

National Hispanic Environmental Council



**NHEC 10<sup>th</sup> Annual  
MINORITY YOUTH ENVIRONMENTAL  
TRAINING INSTITUTE**

**August 12--21, 2011, Glorieta, NM**

**“10 DAYS OF LEARNING, A LIFETIME OF EXPERIENCE”**

**DAY 1: FRIDAY, AUGUST 11, 2011**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                                                                                                                                                            |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:00 am     | Staff Preparation at Glorieta Lifeway Conference Center and at Albuquerque Airport.                                                                                                                                                                                                        |
| 9:15 am     | <b>Begin Meeting Students Upon Arrival At Albuquerque airport.</b><br>Icebreaker activity for arriving students – Students interview each other using “Getting to Know You” Form.                                                                                                          |
| 12 Noon     | Sack lunch served to students; student interviews continue as new students arrive.                                                                                                                                                                                                         |
| 1:15 pm     | <b>Roll Call Of Students, then load Bus. Depart for Sheraton Albuquerque Airport Hotel (hotel is adjacent to airport).</b>                                                                                                                                                                 |
| 1:20 pm     | <b>Arrive Sheraton.</b> Students off bus, go to Meeting Room for start of Institute orientation. <u>Student luggage stays on bus.</u> Students who have not finished lunch do so in meeting room; students needing to finish interviewing others do so.                                    |
| 1:40 pm     | <b>NHEC Official Welcome to Institute by Lead Instructor Dr. Pedro Chavarria.</b> Brief Introduction of NHEC Instructors who are present; plus role models present. <b>Students then introduce each other</b> , sharing information based on the interviews they conducted at the airport. |
| 2:20 pm     | <b>Student Interviews end.</b>                                                                                                                                                                                                                                                             |
| 2:20 pm     | <b>Pre-Test Given to Students.</b>                                                                                                                                                                                                                                                         |
| 2:45 pm     | Test Concluded. Tests handed in. Students take Break                                                                                                                                                                                                                                       |

|          |                                                                                                                                                                                                                                                                                                                                |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2:50 pm  | <b>Introduction/Orientation to Institute:</b> Review purpose and goals of Institute; how Institute runs; overview of Program; what is Glorieta and rules there; materials and science equipment to be used; safety issues; overview of Rules and Code of Conduct; wearing the hat; roommate assignments—how and why; and more. |
| 3:45 pm  | <b>Students depart Sheraton Hotel for Glorieta Lifeway Conference Center.</b>                                                                                                                                                                                                                                                  |
| 3:50 pm  | During Bus ride to Glorieta, instructors describe scenery, ecology and historical points of interest along the way.                                                                                                                                                                                                            |
| 5:15 pm  | <b>Arrive Glorieta Lifeway Conference Center.</b> Unload bus. Students take luggage into dormitory building; <u>do not unpack until after dinner.</u>                                                                                                                                                                          |
| 5:30 pm  | <b>Dinner</b> at Glorieta Dining Hall.                                                                                                                                                                                                                                                                                         |
| 6:30 pm  | Return to Dormitory, check into sleeping rooms, refresh.                                                                                                                                                                                                                                                                       |
| 7:30 pm  | Students go to Classroom A&B, where all Institute instruction will be held during Institute.                                                                                                                                                                                                                                   |
| 7:40 pm  | <b>Outdoor Team Building Exercises</b> –students do this in teams to continue icebreaking and leadership development.                                                                                                                                                                                                          |
| 8:10 pm  | <b>Introduction to Glorieta Conference Center</b> —Walk around orientation of the grounds; tour facilities. Led by instructors, begin bird, animal, plant, and tree identification.                                                                                                                                            |
| 8:40 pm  | Return to classroom.                                                                                                                                                                                                                                                                                                           |
| 8:45 pm  | <b>Introduction to Journals</b> —purpose and use by both students and instructors.                                                                                                                                                                                                                                             |
| 8:55 pm  | <b>Wrap-up. Reminders for next day.</b> Students return to Rooms, accompanied by Instructors. Students finish unpacking; get settled into their sleeping rooms.                                                                                                                                                                |
| 9:00 pm  | <b>Free time for students to socialize.</b> Also, journal writing.                                                                                                                                                                                                                                                             |
| 11:00 pm | <b>Room roll call and students in their rooms.</b>                                                                                                                                                                                                                                                                             |
| 11:00 pm | <b>Periodic bed checks by Instructors.</b>                                                                                                                                                                                                                                                                                     |

