for anadromous fish. Table 1 lists economic species and harvest seasonality. An estimate of economically most important species is indicated by exclamation points (!) in the table.

Table 1. Utilized Columbia River Resources

Common Name	Taxon	Resource Type	River Season
White Sturgeon !	*Acipenser transmontanus*	Large Anadrs. Fish	SpW
Chinook Salmon !	*Oncorhynchus tschawytscha*	Large Anadrs. Fish	SpSuW
Humpback Salmon	*Oncorhynchus gorbuscha*	Medium Anadrs. Fish	SuA
Chum Salmon	*Oncorhynchus keta*	Medium Anadrs. Fish	A
Coho Salmon !	*Oncorhynchus kisutch*	Medium Anadrs. Fish	A
Sockeye Salmon	*Oncorhynchus nerka*	Medium Anadrs. Fish	Sp
Steelhead Trout !	*Salmo gairdneri*	Medium Anadrs. Fish	SuW
Eulachon !	*Thaleichythys pacificus*	Small Anadrs. Fish	Sp

Clearly, the Columbia River has played a major role in the last several thousand years of Northwest prehistory. It not only provided an abundant and predictable source of food, but facilitated

efficient long distance transportation as well. Despite abundant resource and transportation potential, however, economic use of the Columbia has its costs. Exploitation of main trunk river resources noted above required substantial labor and organizational investment. It is reasonable to argue that the sophisticated economic and political integration of the Chinookan speaking population present at the time of historic contact is critically linked to their need to exploit riverine resources and trade. We can expect Chinookan or similarly intensive use of the Columbia to extend several thousand years into the prehistoric past, beginning at a time when prehistoric population density became high enough to require a highly productive resource base and adequate to meet the demanding requirements of lower Columbia salmon fishing. Data gathered by Kenneth Ames (1988), in a study on sedentism, examined a series of radiocarbon dated prehistoric settlements on the Columbia. His data suggest that village based use of the river began about 4,000 years ago, with intensive use during the last 1,400 years. Pre 4,000 B.P. human use of the river margin may have taken place as minor part of a hunting and gathering strategy focusing more directly on exploitation of upland game.

For our purposes, the salient issue in the general emphasis of riverine resources is its implication for shoreline archaeological remains. Due to the economic importance of the river, we may expect its margins to have been the focus of relatively intense human activity in the prehistoric past. Remains of human occupation and task-specific use of the river should be expected to be preserved in river margin sediments. The natural levee now underlying Marine Drive is a prime location for archaeological remains because of its proximity to the river and because the levee would have provided seasonally dry sediments for human occupation.

The Columbia Floodplain and its Wetlands

The Columbia Slough, lakes, marshes, and seasonally dry ground are major components of the Urban Renewal area's floodplain environment. Standing water typically occurs at elevations below 9 feet (2.7 m) above mean sea level (amsl). Standing water is fed by up slope runoff and Columbia sub-surface pressure. Dry floodplains occur above 9 feet to approximately 35 feet (2.7 to 10.7 m) amsl. The floodplains are free of standing water except for seasonal or exceptional flood events. The creation and location of the south shore floodplain landforms was discussed earlier. The turn of the century mix of dry and wet land was illustrated on Figure 2.

Wetlands are dominated by water tolerant floral species such as cattails, sedges and marsh grasses; and a variety of herbaceous plants and brush. There is evidence suggesting that the wetlands in this area are quite old. In addition to those shown on early maps of the region, well logs and geological data cited earlier (cf. ACOE 1986) indicate the existance of a wetland floodplain association for much of the last 6,000 years.

Floodplains proper are situated at the higher elevation margins of the wetlands, on the river and slough levees, and other elevated areas that allow at least seasonal drainage. Floodplain species are adapted to slightly drier conditions than those of the wetlands. The typical pattern is one of grasses and forbes interspersed with trees and brush.

While floodplains and wetlands support distinct floral and faunal associations, both are water maintained and tend to co-occur in a mosaic of marshes, brush, trees, and seasonally dry meadows. The general environment supports a number of species of economic importance to prehistoric human populations. Table 2 lists floodplain and wetland ethnohistorically documented resources and primary harvest seasons. Please note that the resource tables simplify reality. Nonetheless, they should serve a useful purpose in directing our attention to the array of biological resources that controlled the economic livelihood of prehistoric populations.

Table 2. Utilized Wetland and Floodplain Resources

Common Name	Taxon	Resource Type	Wetland	Floodplain
Wild Strawberry	*Fragaria spp.*	Berry		Sp
Osoberry	*Oemleria cerasiformis*	Berry		Su
Blackcap	*Rubus leucodermis*	Berry		Su
Thimbleberry	*Rubus parviflorus*	Berry		Su
Dewberry	*Rubus ursinus*	Berry		Su
Elderberry	*Sambucus spp.*	Berry		Su
Salmonberry	*Rubus spectabilis*	Berry & Stem		Su
Wild Crabapple	*Pyrus fusca*	Berry-like		A
Elk !	*Cervus Canadensis*	Large Mammal		W
Wood Sorrel	*Oxalis oregana*	Leaf		SpSu
Bracken Fern	*Pteridium aquilinum*	Leaf		SpSu
White-tailed Deer !	*Odoicoileus virginianus*	Medium Mammal	SpAW	SpAW
Bald Eagle	*Haliaeetus leucocephalus*	Migratory Bird	W	
Wood Duck	*Aix sponsa*	Migratory Bird	Su	
Dabbling Duck	*Anas spp.*	Migratory Bird	AW	
White-front Goose	*Anser albifrons*	Migratory Bird	AW	
Canada Goose	*Branta canadensis*	Migratory Bird	AW	AW
Swan	*Cygnus sp.*	Migratory Bird	AW	
Coot	*Fulica americana*	Migratory Bird	AW	
Sandhill Crane	*Grus canadensis*	Migratory Bird	SpA	SpA
Snow Goose	*Shen caerulescens*	Migratory Bird	AW	
Cooper's Hawk	*Accipter cooperi*	Non-migratory Bird		SpSuAW
Red-Tailed Hawk	*Buteo jamaicensis*	Non-migratory Bird		SpSuAW
Kingfisher	*Megaeryle alcoyon*	Non-migratory Bird	SpSuAW	
Flicker	*Colaptes auratus*	Non-migratory Bird	SpSuAW	
Crow	*Corvus brachyrynchus*	Non-migratory Bird	SpSuAW	SpSuAW
Hazelnut	*Corylus cornuta*	Nut		A
Acorn	*Quercus garryana*	Nut		A
Freshwater Turtle	*Testudinidae spp.*	Reptile	SpSuA	
Camas !	*Camasia quamash*	Root		SuA
Wapato !	*Sagittaria latifolia*	Root	A	
Skunk Cabbage	*Lysichiton camtschatcense*	Root & Leaf	Su	
Cattail	*Typha latifolia*	Root & Leaf	Su	
Horsetail	*Equisetum telmateria*	Root & Stem	Sp	
Cow Parsnip	*Heracleum lanatum*	Root & Stem		Sp
Beaver	*Castor canadensis*	Small Mammal	SpSuAW	
Ground Squirrel	*Citellus beecheyi*	Small Mammal		SpSuA
Mink	*Mustela vison*	Small Mammal	SpSuAW	
Muskrat	*Ondatra zibethicus*	Small Mammal	SpSuAW	
River Otter	*Lutra canadensis*	Small Mammal	?	
Racoon	*Procyon lotor*	Small Mammal	?	
Brush Rabbit	*Sylvilagus bachmani*	Small Mammal		SpSuA
Red Fox	*Vulpes fulva*	Small Mammal		SpSuAW
Wild Celery	*Oenanthe sarmentosa*	Stem		Sp

There is little doubt that wetland and floodplain species were economically important to lower Columbia populations. Wapato (in marshes) and camas (on floodplain meadows) provided critical sources of storable carbohydrates and sugars. However, as with salmon, the labor investment needed to harvest, process and store these plants is relatively high. When populations were driven to use them

in quantity, we could expect a substantial number of people to have been available to provide labor during the late summer to fall seasons when productivity was highest. Waterfowl, deer and elk also were major faunal resources of the floodplain. They provided concentrated protein and by-products such as hides, bone and feathers. As with wapato and camas, these animals should have been a focus of activity in the lowlands during high productivity seasons. Data summarized in Table 2 suggest that the most productive seasons for the most important floodplain/wetland resources were autumn and winter. Accordingly, these may be the seasons when prehistoric population density was at its peak. Other resources with lower return for investment round out seasonal cycle.

Lewis and Clark's View of Local Resources

Observations of Lewis and Clark in the autumn of 1805 are consistent with the availability of resources and the intensive autumn/early winter use of the south shore's floodplain resources. Their expedition entered the Portland Basin via the Columbia Gorge on November 2, 1805. Clark's notes of that day indicated the importance of what is almost certainly camas. On Strawberry (now Hamilton) Island immediately downstream from Bonneville Dam, they saw Indians digging roots (probably camas). Indeed, digging had been so extensive that "the whole island bears every appearance of having been at some period in a state of cultivation" (Coues 1893:688). That night they camped on a meadow near Rooster Rock east of present day Troutdale, Oregon. Here, they commented on the extensive woodlands, and on the profusion of vines and brush that lined the river. At the time, the vegetation seemed a welcome contrast to the drier country east of the Cascades. On November 3, they passed the mouth of the Sandy River and camped on the north side of the river, opposite what they called Diamond Island (now the eastern end of Government Island). Their comments are directly relevant to the Columbia south shore study area.

> Below Quicksand river the country is low, rich and thickly wooded on each side of the river. The islands have less timber, but are furnished with a number of ponds near which are vast quantities of fowls, such as swan, geese, brants, cranes, storks, white gulls, cormorants, and plovers. The river is wide and contains a great number of sea-otters. (Coues 1893:691)

That evening they killed three swans, eight brants, and five ducks from an island pond. The next morning Clark noted a substantial village of 25 houses (most of them temporary) with 52 associated canoes situated on the Columbia south shore near the present site of the Portland International Airport. Aside from resources noted above, Clark's comments suggest that both deer and wapato were accessible on the floodplain at this time of year. DeVoto (1953:275) abridges Clark's notes as follows:

> NOVEMBER 4TH MONDAY 1805 Shannon set out early to walk on the Island to kill something, he joined us at the lower point with a buck. (Tide rose last night 18 inches perpendicular at Camp) near the lower point of this dimond Island is the head of a large Island {this is the western end of Government Island, previously separated from the upstream portion by a shallow mid-island channel--ed.} separated from the Small one by a narrow chanel, and both Situated nearest the Lard. Side, on the Main Lard. Shore a Short distance below the last Island we landed at a village of 25 *houses*: 24 of those houses we[re] thached with Straw, and covered with bark, the other House is built of boards in the form of those above, except that it is above ground and about 50 feet in length [*and covered with broad split boards*] This village contains about 200 Men of the *Skilloot* nation I counted 52 canoes on the bank in front of this village maney of them verry large and raised in bow. we recognized the man who over took us last night, (*our pilot who came in his canoe*) he invited us to a lodge in which he had Some part and gave us a roundish roots about the Size of a Small Irish potato which they roasted in the embers until they became Soft, This root they call *Wap-pa-to* the *Bulb* of which the Chinese cultivate in great quantities called *Sa-git ti folia* or common arrow head, (*we believe it to be the Same*) it has an agreeable taste

and answers verry well in place of bread. we purchased about 4 bushels of this root and divided it to our party,

As the party hurried downstream they also noted more deer and elk on floodplain prairies. They continued to trade for wapato and comment on the immense numbers of waterfowl on the river. Throughout their journals their references to native canoe travel repeatedly emphasizes the importance of the river in local transportation. Their summary comments about the Portland Basin are worth noting. Elliot Coues (1893:697-698) version of a portion of their November 5 comments reads:

> ...This great plain or valley begins above the mouth of the Quicksand river, and is about 60 miles wide in a straight line, while on the right and left it extends to a great distance. It is a fertile and delightful country, shaded by thick groves of tall timber, watered by small ponds, and running on both sides of the river. The soil is rich and capable of any species of culture; but in the present condition of the Indians, its chief production in the wappatoo-root, which grows spontaneously and exclusively in this region. Sheltered as it is on both sides, the temperature is much milder than that of the surrounding country; for even at this season of the year we observe very little appearance of frost. During its whole extent it is inhabited by numerous tribes of Indians, who either reside in it permanently, or visit its waters in quest of fish and wappatoo-roots. We gave it the name of the [Wappatoo or] Columbia valley.

The expedition continued to the Pacific coast, eventually spending the winter at Fort Clatsop. The following spring (late March and early April of 1806) they again visited the Columbia south shore area on their return journey. Again they noted abundant waterfowl, other wetland species, deer, elk and bear. The big game, however, was generally of poor quality and often not worth hunting (see Coues 1893:928). All that remained of the 25 house village visited in November was the single wooden plank long house. Group attention had turned away from game and roots, and toward salmon. The bulk of the population had moved upstream to the Columbia rapids where salmon could be taken more easily.

Probably due to low body weight of game animals, and exhaustion of wapato and camas, spring resources did not seem sufficient for the local population. The spring salmon run had not begun, and various Indian visitors appeared impoverished near the point of starvation (perhaps an overstatement). Local people were most reluctant to trade their limited foodstuffs to the members of the expedition. Because the party needed to replenish their own supplies, and because they were hesitant to move through Columbia rapids (now heavily populated with impoverished people waiting for the spring salmon run), Clark and Lewis spent several extra days in the general Portland Basin area. Thanks to this unexpected delay, we are given some of their most thorough notes on the region. Interested readers may wish to consult Coues (1893) *The History of the Lewis and Clark Expedition* for a useful and readily available summary of the period, or the more complete accounts in Twaites' (1905) *The Original Journals of Lewis and Clark.* For our purposes, it is pertinent to note that they again emphasized the mix of riverine and floodplain resources (in reduced abundance and quality). They also located a number of villages, including a second very large plank house associated with additional abandoned structures at the eastern edge of the study area. The two south shore villages are discussed further in the Section Two of this report.

South Shore Environment, Economy, and Prehistoric Site Distribution

Clearly, environmental characteristics of the Columbia south shore floodplain provided resources adequate to attract and sustain substantial numbers of people during the prehistoric past. Lewis and Clark's highest estimate of the population between The Dalles and the Pacific coast was 23,700 (Hajda

1984:71). Their estimate was made years after smallpox epidemics had ravaged the area. This and other European diseases (eg., whooping cough, measles and influenza) had dramatic impact on non-resistant Native Americans and decimated populations well in advance of actual physical contact with Europeans. These diseases tended to be particularly severe on people who lived in the close quarters of settled villages like those on the lower Columbia. Consequently, the population figures given by Lewis and Clark almost certainly underrepresented the regional population density of only a few hundred years earlier. In my opinion, late prehistoric, pre-epidemic population density for the lower Columbia would have exceeded 100,000.[4] Population at this level would have benefited from the region's high resource productivity, and could have provided the labor and organizational sophistication that exploitation of those resources required.

High population densities, of course, were not always the case on the lower Columbia. Except for short-term catastrophes, Northwestern North America experienced generally increasing population densities through time (as has the world in general). I have suggested that riverine and floodplain resources would have been particularly valuable after populations densities increased beyond the point that groups were able to reliably maintain themselves through less demanding upland hunting and gathering practices. At some point in the past, perhaps 4,000 years ago, that threshold was passed on the lower Columbia. The river and its floodplains increasingly became the focus of intensive human economic activity --activity that continued until diseases and Euroamerican immigrants intruded into the region.

The physical character of the landform and its floral and faunal assemblage has always conditioned the manner in which it could be used by human beings. Such constraints applied no less in the past than in the historic present. During the last 6,000 years, frequent flooding of the river gradually built the floodplain with its constituent topographic features --natural channel marginal levees, sloughs and other wetlands. The flooding combined with this topographic variability to help maintain the patchy floral and faunal pattern characteristic of the Columbia south shore floodplain.

I maintain that environmental variables are of key importance to understanding long-term patterns in prehistoric use of the landform and its resources. I assume that, over the long term, humans tend to locate their habitations and to focus their activities at places that 1) optimize return of critical resources for time and energy investment, and 2) provide adequate stability in the resource flow to insure continuing viability of the population. Arguably, resources most critical to sustaining prehistoric economies of the lower Columbia were anadromous fish and sturgeon in the river, wapato and water fowl in the wetlands, and camas and large ungulates on floodplain meadows. In order to efficiently use these resources, groups should have repeatedly directed their activities to points on the landscape that optimized resource access while avoiding seasonal flooding and continuously wet ground.

It is this repetition in use of the landform that creates distribution patterns in the archaeological record. Places on the Columbia south shore floodplain that optimize access to critical resources are not randomly or uniformly distributed. I suggest that the most heavily used of these places would have been elevated ground (levees and Scabland Flood gravel bars) situated near the river proper and/or inland wetlands. If people have repeatedly biased their activities toward these locations as expected, then archaeologically preserved remains of these activities should exhibit the same biased pattern. Please note that there is little doubt that some archaeological materials may be found anywhere on the landform. Nonetheless, if the above arguments and the basic assumptions on which they are predicated are valid, we may expect the highest density of archaeological remains to clustered on elevated dry ground near

---

[4]This figure assumes a population loss of 80% from the effects of introduced Old World diseases.

the river and near inland floodplain wetlands. The primary goal of the present study is to determine the extent to which present data are consistent with that pattern. In the sections that follow, I will argue that presently available information is consistent with such a pattern.

II. PREHISTORY AND ARCHAEOLOGY OF THE FLOODPLAIN

The preceding section characterized the basic nature of the Columbia south shore environment as it must have appeared during much of the prehistoric past. I suggested that the patchy floodplain environment would have resulted in predictable patterns in the distribution of floral and faunal resources critical to prehistoric occupants of the region. As humans exploited those resources over long stretches of time, they should have left remnants of their activities (now archaeological sites) that reflect their patterned use of the environment. Here, I review available evidence to evaluate the extent to which the extant archaeological record reflects the expected prehistoric land-use bias toward elevated ground near water. First, I extend Lewis and Clark's account of settlements in the immediate vicinity of the Airport Way Urban Renewal Area. Second, is a summary of archaeological research in the area, including basic procedures and results of the present effort. Finally, the combined data are used to evaluate the expected land-use pattern.

Lewis, Clark and Columbia South Shore Villages

When Lewis and Clark visited the south shore area in the Fall of 1805 and the Spring of 1806, they noted the presence of two active Indian villages in the immediate vicinity of the present Airport Way Urban Renewal Area. These were among approximately 27 ethnohistorically documented villages in the Portland Basin (Saleeby 1983:57). The southernmost of the two villages was the multi-structure seasonal village with a single, over wintering plank long house noted in Section One. Clark called this settlement *Ne-er-che-ki-oo.* His comments suggest that the size of the settlement expanded and contracted substantially, growing larger during the autumn (when wapato and camas are best harvested), and shrinking during the winter and spring. Clark's maps indicate that it was situated on the river levee just south of the western tip of Government Island. This would place the site near the present location of Portland International Airport. Figure 4 shows the village location. The map is based on one of Clark's original maps of the area (Thwaites 1905:Map No. 34) as presented in Archibald (1984). I have modified it to show the second settlement and the Multnomah (Willamette) River identified after the map was drawn.

A second settlement was located on the Columbia south shore near the eastern end of Government Island. Clark called this village *Ne-cha-co-le.* When he visited the village in April, it consisted of a 226 foot plank long house divided into seven 30 foot square compartments. Near the building were the ruins of several other large, semi-subterranean buildings. Inhabitants attributed the demise of the once larger village to a smallpox epidemic about 30 years earlier (Coues 1893: 926-927). Some archaeologists argue that site 35MU24 in Blue Lake Park east of the study area is the remains of this village (Woodward et al 1977, Woodward 1983 and 1984). While this may be so, the arguments supporting the designation remain inconclusive. Archaeological remains of other residential localities are located in the area. Site 35MU70, for example, is located on the eastern boundary of the study area at the intersection of 185th Avenue and Marine Drive. It is situated in approximately the correct location for Clark's village. Indeed Susan Horton, who was involved with a later Blue Lake Park archaeological testing project (Archibald 1984), believes the latter location to be a more probable site for the village (personal communication).

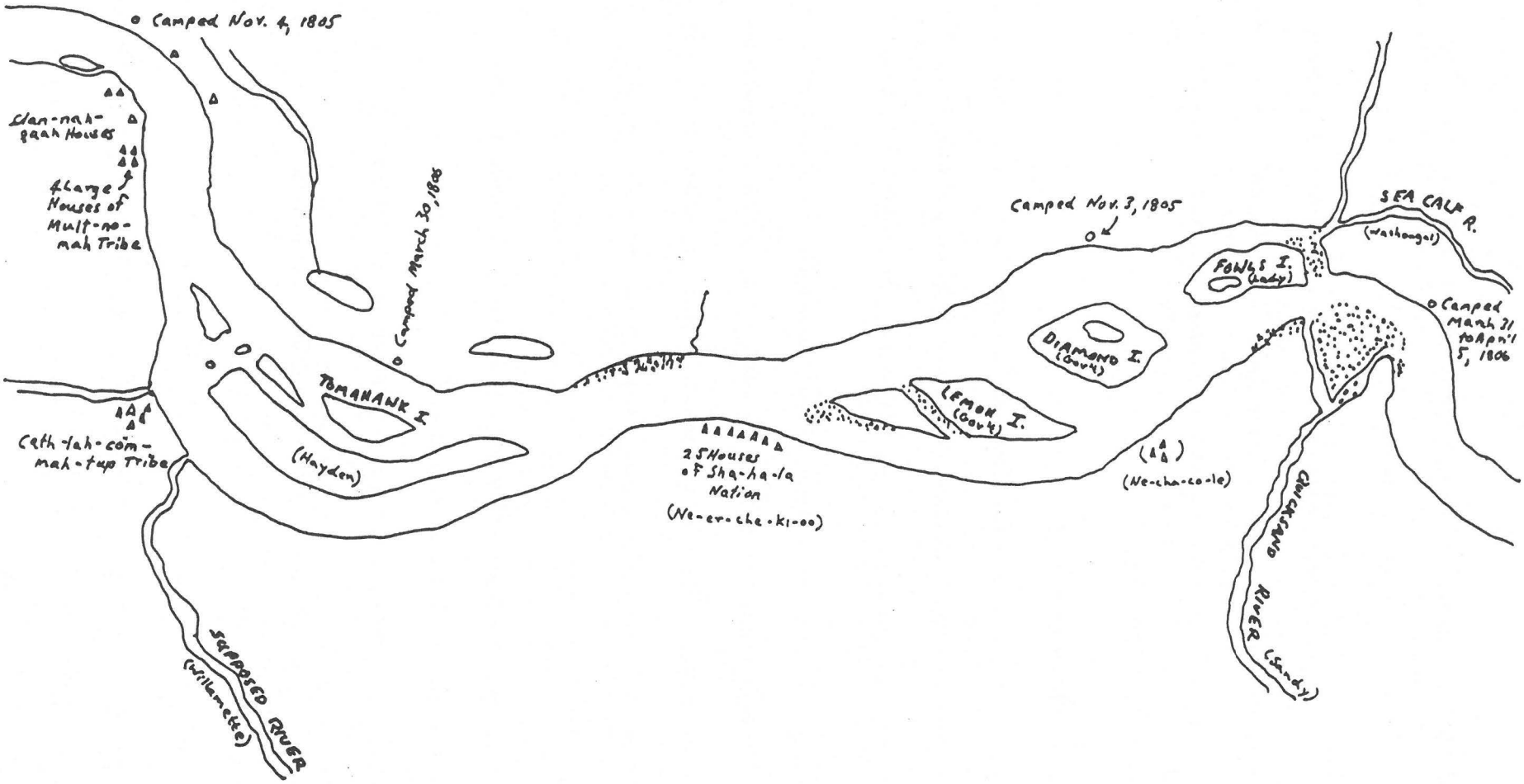


Figure 4. **Lewis and Clark Map of the Columbia South Shore Area, 1805 - 1806**

Site 35MU70 has not been systematically investigated beyond Kongas'(1979) work, but artifacts collected from the surface are consistent with designation as a residential locality. Some of these may be seen in the private collection photographs in Appendix B of this report.

The salient issues in Clark's observations have less to do with the specific location of early historic villages than with the fact that 1) the villages were present in the project area on elevated ground adjacent to water, and 2) the occupants' exploitation patterns were fit to the distribution and abundance of certain critical floral and faunal resources. Recall that by the time Lewis and Clark saw the Columbia south shore, native populations had already been reduced by Old World epidemic diseases. Their observations barely hint at a human presence and economic system that can be expected to have existed, with substantially greater intensity, for several thousand years. Archaeological materials are now the only remaining record of that prehistoric past.

Columbia South Shore Archaeology

Considering its extent and prehistoric importance, the south shore of the Columbia River has received relatively little cultural resource attention. This is undoubtedly due to the fact that Portland developed as an urban center well before our prehistoric heritage was protected. Much of the land suitable for prehistoric occupation was also the best terrain for building the new city. Consequently, an unknown but certainly large number of archaeological sites were bladed away or covered as Portland and adjacent cities expanded their metropolitan boundaries.

