

Environmental Site Tours

Sunday, November 6, 2005

Each year, the NHEC Conference offers our students—America’s future environmental professionals and leaders—the opportunity to visit a variety of environmental sites. These tours have spanned a range of environmental and natural resource interests; including environmental engineering; water management and reclamation; natural resource management; pollution abatement and environmental remediation; park management; wilderness/wildlife conservation; historical and cultural preservation; and more.

During the site tours, students have the opportunity to see the latest techniques and to learn from experts in the field. The tours are also an opportunity to explore and value—up close—America’s scientific, natural, cultural, and historical treasures. They are designed to be substantive and educational—but also fun.

There will be five site tours this year, hosted by our federal sponsors. The site visits will begin around 9 am and depart from the Hilton Hotel. Most tours last all day. Students will travel by bus, and we will provide a box lunch and bottled water. All students will be back at the hotel by 5:30 pm at the latest. Some tours have size limits, so be prepared to go to your second choice. Most tours actually begin once you board the bus; you may see a video along the way, or your guide may speak on the drive to the site.

All students will be escorted to and during their site visit. All tours have been planned by professionals, with your safety in mind. Always follow their instructions.

Please remember—step lightly and respectfully on the earth. And most important, take only pictures and memories—do not disturb, damage, or take home with you any artifacts, rocks, plants, or anything else without the express permission of your site tour guide. (Take note: when on federal land, you must obey federal law. In many places, especially national parks, it is illegal to disturb or

damage natural resources).

Regarding dress, keep several things in mind. First, all tours include time outside, so bring sturdy walking shoes, and be sure to watch your footing. Be sure to wear pants (not shorts), but no tank tops or other inappropriate clothing. **Dress like you’re going on a hike.**

Regarding the weather, please note that the weather is highly changeable in Seattle this time of year. You can expect temperatures in the mid-50s. It will be chilly and rainy. **Be sure to dress in layers (bring a warm jacket), wear a hat, sunscreen, and sunglasses! And drink plenty of water.**

Finally, remember to bring your camera and binoculars. You will be seeing some of America’s most spectacular scenery and historical sites. Listen, learn and enjoy!

❖ **Klondike Gold Rush National Historical Park** *(sponsored by the National Park Service)*

This tour will give students a unique look at a small urban national park that is undergoing a variety of major changes. Klondike Gold Rush National Historical Park was created in 1976, along with its sister park in Skagway Alaska, to preserve and interpret the story of the 1897-98 stampede to the Yukon gold fields in Alaska.

Seattle was a major “jumping-off” point for the thousands of gold prospectors from all across America who rushed to Seattle (and from there by ship to Alaska), all in the hopes of striking it rich in the gold fields. Although many did find gold and wealth in Alaska, many did not, but stayed anyway to build Alaska, first as a territory and then a state. For Seattle, the gold rush brought significant changes, since many who finally arrived in Seattle liked it so well that they never went onto Alaska, thus providing a crucial population and economic infusion into what was a small city at the time.

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And, many who did go to Alaska eventually returned to Seattle and put down roots there, helping to build the city. Thus, the story of the Alaska gold rush is also a story of Seattle.

Located in the heart of downtown Seattle, this small park works cooperatively with a variety of park neighbors, from areas businesses to community and museum organizations, to preservation groups and the City of Seattle.

The park is comprised of a visitor center/museum, theater, and administrative offices. The historic neighborhood itself serves as the backdrop for the majority of the park's stories. The park is also undergoing a number of major changes, including actually relocating its visitor and administrative facilities. The park's administrative offices have already moved into their new location. The visitor center will relocate later in 2006. In addition to coordinating the move, the park is designing and fabricating new exhibits for the new location. This \$1.3 million dollar project is going on simultaneously with the planning, building renovations, and fundraising efforts.

Join Park Superintendent Debbie Conway to learn more about the Klondike Gold Rush and the challenges this small park faces in an urban environment. Tour the park's present visitor center as well as the new location and get an insiders look at the planned exhibits and the efforts put forth to coordinate a major partnership project.

❖ Mount Rainier National Park

(sponsored by the National Park Service)

Established by Congress in 1899, Mount Rainier is the fifth oldest national park in the National Park System. Mount Rainier is the premier icon of the Pacific Northwest, with its spectacular image pervading the daily views of millions of people in the Seattle area and beyond. With its

tall, snow-capped mountains and glaciers visible for many miles in every direction, has come to symbolize the Pacific Northwest region. The park's resources are accessible to a large, diverse, and growing population. It is particularly known for its challenging mountain climbing—summit climbs on Mount Rainier are considered required training for bigger mountains around the world, including Mount Everest. There is an average of 11,000 summit attempts annually.