## **DAY 2: SATURDAY, AUGUST 13, 2011**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                        |
|-------------|----------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                  |
| 7:00 am     | Check in with Instructors in Dormitory or classroom.                                   |
| 7:05 am     | Breakfast available in Dining Hall                                                     |
| 8:15 am     | Back in Classroom                                                                      |
| 8:20 am     | <b>Preparation for and Overview of Day.</b>                                            |
| 8:30 am     | Students Continue to share the interviews they conducted of each other the day before. |

- 8:40 am **Role Models Speak.** Role Models who are present talk about 10 minutes each—describe their personal journey to an environmental career, and their current work. Bill Gwaltney, Associate Regional Director for Workforce Development, National Park Service; David Fernandez, Esq. Attorney at Law and Professor for Legal Studies Program, Keiser University, Tampa, FL; Sandi Lewis, Resource Conservationist, USDA NRCS, Joplin, MO
- 9:15 am Student Assistant (and 2010 NM Institute alumni) Lily Ng, Skidmore University, speaks to students about her experiences at past Institutes and with NHEC, and answers questions.
- 9:30 am **Student Icebreaker and Team Building Activities, outdoors.**
- 10:00 am Back in Classroom.
- 10:05 am **Presentation on “Ecology, Natural Systems, and Wildlife”**, by Dr. Pedro Chavarria, NHEC Lead Instructor and PhD candidate in Wildlife Biology.
- 11:00 am **Presentation on “Becoming an Attorney—How to Prepare for a Career in the Law”** by David Fernandez, Esq.,
- 11:30 am **Lunch in Dining Hall.**
- 12:35 pm Back in Classroom.
- 12:35 pm **Presentation on “Field Ornithology and Natural Habitats of Birds”** – by Claudia Tamez, NHEC Instructor and Interpretive Naturalist, Texas Parks and Wildlife Dept.
- 1:25 pm **Re-Orientation to NHEC Institute** (as some students flew in late the night before). Re-discuss the purpose, framework, Program, materials, safety, rules, Code of Conduct, roommate assignments, and more – by NHEC President Roger Rivera.
- 1:40 pm **Walk to Prayer Garden**
- 1:50 pm **Instructors Speak As Role Models**—their Background and Training, Past and Present Environmental jobs and experiences in the outdoors, and how students can follow in their footsteps.
- 2:35 pm **Walk back to Classroom.**
- 2:45 pm **Back in Classroom. Break**
- 2:50 pm **Presentation on “Overview of Scientific Method and Sampling Theory”** by Dr. Pedro Chavarria, NHEC Lead Instructor.
- 3:20 pm **Presentation on “Environmental and Natural Resource Career Programs and Opportunities for Students”**. A powerpoint presentation by Bill Gwaltney, Associate Regional Director for Diversity, Intermountain Region, National Park Service, with other Institute sponsors, including USDA NRCS

and U.S. Forest Service staff, including Berlinda Baca Sanchez, MWSI Coordinator.

Presentation is an overview of the various steps students can and should take in seeking their first environmental internship or job, especially with a federal agency. Will include overviews of federal student programs like the new “Pathways” internship program, and other student opportunities. Followed by Q&A with students.