During the last several decades, however, a body of information on prehistoric site location and content has been gradually growing. Approximately 107 site localities are now recorded in the Oregon State Historic Preservation Office (OSHPO) for the southern Columbia River floodplain from Sauvie Island south to the Sandy River. Additional prehistoric sites have been found which have yet to be entered into the state system (Jo Reese, personal communication), plus a number of others known only to local residents and collectors. While the known total substantially underrepresents the complete archaeological record, it is indicative of the extensive occupation of the region. Seventeen prehistoric sites are now recorded within the Airport Way Urban Renewal Area. The text below provides summary information about the current project and these seventeen sites.[5] In order to investigate relative site distribution on the floodplain, I have added a portion of the basic OSHPO data for the broader south shore floodplain from Sauvie Island to the Sandy River. Combined data are used to evaluate the expected relationship of archaeological site density, with elevation and proximity to water.

Prehistoric Localities in the Urban Renewal Area

The Columbia south shore study area for this report conforms to the easternmost four miles of the Airport Way Urban Renewal boundaries shown on Figure 1. The following Figure 5 map shows the study area. At present, development decreases from west to east, enhancing our ability to locate prehistoric localities. As a result, most of the known prehistoric sites are located in the eastern portion of the area. The apparent pattern, of course, is an accident of development and bears no necessary relationship to prehistoric reality.

---

[5]Detailed site forms and maps for specific prehistoric localities recorded during the project are printed under separate cover and are on file in the Oregon State of Historic Preservations Office and at the Laboratory of Archaeology and Anthropology.

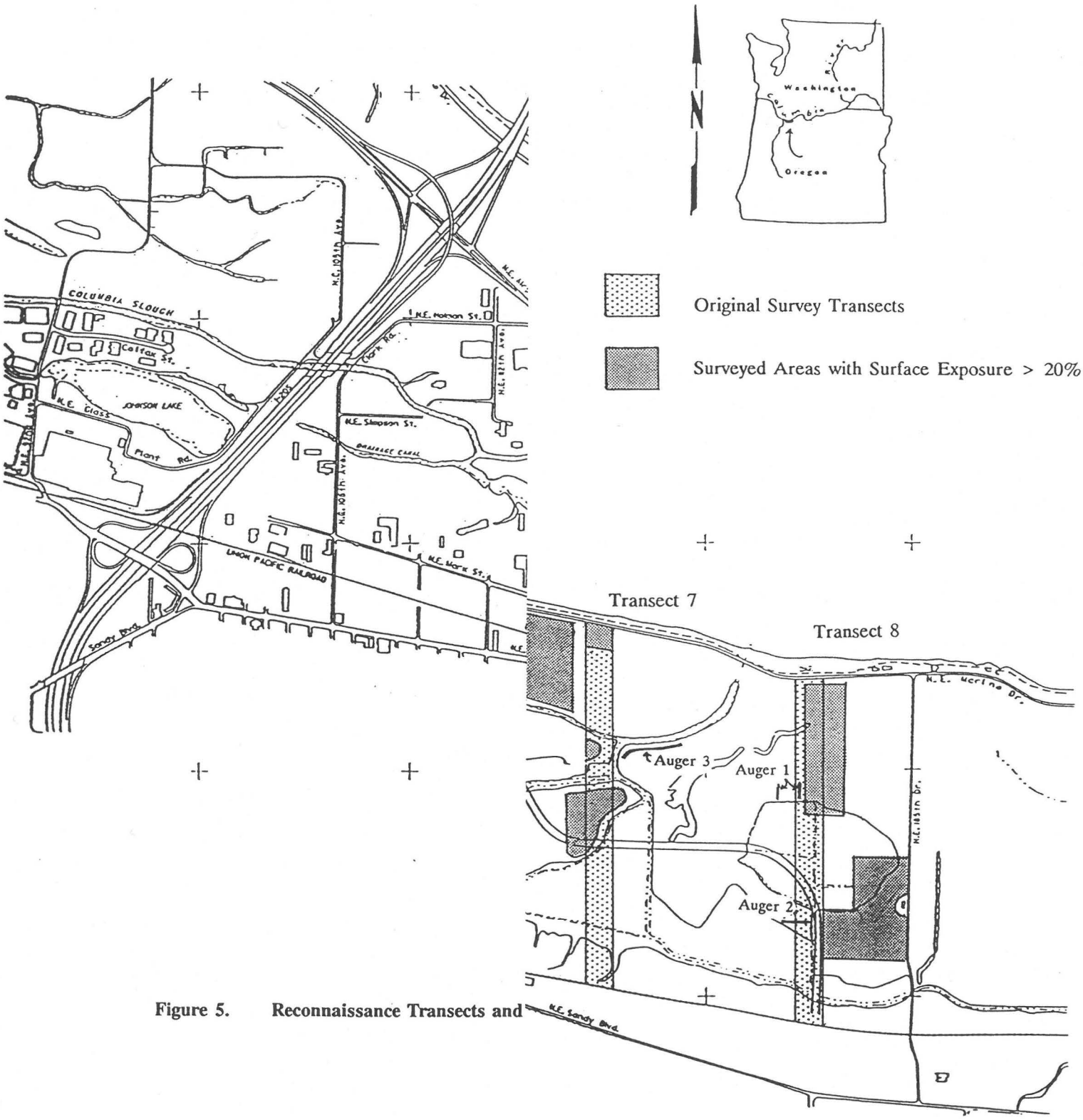


Figure 5. Reconnaissance Transects and

Prior to the present study, eight prehistoric localities had been recorded within or immediately adjacent to the project boundaries. A number of additional sites had been found immediately east of 185th Drive and south of the Union Pacific railroad near Sandy Boulevard. Most of the previously recorded sites were located through the efforts of a City of Portland/CETA funded survey in 1979 (see Kongas 1979) and a cultural resources survey for the proposed extension of Airport Way (see Bland and Connolly 1989, and Connolly 1989).

The present reconnaissance located an additional nine previously unknown or known but unrecorded prehistoric sites within the project area. The combined total is discussed below in the "Results" portion of this section. While the current total far from exhausts the range of archaeological resources situated within the project area, I believe that it substantially improves our understanding of prehistoric use of this portion of the Columbia floodplain.

Reconnaissance Techniques

The present reconnaissance relied on a walking **pedestrian surface survey** of approximately 20% of the study area supplemented by auger probes to sample subsurface sediments. Survey techniques were designed to sample the complete range of terrain types found within the Columbia floodplain environment (levees, swales, seasonally inundated wetlands, etc.). This was done to avoid sampling bias while investigating the expected wetland and river margin oriented pattern in the archaeological record. As the primary source of both transportation and food, the Columbia shoreline and floodplain wetlands should have been the primary center of human activity for the three to four thousand year period in which the river and its floodplains have been stable. Higher ground (primarily natural river and slough marginal levees, and Scabland Flood gravel bars) would have been preferred simply because they offered more reliably dry ground for human occupation and related activities.

Working under these assumptions, we developed a sampling design using a series of systematically placed north to south transects running from Marine Drive to the Union Pacific railroad. The transects were 50 feet wide and set at 250 foot intervals. Figure 5 shows the location of original transects. Ideally, transects offered the advantage of crosscutting the full range of floodplain terrain types at increasing distances from the river. Such a sampling design is a useful method for gaining general information about a region, such as the Columbia south shore, for which initial information is limited (cf. Judge, Ebert and Hitchcock 1975).

The character of the reconnaissance changed during the course of the fieldwork. Early in the survey, it became apparent that differences in ground visibility and land access limited the utility of strict adherence to the original transect boundaries. Many areas were so heavily brush and blackberry covered that effective surface survey was not practical. Accordingly, we shifted our focus to cleared fields and other areas of exposed ground for which access permission could be obtained. By the conclusion of the project, all transect areas had been surveyed or inspected. In addition, cleared fields had been surveyed as possible in the vicinity of the original transects and near ACOE identified wetlands.[6] Figure 5 shows not only the original transects, but surveyed areas with greater than 20% exposed ground. In essence, these areas make up the effective survey boundaries. The exposed areas are the places where surface reconnaissance techniques could locate archaeological materials with reasonable reliability. Figure 6 shows freshly prepared ground and background cultivated fields on Spada Farms in the study area. Such conditions make cultural remains on the surface easy to locate.

[6]All surveys were competed with crew members walking transects spaced at intervals not exceeding 15 meters.

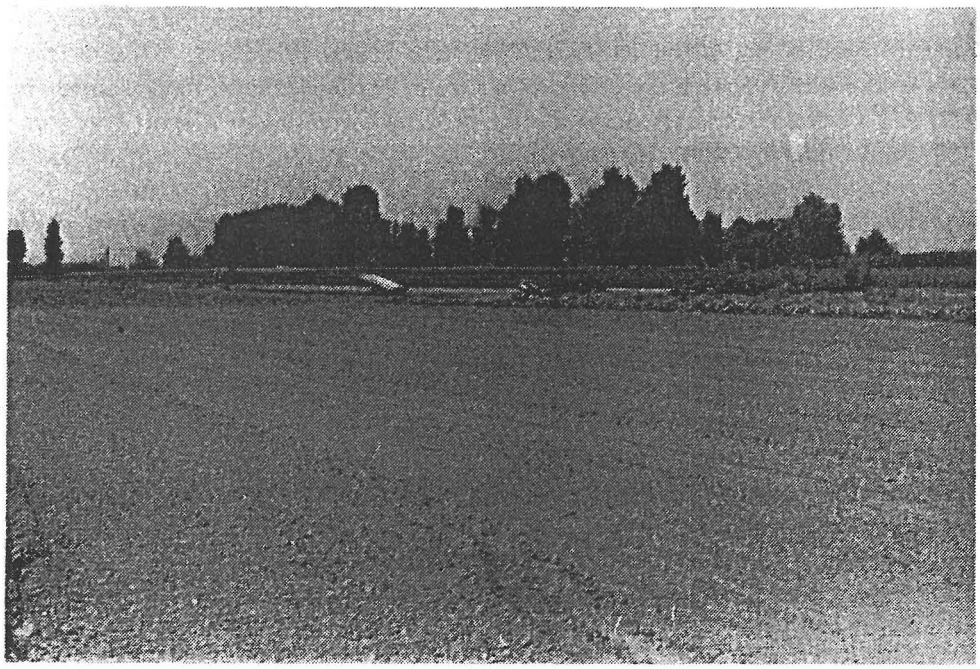


Figure 6. Cultivated Ground at Spada Farms, Showing Ideal Reconnaissance Surface Exposure

Fortunately, the exposed areas also crossed the range of floodplain terrain types at varying distances from the river. The patterns in the relative density of prehistoric sites suggested below are based upon inspection of those high visibility areas coupled with the previously established archaeological record for the Columbia South Shore.

Auger test units excavated to two meters in depth supplemented the surface reconnaissance. Test units were located to sample subsurface sediments under a variety of floodplain terrain types. Our intent was to search for buried cultural materials that may not have been visible to surface reconnaissance only.

Figure 5 shows the location of the auger test lines excavated during the project. At each location, a series of 12 cm diameter holes were drilled with a tractor mounted auger. All sediments removed from the auger units were screened through 1/4 inch hardware cloth to check for the presence of cultural materials. Sediment texture, color and inclusions were recorded for each auger unit. Please refer to Appendix A for auger probe summaries.

The auger tests were useful in illustrating the character of landform sediments, but they did not provide indicators of buried prehistoric materials in the locations tested. While there is no doubt that buried sites are present on the Columbia south shore (see Bland and Connolly 1989), patterns in their location could not be clarified by the present auger tests. Prehistoric land-use patterns suggested by this study, then, are based solely on the results of the surface reconnaissance and on previously recorded archaeological remains for the broader Columbia south shore region. The following map shows the known distribution of prehistoric sites in the project area.

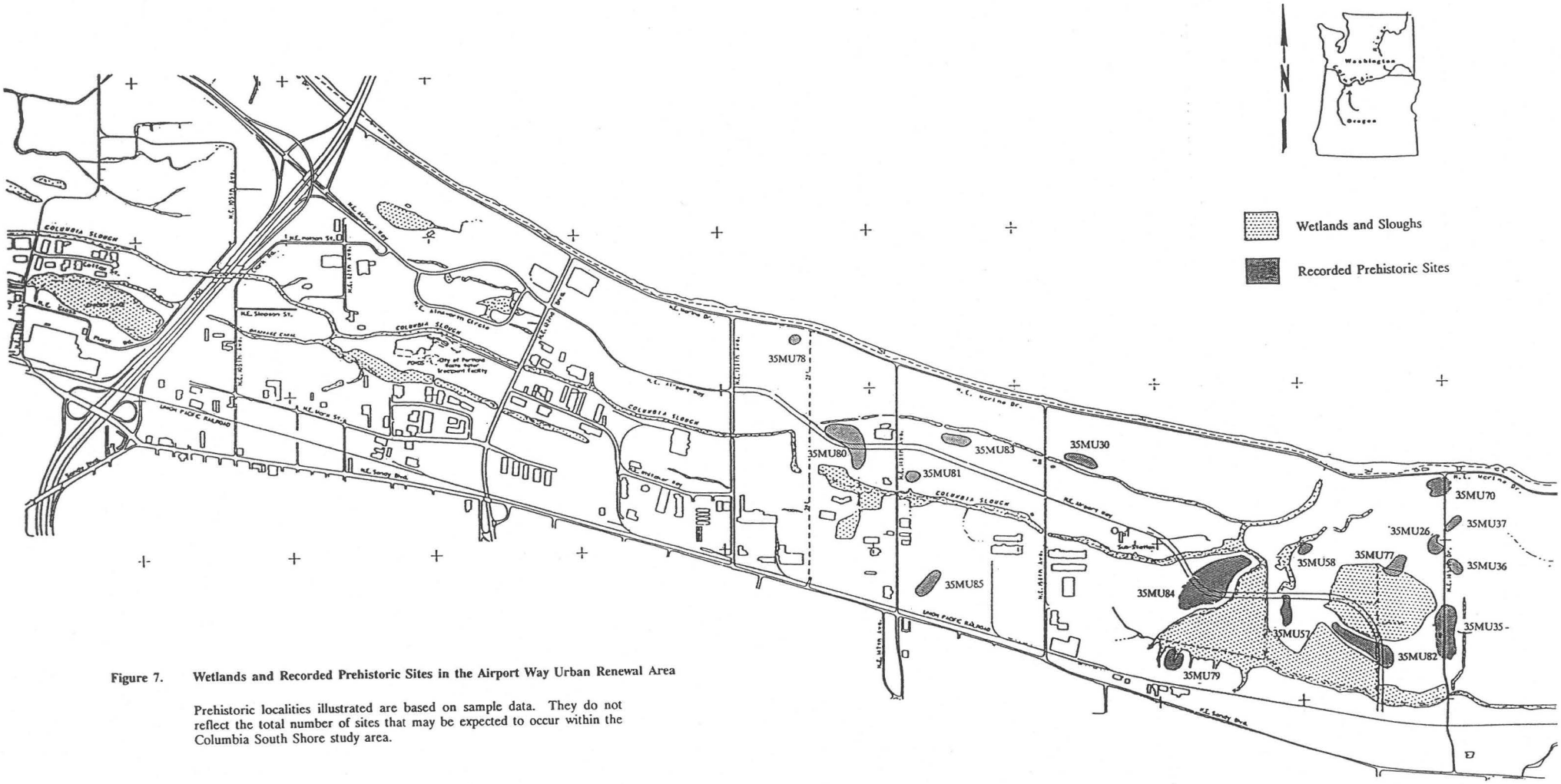


Figure 7. **Wetlands and Recorded Prehistoric Sites in the Airport Way Urban Renewal Area**

Prehistoric localities illustrated are based on sample data. They do not reflect the total number of sites that may be expected to occur within the Columbia South Shore study area.

Reconnaissance Results

The surface reconnaissance coupled with discussions with local residents resulted in the location of nine previously undocumented prehistoric localities. For the most part, these sites consisted of moderate to light density scatters of fire cracked rock (FCR)[7], varying densities of ground stone tools, and chert and obsidian chipped stone debris from tool manufacture and resharpening activities. Generally, these sites appear to represent task-specific uses of the landscape such as seasonal hunting camps or processing areas for camas, wapato or other vegetal products. Figure 7 shows the distribution of project area prehistoric sites as established by this and the 1979 Kongas survey.

The most notable exception to the task-specific localities located during the present reconnaissance may be site number 35MU84 on Figure 7 and Table 3 (also known as the Hemlock site). The variety, density and size of the artifact distribution, combined with elevation and location adjacent to a prehistoric lake (now seasonally inundated wetland shown in Figure 3) suggest a residential village locality. This site is in the path of the proposed Airport Way extension and has been tested by Oregon Department of Transportation archaeologists (Connolly 1989). Test procedures were limited to the direct right-of-way plus two units placed to examine concentrations of chipped stone and FCR. In all cases, cultural debris was limited to surface or near surface context. These results tend to suggest relatively late and/or limited prehistoric use of the landform. Connolly suggests (and I agree), however, that additional cultural materials extend beyond the tested limits of the Airport Way right-of-way. In the absence of more spatially extensive determination of site contents and function, I urge that 35MU84 be regarded as an important cultural property on the Columbia south shore floodplain. I suggest that the known contents of the site are consistent with residential, possibly late prehistoric, use of the landform.[8]

Sites 35MU78 (the Pryor site) and 35MU70 (the Alfon site) may also be residential localities. Both sites are situated on the natural Columbia River levee as anticipated by our original operating assumptions. 35MU78 is represented solely by artifacts found during excavation for a building foundation. Prehistoric materials are not visible on the modern ground surface, nor were they seen in a 1988 reconnaissance of the Columbia River shoreline (Jo Reese: Personal Communication). The items in Figure 8 are from 35MU78.

Site 35MU70 is clearly visible on the surface. Material from this locality is widely scattered across a presently farmed field. This site was mentioned earlier as a possible alternative location for Clark's *Ne-cha-co-le* village. No subsurface testing has been conducted in order to determine depth, complexity

---

[7]Fire cracked rock is a particularly abundant component of prehistoric localities in the Pacific Northwest. Heated stones were used for a variety of cooking and roasting purposes. Typically, selected rocks would be heated, cleaned and emersed into a sealed basket or lined pit to cook the contents. Fire heated rocks were also used in covered pit ovens to process camas and to roast other food items. In both cases, stone was exposed to thermal stress that resulted in distinctive fracture of a substantial quantity of rock. Because so much stone was used for this purpose and because it has not been removed by modern collectors, fire cracked rock remains a most valuable indicator of prehistoric cultural sites.

[8]Special attention is given to 35MU84 because the eastern portion of the site falls within a proposed wetland enhancement area. Modification of the terrain to enlarge adjacent wetlands would necessarily damage the prehistoric cultural contents of the site. Terrain modification should not occur without additional prior cultural resource investigation of 35MU84.

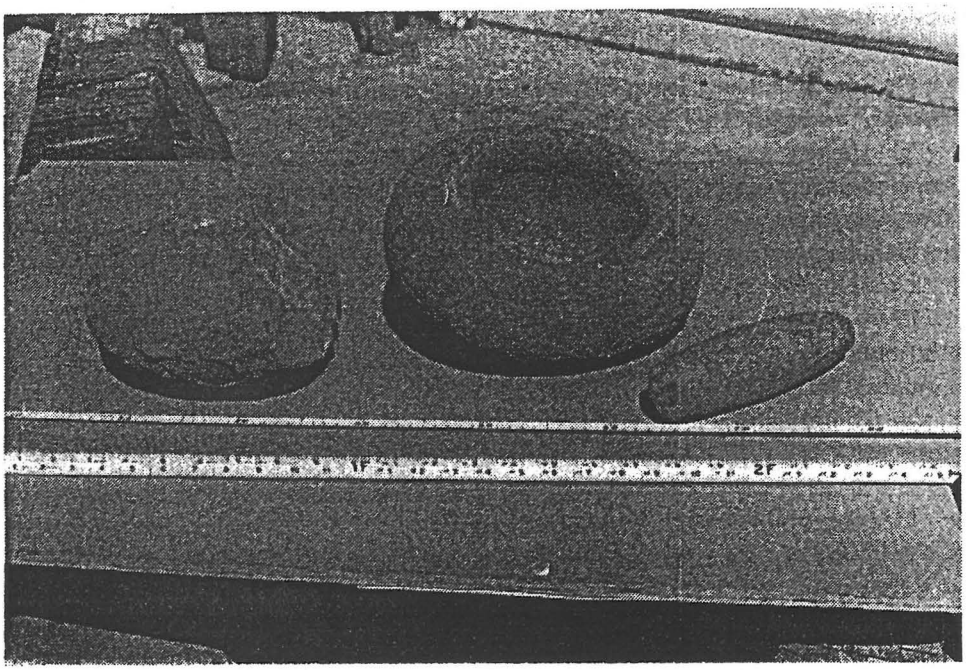


Figure 8. Cultural Materials from 35MU78, The Pryor Site

or content of the site. Determination of the nature of the both localities awaits site testing procedures. Please refer to Figure 7 to see the location of these village sites. Photographs of some of the materials removed from 35MU70 may be seen in Appendix B.

Table 3 lists all presently known prehistoric localities in and immediately adjacent to the Airport Way Urban Renewal Area. It provides brief descriptions of the types of cultural materials observed at the sites and lists inferred site function. The site numbers on the table may be compared with the mapped locations on Figure 7 to provide a more complete picture of the nature of known prehistoric sites in the area. More thorough information is included on site records and maps on file at the Oregon State Historic Preservation Office. Appendix B shows some the cultural contents of several of the sites.

The primary objective of the reconnaissance project was to attempt to establish patterns in the location and relative density of prehistoric sites on the Columbia South Shore floodplain. I had assumed initially that the heaviest concentration of sites, particularly residential localities, would be biased toward higher ground near the Columbia River with secondary concentrations of generally task-specific sites on elevated ground inland. This was based on the notion that, as the main source of food (principally anadromous fish) and transportation, the river would have been the primary focus of human activity. Inland wetlands and sloughs would provide important, but secondary resources. Present reconnaissance data suggest, however, that floodplain resources may be of equal, or near equal, importance to the river as determinants for the location of habitation as well as task-specific sites. Several floodplain locations noted on Table 3 contain a wider variety of artifacts than would be expected for task-specific localities. In the absence of further information, it is reasonable to suggest that these locations, like those nearer the river, served primarily as residential locations.

Table 3. Summary of Known Prehistoric Cultural Resources in the Airport Way Urban Renewal Area

Site Number	Site Name	Site Type	Summary Description
35MU26	Andrew	Poss Task Specific	Light to medium scatter of FCR, unmodified cobbles, one cobble chopper, one ground stone hammerstone, and a single core. Elevated ground E of wetland.
35MU30	Ilene	Task Specific/Residential	Moderate density FCR, mortar base and pestle, chert flake, cobble chopper. On levee near Columbia river shoreline.
35MU35	Nick-South	Possible Residential	Heavy scatter of FCR, unmodified cobbles, chert debitage, cores, biface fragment and a possible chopper. Associated with 35MU36 & 37 on elevated ground near seasonally inundated wetland.
35MU36	Nick-Center	Possible Residential	Medium to heavy scatter of materials above.
35MU37	Nick-North	Residential/Task Specific	Light scatter of FCR, cobble choppers, and possible human bone.
35MU57	Broken Tops	Probable Task Specific	FCR, small flaked and ground stone tools in slightly elevated ground projecting into seasonally inundated wetland.
35MU58	Airport Way	Task Specific: Camas Roasting	FCR and charcoal features containing Charred Camas bulbs. On levee of original Columbia Slough, north of major wetland area (camas habitat). C_{14} dated 1910 to 1230 years ago.
35MU70	Alfon	Probable Residential	Heavy concentration FCR, medium density chert and obsidian lithic debris, netsinkers, ground stone tools, projectile points, unifacial and bifacial tools. On Columbia River levee.
35MU77*	None	Task Specific: Camas(?)	Moderate density FCR, chert biface and debitage, ground stone. Immediately north of seasonally inundated wetland.
35MU78*	Pryor	Probable Residential	Stone bowl, pestle and probable anvil stone found in foundation excavation on Columbia River levee.
35MU79*	Spring	Task Specific: Hunting (?)	Scattered projectile points and bifaces in private collection. Varying neck widths suggest both dart and arrow sizes. Associated with natural spring at the base of the first terrace.
35MU80*	None	Task Specific: Camas (?)	Moderate to high density FCR and obsidian biface clustered near wetland. Associated with scattered unmodified cobbles and possible choppers on slough marginal levee.
35MU81*	None	Possible Residential	Low density FCR, pestle and bowl, chert flake. On levee north of the Columbia Slough.
35MU82*	None	Task Specific	Low density FCR, anvil stone, ground stone and basalt flakes. On elevated terrain between wetland areas north and south.
35MU83*	Josephine	Task Specific/Residential	Light scatter of FCR, cobble choppers, ground stone tools, pestles, bead and musket ball. On levee south of the northern arm of the Columbia Slough.
35MU84*	Hemlock	Probable Residential	Moderate to heavy concentration of FCR, cobble choppers, ground stone tools, lithic debris on elevated terrain adjacent to Columbia Slough and major floodplain wetland.
35MU85*	None	Task Specific: Hunting(?)	Chert and obsidian bifaces, edge ground cobbles and light scatter of FCR. Near boundary of the floodplain and first terrace.