While the park is best known for its wondrous natural resources and world class recreational opportunities, it is also rich in cultural history, including Native American uses dating back thousands of years. Its historic infrastructure is the product of the first master planning process in the National Park System, and it remains the most complete example of the results of such planning, with showcase examples of "park rustic" architecture. The historic infrastructure forms the basis of the Mount Rainier National Historic Landmark District designated in 1997, encompassing all park roads, historic developed areas, and historic backcountry structures.

Mount Rainier encompasses over 235,625 acres, of which approximately 97% were designated wilderness in 1988, and 3% were designated a National Historic Landmark District in 1997.

Mount Rainier contains the greatest single peak glacial system in the United States, with 26 glaciers radiating from the mountain's summit and slopes. Mount Rainier is also the second most seismically active volcano in the Cascade Range. On a clear day, people 200 miles away can see the mountain towering over the landscape. The park's elevations extend from the mountain's summit at 14,410 feet to the forested entrance road at about 1,700 feet

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above sea level. The flanks of the mountain are drained by five major rivers and their tributaries. The park's boundaries encompass pristine stands of old growth forests, subalpine meadows, an inland rain forest, alpine lakes, waterfalls, geothermal hot springs and mineral springs. The park's significant biodiversity reflects the varied climatic and environmental conditions encountered across the park's 12,700 foot elevation.

The group will be joined by Park Interpreter Jim Ross for the trip from their hotel to Mount Rainier. Jim is a high school teacher who has spent over 30 summers working at Mount Rainier National Park as a Park Interpreter. Once the group arrives at the park, they will be met by Superintendent Dave Uberuaga and he will discuss current park issues and behind the scenes discussions on challenges for park managers. This will be at the Henry M. Jackson Memorial Visitor Center, where the group will also have an opportunity to visit the bookstore and gift shop.

Travel time to and from the hotel to park will take 2–3 hours each way, so limited time will be available while in the park.

❖ **Mt. Baker Snoqualmie National Forest** *(sponsored by the U.S. Forest Service)*

The USDA Forest Service operates 155 national forests in the United States. The Mt. Baker-Snoqualmie National Forest is one such forest. It runs extends more than 140 miles along the western slopes of the Cascade Mountains from the Canadian border to the northern boundary of Mt. Rainier National Park, in Washington State. A large population in the Seattle area and beyond, coupled with easy road access, makes the Mt. Baker-Snoqualmie National Forest one of the most visited National Forests in the country.

Along with its recreation programs, the Mt. Baker-Snoqualmie National Forest has significant programs in fisheries and wildlife habitat, soils and watershed, lands and minerals, wood fiber, and human and cultural resources. Nineteen federally-recognized Tribes still utilize areas of the Mt. Baker-Snoqualmie National Forest that were once inhabited or used by their ancestors. They, along with interest groups such as environmentalists, recreationists and timber industry representatives, take an active interest in the management of the Forest and its resources.

Students on this site tour must remember to wear layers of clothes as it will be chilly, and probably rainy on or near the Forest.

❖ **King & Pierce Counties, WA** *(sponsored by the USDA Natural Resource Conservation Service)*

While most federal agencies deal with natural resource issues on public land, the Natural Resource Conservation Service, a part of the U.S. Dept. of Agriculture (USDA), is the only federal agency to work on private land, with private land-owners and agricultural producers. As the majority of all land in the United States is actually privately owned, environmental and conservation issues on these lands is extremely important, and a major undertaking.

NRCS in particular helps farmers and ranchers with many natural resource issues, and works closely with these landowners to deal with the environmental impacts of these traditional activities on the land. The Farm Bill offers American farmers incentives to voluntarily conserve natural resources on privately owned farmland. Its conservation provisions help reduce erosion, guard streams and rivers, restore and establish fish and wildlife habitat, and improve air quality. A variety of financial incentive programs are available to farmers to help

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implement conservation practices, and NRCS is there to provide technical assistance to help implement these conservation practices.

On this tour, students will visit two producers who are participants of the Environmental Quality Incentives Program (EQIP) and the Farm and Ranch Protection Program (FRPP), two important programs of the Farm Bill.