- 5:15 pm **Dinner in Dining Hall**  
6:30 pm Back in Classroom.  
6:35 pm **Presentation on “Fire Ecology and Its Relationship to Natural Resources”** By NHEC Instructor Adam Deras, U.S. Forest Service.  
7:35 pm **Presentation on “Conducting Field Research in a Marine Biology Setting: Surface Behavior of Southern Resident Killer Whales”**  
8:30 pm **Preparation for next day.**  
8:45 pm **Free time** –students can return to Rooms/Common Area or use Glorieta facilities; also journal writing.  
11 pm **Room roll call and students in their rooms**  
11 pm on Periodic bed checks by Instructors

### **DAY 3: SUNDAY, AUGUST 14**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                                                                                   |
| 7:00 am     | Check in with Instructors in Dormitory or classroom.                                                                                                    |
| 7:05 am     | <b>Breakfast available in Dining Hall.</b>                                                                                                              |
| 8:15 am     | Back in Classroom                                                                                                                                       |
| 8:20 am     | <b>Preparation for and Overview of Day.</b>                                                                                                             |
| 8:20 am     | <b>Presentation on “Lentic and Lotic Aquatic Systems”</b>                                                                                               |
| 9:15 am     | <b>Presentation on “Environmental Water Quality Assessment: Abiotic and Biotic”</b>                                                                     |
| 10:00 am    | Break                                                                                                                                                   |
| 10:05 am    | <b>Presentation on “Wildlife and Vegetation Sampling Theory and Methodology”.</b>                                                                       |
| 10:40 am    | <b>Presentation on “Introduction to Soil Science and Testing”</b> by Adam Deras, NHEC Instructor, and formerly Fire Ecologist with U.S. Forest Service. |
| 11:30 am    | <b>Presentation: Field Studies, and Assignment of Students into Teams</b> , and discussion of topics to be studied – plant                              |

diversity, human impact, biological assessments, water and soil testing, plus overview of scientific equipment to be used, i.e. Hanna water meter, plankton nets, field microscopes, etc.

- 12:15 pm **Lunch in Dining Hall**
- 1:00 pm Back in classroom.
- 1:05 pm **Begin Field Testing at Glorieta Pond**, guided by instructors.
- 3:00 pm Back to Classroom,. Clean up as necessary.
- 3:05 pm Walk to Prayer Garden
- 3:15 pm **Presentation by “Wildlife Rescue”** an organization that rescues and restores injured raptors and other birds of prey. Featured with be several live raptors that were nursed back to health. **Students will be able to see up close and touch (supervised of course) these remarkable predators.**
- 4:30 pm Back to classroom.
- 4:35 pm Presentation: **“Whales to Owls, Oceans to Forests: A Latina’s Environmental Journey”**. Presented by Rena Escobedo, NHEC Instructor and Invasive Species Coordinator, Tahoe National Forest, U.S. Forest Service.
- 5:10 pm Dinner in Dining Hall
- 6:30 pm Back in Classroom
- 6:35 pm **Presentation on “Biology and Impact of Invasive Vegetation”**
- 7:15 pm **Watch movie “The Milagro Beanfield War”**, a heartwarming story about the unique history, culture, and people of northern New Mexico.
- 9:15 pm Film ends
- 9:20 pm **Preparation for next day.**
- 9:25 pm **Free time** –students can return to Rooms/Common Area or use Glorieta facilities; also journal writing.
- 11 pm **Room roll call and students in their rooms**
- 11 pm on Periodic bed checks by Instructors

#### **DAY 4: MONDAY, AUGUST 15**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                           |
|-------------|-------------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                     |
| 7:00 am     | Check in with Instructors in classroom                                                    |
| 8:00 am     | <b>Breakfast in Dining Hall</b>                                                           |
| 8:15 am     | Back in Classroom                                                                         |
| 8:20 am     | <b>Preparation for and Overview of Day</b> , including equipment check for field studies. |