(* indicates site recorded during the current project)

In short, visual inspection of identified archaeological sites in Airport Way Urban Renewal Area tends to support the expected distribution pattern. Archaeological sites are most densely distributed on elevated dry ground near inland sloughs and wetlands as well as the river.

The most striking pattern can be seen in the cluster of sites around the margins of the substantial wetland areas near the eastern boundary of the project area between 158th Avenue and 185th Drive (see Figure 7). The site pattern around wetlands can be explained by reference to the same food availability and transportation factors that apply to the Columbia. Wetland areas that now appear only as seasonally inundated lowlands were, in the past, the location of prehistoric lakes and marshes. In fact, the pre-dike Figure 2 map illustrates the wetland area of concern here ("Duck Lake") as a body of standing water undifferentiated from Blue Lake or Fairview Lake further east. Such water bodies would have provided fish, waterfowl and wapato for human populations residing in the area. As they gradually eutrophied into marsh and seasonally inundated dry land, camas and seasonal waterfowl habitat would have remained. Since water borne access could arguably have been maintained via Columbia Slough, there is little apparent reason for prehistoric human populations not to have used the area and substantial benefit for such utilization. In this light, the location of residential 35MU84 and the other prehistoric localities ringing the wetland may be viewed as a pragmatic response to floodplain resource patterns. Assuming similar resource oriented considerations underlaid other prehistoric land-use decisions, a similar pattern should apply to other wetland marginal areas across the floodplain as well.

Combined Columbia South Shore Site Location Data

Extant information derived solely from the project area is consistent with basic site density expectations. The highest density of both task-specific and residential prehistoric localities appear to be clustered on elevated ground near the Columbia River and/or larger floodplain wetlands fed by the Columbia Slough and its connecting water courses. These data have particular value because they were gathered in a manner that considered the full range of landforms in the project area. Their primary limitation results from the fact that the pattern is generated by a limited sample of the total study area. The pattern, while robust, is nonetheless limited by the sample size.

In order to investigate the expected site distribution pattern further, we collected basic location data for 54 floodplain sites ranging from the northern end of Sauvie Island to the Sandy River. For these localities, we examined maps and/or survey forms and recorded site designation, elevation, distance from water, and type of water body.[9] These are the primary variables of concern to the pattern under investigation here. All else being equal, site density should increase as a function of proximity to water and elevated ground. OSHPO map data, while simple, should provide a larger sample to evaluate the patterns suggested by the more thorough, but smaller, project area sample discussed above.

Table 4 contains basic data on sampled sites. Please note that the number still represents only a fraction of the total number of archaeological localities in the area. Note, too, that these locations were not necessarily collected in a manner that considered the full range of floodplain landforms. Often cultural resource projects are limited by the nature of the project that requires their completion (eg., pipelines, roadways, and riverbank modifications). The larger sample number, nonetheless, provides an

[9]Due to time limitations we did not record more complete site data. Our primary concern here is with relative site density. More complete data can be obtained by reference to site reports on file at OSHPO, or through examination of references included in the bibliography to this report.

Table 4. Columbia South Shore Site Location Data

Site	Elevation	Distance to Water	Wetland Type	Source
35MU61	5	0	River	Hibbs & Ellis 1988
35MU62	7	0	River	Hibbs & Ellis 1988
35MU64	8	0	River	Hibbs & Ellis 1988
35CO37	9	0	Creek	Hibbs & Ellis 1988
35MU27	9	0	River	OSHPO map
35CO7	10	0	River	Hibbs & Ellis 1988
35MU16	10	0	Lake	OSHPO Map
35MU17	10	0	Lake	OSHPO Map
35MU18	10	0	Lake	OSHPO Map
35MU19	10	0	Lake	OSHPO Map
35MU20	10	0	Lake	OSHPO Map
35MU21	10	0	Lake	OSHPO Map
35MU22	10	0	Lake	OSHPO Map
35MU48	10	0	Slough	Thomas n.d.
35MU49	10	0	Slough	Thomas n.d.
35MU50	10	0	Slough	Thomas n.d.
35MU51	10	0	Slough	Thomas n.d.
35MU52	10	0	Slough	Thomas n.d.
35MU65	11	0	River	Hibbs & Ellis 1988
35MU66	11	0	River	Hibbs & Ellis 1988
35MU67	11	0	River	Hibbs & Ellis 1988
35MU1	14	0	River	Hibbs & Ellis 1988
35MU4	14	0	River	Hibbs & Ellis 1988
35MU77	14	0	Marsh	Burtchard This Volume
35MU80	14	0	Marsh	Burtchard This Volume
35MU46	15	0	Slough	Thomas n.d.
35MU47	15	0	Slough	Thomas n.d.
35MU81	16	0	Marsh	Burtchard This Volume
35MU82	16	0	Marsh	Burtchard This Volume
35MU68	17	0	River	Hibbs & Ellis 1988
35MU26	21	0	Marsh	OSHPO Map
35MU37	21	0	Marsh	OSHPO Map
35MU31	22	0	Slough	OSHPO Map
35MU35	23	0	Marsh	Kongas 1979
35MU36	24	0	Marsh	OSHPO Map
35MU84	25	0	Lake	Burtchard This Volume
35MU15	10	10	Lake	OSHPO Map
35MU63	14	41	River	Hibbs & Ellis 1988
35CO36	8	50	Marsh	Ellis personal communication
35MU69	11	50	River	Hibbs & Ellis 1988
35MU30	28	50	Slough	Kongas 1979
35MU24	9	90	River	OSHPO Map
35CO22	15	100	Slough	Newman et al. 1977
35MU83	28	120	Slough	Burtchard This Volume
35CO35	8	150	Creek	Ellis personal communication
35MU57	18	150	Lake	OSHPO Map
35MU78	27	150	River	Burtchard This Volume
35MU79	30	150	Lake	Burtchard This Volume
35CO21	8	200	Slough	Newman et al. 1977
35MU29	21	200	Slough	OSHPO Map
35MU70	26	270	River	OSHPO Map
35MU28	20	400	Slough	OSHPO Map
35MU58	17	450	Slough	OSHPO Map
35MU85	26	700	Marsh	Burtchard This Volume

alternative means to evaluate the pattern suggested for the more restricted project area. Since landform formative processes, and environment should have been relatively uniform across the broader floodplain area, site patterns for the Airport Way Urban Renewal Area, if valid, should apply to the broader area as well.

Two patterns are immediately apparent in the table. The location of prehistoric sites is clearly biased toward water, and the nature of the water bodies includes the full range of floodplain wetlands. As will be seen below, the relationship of sites to elevation is less clear, suggesting that access to water is a primary determinant for functionally undifferentiated localities. Ground simply has to be dry enough to support the activity being pursued. The following graphs display variation in site number in three ways. The first shows site density in relation to elevation. The second, considers the relationship between site number and distance to water. The final chart compares site number to type of water body.

Site Distribution by Elevation

Figure 9 is a graph of the relative density of sampled floodplain prehistoric sites by reference to their elevation above mean sea level. Elevation is expressed on the horizontal base. Site density is on the vertical side bar.

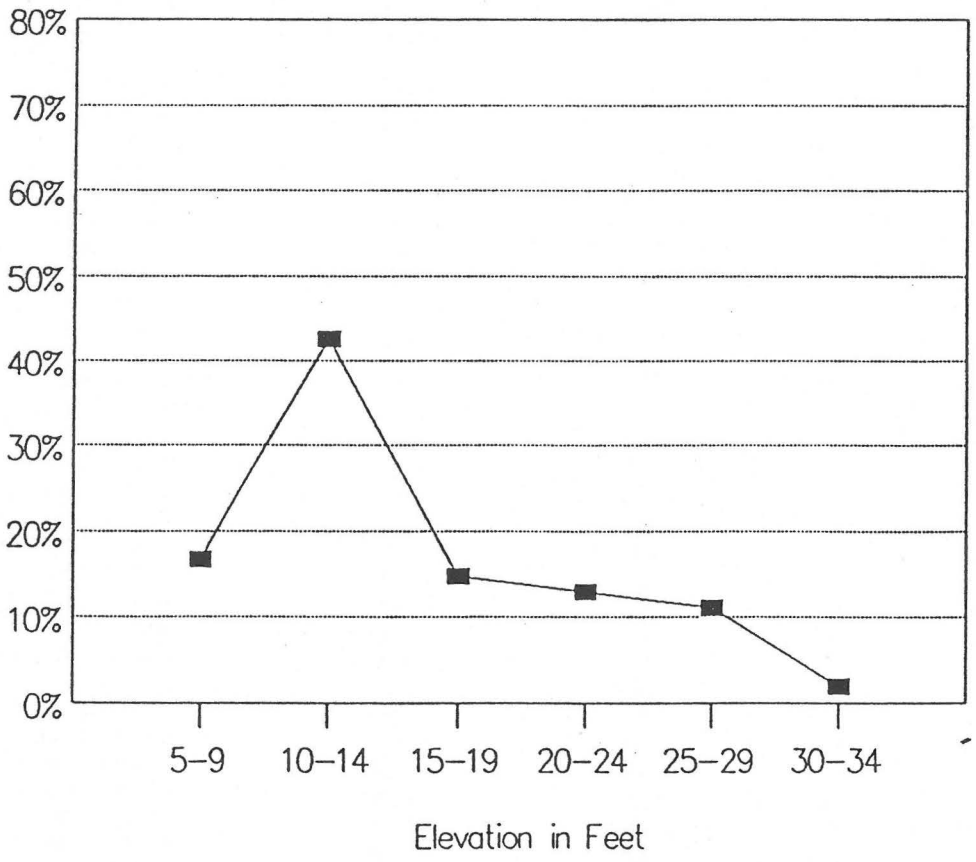


Figure 9. Sample Site Density by Elevation

Elevation measured in Figure 9 is relative to mean sea level. While the sampled localities span almost the entire floodplain elevation range, it is clear that the greatest number are just above the mean elevation of the river (9 feet). Superficially, this suggests that site location is not sensitive to elevation. As a sole predictor of relative site density this is almost certainly the case. The pattern does not necessarily mean, however, that prehistoric people were not systematically seeking elevated dry ground to conduct their activities. Rather, it reflects the manner in which the data were collected. Many sites were located by river edge surveys which found sites with cultural material extending into sediments now below the modern river level. When the sites were in use, the river was lower and the terrain dry. Elevations on Table 4, however, are averages made at the time the sites were recorded. Since many were recorded at river level, the average reflects that bias.

In other words, elevation alone is not useful as a site predictor because the landform was inhabited throughout most of its building process. Low elevation as reflected in Table 4 may have been the highest available ground when the archaeological materials were deposited. On the interior of the modern floodplain, low elevation areas are generally old lake beds and marshes. Here, we can expect low site density. People simply did not routinely conduct their activities in water. Above that level (ie., above circa nine feet amsl), site density does not appear to be sensitive to elevation alone. More important is site proximity to wetlands.

Site Distribution by Distance to Water

The following graph (Figure 10) shows clearly the close relationship between archaeological localities and proximity to wetlands. Approximately 70% of the sampled sites are immediately adjacent to a wetland. Most of the remainder are within 200 feet. In part, this pattern reflects the manner in which the data were collected. Many of the sites were located in river margin surveys as noted above. A glance at Table 4 and Figure 11 below, however, show that wetland margin sites are found adjacent to the entire range of floodplain wetland types. The fact that so many marsh, lake and slough sites were located (despite a sampling bias favoring river edges) suggests that the general wetland/site density pattern is robust. The data support information derived solely by the present reconnaissance. They indicate a patterned association of archaeological localities with Columbia south shore wetlands.

Site Distribution by Type of Wetland

I have included the final graph because it indicates clearly that prehistoric people were using the full range of floodplain wetlands. Figure 11 shows relative density of archaeological localities in relation to the primary water body with which they are associated. Rivers include the Columbia, Willamette, and the Multnomah Channel east of Sauvie Island. Smaller, free flowing bodies of water are creeks. Sloughs are slow moving linear, perennial water bodies. Lakes include all sizes of perennial standing water. Marshes are at least seasonally inundated wetlands with characteristic water tolerant marshland vegetation. Unfortunately, for our purposes, many of the marshes have been drained and filled during the historic period. Most of the marsh designations included in Table 4 and shown in Figure 11 are those recorded in the early floodplain maps adapted as Figure 2 of this report.

I emphasize again that sampled data indicate an association of undifferentiated archaeological localities with a variety of floodplain wetlands. The somewhat higher density of river and slough marginal sites reflects, at least in part, surveys biased toward these features. The proximity of prehistoric localities to wetlands of various types suggests that caution must be exercised in developing these areas if damage to cultural properties is to be minimized.

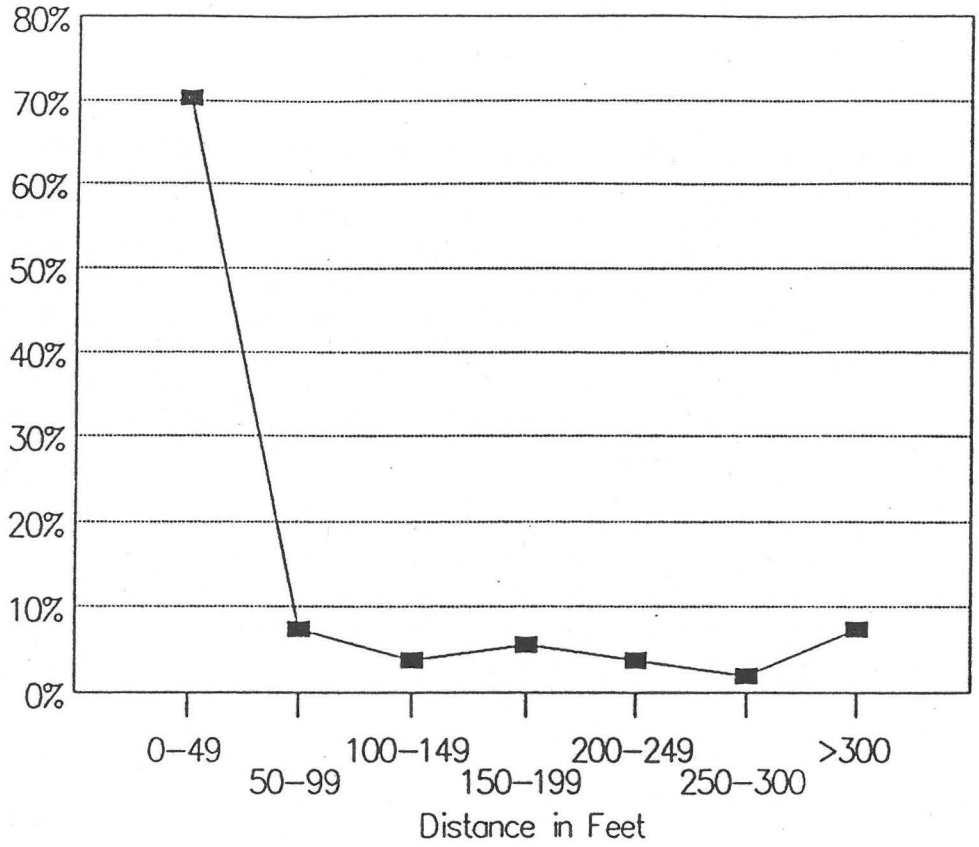


Figure 10. Sample Site Density by Distance to Water

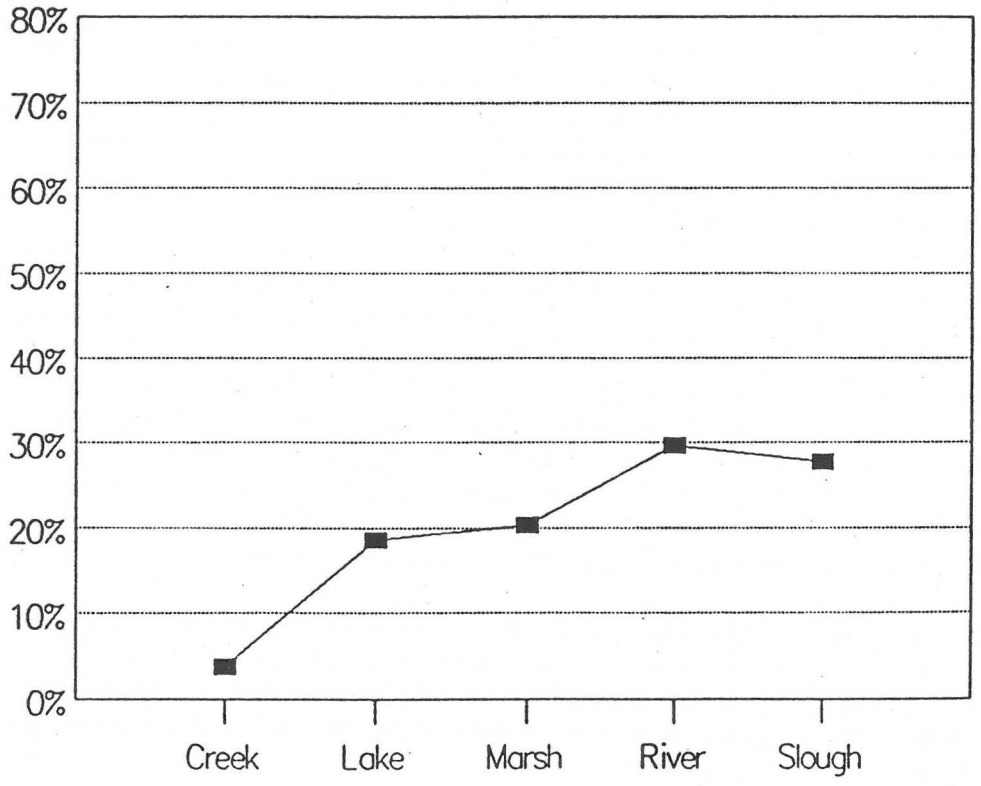


Figure 11. Sample Site Density by Wetland Type

Summary Evaluation of Columbia South Shore Site Density

In sum, results of the present reconnaissance, combined with previously established site locations on the floodplain, suggest that the density and distribution of prehistoric localities form definable patterns. Known site locations are consistent with the general assumption that, on the Columbia floodplain, humans have tended to concentrate their activities in areas that maximize resource return and provide ease of water borne transportation. Based on available data, I suggest that the highest density of prehistoric localities will be located on terrain 1) near the Columbia River margin, 2) adjacent to larger inland wetland areas, and 3) adjacent to the Columbia Slough at places that provide both transportation needs and access to available floodplain resources. Other areas of the floodplain undoubtedly were used by prehistoric populations as well. Those areas will contain archaeologically preserved remains of that use. Available information, however, indicates that the most intensive use of the landform was directed toward the areas noted above.

If preservation of cultural resource information is of concern during the development process, care should be taken to observe and record archaeological properties as appropriate throughout the urban renewal area. Particular care should be taken to document and mitigate development related damage to prehistoric localities situated on elevated ground in the vicinity of floodplain wetlands and sloughs. Such effort would help preserve information about past use of the floodplain, and would help us to better understand long term processes of human adaptation to the Columbia South Shore environment.

III. IMPACT OF URBAN RENEWAL ON CULTURAL RESOURCES

To this point, I have argued that debris relating to prehistoric use of the Columbia south shore floodplain will be scattered with variable density across the landform. While cultural materials may be expected to occur anywhere in the project area, there are theoretical and empirical reasons to expect both task-specific and residential sites to be clustered on elevated ground near wetlands. The preceding sections have detailed the environmental and site data-bases underlying this pattern. This section is intended to draw attention to the nature of the impact that continuing industrial development of the area will have on its remaining prehistoric cultural properties.

Continuing Impacts without Planned Development

At present, the Columbia south shore area is used primarily for farming. Land-use is gradually shifting to light and medium industrial purposes, progressing from the more metropolitan west side to the rural east. Recall that the economic processes that once favored agricultural use of the area have changed. Production costs, land values and tax rates have risen out of proportion to the value of agricultural commodities. Small-scale farmers on the Columbia south shore are experiencing greater difficulties supporting themselves on their land than did their predecessors only a few decades ago. The change is part of a nationwide process favoring larger high production farms, long distance transportation, storage and mass marketing. Consequently, we can expect a continuing land shift from agricultural to industrial or other alternative uses due to causes well beyond the control of local residents. Assuming current trends continue, such change will occur regardless of whether it is planned as the Airport Way Urban Renewal Area or proceeds in an unplanned fashion.

In the event that planned development was halted, and assuming that economic processes continue as indicated above, the primary sources of continuing damage to the south shore's archaeological record should come largely from 1) continued farming and private artifact collecting; and 2) encroaching industrial development. The damage would probably be slower than through directed development, but nonetheless genuine.

Farming related damage to archaeological materials stems largely from the mechanical action of tillage equipment on site sediments. Repeated turning of the soil disassociates previously patterned cultural items, and physical impact by machinery breaks a portion of the exposed artifacts. While far from negligible, the damage from farming per se is less severe than that from most other sources of disturbance, such as ditching, road construction, and building excavation.[10] Soil tillage is relatively shallow, and materials are not systematically removed from their general area of origin. Most archaeological sites retain substantial research value despite years of farming impact.

A second source of site damage related to farming results from private collection of exposed cultural materials. Turning the surface of an archaeological site repeatedly exposes prehistoric items. It is hard to resist the temptation to collect the most aesthetically pleasing (and often the most diagnostically useful) of these items. All of the artifacts illustrated in this volume, for example, are from such private collections. We are fortunate that this collector has taken unusual pains to identify and store these materials. His actions are exceptional. In any case, collection irrevocably damages prehistoric sites despite the good intentions of the collectors. Diagnostic items are removed from their depositional context. Almost invariably, the origin of these artifacts is destroyed; and as the collectors' interest wanes, items are given away, sold or lost.

Continuing, unregulated construction represents the major source of impact to prehistoric materials on the south shore. The sources of damage are straightforward. Excavation for foundations and utility lines removes sediments containing prehistoric cultural materials. The extent of the damage varies directly with the depth of the excavation and the original density of cultural material. Federal cultural resource regulations provide for the protection of some of the information value when federal permits or funds are involved. In all other cases, no presently effective regulations apply. Since cultural resource concerns are seldom in the economic interest of the developer, prehistoric localities are generally lost without thought to preservation or mitigation.

Even in the absence of planned development, then, adverse impacts to cultural materials can be expected for the Columbia south shore area. Industrial development of the floodplain would continue to erode its archaeological record. Some of the information value of those resources may be conserved in cases where individual development projects require federal permits for their completion. Places that avoid development, either as open space or as farms, should retain more of their archaeological potential.

Impacts from Development of the Airport Way Urban Renewal Area

Directed development of the Columbia south shore as an urban renewal area has both positive and negative aspects for the area's cultural resources. Controlled development offers a means of maintaining a portion of the public information value of the archaeological record through implementation of federal cultural resource protection guidelines. At the same time, accelerated development will hasten the

[10]Of course, excavation and building construction are a part of farming too. I focus on tillage because it is the most spatially extensive part of a farming enterprise.

erosion of remaining prehistoric materials. Again, there appear to be two main sources of damage to cultural materials: 1) direct impact from construction related activities, and 2) impact resulting from ACOE procedures designed to mitigate development damage to floodplain wetlands.

The damage done to archaeological materials from construction related terrain disturbance needs little elaboration beyond that noted above. Developers tend to select the same places on the landscape as did prehistoric occupants. They do so for many of the same reasons. Both prefer relatively high, dry ground to conduct their respective economic or residential activities. As long as sediments are not removed in the process, cultural remains tend to accumulate, preserving a record of repeated human use of the landscape. Modern construction of large buildings, however, often requires extensive excavation and foundation preparation for construction. In addition, modern construction often involves extensive site preparation, leveling and filling operations. Unlike times past, these combined construction activities remove, rather than add to, the archaeological record of the area. By accelerating heavy construction in the area, planned development will necessarily accelerate loss of the region's cultural resources. If planned development proceeds, appropriate measures should be taken to preserve or mitigate the damage to that record.

Paradoxically, the second source of damage to prehistoric materials is related to measures designed to protect another aspect of the floodplain environment --the wetlands. Protective jurisdiction of Columbia floodplain wetlands falls to the U.S. Army Corps of Engineers. In order to guard against development related loss of wetland habitat, the ACOE has proposed a mitigation process that would permit the filling of certain wetlands. This loss would be offset by the enhancement of existing wetlands and creation of new wetlands in other areas. Figure 12 shows the proposed wetland mitigation and enhancement areas (after ACOE 1989).

Wetland modification affects prehistoric cultural resources to the extent that it involves removal of wetland banks and levees. The data presented in this report strongly suggest that prehistoric remains tend to cluster around floodplain wetlands. Consequently, any activity that disturbs wetland marginal terrain runs a substantial risk of damaging cultural materials in the process. The damage would be particularly severe in the eastern end of the project area where the most extensive wetland modification is planned (see Figure 12). A simple comparison of known archaeological site distribution (Figure 7) with the proposed wetland mitigation areas (Figure 12) clearly shows the potential impact to cultural properties. Indeed, a substantial portion of 35MU84, a possible residential locality discussed above, would be removed in the large wetland creation area at the eastern confluence of the Columbia Slough branches. Site 35MU80 would also potentially be damaged by wetland creation near the cross-levee west of 148th Avenue. Other slough marginal modifications run a similar risk of damaging cultural properties; though in most cases the damage would be confined to a narrow band that could be relatively easily mitigated.

