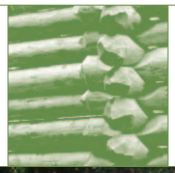


LEWIS AND CLARK NATIONAL HISTORICAL PARK

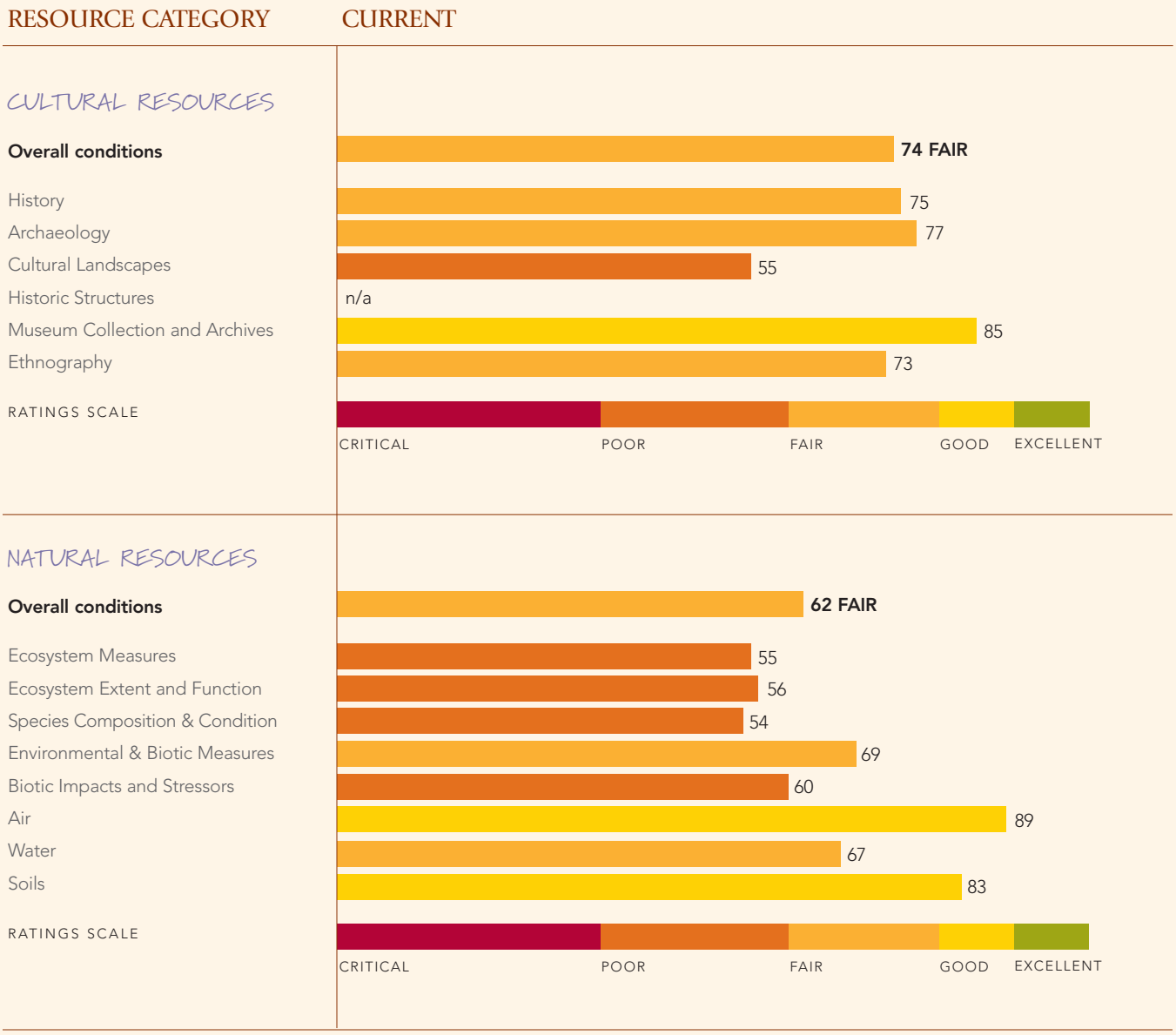
NATIONAL PARK SERVICE

On December 10, 1805, members of the Corps of Discovery began constructing a fort on the Netul River, now called the Lewis and Clark River, near present-day Astoria, Oregon. Fort Clatsop, named after the local Clatsop Indian tribe, was completed in a couple of weeks, and the party spent three and a half months there before commencing their return journey back east. The members of the expedition traded with the Clatsop people, who were friendly to the explorers. In addition to the fort, the Corps of Discovery also constructed a salt cairn near the present-day city of Seaside, Oregon, to extract salt from ocean water to help preserve and flavor meat for the return journey.

Upon leaving the fort on March 23, 1806, Lewis gave the structure and its furnishings to Clatsop Chief Coboway. Over time, the fort deteriorated and the land was claimed and sold by various Euro-American settlers who came to

This fort exhibit, built in 1955, burned down in 2005. Park staff and volunteers immediately began work on a new exhibit, which will be dedicated by the close of 2006.

Note: When interpreting the scores for natural resource conditions, recognize that critical information upon which the ratings are based is not always available. This limits data interpretation to some extent. For Lewis and Clark National Historical Park, 59 percent of the information requirements associated with the methods were met.



The findings in this report do not necessarily reflect past or current park management. Many factors that affect resource conditions are a result of both human and natural influences over long periods of time, in many cases before a park was established. The intent of the Center for State of the Parks® is to document the present status of park resources and determine which actions can be taken to protect them in the future.

the area. Knowledge of the exact site of the fort was lost, but interest in the fort remained strong. At the turn of the 20th century, the Oregon Historical Society bought some land thought to contain the original fort site. Public interest continued to grow, and in 1955, Astoria, Oregon, residents built a fort replica based on a floor plan described in Clark's journal. They also built a replica of the salt works.