- 8:30 am **Presentation on “Principles of Hydrology”** by Orlando Romero, Hydrologist, U.S. Geological Survey.
- 9:00 am **Role Models Speak, including role model Dr. Lek Kadeli, Deputy Assistant Administrator for Management, Office of Research and Development, U.S. EPA.** Mr. Kadeli speaks on his work, research projects, and personal environmental journey, as does Christopher Zarba, Dept. Director, National Center for Environmental Research, U.S. EPA.
- 10:00 am **Board bus for Pecos National Monument**
- 10:30 am Arrive Pecos National Monument, unload.
- 10:35 am **Enter Pecos NM Visitor Center,** Welcome by NPS staff, including Dennis Carruth, Superintendent, Pecos NP, to watch introductory movie about site, tour Visitor Center.
- 11:00 am **Depart Visitor Center for Guided Tour of Pecos NM,** escorted by NPS interpretive ranger. Walk loop trail, see ruins, descend into the underground kiva (a Native American place of retreat and worship).
- 12:20 pm **Sack Lunch at Pecos.**
- 1:00 pm **Board bus, depart for Pecos Bridge and River.**
- 1:15 pm Arrive Pecos River, offload bus.
- 1:25 pm **Begin field studies work near and in Pecos River, including water testing and biological assessments.**
- 3:00 pm **Board bus for Lisboa Springs Fish Hatchery, operated by the NM Dept. of Fish and Game.**
- 3:15 pm **Arrive Lisboa Springs,** offload. **Students tour Visitor Center and Hatchery.**
- 4:30 pm Board bus, depart for Glorieta Conference Center.
- 5:00 pm **Arrive Glorieta.** Offload. Students to rooms to clean up or dinner.
- 5:15 pm **Dinner in Dining Hall**
- 6:30 pm Return to Classroom
- 6:35 pm **“Culture and the Environment: Stories About How Native Peoples View the Heavens”.** Stories told and Flute played by Dr. Steven Fadden, a full-blooded member of the Mohawk tribe, and a 30 year resident of New Mexico.
- 7:30 pm Break
- 7:35 pm **Role Model Stephanie Yu, Senior Attorney, U.S. EPA, Washington, D.C,** speaks about EPA and its enforcement of environmental laws.
- 7:50 pm **Presentation on “Environmental Justice”** by Pamela Bingham, NHEC Instructor and Environmental Consultant, Bingham Associates.
- 8:30 pm **Preparation for next day.**
- 8:40 pm **Free time** –students can return to Rooms/Common Area or use Glorieta facilities; also journal writing.

11:00 pm **Room roll call and students in their rooms**  
11:00 pm on Periodic bed checks by Instructors