Wetland fill areas also entail some risk to cultural resources. If sediments adjacent to wetlands are bladed into the low lying areas, associated prehistoric debris would be destroyed. Again, a glance at Figures 7 and 12 show the close association of archaeological properties with wetland fill areas, particularly in the east. Use of imported fill would lessen the impact somewhat, although the movement of heavy equipment and the fill itself would damage, then obscure, cultural materials.

Combined construction and wetland mitigation procedures, then, necessarily entail loss of cultural resources. Given the patterns suggested by the present study we may expect the greatest impact on terrain near wetlands. Here site density should be highest and complexity greatest. Creation and enhancement of wetland areas may ultimately be in the best interest of the general floodplain

environment. Nonetheless, I am obligated to point out that damage to cultural resources may be expected as a byproduct of wetland mitigation. Since such work falls directly under the auspices of the ACOE, I trust that appropriate measures can be taken to further mitigate related damage to the prehistoric cultural environment of the floodplain. Where protective regulations apply, steps should be taken to document, evaluate and, if necessary, mitigate through data recovery archaeological properties in the Airport Way Urban Renewal Area.

In sum, I suggest that we can expect the archaeological record of the Columbia south shore floodplain to continue to degrade with or without planned development of the urban renewal area. Current economic processes tend to select for industrial rather than rural/agricultural uses of the landscape. In my opinion, the primary difference in the resulting impact on cultural resources lies with the relative speed of the two development processes. The most damage would result from construction related excavation and leveling of landscape. In addition, wetland mitigation procedures threaten to impact cultural materials on elevated ground around them. Planned development, however, can offer some benefits as well as losses to our understanding of prehistoric use of the floodplain environment. I hope that this document represents a step in that direction. Careful management of cultural resources during the development process can mitigate some of the loss that such change entails. The next section briefly considers research and management concerns that seem particularly appropriate given the nature of the known Columbia south shore archaeological record and the nature of expected development related activities.

IV. ARCHAEOLOGICAL RESEARCH AND MANAGEMENT

Archaeological Research

This project and report have focused on problems of relative site density to assist ACOE personnel in making informed cultural resource regulatory decisions. Our focus is but one of many avenues of research that may be pursued productively in the Columbia south shore area. Indeed, it is important to reemphasize that the work done here and the patterns suggested in this report are themselves subject to continuing evaluation and change. Even though available data are consistent with the land-use model, those data are based on a relatively small sample of the landform. Ongoing research aimed at examining land-use patterns on the floodplain can do nothing but improve our understanding of the relationship between organized human behavior and critical environmental variables.

Below I list a few issues relevant to developing a more complete understanding of the prehistory of the lower Columbia floodplain. The list is far from exhaustive. It is intended to provide the reader with a general notion of the nature of the research environment of the region. I argue that the research and heritage value of the study area's prehistoric remains make them fully worthy of continuing protection during the development process.

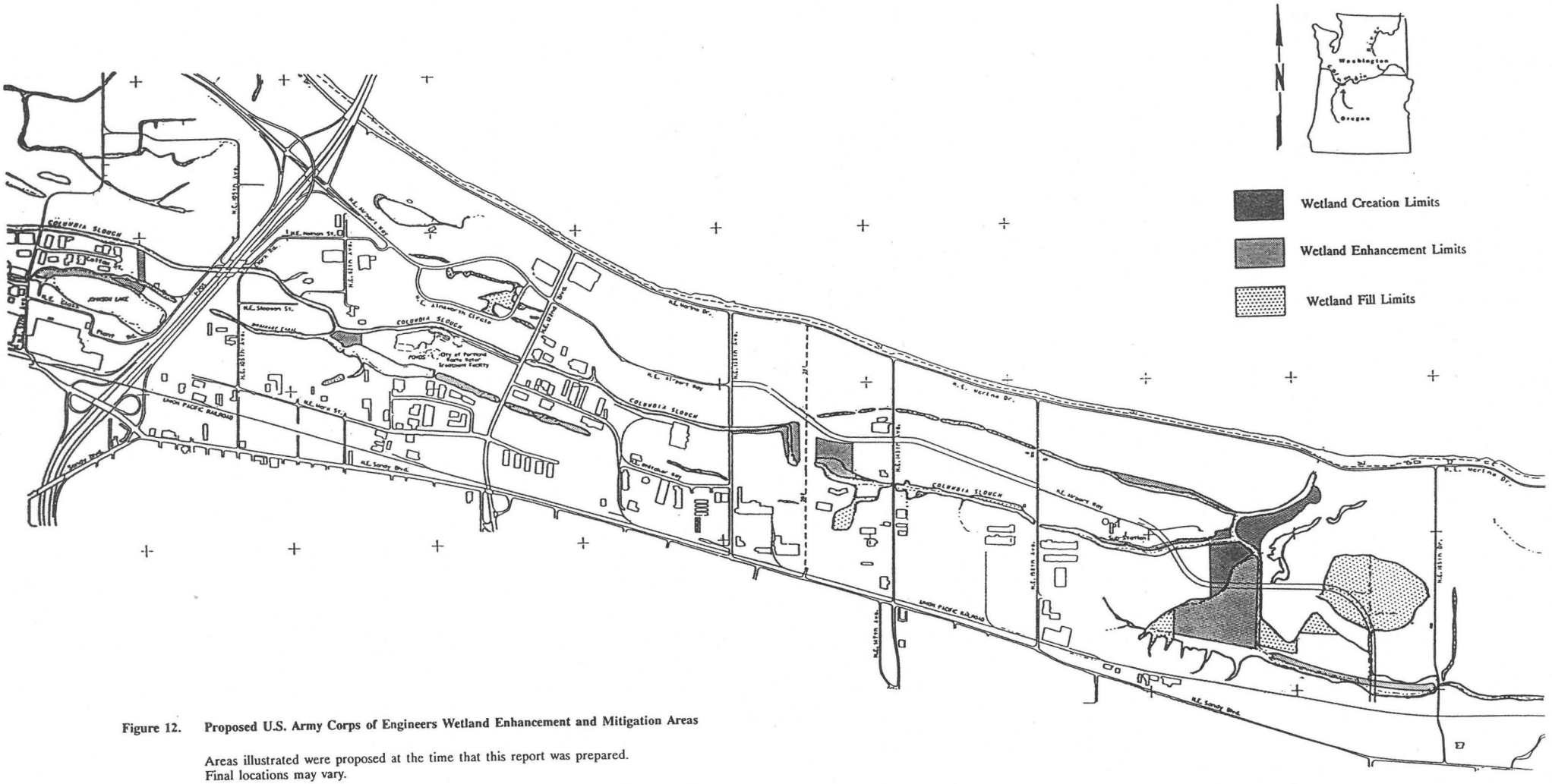


Figure 12. Proposed U.S. Army Corps of Engineers Wetland Enhancement and Mitigation Areas

Areas illustrated were proposed at the time that this report was prepared.
Final locations may vary.

Landform Processes

Earlier in the report, I sketched a chronology of general geomorphic processes underlying creation of the modern Columbia River floodplain in the Portland Basin. This was my best attempt to distill a plausible, parsimonious picture from ongoing discussion of these processes. Deposition and erosional cycles affect both the pattern of human use of the landscape and the integrity of the archaeological remnants of that use. Further research can refine our understanding of the timing of the deposition of the modern floodplain; how the changing floodplain environment would have affected human land-use; how the changing floodplain structure might have affected the integrity of archaeological sites; and the extent to which certain catastrophic events may have impacted the floodplain while it was occupied. There is an open question, for example, as to the effect of the Bridge of the Gods landslide in the Columbia River gorge about 700 years ago. It is unclear whether water impounded by that slide would have burst suddenly, causing a major erosive or a largely depositional flood; or a flood that gradually overtopped the dam with little erosional/depositional effect at all (cf. Hemphill 1989, Pettigrew 1981, Allen et al. 1986, ACOE 1986). This and other issues need not concern us further here. I note them to draw attention to the fact that the study area floodplain, positioned as it is near the entrance to the gorge, is well suited to provide further information on the relationship between local geomorphic processes and the character of the archaeological record.

Relationship Between Habitation and Task-Specific Sites

In its primary focus on relative density of archaeological localities, this report has only hinted at functional distinction between sites. The density information presented here combines places on the landscape that were used for a wide range of purposes. In general, I would expect groups to have set up residences at places that facilitate efficient transportation (ie., near the river). Sites resulting from task-specific use of the floodplain (hunting camps or camas processing sites) should be more frequently found inland near resource acquisition points. The relative ease of canoe transportation, however, may blur residential/task-specific distinctions. Perhaps it was more desirable to live inland (say at site 35MU84) near waterfowl, wapato and camas grounds than to reside near the river. In any case, too few sites have been investigated thoroughly enough to develop an adequate understanding of their functional relationships or distinctions. As data recovery associated with areal development takes place, research can more adequately address issues of intersite variability and function.

Relationship of the South Shore to Other Portland Basin Areas

Beyond the issue of task variation between sites within the south shore floodplain, there may be additional local-level variation between the south shore and other areas in the Portland Basin. Places such as Sauvie Island and the Willamette shoreline near Willamette Falls and the Clackamas River offered substantially different resource opportunities to prehistoric populations. Accordingly, human exploitative patterns may have been quite different in each of these areas despite the relatively short distances separating them. There is little reason to expect the archaeological record of the south shore to be duplicated elsewhere. Future work should be sensitive to the possibility of such local-level variation in prehistoric land-use patterns, and evaluate the resources of the south shore within its local as well broader regional context.

Social Complexity and Floodplain Seasonal Use Patterns

Lewis and Clark's account of the south shore area implies that population density expanded and contracted seasonally. Such a pattern is in accord with similar patterns in the productivity of local plant

and animal resources. It may be simplistic to assume either that 1) due largely to the high productive potential of the river, populations would have established permanent or socially autonomous village structures on its banks; or 2) to accommodate the seasonal variation in non-riverine resources, population would have followed a pattern of seasonal movement. Seasonal variation in availability of anadromous fish, camas, wapato, elk and deer may indeed have forced routine relocation of groups dependent on their exploitation. Many lower Columbia localities may have been used, removed, and reused repeatedly as groups sought to maintain viable resource economies (and to avoid the river's flood cycles). Complex rebuilding episodes at places like 35CO5, the Meier site, could reflect rebuilding following short term abandonment. On the other hand, other materials and the depth and consistence of midden deposits suggest continuous occupation perhaps combined with periodic repair and expansion (Kenneth Ames, personal communication). In my opinion, the issue of settlement patterns remains largely unresolved. Substantial work remains to be done to better understand the movement versus stability patterns of lower Columbia populations, research that has implication for residential sites in the study area.

Aside from the potential for physical movement of habitations, seasonal variation in critical resource availability may be related to the development of complex social arrangements among lower Columbia populations. Trading relationships and long distance social obligations between spatially distinct groups may have been a part of social mechanisms functioning to smooth oscillations in resource supplies. We have only begun to investigate such issues on the lower Columbia. Continuing data recovery on the south shore can begin to address seasonality issues. Data will ultimately be useful for clarifying issues of social complexity as we develop and refine more adequate social models for prehistoric socioeconomic processes along the lower Columbia.

Population Density and Social Complexity

Related to the above issue is one of changing regional population density. I argued earlier that regular economic use of the floodplain was stimulated, in large measure, by the resource needs of an increasing regional population density. It is well recognized that Lewis and Clark's population figures for the region substantially under-represent the region's pre-contact total (cf. Boyd 1975). Indeed, it is plausible that the lower Columbia supported one of the highest population densities in northern North America. High density may have required the development of complex social relationships in order to regulate the activities of the members. Class structures, trading relationships, warfare and so on are intimately involved with requirements imposed by dense populations. These are all features noted for the Chinookan population on the lower Columbia (cf. Ray 1938). Perhaps because lower Columbia residents lived in wooden structures that deteriorate through time, high population density and related social complexity is less recognized by the general public here than in other regions where stone structures attract more attention (and more vigorous protection and research funding). The lower Columbia remains ripe for investigation of the relationship between changing population density and the development of social complexity. Cultural resources of the south shore area, as a part of the greater region, can contribute to the issue.

Research issues noted above only touch the surface of a much broader range of potential research issues that could be pursued productively with data from the Airport Way Urban Renewal Area. Issues such as social implications of variability in residential structures; the continuing utility of established cultural chronologies for the area; the acquisition of better resource data through macrobotanical and pollen studies; and much more offer potentially productive means of extending our understanding of lower Columbia prehistory. The lower Columbia region has received limited prehistoric research relative

to its considerable potential. My primary intent here is to emphasize the point that prehistoric cultural resources of the Columbia south shore are important. They are as worthy of protection as other components of the floodplain environment. I hope that informed management can preserve cultural resources where possible, and advance our understanding of the past through data recovery when it is not.

Management

By this point, I hope to have convinced readers that important cultural resources exist on the Columbia south shore floodplain, that there is reason to expect patterned variation in the distribution of those resources across space, and that the resources have the potential to address significant current archaeological research issues. It is beyond the scope of this report to assess the significance of individual sites. All of the sites, to varying degrees, offer opportunities to extend our knowledge about prehistoric use of the lower Columbia. They offer us a long-term perspective by which to view, and hopefully better understand, the dynamic relationship between human organization and its broader environmental context --a relationship that continues to the present (cf. Burtchard 1981:78). Considering their potential to contribute meaningfully to an understanding of such processes, and in the absence of complete evaluation, I recommend that prehistoric sites located within the urban renewal boundaries be considered potentially eligible for inclusion in the National Register of Historic Places.

There are additional benefits of south shore cultural resources that extend beyond the research interests of the professional community. Archaeology enjoys wide popular support. Heavy tourist attraction to archaeological parks and monuments, general interest in local museums and interpretive displays, and popularity of archaeological documentaries and movies attest to our common curiosity about our prehistoric human past. Public interpretation of Portland Basin prehistory is a clear management option involving south shore resources.

The question of how prehistoric localities may best be managed under varying circumstances is a reoccurring issue in cultural resource management. It is seldom in the best economic interest of profit-oriented institutions to allocate funds to research that offers limited return for investment. The benefits of archaeological research generally are indirect and tend to fall to the public at large rather than to the companies that often must pay for it. Managers face the unenviable task of balancing development needs with needs for conservation of cultural resource and broader aspects of the Columbia south shore environment.

Management options for cultural resources in the urban renewal area are not clear cut. The extent to which cultural resources of the entire area can be managed may hinge on the extent to which federal jurisdiction extends beyond development directly involving wetlands. It is beyond the scope of this paper to grapple in detail with these regulatory issues. I wish to reemphasize, however, that there is a continuing need for archaeological research within the study area boundaries. We still have an incomplete understanding of land-use patterns on the floodplain, and a complete reconnaissance has yet to be conducted for the entire urban renewal area. Depending upon how cultural resource guidelines are implemented, regulation may 1) be limited to that portion of the total area where federal agencies would have direct permitting responsibility without the ACOE regional use permit, or 2) be extended to the entire urban renewal area covered by the regional permit.

Limited Protection

I assume that if protection is limited to a portion of the total landscape, that fraction will be land falling under regulatory jurisdiction of the U.S. Army Corps of Engineers (ie., the Columbia River shoreline and floodplain wetlands). If so, cultural resource regulations would apply to all terrain disturbing activities that impact floodplain marshes, sloughs and lakes. Such activities would include both development related construction adjacent to wetlands and the wetland enhancement and enlargement plans. This report has repeatedly emphasized the importance of floodplain wetlands in conditioning prehistoric use of the environment. I have argued that repeated use of levees and other floodplain ground near wetlands would have resulted in a relatively high frequency of prehistoric remains at those locations. Available data generally support that pattern. Such a pattern, of course, is particularly meaningful for activities that would substantially alter landforms adjacent to wetlands. In short, construction activities that involve wetlands appear to involve substantial risk of impacting prehistoric cultural resources.

Based on the results of the present project, I recommend that any activities that involve disturbance of terrain near wetlands be preceded by prior surface reconnaissance and testing of cultural properties. Given the poor surface visibility of these areas, I suggest that all reconnaissance be supplemented by subsurface augering to improve the probability of locating buried cultural materials. Once located, sites should be tested in a manner that allows assessment of site parameters, content and significance. Finally, if judged eligible for inclusion in the National Register of Historic Places, and if terrain disturbing construction continues, damage to the archaeological property should be mitigated through data recovery.

In my opinion, testing and data recovery procedures are particularly important for the extensive wetland mitigation areas at the eastern end of the project area (see Figure 12). A substantial portion of site 35MU84 would be removed by creation of the wetland as shown. A number of other prehistoric localities ring the wetlands in this area. Care should be taken to protect or mitigate damage to these localities in the process of altering the wetland habitat.

In sum, if protective regulations are extended only to federally permitted activities involving alteration of wetlands, I recommend that any such activities be proceeded by regular cultural resource protection measures. The present project should be view as an indicator of relatively high site density in these areas, not as a substitute for continuing cultural resource protection. If the regulatory process is limited, prehistoric materials will be lost on some parts of the floodplain. Nonetheless, information gained from limited protection should be of significant value to furthering our understanding of past human use of the area.

Management of the Entire Urban Renewal Area

Implementation of uniform cultural resource regulations over an extensive area usually apply in situations where the entire area falls under a single administrative agency and/or involves development covered under a single federal permit. The Airport Way Urban Renewal Area is a complex mosaic of land parcels owned by various individuals, corporations and agencies. Development, while planned by a single agency, will be carried out under contractual arrangements involving various parties, at various times and places. Nonetheless, it seems appropriate to consider uniform management of the entire area to accommodate potential obligations of the proposed regional use permit covering the entire urban renewal area.

If cultural resource regulations are to be implemented, regardless of land ownership and subsequent permitting procedures, then administrators will have to consider imposing requirements 1) situationally as the region is developed, or 2) uniformly in advance of specific development. In either case, procedures are well established. As above, they involve site location reconnaissance, testing, and data recovery. Clearly, the most efficient way to manage the entire area would be as a uniform unit in advance of development. While this may prove impractical, I suggest that minimally the reconnaissance phase be completed in this fashion. A 100% survey of the urban renewal area, supplemented with appropriate sub-surface augering, would provide a more accurate view of the distribution of cultural properties than is possible in a sample survey such as reported here. Results of the reconnaissance could then be used to assist managers in establishing continuing cultural resource guidelines as the region is developed.

Uniform implementation of cultural resource obligations in an area would undoubtedly be complex in the multiple-ownership environment of the urban renewal area. Coordinated procedures would need to be maintained to facilitate smooth integration of cultural resource work into development schedules. Administration would be complex and the nature of the funding potentially burdensome on smaller developing entities. There is no doubt, however, that uniform implementation of cultural resource obligations across the landform would provide the greatest information return on the area's prehistoric resources. Such work would minimize sampling biases and allow the most thorough implementation of research issues as outlined above. It is the obligation of government agencies, with public input, to weigh competing interests and establish appropriate conservation guidelines for the region's prehistoric cultural heritage.

Conclusion

The primary goal of this study has been to identify patterns in the relative density of archaeological localities on the Columbia south shore floodplain. I have argued that the geomorphic structure of the floodplain coupled with the patterned distribution of resources critical to maintenance of prehistoric populations would have repeatedly focused human activity toward particular places on the landscape. Those places are the levees and other areas of seasonally dry ground adjacent to the Columbia River and inland floodplain lakes, marshes and sloughs.

Techniques for the present reconnaissance were structured to examine the extent to which observable cultural remains fit the environmental pattern. Prehistoric remains located during the project, combined with those previously recorded for the study area, are indeed consistent with the anticipated pattern. We also examined patterns in the distribution of sites across the broader floodplain area from Sauvie Island to the Sandy River. These data also suggest that density of archaeological sites tends to be associated with proximity to water. Figures and tables included in the body of the report clearly illustrate site clustering near the full range of floodplain wetlands. Available information, then, tend to support the general land-use pattern as modeled here.

Please note that the suggested wetland focused pattern represents general tendencies realized over long stretches of time. There is no reason to exclude the possibility that humans would have used nearly all parts of the floodplain through its 3000 to 6000 year history. Archaeological remains of those activities will undoubtedly be widely scattered across various floodplain landforms, and situated at varying depths within floodplain sediments. The greatest density of prehistoric remains, however, should occur at places of repeated residential and/or task-specific use. On the Columbia south shore floodplain, these

places appear to be ground adjacent to the river and near inland wetlands. Continuing research on the lower Columbia will allow further evaluation and refinement of that pattern.

Development of the study area whether occurring in either a directed fashion as the Airport Way Urban Renewal Area or through less centralized means will necessarily damage prehistoric materials. Terrain modification involved with construction physically removes sediments containing these items. Data presented here suggest that the greatest number of archaeological localities would be impacted by construction involving wetlands or physical redesign of the shape of existing wetlands to mitigate loss of such areas elsewhere. I urge that as the area is developed steps be taken to conserve the area's prehistoric cultural heritage as outlined in the management setion of this report. Particular care should be taken to extend protection to localities near wetlands. Additional efforts should be made to conserve cultural remains over the broader floodplain landscape as appropriate.

BIBLIOGRAPHY

ACOE (U.S. Army Corps of Engineers)

1986 *Investigation of Bank Erosion at Sauvie Island, Oregon.* U.S. Army Corps of Engineers, Planning Division Technical Report. Portland District, Portland, Oregon.

1989 *Public Notice, Regional Permit No. 071-OYA-4-007294.* U.S. Army Corps of Engineers, Regulatory and Resource Branch. Notice dated October 26, 1989. Portland, Oregon.

Allen, John E., Marjorie Burns and Sam C. Sargent

1986 *Cataclysms on the Columbia.* Timber Press. Portland, Oregon.

Ames, Kenneth M.

1988 *Sedentism: A Temporal Shift or a Transitional Change in Hunter-Gatherer Mobility Patterns.* Paper presented to the Visiting Scholar's Conference, April 15-16. Center for Archaeological Investigations. Southern Illinois University. Carbondale.

Archibald, Dale

1984 *Blue Lake Park, Multnomah County Oregon, Archaeological Report.* Report for the Oregon Historical Society. Portland.

Bland, Richard L. and Thomas J. Connolly (editors)

1989 *Archaeological Investigations at the Airport Way Site and Vicinity.* Oregon State Museum of Anthropology Report 89-2. University of Oregon, Eugene.

Boyd, Robert

1975 *Another Look at the "Fever and Ague" of Western Oregon.* Ethnohistory 22(2):135-153.

Burtchard, Greg C.

1981 *Test Excavations at Box Canyon and Three Other Side Canyon Sites in the McNary Reservoir.* Project Report Number 10. Laboratory of Archaeology and History. Washington State University. Pullman

1989 *Archaeological Evaluation of the Trojan Locality; 35CO1.* Laboratory of Archaeology and Anthropology Cultural Resource Investigation Series Number 1. Portland State University. Portland, Oregon.

Connolly, Thomas J.

1989 *Preliminary Report of Test Excavations Along the Modified A-2 Alignment for the N.E. 138th Ave. - N.E. 181st Ave. Section of N.E. Airport Way (Portland), Multnomah County.* Letter report submitted to the Oregon State Highway Division, Environmental Section. Salem.

Chandler, S. Robbins, Bertel Bruun, and Herbert S. Zim

1966 *Birds of North America.* Golden Press. New York.

Coues, Elliot (ed.)
1893 *The History of the Lewis and Clark Expedition.* Unabridged reprint of the Francis P. Harper edition in three volumes. Dover Publications, Inc. New York.

DeVoto, Bernard (ed.)
1953 *The Journals of Lewis and Clark.* The American Heritage Library. Houghton Mifflin Company. Boston.

Hajda, Yvonne P.
1984 *Regional Social Organization in the Greater Lower Columbia, 1792-1830.* Ph.D. Dissertation in Anthropology. University of Washington.

Hemphill, Claudia B.
1989 Stratigraphy of the Airport Way Site. In *Archaeological Investigations at the Airport Way Site and Vicinity*, edited by R.L. Bland and T.J. Connolly, pp 30-38. Oregon State Museum of Anthropology Report 89-2. University of Oregon, Eugene.

Hibbs, Charles Jr. and David V. Ellis
1988 *An Inventory of Cultural Resources and an Evaluation of the Effects of the Proposed North Coast Feeder Gas Pipeline, Located Between Deer Island and Sauvie Island, Lower Columbia River Valley, In Oregon.* Report to Northwest Natural Gas Company. Portland, Oregon.

Judge, W. James, James I. Ebert and Robert K. Hitchcock
1975 Sampling in Regional Archaeological Survey. In *Sampling in Archaeology*, James W. Mueller (ed.), pp. 82-123. The University of Arizona Press. Tucson.

Kongas, Lembi
1979 *The Blue Lake Survey Region: A Cultural Resources Approach.* Reconnaissance Report Submitted to the City of Portland. Manuscript on file at the Department of Anthropology, Portland State University; or Oregon State Historic Preservation Office, Salem.