Raising funds to adequately maintain the fort and surrounding facilities was a daunting challenge for the Oregon Historical Society. To ensure the site would be preserved and protected, Congress established Fort Clatsop National Memorial in 1958, which would be managed and maintained by the National Park Service. In 1978, the salt works replica was added to the park, bringing the total park size to 125.2 acres.

In November, 2004, Congress passed the Lewis and Clark National Historical Park Designation Act to preserve the cultural and natural resources associated with the Lewis and Clark Corps of Discovery on the Lower Columbia River, based on recommendations by a boundary study conducted by the National Park Service in partnership with Washington and Oregon States. The act redesignated Fort Clatsop National Memorial as Lewis and Clark National Historical Park, and provided for the inclusion of three additional sites in Washington State. The boundary study also recommended the establishment of the Lewis and

NATIONAL PARK SERVICE

KEY FINDINGS

- With the recent expansion of the park, several cultural resources studies are needed: historic resource study, ethnographic overview and assessment, administrative history, general management plan, archaeological overview and assessment, and cultural landscape report.
- The park's 1995 General Management Plan identified the need for eight additional resource positions (both cultural and natural) to adequately manage the park. This plan does not adequately address the park's current staffing needs, however, and a new assessment is needed. Immediate staffing needs include a natural resource compliance and program manager and a full-time cultural resource program manager. The current cultural resource position is part-time, subject to furlough. Adding a historian, archaeologist, and archivist would enable the park to adequately research, identify, evaluate, and protect cultural resources.
- Logging, agriculture, dikes, dams, water diversions, channel manipulation, and urban development have affected the region surrounding the park for the last 200 years, making the protected habitats within the park of even greater value. But these surrounding uses affect the park and have the potential to degrade some resources. As much as possible, park staff must strive to protect park resources and guard against damage caused by activities outside park borders.
- The park protects some diverse and important habitats such as old Sitka spruce forests and American beachgrass communities that provide habitat for protected wildlife species.
- Invasive plants are present throughout the park; reed canarygrass, English ivy, Scotch broom, yellow iris, and holly of particular concern. Park staff are developing a plan to prioritize nonnative plant management activities.
- Illegal shallow wells, levees, dikes, and withdrawals in the dry season lower water flows in the Lewis and Clark River, with the potential to affect fish populations. Freshwater flow through Lewis and Clark National Historical Park is necessary to maintain and restore natural aquatic systems, and this flow is threatened by the over-appropriation of water for human uses.

Park staff and volunteers came together to build a new Fort Clatsop exhibit using the same techniques employed in the original fort.

RESOURCE MANAGEMENT HIGHLIGHTS

- In November 2005, the park completed the Fort to Sea Trail, a 6.5-mile trail from Fort Clatsop to Sunset Beach on the Pacific Ocean. The trail winds through a diverse landscape of wetlands, deep woods, coastal lakes, sand dunes, and grasslands. It was constructed through a partnership of private businesses, federal, state, and county governments, nonprofit organizations, and with local community support and many hours of volunteer labor. Thirteen private companies donated time, expertise, and materials to design and build the trail.
- After many years of planning, the Park Service has acquired two parcels adjacent to Fort Clatsop on the south. By including these lands within the park, additional wildlife habitat is protected, as is the park's viewshed. The Weyerhaeuser tract consists of about 940 acres of undeveloped, heavily forested land formerly owned by Weyerhaeuser Corporation. The Conservation Fund purchased 921 of these acres for the park in 2004. The Ness Tract includes about 45 acres of diked pastureland adjacent to the Lewis and Clark River. Park staff in cooperation with the Columbia River Estuary Study Taskforce (CREST) have secured $322,000 to initiate restoration of this area by reconnecting it to the estuary.
- Over the last two years, the park has completed extensive vegetation restoration and landscaping at Netul Landing on the Lewis and Clark River. Diking, road construction, and industrial activity heavily impacted the site, and non-native plants competed for space with native plants. Restoration activities have replaced asphalt and concrete with about two acres of wetland habitat. Staff, volunteers, and local school children helped with the restoration by planting hundreds of trees.
- With funding from the National Park Service, and with collaboration and support from the Clatsop-Nehalem Confederated Tribe, the park produced a new film for the visitor center. *A Clatsop Winter Story* recounts the Corps of Discovery's stay at Fort Clatsop as told by Celiast, Chief Coboway's daughter. The film educates visitors about the Corps of Discovery and the cultural and political changes endured by the Clatsop-Nehalem people as a result of the expedition.

Clark State Historical Parks, prompting the states of Oregon and Washington to pass legislation in 2004.

The combined Lewis and Clark National and State Historical Parks preserve and protect sites on the lower Columbia River that are nationally significant to the Lewis and Clark story. They provide an opportunity for the parks to coordinate site interpretation and activities, expand the story of the lower Columbia River for visitors, and allow for coordinated research and resource management activities. Lewis and Clark National Historical Park sites in Washington State are Dismal Nitch, Station Camp, and Cape Disappointment. Oregon sites include Fort Clatsop, the Fort to Sea Trail, Netul Landing, the Salt Works, and Sunset Beach Recreation Area. Areas owned and managed by the Washington and Oregon state park systems were not included in this assessment.

The Dismal Nitch site commemorates the location where the Lewis and Clark expedition members were trapped by inclement weather for six days in November of 1805 on the north shore of the Columbia River. Station Camp was the site of a Chinook village in the late 18th and early 19th centuries that was visited by early American and European fur traders. Lewis and Clark stayed at Station Camp for ten days in November of 1805, and it was there that the expedition voted to decide where to spend the winter before returning home.