## **DAY 5: TUESDAY, AUGUST 16**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                                                                                                                                                                                                                                                                                                                                                               |
| 7:00 am     | Check in with Instructors in dormitory or classroom.                                                                                                                                                                                                                                                                                                                                                                                |
| 7:05 am     | <b>Breakfast Available in Dining Hall</b>                                                                                                                                                                                                                                                                                                                                                                                           |
| 8:15 am     | Back in Classroom                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 8:20 am     | <b>Preparation for and Overview of Day</b> , including equipment check for field studies.                                                                                                                                                                                                                                                                                                                                           |
| 8:30 am     | Role Model Carlos Suarez, Florida State Conservationist, USDA NRCS, an Institute sponsor, speaks to students.                                                                                                                                                                                                                                                                                                                       |
| 8:50 am     | <b>Board bus for Pecos National Park. Drive to “Greer Garson Ranch House”</b> , a part of Pecos NP.                                                                                                                                                                                                                                                                                                                                 |
| 9:25 am     | Arrive Greer Garson ranch house, offload bus.                                                                                                                                                                                                                                                                                                                                                                                       |
| 9:35 am     | <b>Welcome by NPS Interpretive Ranger Eric Valencia.</b> Brief overview of history of house and area.                                                                                                                                                                                                                                                                                                                               |
| 9:45 am     | <b>Short hike down to Pecos River.</b>                                                                                                                                                                                                                                                                                                                                                                                              |
| 9:50 am     | <b>Begin field studies and testing at and in the Pecos River</b> , accompanied by NPS rangers, NHEC instructors, and role models. Continue water, soil, and air monitoring testing, and biological assessments. Accompanying students to <b>help conduct soil tests are Charles Hibner and Aaron Miller, Soil Scientists with NRCS, an Institute sponsor.</b> Also with students are staff from the U.S. EPA, an Institute sponsor. |
| 11:40 am    | <b>Students begin hiking back to Greer Garson</b> ranch house.                                                                                                                                                                                                                                                                                                                                                                      |
| 11:50 am    | <b>Board bus, depart for Glorieta</b> Conference Center                                                                                                                                                                                                                                                                                                                                                                             |
| 12:20 pm    | Arrive Glorieta, offload bus. Students go directly to Dining Hall.                                                                                                                                                                                                                                                                                                                                                                  |
| 12:20 pm    | <b>Lunch in Dining Hall</b>                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1:20 pm     | Students back in their rooms, cleaning up, etc.                                                                                                                                                                                                                                                                                                                                                                                     |
| 1:40 pm     | Back in Classroom                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1:45 pm     | <b>Presentation on “Conservation Biology—Topics in Biodiversity”</b> , by Claudia Tamez, NHEC Instructor and Interpretive Naturalist, TX Dept of Parks and Wildlife.                                                                                                                                                                                                                                                                |
| 2:15 pm     | <b>Presentation: U.S. Forest Service—Their Mission, and Role in the Environment, and Opportunities for Youth”</b> , by James Maes, Director, Civil Rights and Berlinda Baca Sanchez, FS staff and an Institute sponsor.                                                                                                                                                                                                             |
| 3:15 pm     | Break                                                                                                                                                                                                                                                                                                                                                                                                                               |

- 3:20 pm **ROUND ROBIN INTERVIEW SESSION** – Students interview role models; then role models interviews students.
- 5:10 pm **Dinner in Dining Hall**
- 6:30 pm Students back in Classroom
- 7:05 pm **Presentation: “NRCS—Their Mission And Role in the Environment, And Opportunities for Youth”** by Carlos Suarez, Florida State Conservationist.
- 8:05 pm **Academic and Career Goal Discussions With Students—** A student-led discussion. Students discuss their academic and college goals, with a particular emphasis on environmental/natural resource majors, careers, and opportunities such as internships and scholarships. In particular, the students in college share their experiences and information about what to expect in college.
- 8:50 pm **Preparation for Next Day**, including more prep for EJ trial if needed by students.
- 8:50 pm **Free Time--return to Rooms/Common Area; also journal writing.**
- 11 pm **Room roll call and students in their rooms**
- 11 pm on Periodic bed checks by Instructors

## **DAY 6: WEDNESDAY, AUGUST 17**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                                                                                                                                                                                                                                                                                                                                                               |
| 7:00 am     | Check in with Instructors in dormitory or classroom.                                                                                                                                                                                                                                                                                                                                                                                |
| 7:05 am     | <b>Breakfast in Dining Hall</b>                                                                                                                                                                                                                                                                                                                                                                                                     |
| 8:15 am     | Back in Classroom                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 8:20 am     | <b>Preparation for and Overview of Day</b> , including equipment check for field studies.                                                                                                                                                                                                                                                                                                                                           |
| 8:30 am     | <b>Shuttle students in cars to “Goldmine Trail” trailhead.</b> Trail begins at Glorieta Conference Center, continues onto Santa Fe National Forest.                                                                                                                                                                                                                                                                                 |
| 8:45 am     | <b>Roll call, and Goldmine Trail hike begins</b> , guided by Instructors and role models. <b>Forest Service role model Amanda Ginthan, Wildlife Biologist, accompanies students while on FS lands.</b> On hike, students observe trees, wildlife, and other flora/fauna. Also, continue their water, soil testing, and air monitoring, and biological assessments. <b>NRCS staff also accompany students to conduct soil tests.</b> |