Mullineaux, Donal R., R.E. Wilcox, W.F. Ebaugh, R. Fryxell, and M.Rubin.
1978 Age of the Last Major Scabland Flood of the Columbia Plateau in Eastern Washington. In *Quaternary Research*, Volume 10, pp.171-180. University of Washington. Seattle.

Netboy, Anthony
1980 *The Columbia River Salmon and Steelhead Trout.* University of Washington Press. Seattle.

Newman, Thomas M., David McMillan, Roger Wiggin, and Jeffery Williams
1977 *Archaeological Reconnaissance and Testing of Three Sites in the Scappoose Drainage District, Columbia County, Oregon.* Report to the U.S. Army Corps of Engineers, Portland District.

ODFW & WDF
1987 *Status Report; Columbia River Fish Runs and Fisheries 1960-86.* Jointly published by the Oregon Department of Fish and Wildlife and the Washington Department of Fisheries.

Ray, Verne
1938 *Lower Chinook Ethnographic Notes.* University of Washington Publications in Anthropology. 7(2):29-165. University of Washington Press. Seattle.

Saleeby, Becky M.
1983 *Prehistoric Settlement Patterns in the Portland Basin of the Lower Columbia River: Ethnohistoric, Archaeological, and Biogeographic Perspectives.* Ph.D. Dissertation in Anthropology. University of Oregon.

Thwaites, Reuben Gold
1905 *The Original Journals of Lewis and Clark.* Seven Volumes and Atlas Published by Arthur F. Clark Company. Los Angeles.

Thomas, Scott
n.d. *CETA Portland Area Reconnaissance Survey, Draft Report.* Manuscript on File at the Department of Anthropology, Portland State University; and at the Oregon State Historic Preservation Office. Salem, Oregon.

Uvardy, Miklos D. F.
1977 *The Audubon Society Field Guide to North American Birds.* Alfred A Knopf. New York

Woodward, John A.
1983 *An Archaeological Assessment of a Portion of Blue Lake Park, Multnomah Co., Oregon.* Report to City of Portland, Bureau of Water Works.

1984 *An Archaeological Assessment of Interlachen Water Supply System, Blue Lake Park, Multnomah County, Oregon.* Report to City of Portland, Bureau of Water Works.

Woodward, John A. and Max Gilgore, Charles Rollins, Charles Ceicko
1977 *"Nechacokee": The Rediscovery of Blue Lake's Lost Indian Village.* Multnomah County Department of Environmental Quality.

APPENDIX A.

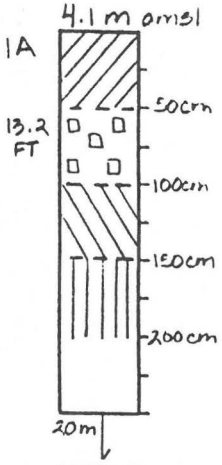
Profile of Auger Test Units Excavated during the Columbia South Shore Archaeological Project

Prepared by

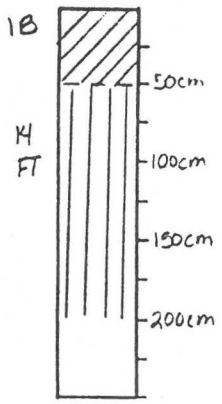
Erin O. Fleming

Site and/or Location: AUGER LOCATION #1 CITY OF PORTLAND MAP 2548 UTM:10 E540780 N5044580
WEST OF TRANSECT 8 LANDFORM: MARSH EDGE NORTH OF CULLY LAKE

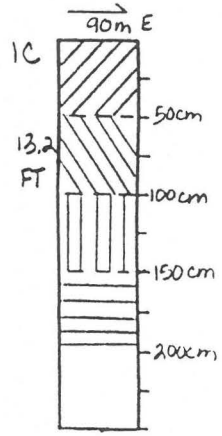
Crew and Date: BURTCHARD, ATWELL, FLEMING 7/27/99 A-B 20 N-S AUGER TRANSECT E 90 C-D 20 N-S AUGER TRANSECT



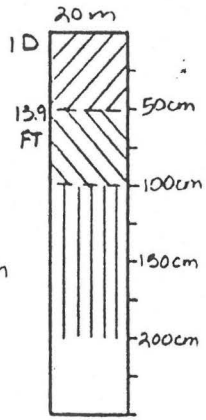
Color	Texture	Content
MED BROWN	SILT	
GRAY	SILT WITH GLAEY-LIKE INCLUSIONS	IO_2 MOTTLING
GRAY	CLAYEY SILT	IO_2 MOTTLING
GRAY	CLAY-SILT	UNSCREENED FROM 175 cm IO_2 MOTTLING



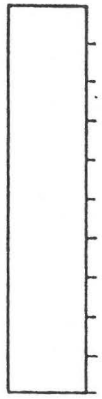
Color	Texture	Content
MED BROWN	SILT	
GRAY	SILT	IO_2 MOTTLING
		UNSCREENED FROM 175 cm

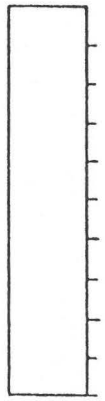


Color	Texture	Content
GRAYISH BROWN	SILT	MODERATE IO_2 MOTTLING
GRAY	SILT	HEAVY IO_2 MOTTLING
GRAY	SILTY-CLAY	HEAVY IO_2 MOTTLING IRON CONCRETIONS ORGANIC INCLUSIONS
BLUE-GRAY	GLAEY SILTY-CLAY	



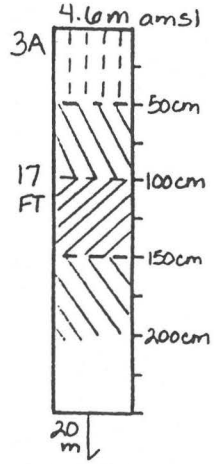
Color	Texture	Content
MED BROWN	SLIGHTLY SANDY SILT	MODERATE IO_2 MOTTLING
GRAY	SILT	MINOR IO_2 MOTTLING
BLUE-GRAY	SILTY-CLAY GLAEY INCLUSIONS	HEAVY IO_2 MOTTLING IRON CONCRETIONS UNSCREENED FROM 150 cm



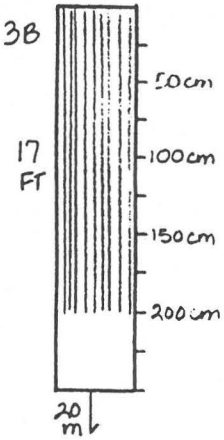


Site and/or Location: AUGER LOCATION #2 CITY OF PORTLAND MAP 2548 UTM: 10 E540820 N5044060
CSS-2; CSS-3; I-1; I-2 LANDFORM: EDGE OF SEASONALLY INNUNDATED MARSH (ELEVATED GROUND)

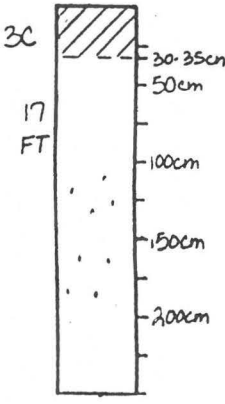
Crew and Date: BURTCHARD, ATWELL, FLEMING 7/27/89 80m E-NW AUGER TRANSECT IN SURVEY TRANSECT 8



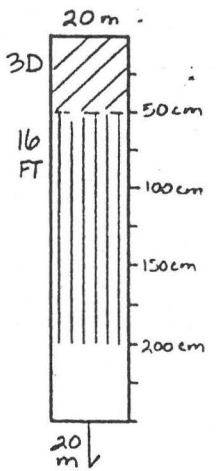
Color	Texture	Content
MED BROWN	SLIGHTLY SILTY SAND	
GRAY BROWN	SILT	10_2 MOTTLING
MED BROWN	SILT	
GRAY BROWN	SILT	10_2 MOTTLING UNSCREENED



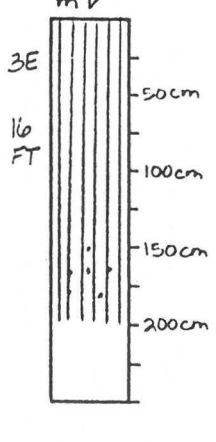
Color	Texture	Content
GRAY BROWN	SANDY SILT	10_2 MOTTLING UNSCREENED FROM 175 cm



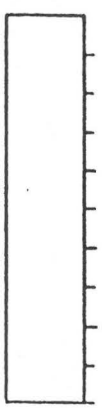
Color	Texture	Content
GRAY BROWN	UNIDENTIFIED TEMPER SLIGHTLY SANDY SILT	SAMPLE TAKEN ROLL 2 BW8 C9 10_2 MOTTLING CHARCOAL INCLUSIONS UNSCREENED FROM 175 cm 10_2 MOTTLING CHARCOAL INCLUSIONS



Color	Texture	Content
MED BROWN	SLIGHTLY SANDY SILT	TEPHRA INCLUSIONS
GRAY BROWN		10_2 MOTTLING
	SAND FRACTION INCREASING	UNSCREENED FROM 200 cm



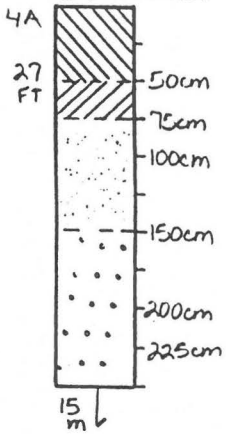
Color	Texture	Content
GRAY BROWN	SLIGHTLY SANDY SILT	TEPHRA INCLUSIONS MINOR CHARCOAL INCLUSIONS UNSCREENED FROM 175 cm 10_2 MOTTLING



Site and/or Location: AUGER LOCATION #3 CITY OF PORTLAND MAPS 2547 & 2548 UTM: 10 E 540240 N 5044700; EAST OF TRANSECT 7 LANDFORM: LEVEE ABOVE THE NORTH BRANCH OF THE COLUMBIA SLOUGH

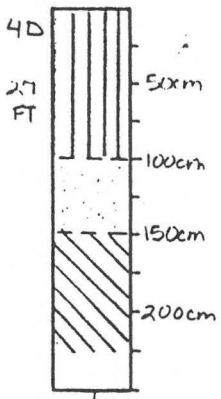
Crew and Date: BURTCHARD, ATWELL, FLEMING 7/31/09 235 N-NE AUGER TRANSECT

8.2m amsl



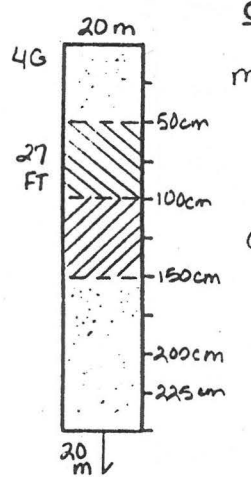
	Color	Texture	Content
4A	MED BROWN	SANDY SILT	AREA LOOKS DISTURBED POSSIBLE RODENT ACTIVITY
		SILTY SAND	
		FINE SAND	100-200cm CLAY PIDGEON PIECES LEAD PELLET (1)
	GRAY-BROWN	MED SAND	BASALT FLAKE (1)
4B	GRAY-BROWN	SLIGHTLY SANDY SILT	
	MED BROWN	SANDY SILT	
		SLIGHTLY SILTY FINE SAND	
		FINE SAND	
4C	MED BROWN	SANDY SILT WITH BLOCKY CLAY INCLUSIONS	CHARCOAL
		SILTY SAND	22 CASING
		FINE SAND	

15 m

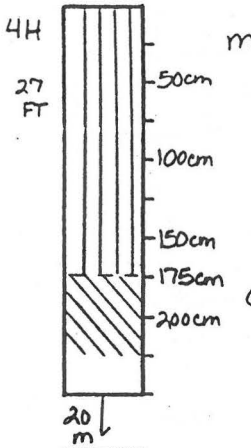


	Color	Texture	Content
4D	MED BROWN	SLIGHTLY SANDY SILT WITH CLAY INCLUSIONS	10_2 MOTTLING
		FINE SAND	10_2 MOTTLING
		SILTY SAND	180cm 22 RIMFIRE SHELL
4E	FILL APPEARS DISTURBED POSSIBLY FROM LEVEE BUILDING		
	MED BROWN	VERY SANDY SILT WITH BLOCKY CLAY INCLUSIONS	
4F	LIGHT BROWN	FINE SAND	
	GRAY-BROWN	SANDY SILT	CHARCOAL INCLUSIONS
	LIGHT BROWN	FINE SAND	
		SILTY SAND	UNSCREENED FROM 200cm

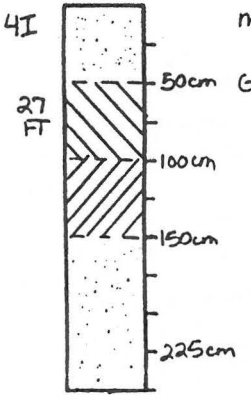
Additional comments as necessary:



Color	Texture	Content
MED BROWN	FINE SAND	
	SILTY SAND	CLAY PIGEON FRAG QUARTZITE PEBBLE
GRAY-BROWN	SANDY SILT WITH CLAY INCLUSIONS	CHARCOAL INCLUSIONS 10_2 MOTTLING
	FINE SAND	10_2 MOTTLING UNSCREENED AFTER 200cm



Color	Texture	Content
MED BROWN	SAND, SILT	CHARCOAL PLASTIC GLASS DISTURBED FROM PGS TO 175 cm
GRAY-BROWN	FINE SAND	10_2 MOTTLING CHARCOAL UNSCREENED AFTER 200cm



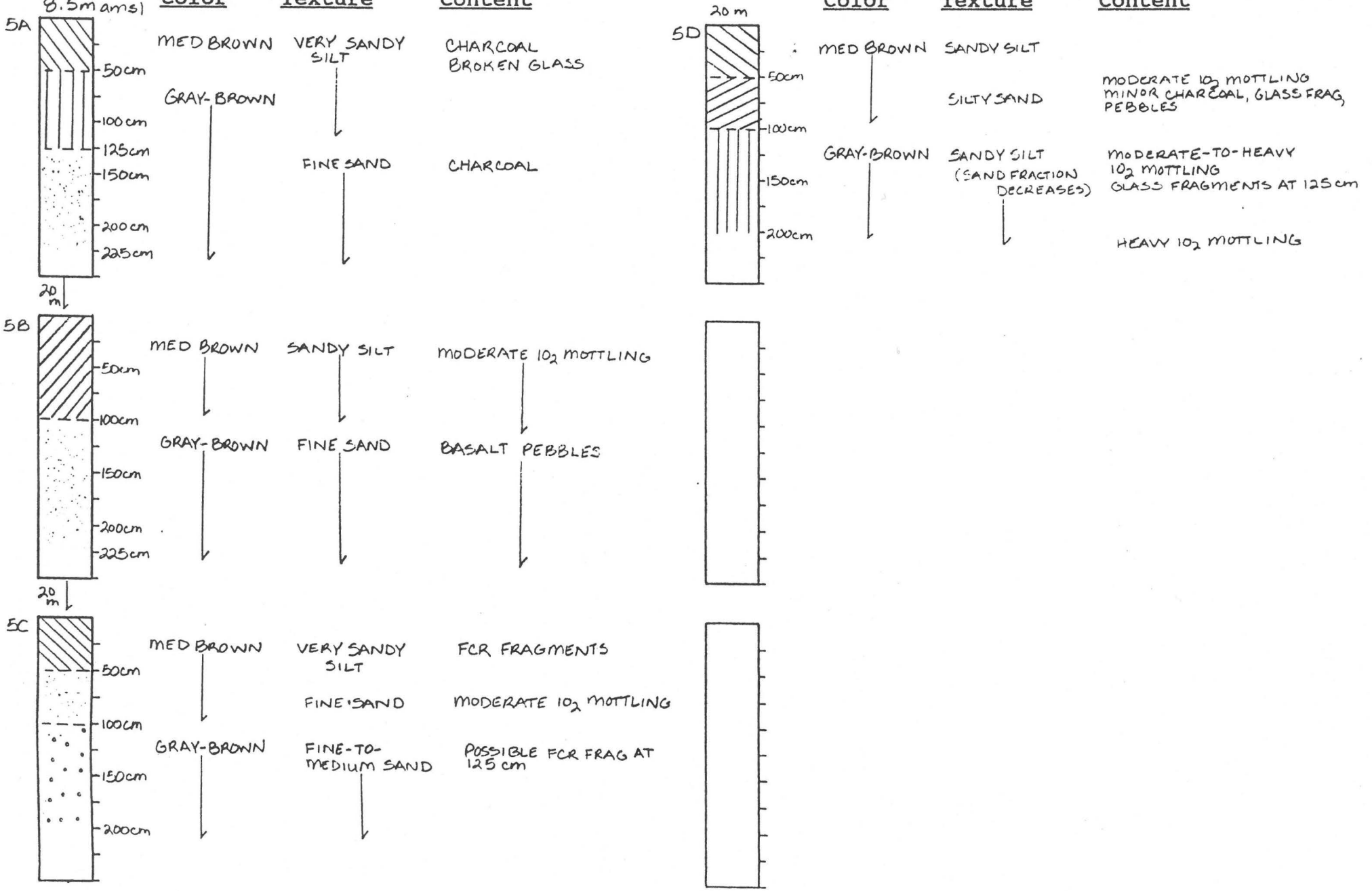
Color	Texture	Content
MED BROWN	FINE SAND	
GRAY-BROWN	SLIGHTLY SILTY SAND	10_2 MOTTLING
	SANDY SILT	10_2 MOTTLING CHARCOAL FLECKS
	FINE SAND	

Color	Texture	Content

Auger Record Form

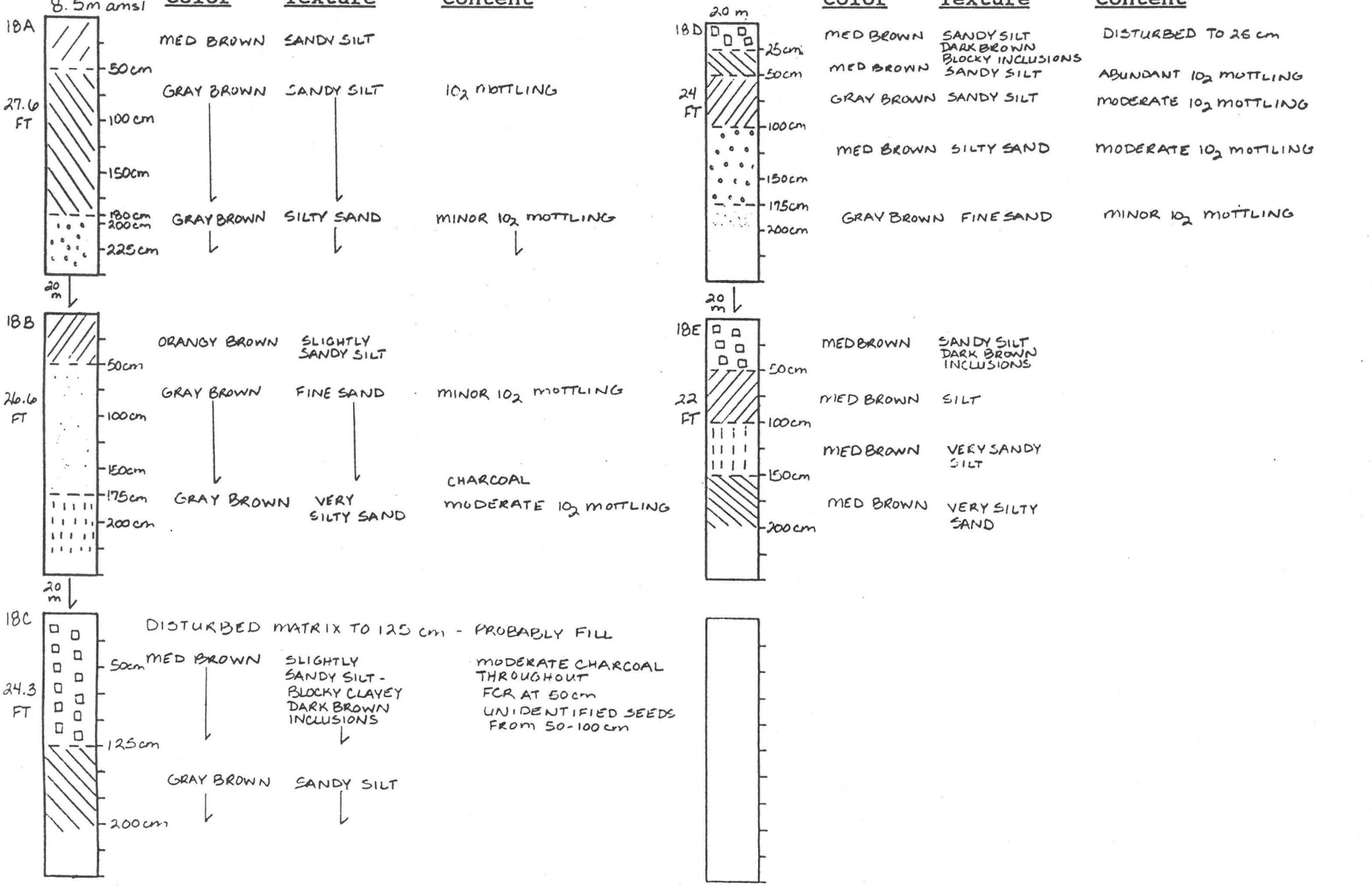
Site and/or Location: AUGER LOCATION #4 CITY OF PORTLAND MAP 2546 UTM: 10 E539590 N5044940
35 MU 30 LANDFORM: - FLOODPLAIN OF THE COLUMBIA EAST OF TRANSECT 6

Crew and Date: BURTCHARD, ATWELL, FLEMING 8/1/89 60 N-S AUGER TRANSECT



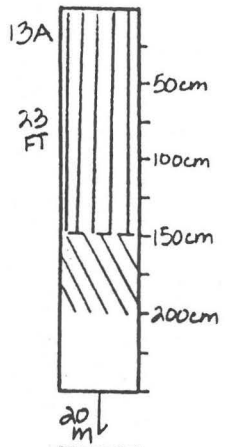
Site and/or Location: AUGER LOCATION #5 CITY OF PORTLAND MAP 2546 UTM: 10 E 5386000 N 5045020
JOSEPHINE SITE - SPADA FARM WEST OF 158th - LANDFORM: LEVEE S OF N BRANCH COLUMBIA SLOUGH

Crew and Date: BURTCHARD, ATWELL, FLEMING 8/1/89 80m N-S AUGER TRANSECT EAST OF SURVEY TRANSECT 5



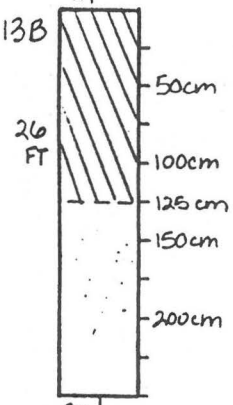
Site and/or Location: AUGER LOCATION #6 CITY OF PORTLAND MAP 2443 UTM: 10 E 5316820 N 5045290
TRANSECT 6 LANDFORM: TERRAIN ABOVE COLUMBIA SLOUGH WEST OF TRANSECT 3

Crew and Date: BURTCHARD, ATWELL, FLEMING 7/26/89 160m N-S AUGER TRANSECT



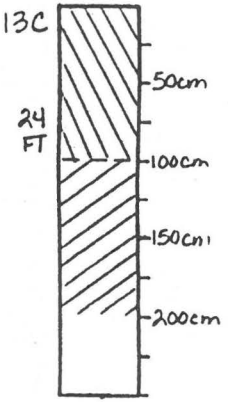
Color	Texture	Content
BROWN	SILTY SAND	CHARCOAL FLECK
	(DAMP)	
	CLAY-SILT	10_2 MOTTLING MINOR CHARCOAL INCLUSIONS

20m



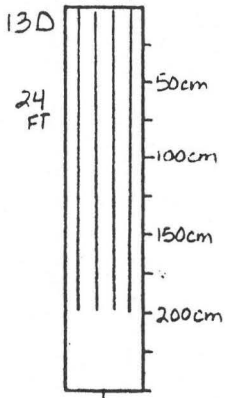
Color	Texture	Content
LIGHT BROWN	SANDY SILT	
	FINE SAND	

20m



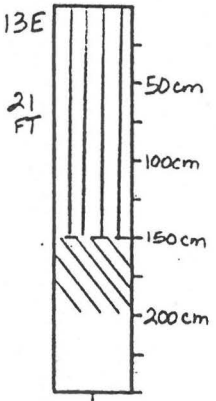
Color	Texture	Content
BROWN	SILTY SAND	
LIGHT GRAY	FINE SAND	MINOR 10_2 MOTTLING

20m



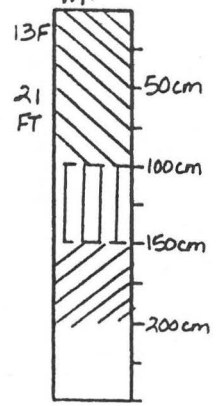
Color	Texture	Content
MED BROWN	SILT	10_2 MOTTLING CHARCOAL
		CHARCOAL