The Fort to Sea Trail in Oregon commemorates and roughly follows the route the expedition members took between Fort Clatsop and the Pacific Ocean. Netul Landing on the Lewis and Clark River was the location of a log-sorting yard for early settlers. It now serves as a parking area and shuttle bus station for Fort Clatsop, and it includes the trailhead for the Netul River Trail between Fort Clatsop and the Landing. The site allows visitors the opportunity to view wildlife along the river. Sunset Beach includes one of the trailheads for the Fort to Sea Trail, and provides visitors with

NATIONAL PARK SERVICE

The park partnered with local communities, private businesses, state parks, and organizations such as the Student Conservation Association to complete the Fort to Sea Trail, which runs 6.5 miles from Fort Clatsop to Sunset Beach.

access to the ocean beaches where they can view Cape Disappointment to the north and Ecola to the south.

On October 3, 2005, a fire completely destroyed the 1955 Fort Clatsop replica. The local community rallied and helped the Park Service build a new Fort Clatsop exhibit using the same techniques employed in the original fort and the first 1955 replica. On December 10, 2005—200 years after Lewis and Clark began to build the original fort—work on the new fort exhibit began. Logs were cut and assembled by hand with the help of volunteers. The new Fort Clatsop exhibit will be completed this fall and dedicated before the end of 2006.

The Center for State of the Parks assessed the conditions of cultural and natural resources at Lewis and Clark National Historical Park. Much information was available for resources within the former Fort Clatsop National Memorial, but information was not available for all aspects of cultural and natural resources within newly added units of the park.

Using all available information, Center for State of the Parks researchers determined that cultural and natural resources are in fair condition, overall, scoring 74 out of 100 and 62 out of 100, respectively. Museum and archival collections are in good condition, but additional cultural landscape work is needed. Air quality is good, but habitat fragmentation is a concern. The natural resources score is based on just 59 percent of the information required by the assessment methodology, however, and additional scientific research is needed to establish a comprehensive understanding of resource conditions.

NATIONAL PARK SERVICE

The placid waters of the Columbia River flow past Station Camp where Lewis and Clark landed and made camp on November 15, 1805. A Chinook village was also located there, and rich archaeological resources have been uncovered.

CULTURAL RESOURCES

HISTORY—RESEARCH NEEDED FOR NEW PARK UNITS

Historical research at the park includes historic resource studies dating to the late 1950s that are still used by park staff, as well as an administrative history for Fort Clatsop National Memorial. The administrative history, completed in 1995, details the historical background of the park, including information about the Lower Chinook, the winter encampment, salt works site, and management of the site under the Oregon Historical Society. It also includes a legislative history for Fort Clatsop and the salt works, land development of the site, visitor use, cultural and natural resources, interpretation, public and interagency relations, and a brief description of the 1995 general management plan. As a result of the expansion and renaming of Fort Clatsop National Memorial to Lewis and Clark National Historical Park, a new administrative history that documents recent establishing legislation will be completed by 2011.

The park has requested funds to complete a special history study of the lower Columbia River. It will supplement existing historical research and provide baseline documentation for interpretation, inventory, evaluation, and management of the historic resources associated with the history of the lower Columbia River. The study will address American Indian land use and occupation; exploration and discovery of the lower Columbia, both overland and maritime; settlement patterns and land use activities; early commercial enterprises such as the fur trade, logging, shipping, and fishing; the military presence in the 19th and 20th centuries;

and the ethnic groups who played a large role in the development of the lower Columbia. It will be conducted through a contract with a historian from a regional university.

The park's cultural resource manager serves as the park historian and is also responsible for all other facets of cultural resources management, which means that she can only spend about 15 percent of her time conducting historical research. A historian based in the Park Service regional office provides support when needed.

ARCHAEOLOGY—NEW DISCOVERIES EXPECTED

Lewis and Clark National Historical Park contains two identified archaeological sites, but additional discoveries on new parklands are expected. The premier archaeological site is the original site of Fort Clatsop, although the exact location of the fort is still unknown. Many archaeological excavations have been conducted within the area to identify the fort's original location, including one underneath the remains of the former replica. Since the land has been in continuous use by Euro-Americans for nearly 200 years, many artifacts dating from the 19th century have been unearthed.

The park's other documented archaeological site, located in the Station Camp unit, is important for a variety of reasons. It is a Chinook village that contained 36 plank houses dating to between 1790 and 1820. It is also the location where the Corps of Discovery landed and made camp on November 15, 1805. Additionally, it is the site where Clark surveyed the Columbia River and Pacific coast, and where all the members of the party voted to establish a winter camp in the area rather than continue back up the Columbia on a return trip during the winter. Station Camp was also an early fur trading site for American and European ships that predates the Hudson's Bay Trading Company in the lower Columbia River.

A lack of funds prevents the park from conducting an archaeological overview and assessment, a basic element of an archaeological resources management program. Without this work, park staff are unable to efficiently document and protect archaeological resources. The park will be requesting funding for an assessment after the park boundary expansion is complete. One of the available funding sources for an assessment is the System-Wide Archaeological Inventory Program (SAIP), from which the park secured funds to conduct archaeological research at the Fort Clatsop and Station Camp units. A recent archaeological project at the Station Camp site used $30,000 from SAIP to unearth more than 100,000 artifacts. The discoveries made during this project—including evidence of American Indian buildings and graves—halted highway work near the Station Camp unit.

In January 2006, the park completed archeological testing within the right of way for the U.S. 101 highway realignment at the Station Camp site. The highway realignment—a joint project involving the Washington State Department of Transportation, National Park Service, Washington State Historical Society, Federal Highway Administration, Washington State Parks and Recreation Commission,

NATIONAL PARK SERVICE

Highway realignment will shift U.S. 101 away from historic St. Mary's Church at the Station Camp site, and will allow for creation of a nine-acre riverfront park.

NATIONAL PARK SERVICE

Archaeological work at Station Camp made possible through funds from the System-Wide Archaeological Inventory Program uncovered more than 100,000 artifacts.