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|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30    | Sack Lunch on trail.                                                                                                                                                                                                                                             |
| 12:10 am | <b>Begin hike back down trail.</b>                                                                                                                                                                                                                               |
| 12:50 pm | At trailhead, shuttle students in cars to Dormitory; students clean up and change.                                                                                                                                                                               |
| 1:20 pm  | <b>Board bus, depart Glorieta for the City of Santa Fe Sewage and Waste Water Treatment Plant.</b>                                                                                                                                                               |
| 2:00 pm  | Arrive Treatment Plant, offload bus.                                                                                                                                                                                                                             |
| 2:05 pm  | <b>Welcome by Plant Staff. Begin tour of Plant, including laboratory.</b>                                                                                                                                                                                        |
| 3:50 pm  | <b>Tour ends.</b> Board Bus, depart for Santa Fe Plaza.                                                                                                                                                                                                          |
| 4:10 pm  | <b>Arrive Santa Fe Plaza,</b> off load bus.                                                                                                                                                                                                                      |
| 4:15 pm  | Brief description of surroundings and unique nature of “The City Beautiful”.                                                                                                                                                                                     |
| 4:15 pm  | <b>Free Time – Students Explore the Plaza.</b>                                                                                                                                                                                                                   |
| 5:20 pm  | <b>Students return to Plaza,</b> board bus.                                                                                                                                                                                                                      |
| 5:55 pm  | <b>Arrive Glorieta Conference Center,</b> offload bus. Go directly to Dining Hall. <b>Dinner in Dining Hall.</b>                                                                                                                                                 |
| 7:15 pm  | Back in Classroom                                                                                                                                                                                                                                                |
| 7:15 pm  | <b>Presentation on “An Overview of Key Environmental Laws and Policies”</b> , by Pamela Bingham, NHEC Instructor and Environmental Consultant/Engineer. Discussed will be NEPA, Clean Air Act, Clean Water Act, Environmental Justice Executive Order, and more. |
| 8:10 pm  | <b>Presentation on “Natural and Environmental Disasters—Hurricane Katrina and the Deepwater Gulf Oil Spill”</b> , by Pamela Bingham, NHEC Instructor and Environmental Consultant/Engineer.                                                                      |
| 8:45 pm  | <b>Discuss preparations for next day’s camping trip.</b> Return to rooms/common area.                                                                                                                                                                            |
| 8:50 pm  | <b>Free Time – return to rooms/common,</b> also journal writing.                                                                                                                                                                                                 |
| 11:00 pm | <b>Roll call,</b> and students in their rooms.                                                                                                                                                                                                                   |
| 11:00 pm | on Periodic bed checks by Instructor                                                                                                                                                                                                                             |

## **DAY 7: THURSDAY, AUGUST 18**

| <u>TIME</u> | <u>ACTIVITY</u>                                      |
|-------------|------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                |
| 7:00 am     | Check in with Instructors in dormitory or classroom. |
| 7:05 am     | <b>Breakfast available in Dining Hall</b>            |
| 8:15 am     | Back in Classroom                                    |

