

## National Hispanic Environmental Council



### 9th CALIFORNIA ENVIRONMENTAL STEM INSTITUTE

JANUARY 10--15, 2024

To be held at

**NATIONAL FORESTS, NATIONAL PARKS, AND OTHER PUBLIC/PRIVATE  
LANDS AND FACILITIES IN SOUTHERN CALIFORNIA**

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

The National Hispanic Environmental Council (NHEC) is pleased to announce it will hold its 9<sup>th</sup> California STEM Institute on January 10-15, 2024 at a variety of sites in southern California.

#### PROGRAM OVERVIEW

NHEC is accepting applications from top college STEM students -- especially from underrepresented/people of color communities -- for our upcoming 9<sup>th</sup> CA Environmental STEM Institute. Next summer NHEC will hold its 13th NY Environmental STEM Institute in July and the 19<sup>th</sup> Annual NM Environmental STEM Institute in August.

Students are competitively selected from across the U.S. and Puerto Rico based on a variety of criteria, including a minimum 3.0 GPA; science major and background; demonstrable interest/experience in the environment; and diversity. NOTE: as this is a federally-funded program all selectees must be U.S. Citizens or Legal Permanent Residents. There is no fee to apply or to attend. As a federally-funded program NHEC Institutes are open to all, and students from all backgrounds are welcome to apply.

With funding from our federal sponsors – the U.S. Forest Service, USDA Natural Resources Conservation Service, and U.S. Environmental Protection Agency -- **NHEC covers all major costs for those students selected to attend -- roundtrip airfare, lodging, meals, local transportation on-site (by chartered bus), science equipment, and more.**

**Further** — with the strong support and funding of the U.S. Forest Service, a long-standing sponsor -- there is a new feature to our Institutes.

**The students selected will receive an educational stipend provided by FS for their work in the program.** Thus, upon successful completion of the CA Institute (as determined by NHEC), each student will receive a check from NHEC for \$100 per day, **for a total of \$600.** Students will receive their checks from NHEC by mail not long after the Institute.

Like all our Institutes, the CA Institute is an intensive, residential, strongly-science based, hands-on, 6 day residential environmental STEM program for top undergraduate college students deeply interested in science and the environment. The Institutes are designed to provide a high-level, high-quality science experience. Having worked in teams during the program, every Institute concludes with **each student team giving a Final Presentation** on one of the Enviro Field Study sites, using all the observations made and field data collected and analyzed.

To be eligible, students must be actively pursuing a **science degree in an environmental, natural resource, or agricultural major, and want a related career in this field, especially with federal agencies.**

Overall, NHEC's Institutes are designed **to help build the next generation of diverse/of color scientists/researchers/professionals in environmental and natural resource science fields**, an area within STEM that still remains severely underrepresented for people of color.

Students will see, learn, and use sophisticated, professional-grade environmental science equipment and instrumentation. Facilities like the Pacific Southwest Research Station of the U.S. Forest Service are participating, as are their staff and scientists, many with Ph.D's. These entities are offering an array of research, science instrumentation, and methodologies to learn/use in the field and lab. NHEC also owns/brings science equipment for students to use.

**Regarding transportation and logistics:** once a student is selected NHEC will quickly call to discuss all travel arrangements, typically airfare, for which NHEC must give final approval. Once in California, NHEC will transport students to/from each site by chartered bus; provide breakfast, lunch, dinner, and snacks/water; provide lodging; provide science equipment; and coordinate all logistics/travel. **See below for a detailed description of the 2024 CA Program.**

**Also participating are “role models” from NHEC's federal sponsors and other partners.** These are environmental professionals/scientists, most in the science/research/technical arena, and many of diverse/of color backgrounds. They will be on-site to share information, research and technology, and engage/mentor/inspire students to continue pursuing their science majors and careers. **This role model component – so students see faces that look like them who actually do environmental science work** -- has been a core element since the very first Institute.

Students should especially note that our **agency sponsors will be on-site to actively meet/recruit students for a range of new federal opportunities** in jobs/internships, science and research, and more.

Further, these agencies are particularly **seeking students with majors that meet a number of high-demand federal “mission critical occupations”**, including forestry, ecology, soil science,

civil and environmental engineering, range management, and more. Students with these majors are especially urged to apply.

## HOW TO APPLY

**Applicants must answer the following questions (see below) and email NHEC asap.** This will give NHEC a solid overview of your eligibility and qualifications, and save you and us time and effort.

### Please answer the questions below in the order they are asked:

- 1.--what college or university do you currently attend and where.
- 2.--what is your current GPA?
- 3.--what is your current major? Please state the full name of the program.
- 4.--what is your grade level, meaning sophomore, junior, etc?
- 5.--describe in several paragraphs past and/or present **experiences** in the environment, natural resources, or agriculture, especially in the sciences or research, that qualify you for the program
- 6.--describe in several paragraphs past and/or present **academic coursework** in the environmental, natural resource, or agricultural sciences that qualify you for the Institute.
- 7.--describe in several paragraphs past and/or present **internships, fellowships, and/or part or full time jobs** in the environmental, natural resource, or agricultural sciences that qualify you for the Institute.
- 8.--if you have attended an NHEC Institute or program before, state where, when, and which.
- 9.--what is the closest airport could you fly out of (if airfare is provided) should you be selected? What is the next closest airport?
- 10.-- you understand that the age range for this program is 18—22?
- 11.--how old are you?
- 12.--what is your date of birth?
- 13.--list your race, ethnicity, and/or other demographic factor you wish NHEC to know-optional.
- 14.--are you interested in a potential job or other opportunity now or in summer 2024 with the Institute's sponsors—U.S. Forest Service, USDA NRCS, and US EPA. If you have a preference among these agencies, please state.
- 15.--you understand that only US Citizens or Legal Permanent Residents are eligible for positions with a federal agency?
- 16.--are you a US Citizen or Legal Permanent Resident? You must state which one.
- 17.--you understand that only students who are fully Covid vaccinated can be selected?
- 18.--are you fully Covid vaccinated and can provide the CDC proof-of-vaccination card to NHEC?
- 19.--provide a home and cell number, and school and personal email address so NHEC may contact you promptly.
- 20.--provide your full home and school address.