Washington State Historic Preservation Office, and the Chinook Tribe—will improve safety and allow the expansion of the site to create a nine-acre riverfront park. Archeological investigations uncovered the remains of a cannery and associated town, artifacts from the early fur trade, and American Indian objects. Components of the site are eligible for the National Register of Historic Places and will contribute to current understandings of regional history.

Lewis and Clark National Historical Park strives to ensure excellent care for archaeological resources by providing training on archaeological site protection to all staff members a few times each year. Park rangers and volunteers teach visitors about the importance of archaeological site protection, and signs also communicate this message.

The park's cultural resource manager also serves as the archaeologist. Additional support comes from staff at the Park Service regional office and archaeologists employed at other parks in the region. However, the park's archaeological obligations have grown since the park expanded, and additional archaeological surveys, work, and interpretation are now needed. The park would benefit from the addition of a full-time archaeologist.

HISTORIC STRUCTURES—PROTECTING FORT REPLICA IS A PRIORITY

There are no historic structures within Lewis and Clark National Historical Park, but the first Fort Clatsop replica, built in 1955, was treated as a historic structure, and the new fort exhibit, scheduled for completion in October, 2006, will also be treated as one. The new fort exhibit will include smoke alarms and a fire-suppression system. Fires are forbidden within fire rings inside the fort, and the park may relocate interpretive programs that use fire, such as wax melting and candle making, thereby retaining important interpretive value while meeting necessary safety and fire protocols.

CULTURAL LANDSCAPES—ADDITIONAL LANDSCAPES OFFER INTERPRETIVE OPPORTUNITIES

Lewis and Clark National Historical Park has not conducted a cultural landscape report since 1993, when the park encompassed just 125.2 acres and was known as Fort Clatsop National Memorial. The 1993 report identified three cultural landscapes: the Salt Works, located near the Pacific Ocean inside the city limits of Seaside, Oregon; the Fort Clatsop replica site; and the Canoe Landing, located on the Lewis and Clark River, near the fort replica site.

The Salt Works is a replica of the salt cairn that Lewis and Clark used to make salt by boiling seawater during the winter of 1805-1806. The Fort Clatsop exhibit has been rebuilt using a floor plan that is generally accepted to be the one used to build the original. The Canoe Landing, located 200 yards from the fort site, is likely where the Lewis and Clark Expedition landed its canoes.

With the renaming and expansion of the park to more than 3,000 acres, these three cultural landscapes are just the beginning of the possible landscapes present within Lewis and Clark National Historical Park. Plans are in place to produce a new cultural landscape report by 2009, which will identify cultural landscapes both within the original 125.2 acres and in the expanded parklands.

Additional cultural landscapes that have not yet been officially identified include the Fort to Sea Trail, Netul Landing, the trail from Netul landing, the trail from the Fort Clatsop site to the Canoe Landing, and forest and natural landscapes. Netul Landing, located on the Lewis and Clark River about one mile from the fort site, provides park visitors a view of both ethnographic landscapes and wetlands and estuaries. The park consulted with the Clatsop Nehalem Confederated Tribes of Oregon in the design and development plan for Netul Landing, and it uses the landing for canoe launching and

NATIONAL PARK SERVICE

Several times each year, canoe tours at Netul Landing give visitors an opportunity to paddle the same waters as Lewis and Clark and native Chinookan peoples.

NATIONAL PARK SERVICE

Exhibits include museum objects that teach visitors about American Indian culture.

demonstrations by the tribes. Interpretation of American Indian use of the area is one of the primary focuses of the site. The demonstrations give visitors a glimpse at possible uses of the Lewis and Clark River and its connection to the Clatsop and other Chinookan peoples. Netul Landing also provides additional parking for park visitors, and a shuttle bus transfers visitors to the fort exhibit and visitor center during the summer months.

The expanded Lewis and Clark National Historical Park will have many new cultural landscapes within its borders, including Station Camp, Clark's Dismal Nitch, and Cape Disappointment. Some of these sites are tied to land use by the Chinookan peoples and contact between local American Indian peoples and European explorers both before and after Lewis and Clark. Expansion of the park offers an important opportunity to explore and interpret these and other topics that go beyond themes relating to the Lewis and Clark Expedition.

MUSEUM AND ARCHIVAL COLLECTIONS—STAFF PROVIDE GOOD ACCESS TO PARK'S WELL-MAINTAINED COLLECTIONS

Lewis and Clark National Historical Park is home to rapidly expanding museum and archival collections that include more than 80,000 historic objects, ethnographic items, and natural history specimens. The park collections include American Indian baskets, beads, projectile points, tools, and mats. The historic collections include 19th-century woodworking tools, fur traps, rifles, musical instruments, and objects related to the Lewis and Clark Centennial. The natural history collections include a large herbarium, and bird and mammal specimens. The park's 2005 museum management plan outlines important activities and goals pertaining to the existing collections as well as anticipated growth resulting from park expansion.

The park's museum collection storage area and research library were rehabilitated recently. Storage cabinets and shelving units were

Fort exhibit, interpretive programs, and hands-on activities teach visitors about broad historic themes

At Lewis and Clark National Historical Park, rangers, staff, and volunteers strive to interpret the story of the Corps of Discovery encampment during the winter of 1805-1806, as well as the much larger narrative of the history and culture of the lower Columbia region.

The Fort Clatsop exhibit is a key interpretive feature at the park. Staff and volunteers use the fort as a starting point to convey broad historical themes such as interpretation of pre-contact Northwest coast hunters and fishermen; the ethnohistory of American Indian populations; adaptations to Northwest coastal environments; intercultural relationships among local American Indians and Euro-American explorers and traders; and British and United States exploration and fur trade.