- 8:20 am **Review and prep for the day, especially equipment check for trip to Las Vegas National Wildlife Refuge and later to Abiquiu Lake and Dam for overnight camping.** Store equipment, camping gear, sack lunches, etc. on bus.
- 8:45 am Board bus, **depart for Las Vegas National Wildlife Refuge,** Las Vegas, NM.
- 9:45 am **Arrive at Las Vegas NWF,** off load.
- 9:55 am **Welcome by Refuge Manager Rob Larranaga; Tour Visitor Center,** view film on FWS.
- 11:00 am NHEC President Roger Rivera introduces FWS Dept. Director Dr. Rowan Gould and Southwest Regional Director Dr. Benjamin N. Tuggle, Region 2, to students. **Dr. Gould and Dr. Tuggle speak. Q&A with students to follow.**
- 12:15 pm **Sack Lunch at Visitor Center,** Dr. Gould and Dr. Tuggle join students for lunch.
- 1:00 pm **Board bus; students go short distance to location where they can hike trail to Gallinas River.** Students offload with field studies equipment, including their water, soil and air monitors. **Students hike to river, accompanied by FWS staff. Students, in teams, conduct their field studies.**
- 2:55 pm Students return to bus; load equipment.
- 3:15 pm **Depart Las Vegas NWF for Abiquiu Lake and Dam.**
- 6:00 pm **Arrive Abiquiu,** off-load bus. **Welcome by staff to Abiquiu Lake/Dam,** operated by the U.S. Army Corps of Engineers.
- 6:20 pm **Begin setting up camp,** including tents and other equipment.
- 7:15 pm **Break for Dinner,** a special chuck-wagon feast.
- 7:45 pm **The Wildlife Center brings raptors, other animals to share with students.**
- 8:15 pm Continue to set-up camp.
- 8:45 pm **Performance by Native American Dance troupe;** students join in.
- 9:30 pm **Smores, and more, by campfire.**
- 11 pm Check in with Instructors. All students in their tents.
- 11 pm on **Quiet time – listen to the sounds of the night!**

## **DAY 8: FRIDAY, AUGUST 19**

| <u>TIME</u> | <u>ACTIVITY</u>                           |
|-------------|-------------------------------------------|
| 7:00 am     | <b>Wake up knock on tents.</b>            |
| 7:30 am     | Clean-up in nearby bathrooms and showers. |

- 7:45 am **Break camp, pack-up and clean-up campsite.** Bus arrives, load equipment on bus
- 8:00 am **Breakfast**
- 9:00 am Finish breaking camp
- 9:15 am **Board bus, drive short distance to Abiquiu Lake and Dam Visitor Center;** offload.
- 9:20 am **Corps of Engineers staff speak to students about Abiquiu facility.**
- 9:40 am **Students board bus for short drive to Abiquiu Hydroelectric Plant,** located at base of Dam, 3 stories underground.
- 9:45 am Arrive Hydroelectric plant; offload.
- 9:50 am **Plant staff greet students, brief remarks.** Students then descend to the Plant. **Tour facility, including giant turbines, spillways, and more.**
- 11:00 am **Board bus to Echo Cave, operated by the U.S. Forest Service**
- 11:20 am **Arrive Echo Cave,** offload. Students greeted by FS Geologist Calvin Parsons. **Tour of Echo Cave, an amazing natural cavern in the “red rock” country, and known for its remarkable acoustics.**
- 12:00 pm **Students have sack lunch at Echo Cave.**
- 12:35 pm **Board bus to return to Abiquiu Lake and Dam.**
- 12:55 pm Arrive Abiquiu, offload bus.
- 1:00 pm **Role Model Luis Laracuenta, Area Agriculture Engineer, with NRCS speaks to students about the science of surveying.** Students will view the Robotic Surveying Total Station, a robot used in the field.
- 2:30 pm Board bus, depart Abiquiu for **Bandelier National Park.**
- 3:50 pm **Arrive at Bandelier**—the Ponderosa campsite. Offload bus.
- 4:00 pm Begin hike on trail which skirts the edge of the mesa. View the amazing rock formations and ecology of Bandelier.
- 5:45 pm Return to bus. **Depart Bandelier for Espanola.**
- 7:00 pm **Arrive Espanola, and go to Restaurant for Dinner—enjoy an authentic “New Mexican meal” at a local Hispano-owned restaurant.** Delicioso!
- 8:30 pm Depart Espanola, return to Glorieta.
- 10:20 pm **Arrive Glorieta.** Return to rooms, clean-up, and journal writing.
- 11 pm Roll call, and students return to room
- 11 pm on Periodic bed checks by Instructors