20m



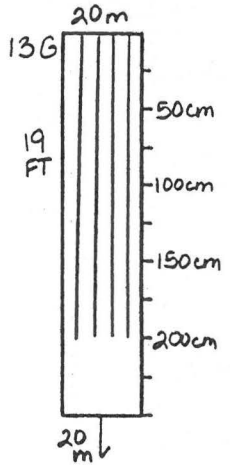
Color	Texture	Content
MED BROWN	SILTY SAND	
	SLIGHTLY SANDY SILT	

20m

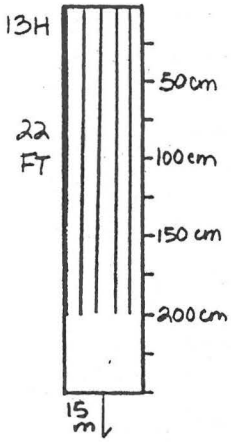


Color	Texture	Content
MED BROWN	SILT	10_2 MOTTLING
	CLAYEY SILT	10_2 MOTTLING
	SANDY SILT	10_2 MOTTLING

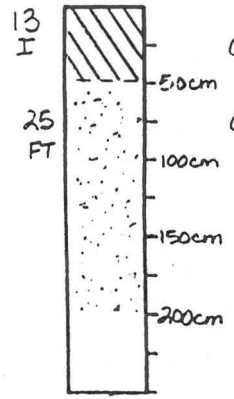
Additional comments as necessary: NO CULTURAL MATERIAL OBSERVED



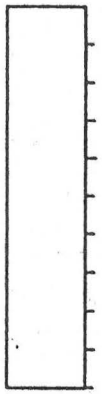
Color	Texture	Content
MED BROWN	SILT	10_2 MOTTLING



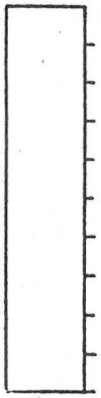
Color	Texture	Content
LIGHT BROWN	SLIGHTLY SANDY SILT	CHARCOAL FLECKS



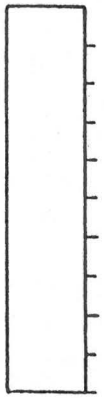
Color	Texture	Content
ORANGE-BROWN	SANDY SILT	
GRAY-BROWN	FINE SAND	



Color	Texture	Content



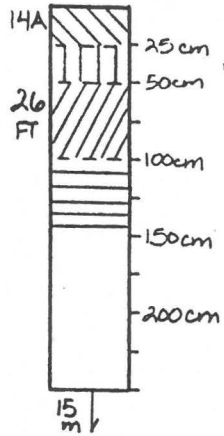
Color	Texture	Content



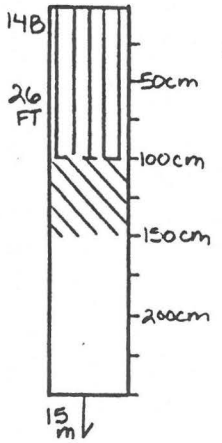
Site and/or Location: AUGER LOCATION # 7 CITY OF PORTLAND MAP 2442 & 2443 UTM: 10 E 5316360 N 5045750
TRANSECT 5 LANDFORM: SLOPE ABOVE A PREHISTORIC POND AND THE POND A-D 45 N-S TRANSECT;

Crew and Date: BURTCHARD, ATWELL, FLEMING 7/28/89 E-F 15 E-W TRANSECT; G-H 20 S-SE TRANSECT; H-I 20 N-NW TRANSECT;
J-K 60m N-S TRANSECT

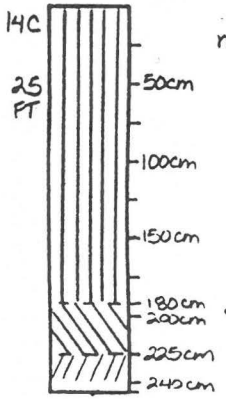
7.9-4.3m amsl



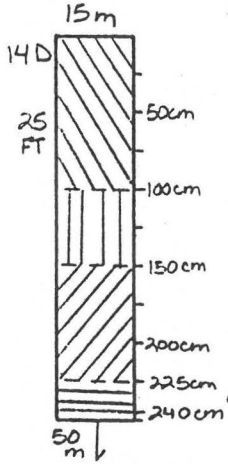
Color	Texture	Content
PLOW ZONE		
MED BROWN	SLIGHTLY SANDY SILT	BURNED EARTH MINOR CHARCOAL 10_2 MOTTLING
		10_2 MOTTLING
MED DARK BROWN	CLAYEY-SILT	10_2 MOTTLING



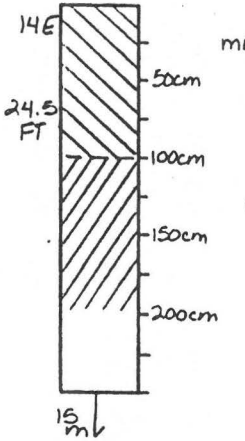
Color	Texture	Content
MED BROWN	SLIGHTLY SANDY SILT	BURNED EARTH CHARCOAL
		PROBABLE BURNED EARTH CHARCOAL HEAVY 10_2 MOTTLING
	CLAYEY-SILT	10_2 MOTTLING



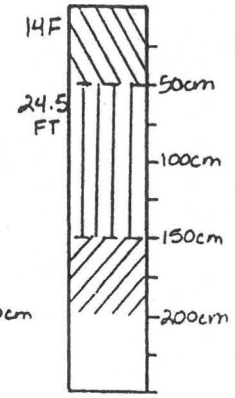
Color	Texture	Content
MED BROWN	SANDY SILT	10_2 MOTTLING MINOR CHARCOAL INCLUSIONS
ORANGE BROWN	SILTY SAND	UNSCREENED FROM 200cm
	SLIGHTLY SANDY SILT	



Color	Texture	Content
MED BROWN	SLIGHTLY SANDY SILT	10_2 MOTTLING
	SLIGHTLY CLAYEY-SILT	10_2 MOTTLING
	CLAYEY-SILT	UNSCREENED FROM 200 cm
ORANGE BROWN	SILTY SAND	

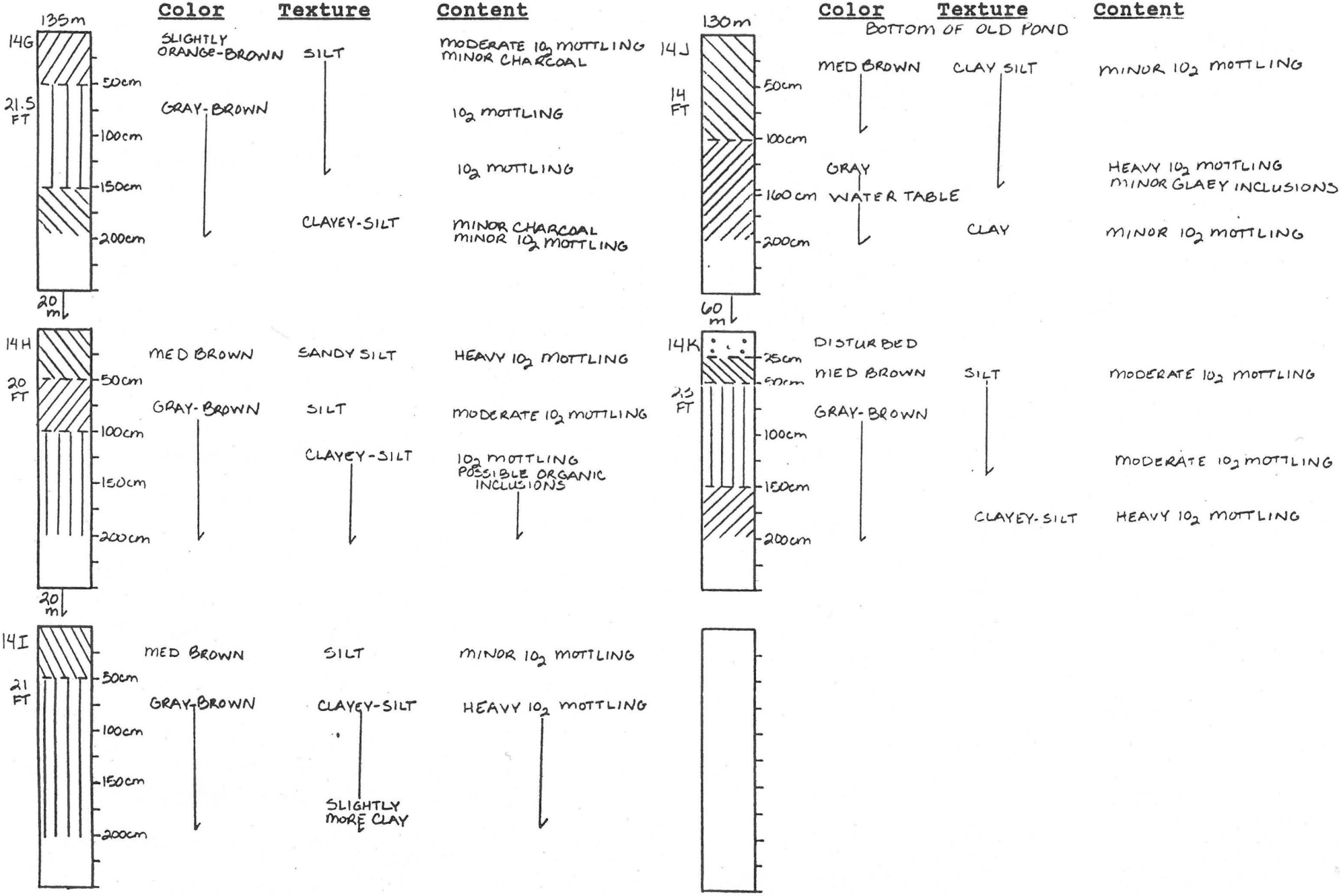


Color	Texture	Content
MED BROWN	SILT	10_2 MOTTLING
GRAY BROWN		10_2 MOTTLING
		10_2 MOTTLING UNSCREENED FROM 150cm



Color	Texture	Content
MED BROWN	SLIGHTLY SANDY SILT	
GRAY BROWN	SILT	ABUNDANT CHARCOAL 10_2 MOTTLING
		ABUNDANT CHARCOAL 10_2 MOTTLING
	CLAYEY-SILT	MINOR CHARCOAL MINOR 10_2 MOTTLING UNSCREENED FROM 150cm

Additional comments as necessary: NO CULTURAL MATERIAL OBSERVED



APPENDIX B.

Photographs of Privately Collected Materials from Selected Study Area Archaeological Localities