Living history programs, reenactments, wood chopping and blacksmithing demonstrations, hands-on demonstrations such as candle making, and interpretive panels and displays explain the significance of Fort Clatsop in the overall history of the lower Columbia River region. Museum exhibits containing artifacts such as 18th- and 19th-century woodworking tools, musical instruments, paintings, a canoe, tribal clothing, baskets, glass beads, and taxidermy mounts further interpret the history of the lower Columbia River region and the Lewis and Clark Expedition.

Natural resources are also an important part of interpretation at Lewis and Clark National Historical Park. In November 2005, natural resource staff created a display about the original Oregon coast flora and provided interpretation of regional natural history at the county fairgrounds. Staff also created a popular publication and exhibit of the native plants of Fort Clatsop, and the Fort Clatsop Historical Association recently released a new teacher's guide and school curriculum centered on the park's natural resources.

In addition to Fort Clatsop, the park has several other interpretive sites: the Salt Works, Netul Landing, and the Fort to Sea Trail. The Salt Works, located in Seaside, Oregon, is a replica of a salt cairn constructed by members of the Corps of Discovery to extract salt from ocean water. Netul Landing, located along the Lewis and Clark River south of the park visitor center, includes a canoe/kayak launch for visitors who wish to explore the Lower Columbia River Water Trail. At the landing, visitors can view wildlife and read interpretive panels to learn more about the Corps of Discovery and Indians of the lower Columbia River. The Netul River Trail begins near Netul Landing and runs along the Lewis and Clark River to the visitor center.

The Fort to Sea Trail provides direct access from Fort Clatsop to the Pacific Ocean, more than six and a half miles away. Along the trail, visitors hike through coastal woodlands, wetlands, and pastures, and have the opportunity to observe coastal wildlife; part of the trail is wheelchair-accessible.

NATIONAL PARK SERVICE

Living history programs and demonstrations teach visitors about Fort Clatsop and the history of the lower Columbia River region.

ABOUT THE CHINOOKAN PEOPLE

The term Chinookan refers to the speakers of several closely related languages who occupied the Columbia River from the present town of The Dalles, Oregon, to the river's mouth, and along the coasts of present-day Washington and Oregon, from Tillamook Head in the south, and north to Willapa Bay in southwest Washington. The Chinookan language family can be divided into two branches—the Lower Chinook and the Upper Chinook. The Lower Chinook speakers included the tribes at the mouth of the Columbia River—the Chinook on the north bank and the Clatsop on the south bank. The Upper Chinook language was spoken along both sides of the Columbia from its estuary upriver through the Columbia River Gorge. Upper Chinook includes three languages: Cathlamet, Multnomah, and Kiksht. Journals written by Lewis and Clark are some of the most detailed written accounts of Chinookan culture prior to major disease epidemics that decimated many of the tribes.

The Chinookan peoples relied on the land, river, and ocean for their livelihood. They hunted a variety of animals for both food and as trade items, they collected berries and tubers, and used the bones, oil, and meat of beached whales.

The arrival of European explorers and fur traders brought metal cookware, glass beads, muskets, ammunition and powder, fishhooks, and other goods not previously available to American Indians on the west coast. An increasing white population also brought a number of devastating diseases such as malaria, small pox, and influenza, which decimated the Chinookan tribes.

As the Indian population declined and traders and missionaries began to resettle the lower Columbia region, they encountered resistance from resident tribes. The resistance culminated in the 1855 treaties that removed most of the tribes from the lower Columbia region to reservations throughout Oregon and Washington Territories. In spite of this forced relocation, the tribal groups have survived. Although most of the tribes are federally recognized, some are in the arduous process of obtaining formal recognition from the federal government.

The Park Service must make all efforts to build relationships with these traditionally associated groups, and must consult with them to accurately and appropriately manage and interpret ethnographic resources.

replaced with new cabinets that provide better security, better protection from environmental and physical damage, easier and safer staff access to objects, and some room for growth of the collections. The library was reorganized to make books and archives more accessible to researchers. Seven deficiencies listed on the park's Checklist Report for Museum Collections Preservation and Protection were fully corrected and one deficiency was partially corrected.

These important measures benefit the collections, but as the number of museum objects and archives grows, increased storage space will likely be needed. Options include converting existing space to museum storage or building a new storage facility. The 2005 museum management plan advances the idea of creating a research center focusing on the cultural and natural resources of the lower Columbia River region. The plan will allow the park, its partners, and the community to facilitate research activities related to the Lewis and Clark story, provide space for museum collections, and offer work and study areas for researchers.

The park's cultural resource manager also serves as the park's museum curator. A new museum technician was recently brought on, but with the growth of the park, one additional staff member may be insufficient. More staff may be needed to catalog items, create finding aids, complete a scope of collections statement, treat and preserve objects, and complete other necessary work. Public access to the museum and archival collections is quite good. Park staff provide valuable assistance to researchers interested in visiting the park, and are willing to mail copies of documents to researchers who are unable to visit.

ETHNOGRAPHY—INTERPRETATION IMPROVING AS PARK COLLABORATES WITH ASSOCIATED GROUPS

In the past, the park's ethnographic resources were not well recognized or interpreted. An interpretive film in the 1990s incorrectly labeled

the Clatsop people as extinct, to the dismay of young tribe members who visited the park and watched the film. Much ethnographic work has been done since then, and the park has expanded its focus on lower Columbia ethnographic history and archaeological studies. A new interpretive film entitled *A Clatsop Winter Story* correctly interprets associated peoples and ethnographic resources. Lewis and Clark National Historical Park continues to interpret the significance of Fort Clatsop while also enhancing the broader identity of the park before, during, and after Lewis and Clark's visit. Attention to traditionally associated peoples and local tribes is now a primary focus at the park.