## DAY 9: SATURDAY, AUGUST 20

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                                                                                                                                     |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:00 am     | <b>Wake up Knock on Student Doors</b>                                                                                                                                                                                                                               |
| 7:05 am     | Breakfast available in Dining Hall                                                                                                                                                                                                                                  |
| 9:00 am     | Back in Classroom                                                                                                                                                                                                                                                   |
| 9:05 am     | <b>Preparation for and Overview of Day</b>                                                                                                                                                                                                                          |
| 9:10 am     | <b>Presentation: Geographic Information Systems (GIS) and GPS– Critical Tools for Environmental Professionals”</b><br>Using Google Earth and other methods, students will be shown the important uses of these resources. by Pedro Chavarria, NHEC Lead Instructor. |
| 10:40 am    | Break                                                                                                                                                                                                                                                               |
| 10:45 am    | <b>NRCS role model Luis Laracuenta demonstrates the Robotic Surveying station, with robot.</b> Students will collect field data using this equipment and gain valuable hands-on experience.                                                                         |
| 11:45 am    | <b>Lunch in Dining Hall</b>                                                                                                                                                                                                                                         |
| 1:00 pm     | Students back in classroom.                                                                                                                                                                                                                                         |
| 1:05 pm     | <b>Students continue their work with the Robotic surveying.</b> Following the field work, students will review the data in CAD.                                                                                                                                     |
| 2:30 pm     | <b>Begin Preparation by Student Teams for their Final Presentations,</b> based on all their field tests results, biological assessments, measurements, and observations.                                                                                            |
| 3:45 pm     | <b>Students finish their preparations</b> for final presentations.                                                                                                                                                                                                  |
| 3:50 pm     | <b>Students teams start giving their final presentations.</b>                                                                                                                                                                                                       |
| 5:45 pm     | Students teams finish.                                                                                                                                                                                                                                              |
| 5:45 pm     | <b>Dinner in Dining Hall.</b>                                                                                                                                                                                                                                       |
| 7:00 pm     | Students back in classroom.                                                                                                                                                                                                                                         |
| 7:05 pm     | <b>Students write their final essays,</b> on what the Institute has meant to them and their experiences.                                                                                                                                                            |
| 7:35 pm     | <b>Students read their final essays.</b>                                                                                                                                                                                                                            |
| 9:15 pm     | Students finish reading their essays. <b>Graduation ceremony, and receipt of Institute diplomas.</b>                                                                                                                                                                |
| 10:10 pm    | Congratulations! <b>Graduation party, with pizza.</b>                                                                                                                                                                                                               |
| 11:30 pm    | Roll call, and students to rooms/commons room                                                                                                                                                                                                                       |

## **DAY 10: SUNDAY, AUGUST 21**

| <u>TIME</u> | <u>ACTIVITY</u>                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6:00 am     | <b>Wake up Knock on Student Doors</b>                                                                                                                                       |
| 7:00 am     | Check in with Instructors in dormitory or classroom                                                                                                                         |
| 8:00 am     | <b>Breakfast available in Dining Hall.</b>                                                                                                                                  |
| 8:00 am     | <b>Final Packing, and walk-thru of rooms.</b>                                                                                                                               |
| 9:15 am     | <b>Board bus to Albuquerque.</b>                                                                                                                                            |
| 10:35 am    | <b>Arrive at Sandia Tram site. Board tram (longest tram in the U.S.) to top of Sandia Crest, a unit of the U.S. Forest Service. Tour top of Sandia Crest, take in view.</b> |
| 11:45 am    | Depart Sandia tram site for Albuquerque airport                                                                                                                             |
| 12:15 pm    | <b>Arrive at Albuquerque airport.</b> Off-load bus.                                                                                                                         |
| 12:30 pm    | <b>Lunch at airport (students on own for this).</b>                                                                                                                         |
| 1:00 pm on  | <b>Final Goodbyes.</b> Students begin departing for their flights home.                                                                                                     |

### **2011 INSTITUTE ENDS!**

**“10 DAYS OF LEARNING, A LIFETIME OF EXPERIENCE!”**

NHEC wishes to extend its deep appreciation to all our sponsors, especially the U.S. Fish and Wildlife Service, U.S. EPA, and USDA Natural Resources Conservation Service whose support and funding made the Institute possible.