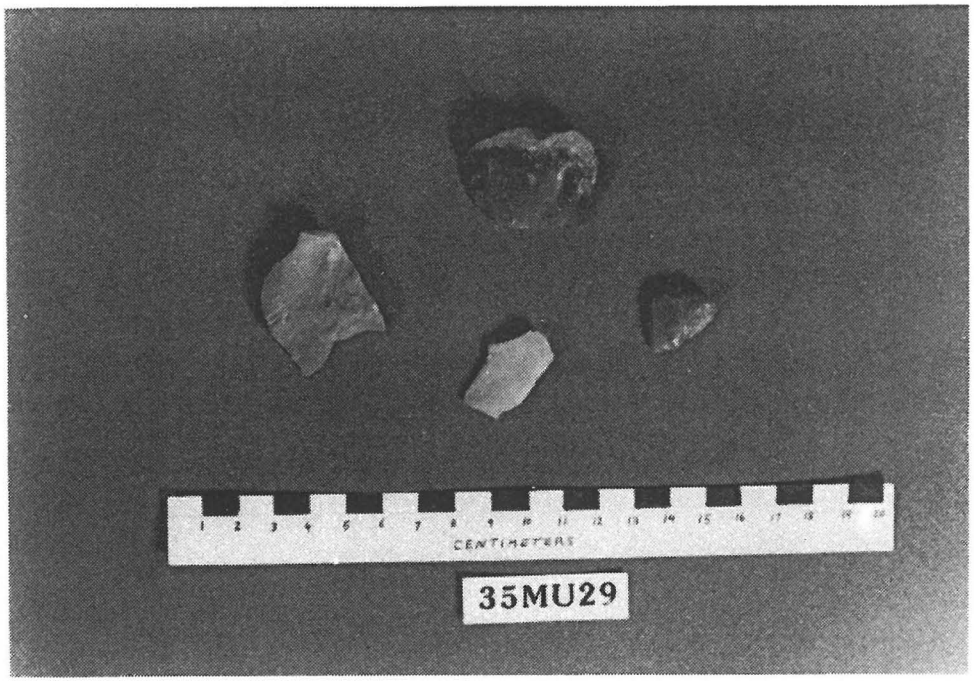
Materials Donated by Ron Spada

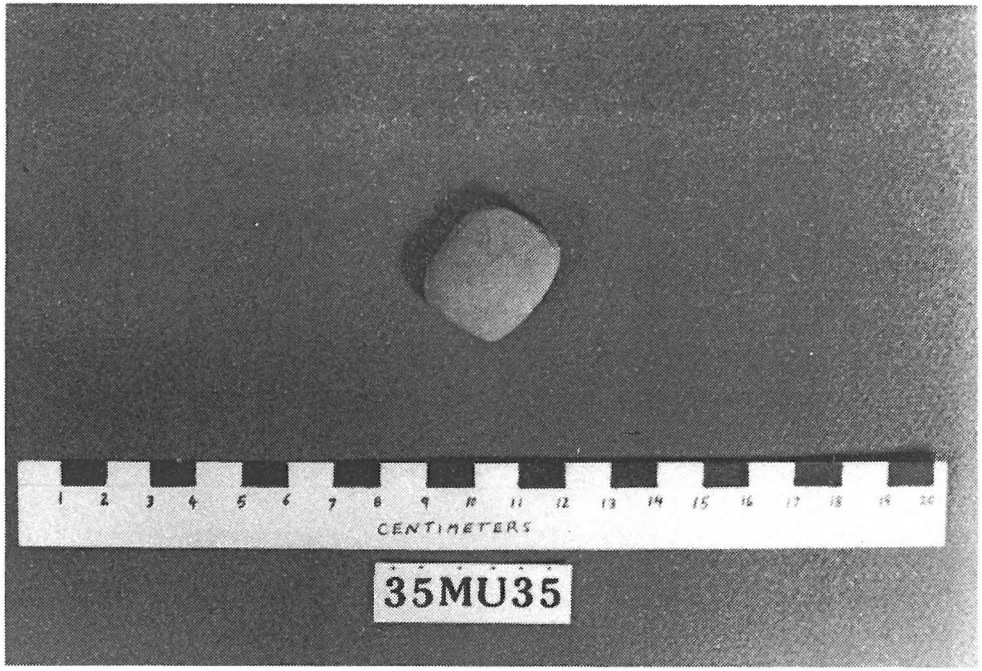
and Assembled by Susan Horton

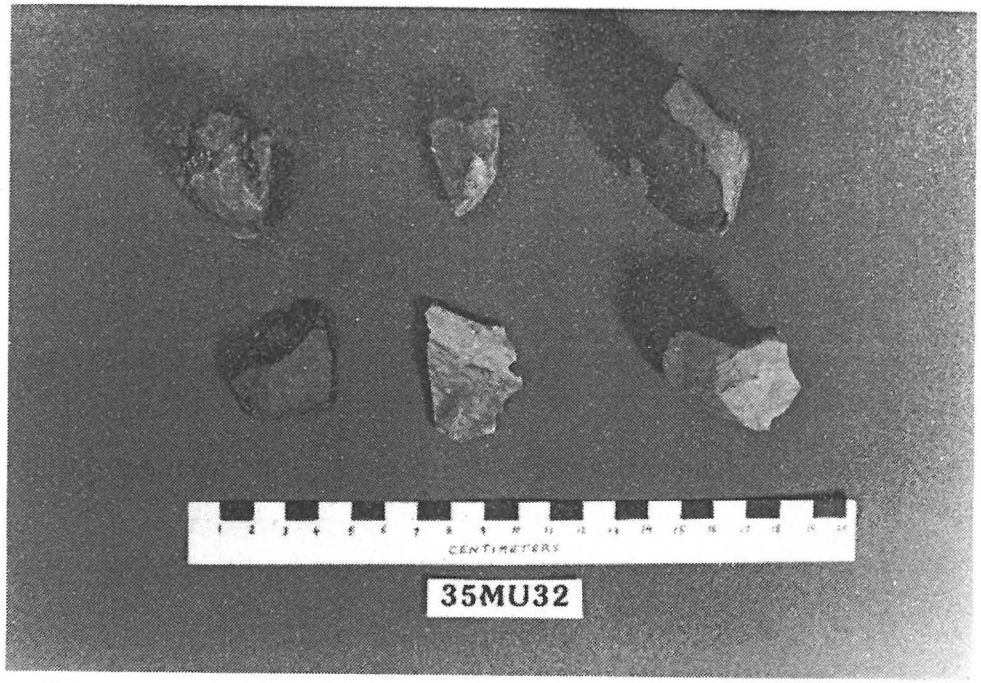

CENTIMETERS
35MU28

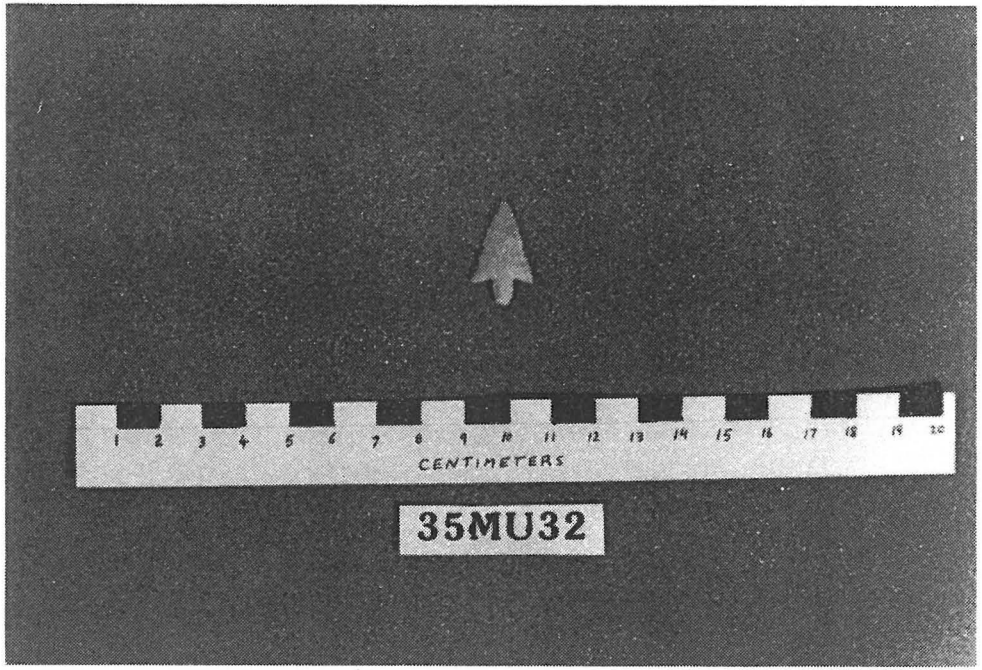

CENTIMETERS
35MU29

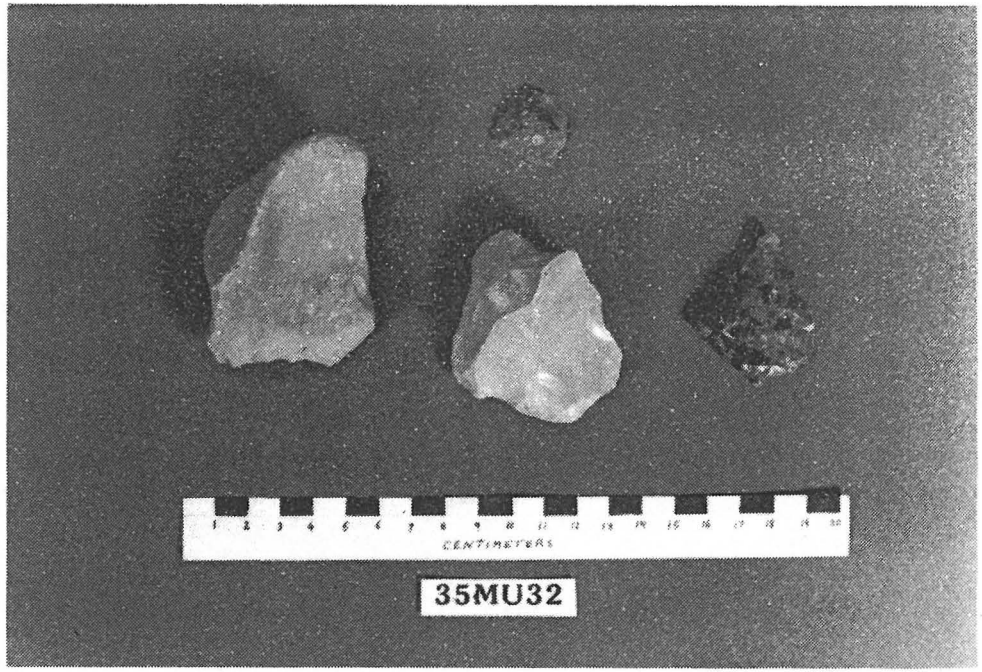

CENTIMETERS
35MU29

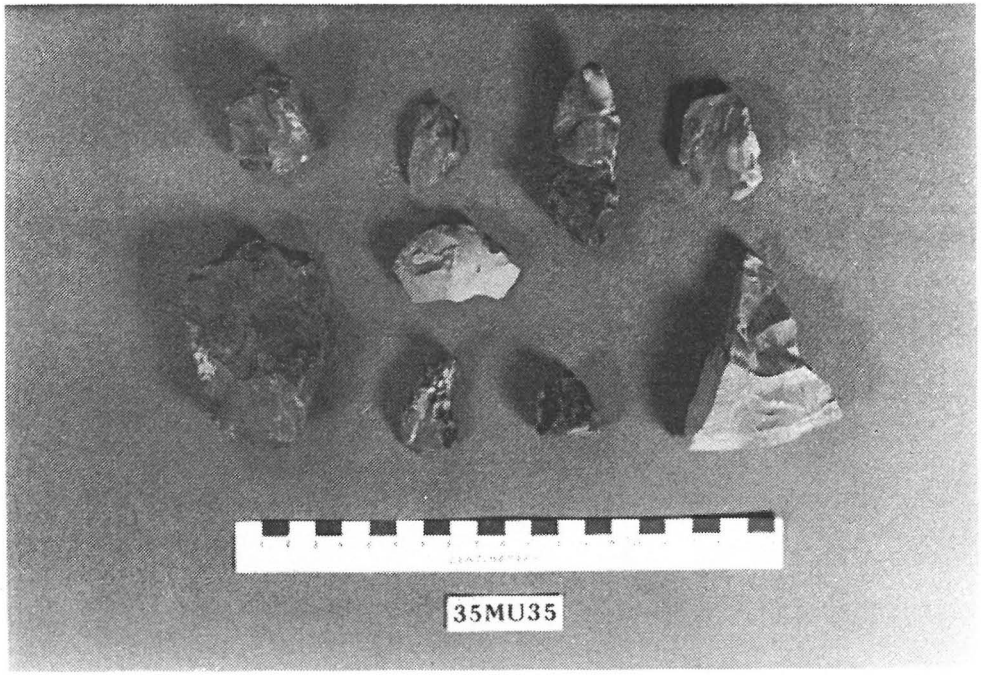

CENTIMETERS
35MU29

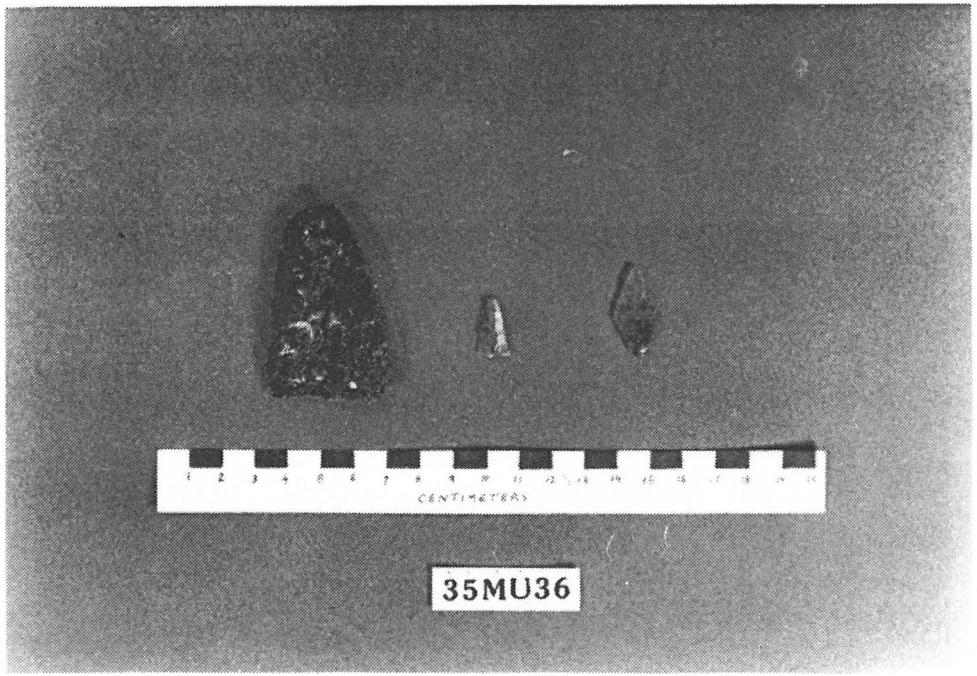

CENTIMETERS
35MU35


CENTIMETERS
35MU32


CENTIMETERS
35MU32


CENTIMETERS
35MU32

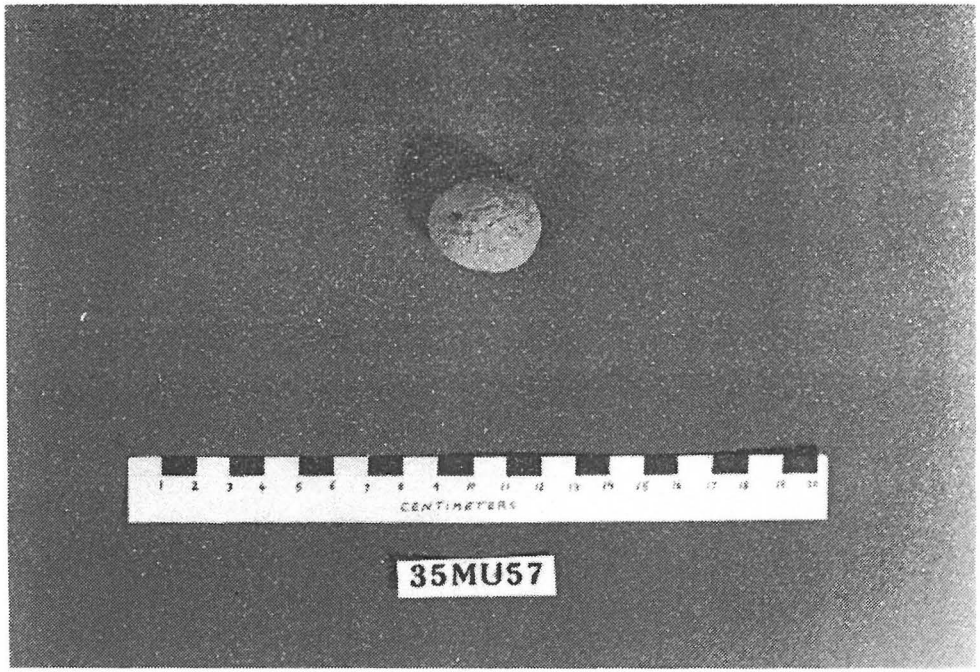

35MU35

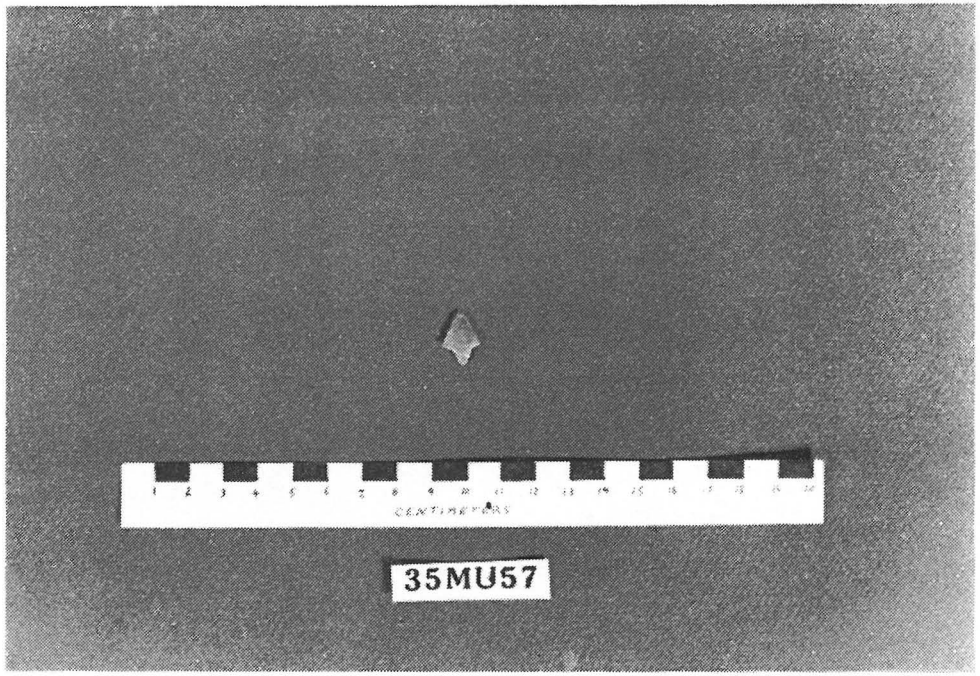

CENTIMETERS
35MU36

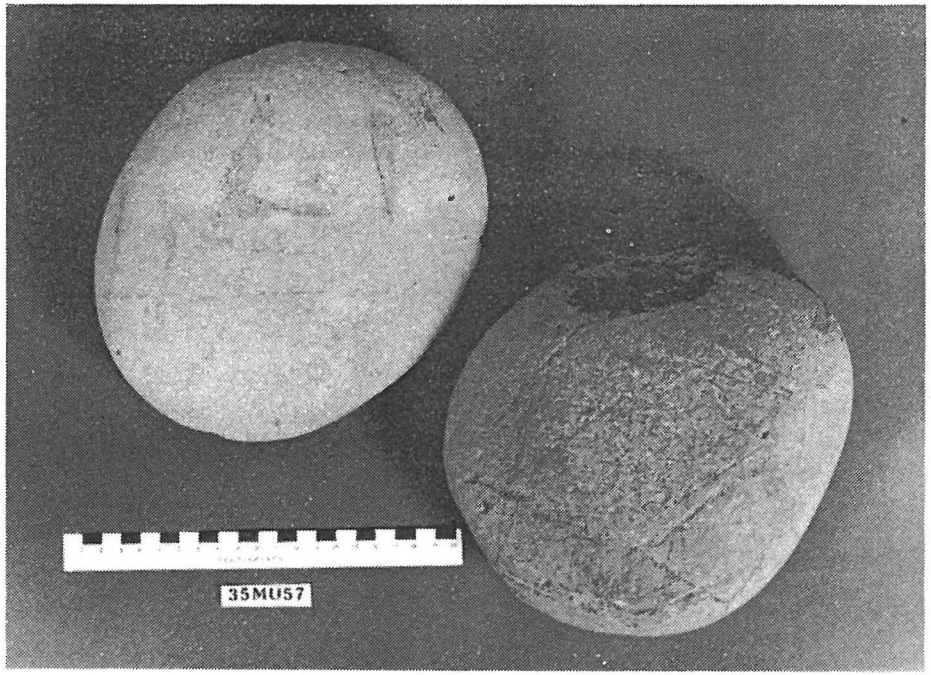

CENTIMETERS
35MU35

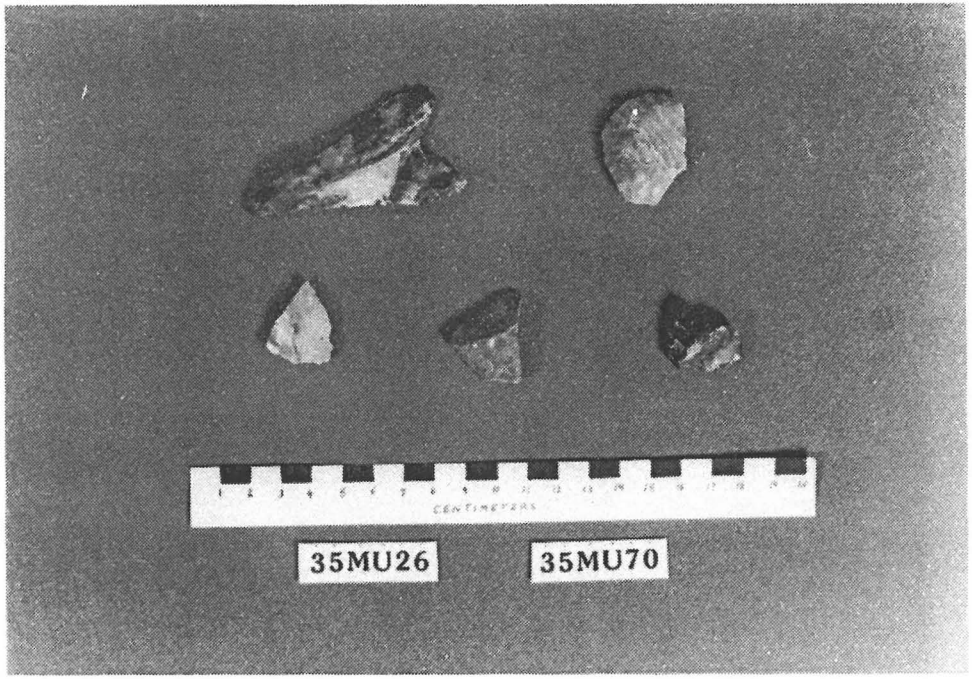

CENTIMETERS
35MU36

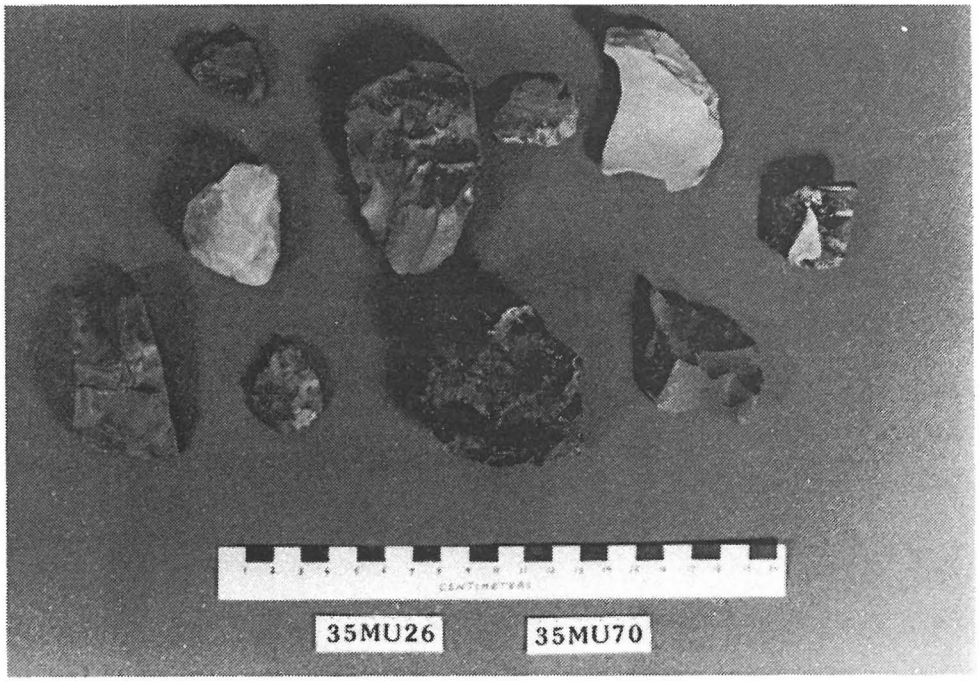

CENTIMETERS
35MU57

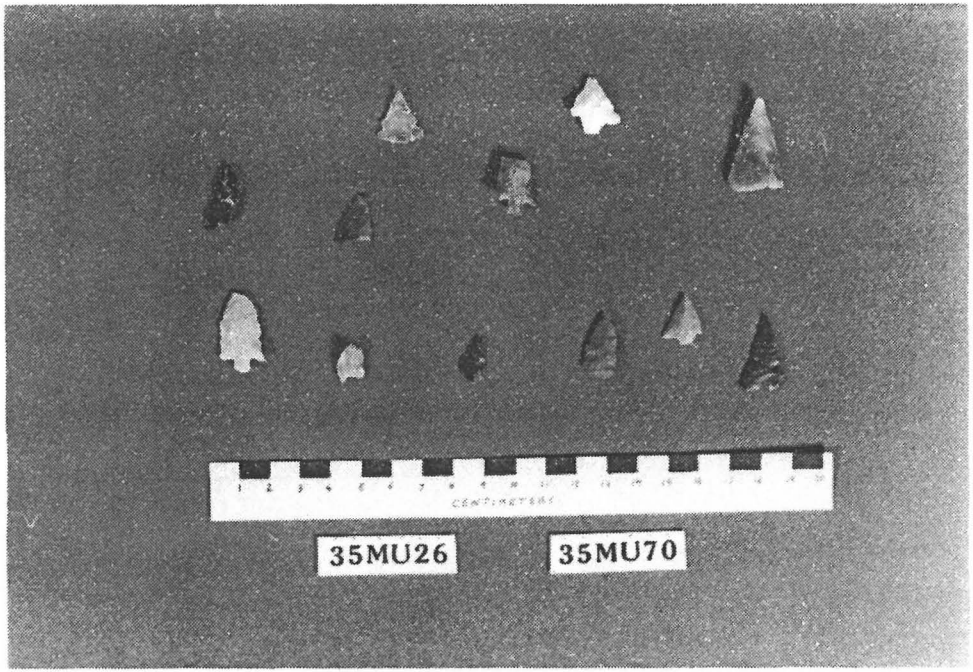

CENTIMETERS
35MU57


CENTIMETERS
35MU57

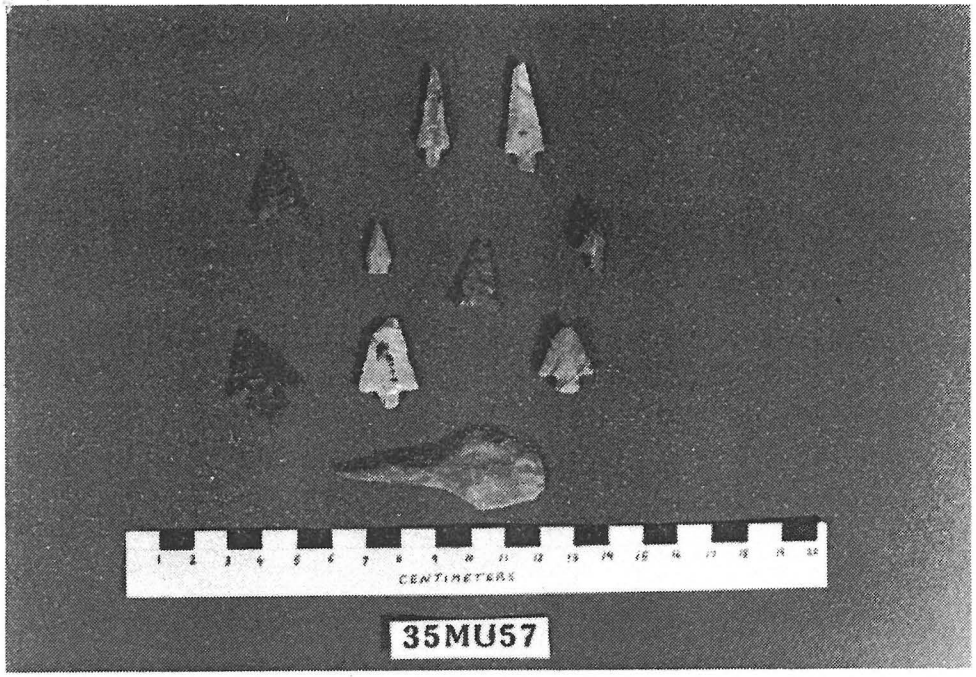

35MU57


35MU26
35MU70


35MU26
35MU70

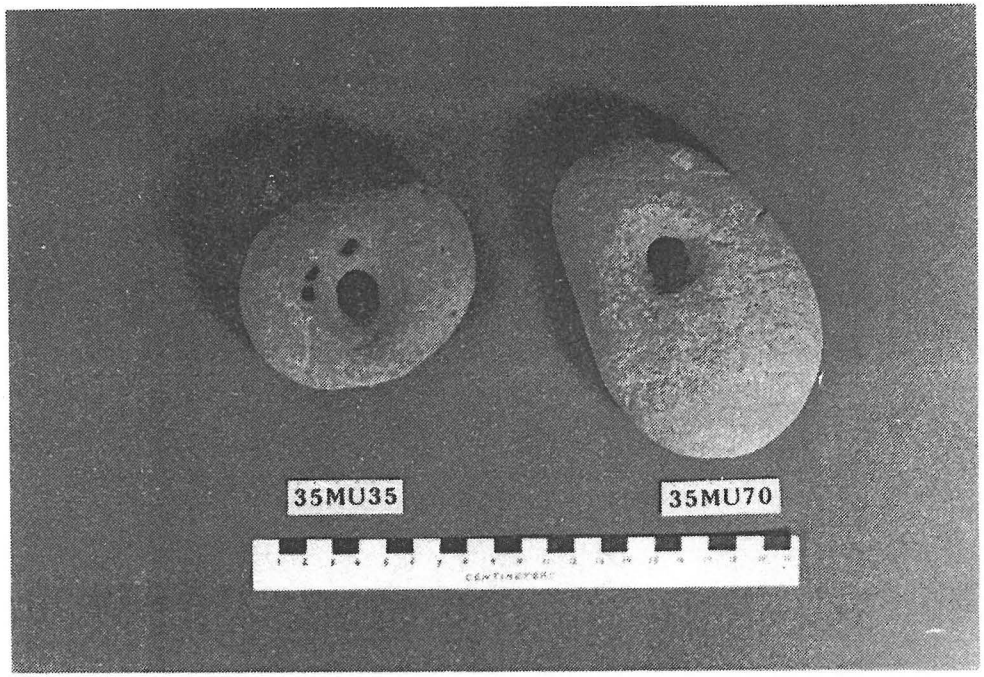

35MU26
35MU70

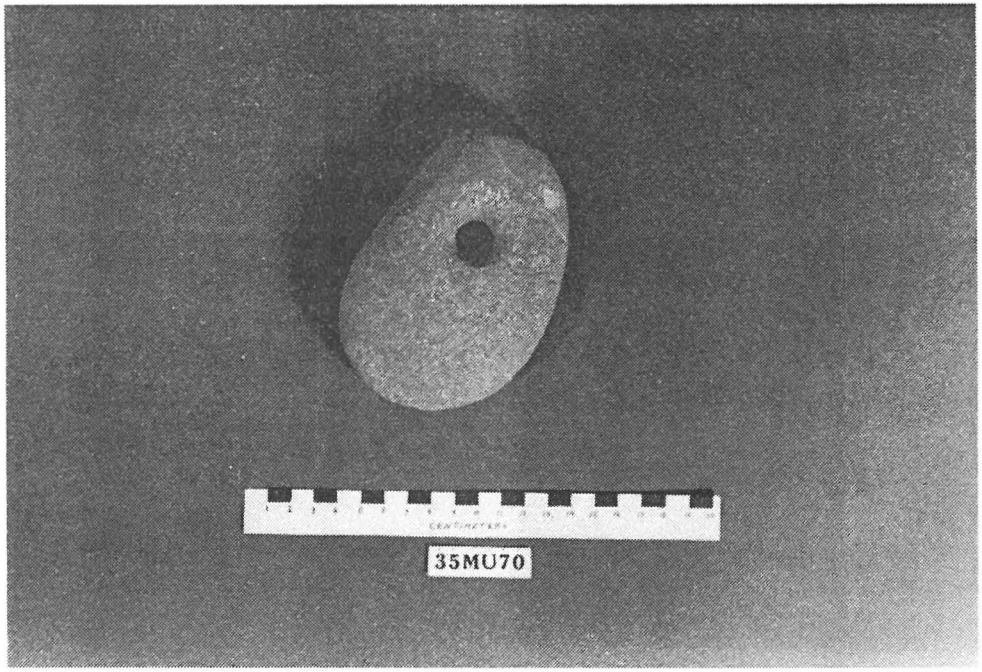

35MU26
35MU70

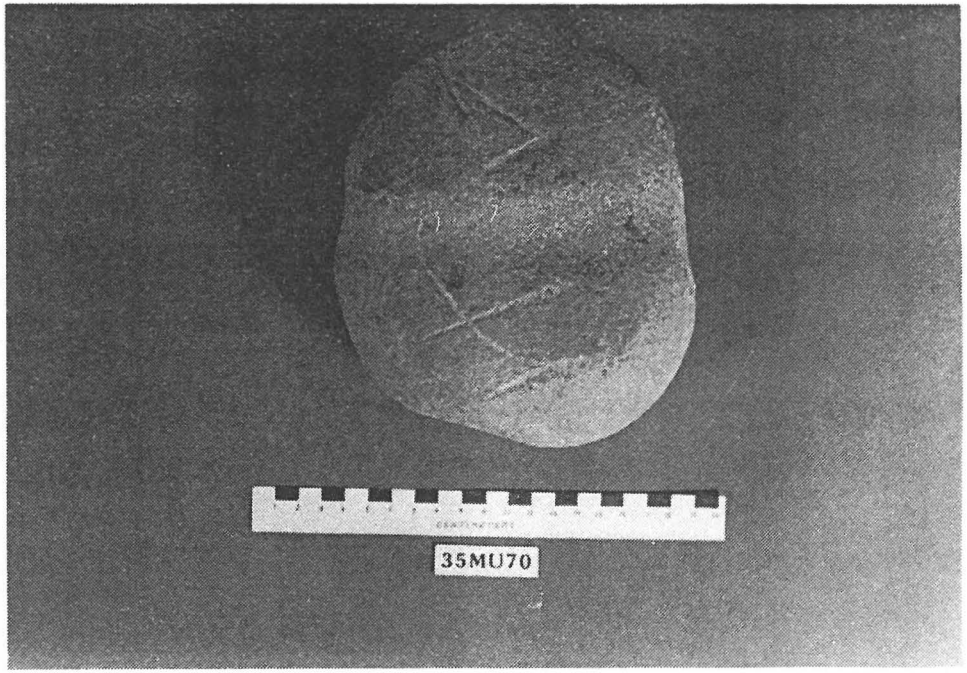

CENTIMETERS
35MU57

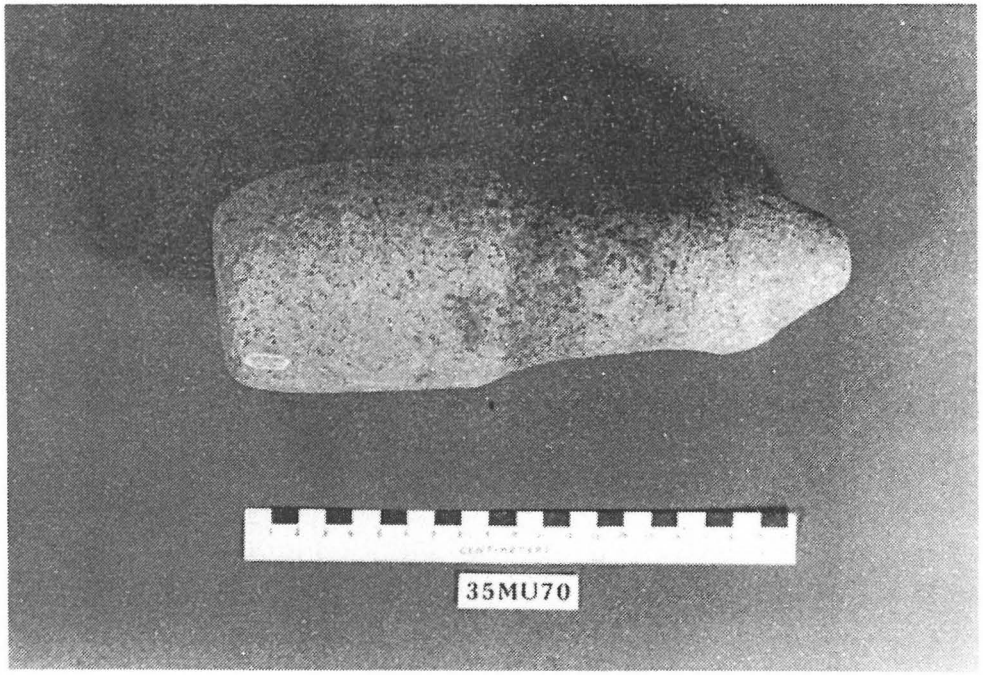

CENTIMETERS
35MU57


35MU57


35MU35
35MU70
CENTIMETERS

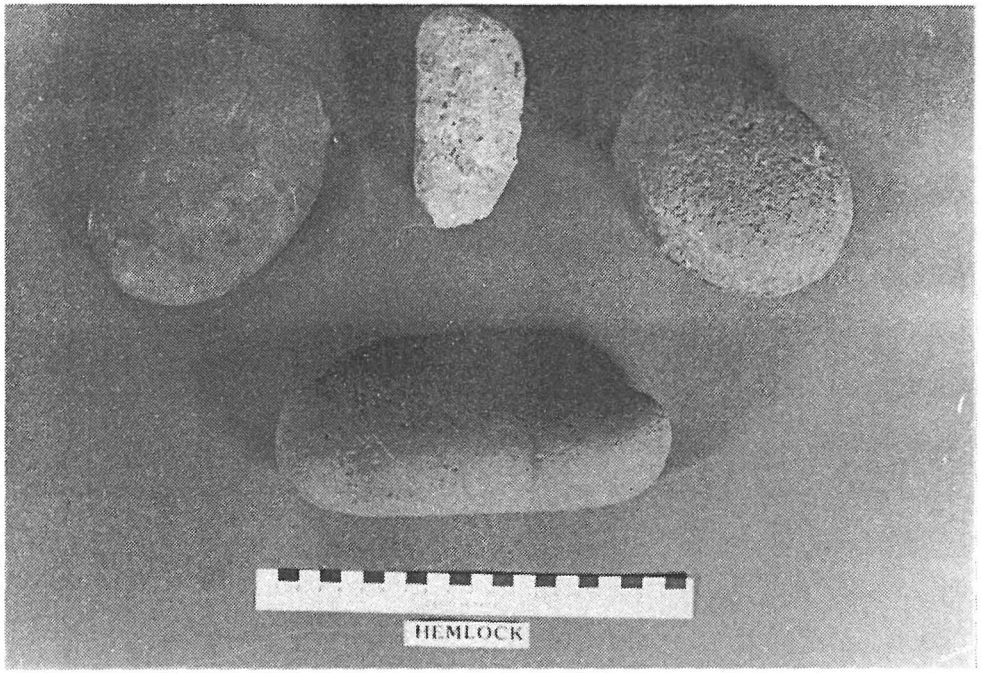

35MU70

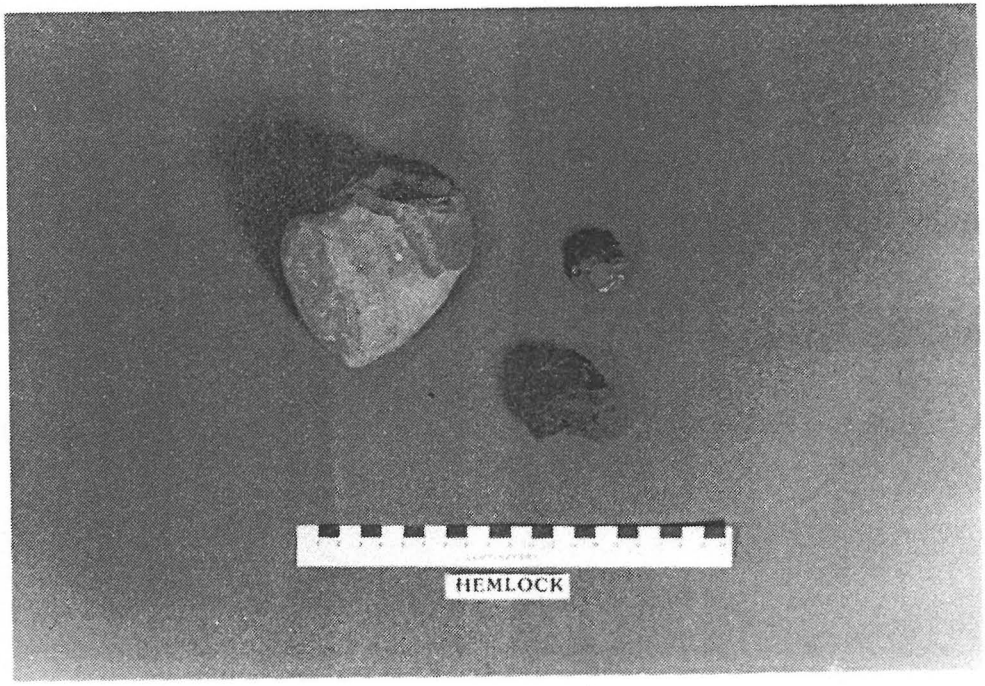

35MU70


35MU70


35MU70


HEMLOCK


HEMLOCK


HEMLOCK

Glascock

CITY OF
PORTLAND, OREGON
BUREAU OF PLANNING

Gretchen Kafoury, Commissioner
Robert E. Stacey, Jr., Director
1120 S.W. 5th, Room 1002
Portland, Oregon 97204-1966
Telephone: (503) 823-7700
FAX: (503) 823-7800

April 12, 1993

MEMORANDUM

To: Mayor Vera Katz
Commissioner Earl Blumenauer
Commissioner Charlie Hales
Commissioner Gretchen Kafoury
Commissioner Mike Lindberg

From: Bob Stacey RBS

Subject: **Archaeological Resource Protection in Columbia South Shore**

On March 10, 1993, the Council heard testimony on the Development Standards project. One issue raised in testimony was archaeological resource protection within Columbia South Shore. This memorandum identifies three program options and recommends one of those options. This issue will be before the Council on May 27, 1993.

The options are shaped by our current knowledge of archaeological resources in the district, the cost and time required to supplement existing inventories and conduct a Goal 5 process, and legal requirements given recent court cases. Option 3, deferral to a future community planning effort, best meets these considerations. It recognizes limited knowledge of archaeological resources and commits to a thorough Goal 5 process in the future as part of community planning. Until the process is complete, we recommend that Council retain existing interim resource protection for two known archaeological sites.

On its face, Option 1 appears to provide a least-cost, earliest resolution of the issue. The PDC appears to favor Option 1, for these reasons. But this option may not meet state periodic review requirements and would almost certainly result in costly legal challenges to legislative and development projects. The bureau finds Option 3 to be the most responsible means of protecting cultural resources within current budget constraints.

We look forward to direction from the Council on this matter. Thank you for your consideration.

RES:rhg

cc: Kathryn Imperati, Senior Deputy City Attorney
Paul Shirey, Portland Development Commission
Cay Kershner, Council Clerk

PROGRAM OPTIONS
CULTURAL RESOURCES IN COLUMBIA SOUTH SHORE

Option 1: Initiate New Goal 5 Project (using existing inventory)

This option relies on existing inventory information, including a 20% surface reconnaissance survey already conducted in the district. It requires extra review where excavation activity uncovers archaeological resources (case-by-case). Each review would involve completing the analysis and deciding on appropriate protection measures.

Project Format
To implement this option, planning staff reviews the existing inventory, holds public workshops, prepares a report and recommendations, and takes code amendments through the public hearings process. The project may take 12 months, beginning July 1, 1993. Total project cost: $56,000 (not presently budgeted).

Pros
- Least-cost inventory approach.
- Earliest resolution of issue.

Cons
- Requires unbudgeted resources.
- Cultural advocates will likely challenge completeness of the inventory.
- May not be consistent with Goal 5 rule in light of recent court cases (Ramsey v. City of Portland, Columbia Steel Castings v. City of Portland).
- Owners will bear additional costs and delays at time of development.

Option 2: Initiate New Goal 5 Project (more inventory work)

This option adds to existing archaeological inventories in the district. The analysis and protection measures are determined in advance of developments. No funds have been committed for this project.

Project Format
The City manages a contract for archaeological services. Planning staff reviews the inventory for completeness and accuracy, holds public workshops, prepares a report and recommendations, and takes code amendments through the public hearings process. The project will take 12 to 18 months, beginning July 1, 1993. Total project costs: FY 93-4 = $116,000 (not in proposed budget); FY 94-5 = $28,000.

Pros
- Collects best possible information to develop a protection program.
- Satisfies state Goal 5 and related court cases.
- Targets protection to identified sites; minimizes case-by-case reviews.
- May avert costly legal challenges to Goal 5/cultural resource protection.

Cons
- Requires additional unbudgeted resources beyond those in Option 1.
- Requires landowner permission to grant access for field work.

Option 3: Defer to Community Planning Process

This option defers the Goal 5 process until Columbia South Shore is reviewed as part of community planning. There is insufficient information on archaeological resources. Two probable residential sites can be protected by retaining the interim resource protection (sec) review for those sites. Other sites may be destroyed prior to community planning.

Project Format

No work in FY 93-4 or FY 94-5. According to the Planning Commission-approved schedule of community plans, this project would begin in 1998 as part of the Outer Northeast Plan. There will be efficiencies in the use of community plan public review, but an additional 0.5 FTE CPA is still needed at a cost of $25,000. Also requires an estimated $60,000 of consultant fees for inventory work. Total project cost: $85,000.

Pros

- Commits to Goal 5 process when planning resources become available.
- Efficient use of public resources.
- Protects two known sites using Development Standards project (existing project).
- May avert costly legal challenges to Goal 5/cultural resource protection.

Cons

- Some archaeological sites may be destroyed during the deferral.
- Cultural advocates may challenge this approach, but with less basis for challenge than under Option 1.

Project Development Services
Urban Design
Planning
Analysis
Policy
Management

Basehore & Associates

5022 N.E. 23 Avenue
Portland, OR 97211
(503) 249-1884

May 27, 1993

TESTIMONY TO CITY COUNCIL: COLUMBIA SOUTH SHORE DEVELOPMENT

I come to this meeting today as a planner offering a differing viewpoint. From the technical position I must say I am astounded that after so many years of government and business planning for a proposed development that the resultant proposal illustrates such a flagrant violation of state planning laws, most specifically Goal 5 and Portland's own Comprehensive Plan. In the short time I have had to review this I find both the process and the product to be excessively flawed and as I said, in direct violation of the regulations that direct how land planning is to be carried out.

I have gone through stacks of paper work and read the letters to the city that outline what must be done; I have seen follow-up letters reminding the city of its obligations under planning law. I have reviewed the documents prepared for the city by outside experts stating very clearly the known existence of burials, villages and campsites and the very high probability for locations of others.

The city has been educated in these reports to the interrelationship and interconnectedness of these sites to wetland features and other natural resources. Even the most rudimentary understanding of the communities that inhabited this area for thousands of years points to the direct correlation between food gathering areas and community living. The white settlers who most recently came into this area learned from the first citizens and replicated their early settlements based on the same principle. The first people taught the white settlers where to build their houses, when the fish were most plentiful, and how to best navigate the waters. They extended their hand in neighborly friendship to help the poor and most often starving migrants.

What happened to those first citizens after the influx of inmigrants is a cruel and gruesome telling of betrayal, removal, and final denial. The final denial that the people ever existed. But for the people who sit with you today their ancestry is real and present all around them. These first citizens, the Columbia River Indians, are the grandparents, aunts and uncles of these families. The Native Peoples sitting with you are the living descendants and the owners of their rightful inheritance. The Columbia South Shore Proposed Development Plan does not honor these people. It tells them they must accept both the legal violation of land planning laws and the moral violation of the most basic human rights.

Planning is being done as if people did not matter. And, the land is being environmentally and culturally cleansed. The political machinery that is scraping away at this land is fueled by denial and self righteousness. Self righteousness comes from the driven need to be right when everything around you tells you otherwise. There is a vested interest in not being proved wrong. The need to be right is institutionalized in government planning. And that "right way" does not come from scientifically or technically correct answers leading to acceptable ways to proceed but rather from what is seen as politically appropriate.

There are many historical myths that instruct all of us to believe that human history is progressive and constantly moving upward toward a better life. This system of beliefs would have people to conceive their relation to the natural and spiritual environment according to one of the dominant cultural myths of the West - that man has dominion over the land and its resources. This myth makes us very susceptible to view the world in terms of opposition between elements. The meaning behind it states that there is a hierarchical structure and all things are subordinate to man's desires.

There is a moral imperative to go beyond manifest destiny, beyond the mythic tenet of "dominion over the land." This mythic frame of reference has become a code by which an entire structure of belief has been brought into place. It has become the acceptable norm for doing business, for planning communities' futures.

We understand the economics of land but we know or understand very little about the economics of the heart. The root word for economics comes from the Greek for management of a household or village of households. It means taking care of people. And people are more than the sum that can be extracted from them in terms of work and taxes. Households are the families of yesterday, today, and tomorrow. What is being done today is the investment of tomorrow's inheritance. If we spend our children's inheritance today for immediate profit what will they inherit. Jobs for today are important but not at the expense of the cultural and natural inheritance of future generations.

They aren't making any more land, just more people - so what ever is done to the land must be done with exquisite care - to assure that there is balance between the built and natural environments. These are not just silly sentiments by someone who longs for days gone by. I have watched what has happened to other parts of the country - I am from Dallas, Texas - I watched the real estate crash from overbuilding in 1983-85 - I saw an entire mexican barrio, miles of cultural neighborhood fabric brought down overnight for buildings that now sit empty. We don't have to blindly follow a tenet that has proved itself wrong countless times across the nation. We can be stewards, not dictators of our future. We have a moral imperative to bring balance, to accomodate all that is before us.

In this the year of the Oregon Trail we are sensitized to the wagon ruts that cut through the land to bring the inmigrants. The state holds them up as a symbol of the movement of the people. We smell the dust being kicked up by the oxen and hear the stories of the trials of the trail. Much excitement is created with these images. But also let us sit quietly and hear the light footprints of Indian people as they moved back and forth on this land for tens of thousands of years. Let us feel their movement to and from the rivers, smell the ancient cooking fires. Let us hear the stories and the telling of the elders as they guided the future generations. The generations, they sit before you now.

Thank you for listening.

Commissioner Charlie Hale
City Planning Bureau
City Hall
Portland OR 972

RECEIVED
MAY 25 1993

Dear Comm. Hale:

My husband and I urge you to do all that is necessary to protect the Indian archeological resources that exist along the Columbia South Shore. Rather than encouraging further urban development we feel these resources — an irreplaceable treasure from our past — need to be preserved and studied and displayed (possibly as part of the historic preservation plan being completed by the city). Though of increase value in and of themselves, think of the tourism dollars they could generate, if properly displayed. Our history should not be sacrificed to urban development!!

Sincerely,
Eva Rickles

Eva Rickles
1515 S. W. Westwood Dr., Portland, OR 97201

PORTLAND, OR
MAY 24
PM
1993
972

Commissioner Charlie Hales
Portland Development Comm.
1120 SW 5th
Portland OR 97204

May 27, 1993

The Honorable Vera Katz
Members of the Portland City Council
1120 S.W. Fifth Avenue, Room 1002
Portland, Oregon 97204-1996

Re: Archaeological Resource Protection in Columbia South Shore.

Dear Mayor Katz and City Commissioners:

These comments represent my views as a professional archaeologist with 25 years of research experience in the Pacific Northwest, including the Portland area. The views expressed in this letter are mine, and do not represent the official or unofficial position of either Portland State University, or the Department of Anthropology at PSU -- my place of employment.