Lewis and Clark National Historical Park's cultural resource manager is the park's tribal liaison and meets regularly with representatives from the Clatsop Nehalem Confederated Tribes, the Chinook Nation, the Confederated Tribes of the Grand Ronde, the Confederated Tribes of the Siletz, the Cowlitz, the Quinault, and the Shoalwater Bay Chinook. The park places a high priority on building relationships with these groups, and consults with them when planning and implementing projects that might affect them.

The park hosted a Chinook Nation Canoe Naming Ceremony to celebrate the completion of three traditional Chinook canoes constructed for Lewis and Clark National Historical Park, the Chinook Nation, and for the Chairman of the Chinook Council. The park's canoe, built from a 1,100-year-old cedar tree by a Chinook tribal member, language instructor, and artist, is launched at least twice each year to acknowledge its existence as utilitarian art and a representation of Chinookan culture. The launching of the canoe is an example of the continued interpretation partnership between the Chinookan tribes and Lewis and Clark National Historical Park. Partnerships such as this enable park staff to accurately and appropriately portray traditionally associated groups during presentations within the park and to incorporate these interpretations into the museum exhibits and other programs. Between launchings, the canoe is used in an interpretive and educational display at the park's visitor center.

NATIONAL PARK SERVICE

The park's new interpretive film tells the story of Lewis and Clark during the winter of 1805-1806 through the eyes of the Clatsop and Nehalem people. This photo, taken during filming, shows Dick Basch—a Park Service employee and direct descendant of Clatsop Chief Coboway—paddling his family's canoe.

In order to strengthen and continue these relationships, the park needs an ethnographic overview and assessment, which would identify all tribes associated with the park and provide traditional-use information for interpretation and consultation. The assessment would identify areas where park activities could affect traditionally associated tribal groups, and would help park staff better understand how the lower Columbia Chinookan peoples used the surrounding environment and resources. This knowledge will help park staff improve and expand interpretation. The park recently submitted a proposal for an assessment, but did not receive funding; the park is in the process of resubmitting the request.

NATIONAL PARK SERVICE

Western hemlock and Sitka spruce forests once covered much of the region around the park, but logging decimated many areas. Lewis and Clark National Historical Park contains some of the few remaining examples of old Sitka spruce forests in Clatsop and Pacific counties.

NATURAL RESOURCES

LAND USE—HISTORICAL AND CONTEMPORARY USES AFFECT PARK

The separate sites of the park have diverse land-use histories. The Clatsop-Nehalem and Chinook Indians have used these lands for thousands of years. Historically, the Chinook lived on the north shore of the Columbia River, while the people on the south shore called themselves Clatsop. These societies depended on fish, sea lions, elk, deer, beaver, rabbits, berries, and roots for their sustenance. They constructed cedar plank houses and built cedar canoes for transportation.

Euro-Americans traded in the area in the late 18th century, but widespread settlement did not occur until the decades after Lewis and Clark visited. Since then, the various units within Lewis and Clark National Historical Park have been used for many purposes. The area was largely old-growth forest composed of western hemlock and Sitka spruce until a lumber mill was constructed; the area was completely logged during the early 1850s. After the mill closed, a fruit orchard was planted. Then came agriculture and charcoal and clay mining.

In the 200 years since Lewis and Clark visited the area, much of the region surrounding Lewis and Clark National Historical Park has been altered by logging, agriculture, dikes, dams, water diversions, channel manipulation, and urban development, increasing the value of protected and recovering habitats within the park. According to the Lower Columbia River Estuary Partnership, tidal swamps have declined by about 77 percent since the late 1800s, and remaining marsh habitat is just 43 percent of

what was present historically. Coastal old-growth forests are virtually gone. The extent and functionality of native ecosystems in the region are significantly impaired.

Today, the lands around Lewis and Clark National Historical Park are used for commercial timber harvest, beef and dairy cattle production, and grass hay cultivation. Highways and growing residential areas border some park units. The landscape surrounding the park is highly fragmented, but no studies have been done to quantify the effects of surrounding habitat fragmentation on ecosystems within park boundaries.

Dismal Nitch is bordered by privately owned timberland, which if harvested, has the potential to affect wildlife and edge plant communities at this site. This park unit is also adjacent to Washington State Highway 401, which separates it from the natural estuarine influences of the Columbia River by riprap and asphalt. This certainly has had an effect on shoreline plant communities, and has created pathways for the introduction of non-native plants. Station Camp is surrounded by forestland that was clearcut or selectively cut between 1950 and 1965. Historic farms dating to the 1940s are also adjacent to this unit, and U.S. Highway 101 currently divides Station Camp's nine acres.

The north end of Cape Disappointment is affected by a new resort development in the city of Ilwaco, and other private property adjacent to the north boundary was recently clearcut. Construction of the Columbia River shipping channel jetties affected sediment movement, resulting in major erosion and deposition of coastal sand dunes and bluffs. According to a report by the Washington State Parks and Recreation Commission, about 260 acres of sand have been lost from Cape Disappointment beaches in the last 20 years.

Although development fragments the surrounding landscape and isolates parts of the park, this situation is improving at the Fort Clatsop unit with the acquisition of the Ness and Weyerhauser tracts. After many years of planning, the Park Service recently acquired two parcels adjacent to Fort Clatsop on the south. The Weyerhaeuser tract consists of about 940 acres of undeveloped, heavily forested land formerly owned by Weyerhaeuser Corporation. The Conservation Fund purchased 921 of these acres for the park in 2004. The Ness Tract includes about 45 acres of diked pastureland adjacent to the Lewis and Clark River that has been used for livestock grazing. Park staff in cooperation with the Columbia River Estuary Study Taskforce (CREST) have secured $322,000 to initiate restoration of this area by reconnecting it to the estuary.

LANDSCAPES—PARK PROTECTS IMPORTANT HABITATS

In spite of widespread human-wrought changes in natural landscapes within and beyond the park over the last two centuries, Lewis and Clark National Historical Park protects some diverse and important habitats that are made even more precious because of their relative scarcity.