Stop 1 – Swiss Acres Dairy

In 1997 this family-owned dairy received a ten year EQIP contract to implement conservation practices which helped protect water quality on the farm. The farm is located in the Agricultural Production District in the Enumclaw Plateau area of King County. The EQIP program has allowed the producer to install practices that help contain manure and runoff from the facility and store it in a manure storage pond during the winter months. This facility has completely implemented all facets of their EQIP contract.

Topics to be discussed on this tour include nutrient management; water quality; producers' perspective on implementing an EQIP contract; and future technological considerations for dairy producers in this area

Lunch Break, visit the Green River Recreation Area

Stop 2 – Murray Family Tree Farm

In 2005 this forestry and beef operator received a 5 year EQIP contract to help re-establish forest cover and implement practices to protect water quality and soil conditions. The farm is a family-owned operation and is also enrolled in FRPP. It is located in the Agricultural Production District of King County in Auburn and is adjacent to Newaukum Creek, a tributary of the Green River. The Newaukum Creek provides important spawning, rearing, and mi-

gration habitat for chinook, coho, steelhead, chum, cutthroat, sockeye, and pink salmon.

Topics to be discussed include reforestation, water quality, grazing livestock in forest land, producers input on EQIP, and contract implementation

Return Trip to Sea-Tac Hilton Hotel

If time allows we will take a scenic trip back to the hotel through the South Prairie area of Pierce County. We will stop at the Inglin Farm, a 107-acre former dairy farm just west of the southeastern Pierce County community of South Prairie, which was recently purchased by the Cascade Land Conservancy and Pierce Conservation District to help save salmon habitat. The property includes a 1.3-mile section of South Prairie Creek, a salmon-rich tributary of the Carbon River. Title to the property has been assigned to the Pierce County Conservation District. The tour will include discussion of salmon, geomorphology, climate and natural features of the area.

NOTE:

Wear Suitable Clothing and Footwear on this Site Tour: Be prepared for rain; bring rain gear, hiking boots or rubber boots.

Biosecurity Procedures: Basic biosecurity measures will be in place, disinfectant or disposable boots will be provided by NRCS.

❖ Issaquah Salmon Hatchery, Hiram Chittenden Locks, and Lower Duwamish Waterway *(sponsored by the U.S. EPA)*

The Issaquah Salmon Hatchery, in operation since 1936, serves as a unique "outdoor laboratory" that focuses on Pacific salmon, watershed stewardship, bolstering native and threatened salmon and hatchery operations. Juvenile

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salmon released from the hatchery make an amazing journey to sea by migrating down Issaquah Creek to Lake Sammamish, Lake Washington, Lake Union, the Lake Washington Ship Canal, Puget Sound, the Strait of Juan de Fuca and finally the Pacific Ocean.

The hatchery was significantly upgraded in 1997 and is now run by the WA State Department of Fish and Wildlife, assisted in tours by the Friends of the Issaquah Salmon Hatchery. A senior biologist will lead this tour.

Adult salmon return to the hatchery from late August through December; as many as 10,000 to 30,000 salmon may return. Approximately half of the fish raised at the hatchery are released directly into Issaquah Creek. The rest are distributed as eggs to supplement naturally spawning fish in the Lake Washington basin.

The tour will then continue on to the Hiram M. Chittenden Locks along the Lake Washington Ship Canal. These are made up of two navigational locks, a dam and spillway, a fish ladder, a botanical garden and a regional visitor center. They are run by the US Army Corp of Engineers. The locks allow vessels to pass from fresh water Lake Washington, into the salt water of Puget Sound. An amazing place and an amazing engineering feat. The

Chinook (king) salmon have arrived at the Locks and are now passing through the fish ladder into Lake Washington

The last and most significant part of the tour is the Lower Duwamish Waterway, Seattle's major industrial corridor. But it is also a "Superfund" Cleanup site, a home to salmon and other wildlife, and a focal point for people living in the surrounding neighborhoods. Approximately one-third of the nearby residents are Hispanic. Boat manufacturing and repair, marina operations, metals fabrication, combined sewer overflows, and over one hundred storm drains have contributed to contamination of the waterway.

EPA added about five miles of the waterway to its list of Superfund cleanup sites in 2001. EPA, the Washington State Department of Ecology, and other partners are investigating and cleaning up sediment contamination under Superfund and other programs. The investigation will include an assessment of potential risk to the health of people, fish, wildlife, and the environment. Visit the river to learn its history, cleanup and prevention of pollution, habitat restoration, and outreach to the Hispanic community.