Prior to this testimony, I had read documents containing the original three options presented by Robert Stacey in his memorandum to the Council of April 12, 1993. Mr. Bob Glascock described the additional fourth option to me this morning over the phone. Rather than comment on each option, I will outline, from archaeological considerations, minimum steps that I believe any acceptable approach must include:

1) An 100% archaeological inventory of the South Shore development area to locate, to the full extent feasible, the archaeological heritage localities within the South Shore area. The previous 20% sample by PSU archaeologists constitutes a preliminary step, not an end point. (I would point out that if we found nine sites in a 20% sample, then we might expect to find at least another 30 to 40 sites in a complete inventory.)

2) Interim, management procedures

a) to protect the presently known sites while the inventory proceeds, and the management plan is being developed,

b) to handle discovery situations when previously unknown archaeological materials are encountered in this interim period;

3) development of an appropriate management plan based upon the inventory,

4) full consultation during and after development of the plan with the appropriate Native American groups.

To the possible objection that time is short, I remind the council that these issues have been presented to the city several times by several archaeologists during the past eight years. Problems and delays inevitable arise when archaeological heritage resources are left to the very last minute of a planning process, or are ignored altogether. Finally, let me urge the council not to opt for any approach that attempts to deal with the heritage resources of the south shore on a piecemeal basis -- either site by site or project by project. This will produce a protracted nightmare, resulting in animosity, unneeded expanse, and the completely unwarranted destruction of heritage sites.

Prior to European expansion into the region, what is now the Portland Metropolitan Area was home to one of the densest Native American populations in western North America, if not on the entire continent. These Chinookan speaking peoples lived along the Columbia from its mouth to the Dalles when Lewis and Clark entered the area. At the risk of seeming to exaggerate, the size of the pre-contact Chinookan population in the Portland area may have been

without parallel among hunter-gathering peoples world-wide. These peoples were decimated by epidemics beginning sometime in the eighteenth century. They are now represented by their descendants and an extraordinarily rich, complex, extensive and perhaps unique archaeological record, which is rapidly being eroded by vandalism, unauthorized excavations and urban development.

The surviving archaeological record in adjacent regions clearly indicates that we can eventually expect to find archaeological deposits in the Portland Metropolitan Area extending back to at least 11,500 years ago, if not much earlier. The regional record also suggests that we can expect the Portland area to have supported very large numbers of people for at least 3,000 years, if not more.

The Columbia South Shore was one of the more densely populated areas within what is now the City of Portland. The archaeological record in the South Shore can be expected to contain the remnants of permanent Chinookan towns[1], seasonal residences, and special use localities, including places devoted to plant food collection and processing, hunting, and probably social and ceremonial activities. While some of these localities are on the present ground surface, others will be deeply buried, as a result of Columbia River Floods.

Destruction of the archaeological and cultural resources on the South Shore is proceeding rapidly. The location of a major Chinookan town observed by Lewis and Clark was destroyed by the construction of the airport. Other sites are regularly being destroyed by ongoing activities by residents, developers and, quite astonishingly, city agencies.

Archaeological sites are irreplaceable. Once gone, they are gone, like extinct species or destroyed works of art. It is ironic that a city that is internationally known for its efforts in protecting, preserving and integrating historically and architecturally significant Euro-american buildings into its downtown development plans, is prepared to destroy its less visible but considerably more ancient and unique Native American heritage.

I strongly urge that the council to adopt a program that will protect that heritage.

Yours truly

Kenneth M. Ames

Kenneth M. Ames
Professor of Anthropology/Archaeology
Portland State University
Portland OR 97207
503-725-3318

[1] Chinookan towns in the Portland area ranged in size from 40 to 80 people up to 1200 to 1800 people.

PROGRAM OPTIONS
CULTURAL RESOURCES IN COLUMBIA SOUTH SHORE

Option 1: Initiate New Goal 5 Project (using existing inventory)

This option relies on existing inventory information, including a 20% surface reconnaissance survey already conducted in the district. It requires extra review where excavation activity uncovers archaeological resources (case-by-case). Each review would involve completing the analysis and deciding on appropriate protection measures.

Project Format
To implement this option, planning staff reviews the existing inventory, holds public workshops, prepares a report and recommendations, and takes code amendments through the public hearings process. The project may take 12 months, beginning July 1, 1993. Total project cost: $56,000 (not presently budgeted).

Pros
- Least-cost inventory approach.
- Earliest resolution of issue.

Cons
- Requires unbudgeted resources.
- Cultural advocates will likely challenge completeness of the inventory.
- May not be consistent with Goal 5 rule in light of recent court cases (Ramsey v. City of Portland, Columbia Steel Castings v. City of Portland).
- Owners will bear additional costs and delays at time of development.

Option 2: Initiate New Goal 5 Project (more inventory work)

This option adds to existing archaeological inventories in the district. The analysis and protection measures are determined in advance of developments. No funds have been committed for this project.

Project Format
The City manages a contract for archaeological services. Planning staff reviews the inventory for completeness and accuracy, holds public workshops, prepares a report and recommendations, and takes code amendments through the public hearings process. The project will take 12 to 18 months, beginning July 1, 1993. Total project costs: FY 93-4 = $116,000 (not in proposed budget); FY 94-5 = $28,000.

Pros
- Collects best possible information to develop a protection program.
- Satisfies state Goal 5 and related court cases.
- Targets protection to identified sites; minimizes case-by-case reviews.
- May avert costly legal challenges to Goal 5/cultural resource protection.

Cons
- Requires additional unbudgeted resources beyond those in Option 1.
- Requires landowner permission to grant access for field work.

Option 3: Protect Few Known Sites and Defer Goal 5 to Community Planning Process

This option defers the Goal 5 process until Columbia South Shore is reviewed as part of community planning. There is insufficient information on archaeological resources. Two probable residential sites can be protected by retaining the interim resource protection (sec) review for those sites. Other sites may be destroyed prior to community planning.

Project Format
No work in FY 93-4 or FY 94-5. According to the Planning Commission-approved schedule of community plans, this project would begin in 1998 as part of the Outer Northeast Plan. There will be efficiencies in the use of community plan public review, but an additional 0.5 FTE CPA is still needed at a cost of $25,000. Also requires an estimated $60,000 of consultant fees for inventory work (1993 dollars). Total project cost: $85,000 (1993 dollars).

Pros
- Commits to Goal 5 process when planning resources become available.
- Efficient use of public resources.
- Protects two known sites using Development Standards project (existing project).
- May avert costly legal challenges to Goal 5/cultural resource protection.

Cons
- Some archaeological sites may be destroyed during the deferral.
- Cultural advocates may challenge this approach, but with less basis for challenge than under Option 1.

Option 4: Protect Known Sites and Commit to Later Goal 5 Project

This option approaches cultural resource protection in two phases. In the first phase, the City initiates a Goal 5 process on known sites. Since the current interim resource protection (sec) review does not protect most known sites, other protection measures would be considered. A followup phase begins with the next community planning project for the district. The community plan will conduct a Goal 5 process on the remainder of the district not currently inventoried.

Project Format
For partial protection, planning staff prepares code language to amend the Columbia South Shore Plan District. The code amendments may be considered directly by the Council (per Development Standards project) or on referral to the Planning Commission (per CSS Natural Resources Protection Plan). Would require a series of public workshops and meetings with stakeholder interests. Partial measures may take 12 months, beginning July 1, 1993. The cost in FY 93-4 = $56,000 (not presently budgeted).

As part of a future community plan, the City would manage a contract for archaeological inventories on the remainder of the district. The Outer Northeast Plan is tentatively scheduled to begin in 1998. The second phase will make use of community plan public review, but an additional 0.5 FTE CPA would still be needed at a cost of $25,000. Also requires an estimated $60,000 of consultant fees for inventory work (1993 dollars). Total project cost: $85,000 (1993 dollars, see Option 3).

Pros

- Early protection of known sites.
- Commits to Goal 5 process when planning resources become available.
- Efficient use of public resources.
- May avert costly legal challenges to Goal 5/cultural resource protection.

Cons

- Requires additional unbudgeted resources (to prepare and adopt partial measures).

P.O. Box 1341
Portland, Oregon 97207
May 6, 1993

Commissioner Charlie Hales
City of Portland
1220 SW Fifth
Portland, Oregon 97204

Dear Commissioner Hales:

At the March 10 City Council hearing on Columbia South Shore development standards, two of us spoke on the importance of protecting the archaeological resources of the Columbia South Shore area. Since that hearing, we have considered ways in which we could assist the City in responding to these concerns. We believe that the following proposal offers the opportunity to allow all interested parties to participate in developing mechanisms that help the City address its Goal 5 responsibilities.

We recommend the appointment of a cultural resource task force with the following objectives:

1. Development of procedures for addressing archaeological resources in City land-use actions.

2. Development of guidelines for all City agencies to address archaeological resources in agency plans and activities.

3. Recommendation of a process for addressing the cultural values of archaeological resources.

We recommend that the task force be composed of representatives from the City Council, the development community, the Portland Development Commission, the Planning Bureau, the Native American community, the professional archaeological community, and non-agency planners.

We recognize that the task force would have limited time in which to complete its work and that it would entail staff and resource commitments from the City. These limits and staff and resource commitments are similar, however, even if the City proceeds on its own.

If the City decides to draft a response without a task force, we assume that interested parties will be active participants in preparing the response. We also believe that it is crucial that whatever is prepared minimally address the following points.

1. The City must formally acknowledge all of the archaeological resources currently recorded with the State Historic Preservation Office as constituting its basic Goal 5 inventory for archaeological resources. The available information on the characters and locations of these resources must be integrated into Planning Bureau records as soon as possible. Given the

sensitivity of this information (which the City may withhold from the public record under federal and state law), access to the information should be limited to Planning Bureau staff, other City agencies on a need to know basis, and landowners applying for City land-use permits.

2. Procedures need to be developed and implemented that consider effects to archaeological resources of proposed land-use actions permitted by the City. The procedures need to consider effects on known resources, and must also define a regular process for identifying resources not presently known.

3. Planning and actions by City agencies can affect archaeological resources. There needs to be a mechanism for agencies, especially the Bureau of Environmental Services and the Office of Transportation, to consider the impacts of their activities to archaeological resources.

4. The City needs to determine how it will address the cultural values of archaeological resources. Some archaeological resources may also be Goal 5 "cultural areas," and there may be Native American cultural areas that are not archaeological resources.

5. The procedures that are developed need to address archaeological resources and cultural areas as early as possible in the planning process.

We believe that a sincere determination by the City to responsibly treat these Goal 5 resources will resolve many of the concerns we have raised. We hope that the City will act soon, and we are ready to assist in the process.

Thank you for your attention to this matter.

Yours truly,

Judith Basehore Alef

Susanna Santos

David V. Ellis

cc: Mayor Vera Katz
Robert Stacey

Tim Simmons
Grand Ronde (OR Legal Svcs)

① Inventory (per option 2)

② Standards, esp for critical (like burial sites) areas

③ Govt-to-Govt communication

Louie Pitt, Jr.
Warm Springs

Anne Nickel

Address resources now, comprehensively (not case-by-case), not deferred. Balance w/ Goal 9. Restrictions should be clear & objective.

Cece-talk to Rick Holt

#4 is best.

Lyn Matei

X Option 1 too limited
X Option 3

Gary Vilna