Throughout the park—especially at Fort Clatsop, Netul Landing, Sunset Beach, and Cape Disappointment—estuarine and palus-

NATIONAL PARK SERVICE

The park provides important food and habitat for Roosevelt elk.

NATIONAL PARK SERVICE

Sunset Beach is home to large, well-preserved patches of American beachgrass and habitat for the federally listed threatened Oregon silverspot butterfly.

trine wetlands are of great value because most such habitats have been lost from the Columbia River estuary. Several acres of willow shrub-scrub wetland at Fort Clatsop and Netul Landing are thriving and provide important winter browse for Roosevelt elk (*Cervus canadensis nelsoni*).

Within the state of Washington, Cape Disappointment has been identified as a priority habitat for peregrine falcons (*Falco peregrinus*), bald eagles (*Haliaeetus leucocephalus*), and osprey (*Pandion haliaetus*), and it contains legally protected seabird colonies. Cape Disappointment also contains some of the few remaining examples of old Sitka spruce forests in Clatsop and Pacific counties—important habitat for federally listed threatened marbled murrelets—as well as two globally imperiled plant associations. Baker Bay at Cape Disappointment is an important waterfowl wintering area.

Sunset Beach contains some of the best preserved and largest patches of remaining native American beachgrass (*Ammophila breviligulata*) community, most of which has been converted to residential areas throughout the region. This unique site has not been completely colonized by non-native grasses such as the European beachgrass (*Ammophila arenaria*), as many other dune sites in Clatsop County have. The federally listed threatened Oregon silverspot butterfly (*Speyeria zerene hippolyta*) is dependent on certain habitats at Sunset Beach that are increasingly rare along the coast.

PROTECTED SPECIES—THREATENED AND ENDANGERED SPECIES TAKE REFUGE IN PARK

Parts of the park are home to wildlife species that have special status. Cape Disappointment contains extensive suitable habitat for marbled murrelets (*Brachyramphus marmoratus*), federally listed as threatened, and bald eagles winter at Cape Disappointment and nest near Netul Landing. The brown pelican (*Pelacanus occidentalis*), federally listed as endangered, migrates through the Cape Disappointment site, and peregrine falcons (*Falco peregrinus*), formerly listed as endangered, nest there. The entire park is located within the historical range of the spotted owl (*Strix occidentalis*), a species federally listed as threatened, but no spotted owl populations have been documented within parklands.

Federally listed threatened or endangered fish found within park boundaries include steelhead, chinook salmon, coho salmon, chum salmon, and coastal cutthroat. Bat surveys have confirmed the presence of six federal species of concern: fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), California myotis (*Myotis californicus*), long-eared myotis (*Myotis evotis*), and Townsend's big-eared bat (*Plecotus townsendii townsendii*). This last bat, which occurs in old-growth forests, is known to be very intolerant of human disturbance.

The park is also home to a number of Oregon and Washington state-listed plant and

animal species. Northern red-legged frogs (*Rana aurora*), listed in Oregon as sensitive, are found at Sunset Beach and Fort Clatsop. Cape Disappointment is home to the only recorded populations of ocean-bluff bluegrass (*Poa unilateralis*) in the state of Washington, where it is listed as threatened. This unit also houses Washington's only known population of coyote brush (*Baccharis pilularis*), a state-listed endangered plant threatened by non-native species and beach regression.

Although the park provides some good habitat for Roosevelt elk, populations are declining. A herd of about 50 Roosevelt elk uses land at Fort Clatsop, but the small size of the park forces the elk to rely on adjacent lands for habitat and food as well. Legal and illegal harvesting, habitat fragmentation, habitat change, harassment from dogs, disease, and parasites are major stressors to the elk, and recent fencing at the nearby airport substantially reduced forage used by the herd. Fallow pasturelands and naturally regenerated willow in wetlands provide some forage, but it will continue to be important to monitor the elk population.

RESOURCE THREATS—INVASIVE SPECIES POSE PROBLEMS THROUGHOUT PARK

Noxious riparian species are major threats throughout lower Columbia River wetlands, including areas at Fort Clatsop, Netul Landing, and Cape Disappointment. Reed canarygrass (*Phalaris arundinacea*), extensively planted as a forage plant from 1940 to 1960, degrades plant communities by competing with and excluding native species. Yellow iris (*Iris pseudacorus*), another serious invasive plant that spreads through floating seeds, is also found at Cape Disappointment and Fort Clatsop.

Park uplands face a variety of non-native, invasive plants. A major holly (*Ilex aquifolium*) infestation along the Lewis and Clark River and Netul Landing continues to spread, although most trees were manually removed in 2002. Netul Landing also has Scotch broom (*Cytisus scoparius*), gorse (*Ulex europeaus*), and English ivy (*Hedera helix*). The shrub uplands at Station Camp are dominated by Scotch broom. At Sunset Beach, native sand-dune sedge (*Carex pansa*) and red fescue grass (*Festuca rubra*) are threatened by non-native sweet vernal grass (*Anthoxanthum odoratum*) and European beachgrass (*Ammophila arenaria*). Additional non-native plants are found further inland. English ivy is of grave concern at Cape Disappointment because it strangles trees and suffocates shrubs and groundcover.

The park is creating a management plan to address priorities for invasive species control, with efforts concentrated on Scotch broom, purple loosestrife (*Lythrum salicaria*), English ivy, holly, and yellow iris. Some work has already been done. In 2002, staff spent 1,254 hours on weed control efforts for Scotch broom, English ivy, gorse, and Himalayan blackberry (*Rubus discolor*). As this work proceeds, it will be important to monitor success and remain vigilant in fending off new incursions of known and encroaching species.

NATIONAL PARK SERVICE

Invasive plants are serious problems within some of the park's wetlands. Staff are creating a management plant to address the most damaging species.

AESTHETIC RESOURCES

Protecting viewsheds reminiscent of the time the Corps of Discovery traveled in the area is an important park goal. River corridor property recently acquired from the Ness family protects the viewshed looking up the Lewis and Clark River to Saddle Mountain, and the Fort to Sea Trail offers an overlook of the mountains. One reason for the addition of Station Camp was to protect the views. Oceanfront sites such as Sunset Beach and Cape Disappointment provide views of the rugged shoreline in a relatively natural state. Aesthetic resources are limited at some sites, however, because of their small size and adjacent highways (Station Camp, Sunset Beach, Dismal Nitch), airports (Fort Clatsop), and residential developments (Sunset Beach).

NATIONAL PARK SERVICE

Cape Disappointment's beautiful landscape is priority habitat for peregrine falcons, bald eagles, and osprey.

WATER AND AIR QUALITY—BOTH ARE GENERALLY GOOD, BUT ADDITIONAL MONITORING NEEDED

Specific information on water quality within Lewis and Clark National Historical Park is generally lacking, except at Fort Clatsop. The Oregon Department of Environmental Quality has been monitoring water quality in the Lewis and Clark River near Fort Clatsop since 1963, and a baseline water quality analysis was conducted between 1995 and 1997 in ten diverse fresh and brackish water bodies around the park. Although sources differ with regard to some water quality parameters, they generally agree that water quality is at least fair, if not high, for many parameters.

Water quantity is affected by withdrawals by nearby Warrenton, which gets drinking water from the Lewis and Clark River. Water is diverted from June through September. Water shortages have lasted a few days in the past, but could eventually extend to months. Illegal shallow wells, levees, dikes, and withdrawals in the dry season also lower water flows in the Lewis and Clark River, with the potential to affect fish populations. Freshwater flow through Lewis and Clark National Historical Park is necessary to maintain and restore natural aquatic systems, and this flow is threatened by the over-appropriation of water for human uses. Management objectives focus on restoring river and watershed conditions and anadromous fish populations to 1806 levels.

Air quality at Lewis and Clark National Historical Park is generally considered to be excellent, with no known violations of national air quality standards. The park does not have any air quality monitoring stations, however, so regional data are used to estimate conditions. The park benefits from ocean winds that tend to clear away any pollutants.

RESTORATION—PARTNERSHIPS MAKE PROJECTS POSSIBLE

Early efforts to improve wetlands occurred

shortly after the park assumed management control of Fort Clatsop. At that time, the Park Service restored a small patch of shoreline pasture along the Lewis and Clark River to tidal marsh. This area now provides a functioning example of a system with diverse species.

Recently, the park renewed wetland restoration efforts with a proposed project for the newly acquired Ness Tract to restore natural hydrology on 45 acres of diked pastureland. To date, park staff in partnership with the Columbia River Estuary Study Taskforce (CREST), have been successful in acquiring $322,000 to collect and analyze baseline data and to design and implement restoration projects that could include tidegate removal, culvert retrofits, culvert restoration, pasture and historic channel fill removal, and/or roadbed protection. The return of diurnal tidal cycles to the site is expected to encourage the revival of emergent marsh and Sitka spruce swamps.

Efforts to restore historic forests at Fort Clatsop have a long history as well. Western red cedar trees have been planted and red alder trees have been removed to help establish Sitka spruce. As part of the commemoration of the bicentennial of the Lewis and Clark Expedition, the Park Service and ReTree International have involved 5th- and 6th-grade children in planting trees, shrubs, and dune vegetation at Netul Landing, Sunset Beach, and the Fort to Sea Trail. The park has initiated work to assess forest restoration and develop an implementation plan in partnership with the University of Washington.

Although the park is seriously challenged by a lack of resources to carry out inventories and conduct restoration—only one full-time and two part-time natural resources employees are on staff—it partners with many other organizations to achieve its goals. An excellent example of this is the new Fort to Sea Trail, which brought together many different public and private groups. Extensive bridges and other structures to protect wetlands were created with donated time, expertise, and money. Another good example of collaboration is the work done by Astoria High School to monitor fish within Fort Clatsop. This volunteer effort has generated some important data for the park, while enhancing the education of Oregon's youth.

The park also works with other organizations on projects. The Lower Columbia River Estuary has funded habitat restoration and enhancement projects at Fort Clatsop. Other partner organizations include The Conservation Fund, private landowners, the Columbia River Estuary Study Taskforce (CREST) of Astoria, Oregon, the Clatsop County Road Department, the Youngs Bay Watershed Council, and the Youngs Bay Diking District.

WHAT YOU CAN DO TO HELP:

- **Support or become a member of groups helping to protect the parks:** Knife River Indian Heritage Foundation (www.kniferiverfriends.org), Lewis and Clark Trail Heritage Foundation, Inc. (www.lewisandclark.org), Friends of Fort Union Trading Post (701.572.9083), Fort Union Association (www.nps.gov/fous/aboutfua.html), Nez Perce Trail Foundation (www.nezpercetrail.net), Friends of Bear Paw, Big Hole, and Canyon Creek Battlefields (www.friendsnezpercebattlefields.org), and others.
- **Volunteer in the Parks.** Many parks are looking for dedicated people who can lend a helping hand. To learn about opportunities, contact the parks:

  Lewis and Clark National Historic Trail (402.661.1804)
  Missouri National Recreational River (402.336.3970)
  Knife River Indian Villages National Historic Site (701.745.3300)
  Fort Union Trading Post National Historic Site (701.572.9083)
  Nez Perce National Historical Park (208.843.7001)
  Lewis and Clark National Historical Park (503.861.2471)
- **Become an NPCA activist and learn about legislative initiatives affecting parks.** When you join our activist network, you will receive *Park Lines*, a biweekly electronic newsletter with the latest park news and ways you can help. Join by visiting www.npca.org/takeaction.