**NHEC will contact you shortly after receiving your email to further discuss** your environmental, natural resource, or agricultural interests, qualifications, and background, **and review the remaining application process. The formal application materials will be sent to you soon after.**

**So--if you are passionate about the environment, love science, have a minimum 3.0 GPA, AND been seeking a job or science position in the environmental arena, this program is for you.**

### To answer some common FAQ's:

- 1.-- yes, slots are still available although these are going fast.
- 2.--there is no deadline per se; NHEC reviews applications/selects students on a **rolling basis** until all slots are filled. Thus students are strongly urged to apply asap.
- 3.--as this is a 100% federally funded program only U.S. Citizens or Permanent Legal Residents are eligible.
- 4.--while students from underrepresented and communities of color are especially urged to apply, this is a federally funded program, thus students from all ethnic and racial backgrounds, as well as those representing other diversity backgrounds are eligible to apply.

**TO APPLY:** email your questionnaire answers to the CA Institutes Coordinator, Sochi Uwakweh, at [suwakweh@nheec1.org](mailto:suwakweh@nheec1.org) and NHEC President Roger Rivera at [rrivera@nheec1.org](mailto:rrivera@nheec1.org)

For questions, email or call NHEC at 703-683-3956 or Sochi Uwakweh directly at 703-861-6064. Or see the NHEC website at [www.nheec1.org](http://www.nheec1.org)

## 2024 CA ENVIRONMENTAL STEM INSTITUTE—SUMMARY PROGRAM

**The Institute will be held in sunny Southern California, at sites ranging from Ventura to the Santa Monica and San Gabriel Mountains, Los Padres National Forest, and more.** These sites are about 60 miles north of Los Angeles.

**Tuesday, January 9--** Students will fly into Los Angeles International Airport (LAX) throughout this day into early evening. On arrival students collect their luggage, then are met by NHEC staff who will escort them (on the hotel shuttle) to the **Holiday Inn LAX**, about ½ mile from the airport.

Students will gather here, have a meal, and begin getting to know each other while waiting for all students' flights to arrive. Around 6 pm students will board the chartered bus for the **Sonesta Select Hotel Camarillo**, 4494 Verdugo Way, Camarillo, CA 93012. 805-388-1020. The Sonesta is where students will be lodged, have meals, and attend classroom presentations.

### Day 1 – Wednesday, January 10—

Breakfast at the Sonesta. Students then go to the Classroom where the Institute begins— Introductions, Orientation, Institute Overview, and more. After this NHEC Instructors conduct a series of in-classroom environmental and natural resource issue and science presentations and related activities. Lunch and Dinner at the Sonesta.

In afternoon, board **bus for nearby Conejo Mountain** for a hike; scenic views including the Pacific in distance; outdoor field observations; and more. While at Conejo, students will see a number of major environmental issues currently affecting California -- drought, wildfires, and the wildland-urban interface.

The WUI is where the built environment meets/intermingles with nature. Over the last 20 years in CA (and other states), WUI areas have seen a dramatic increase in wildfires, often severe, with major loss of life, property, and habitat. FS and NRCS staff/scientists are welcome to accompany students to share their expertise and/or serve as role models. Presentations after Dinner.

## Day 2 – Thursday, January 11—

Breakfast at the Sonesta. A full day of issue and science presentations by Institute Instructors, as well as staff from several federal agency sponsors. Lunch and Dinner at the hotel. In the afternoon, board chartered **bus for Channel Islands Regional Park**, where Instructors and students will **hold a practice Environmental Field Study in Calleguas Creek**, a wetland/riparian area. Accompanied/assisted by participating sponsor staff. Afterwards, return to Sonesta Hotel for presentations, including after Dinner. Note: NHEC deliberately holds many of its classroom presentations the first few days of the Institute. This is to provide needed information for the upcoming site visits and field studies.

## Day 3 – Friday, January 12—

Breakfast at the Sonesta. More presentations in morning, then Lunch. In afternoon, US Forest Service staff will hold a presentation on the FS mission, programs, environmental role, locations, and more. Also participating is the Director of the FS Pacific Southwest Research Station, a major laboratory/research facility in the FS Office of Research and Development.

Following this will be a real-time, on-line tutorial for students on federal opportunities-- internships, jobs, fellowships in science/research, and more. This will include going on-line to USA JOBS, the main federal employment portal, to learn how to navigate the site, set-up your profile, search for and apply for specific positions, and more.

Afterwards, students in teams board bus for the **First Environmental Field Study—Riparian Area at the Arroyo Conejo Nature Preserve--Calleguas Creek**. Here, guided by Instructors students conduct air, water, soil testing, plant inventories, tree mensuration, biological assessments, birding, and more. Accompanied/assisted by FS and NRCS staff/scientists to participate, share their expertise, and/or serve as role models.

After this, **board bus for short drive to City of Thousand Oaks Hill Canyon Wastewater Treatment Plant**. Met by Plant scientists and staff. Tour plant instructure—holding and clarifying tanks, intake channels, the on-site laboratory, more.

After this, depart for Sonesta. Dinner in hotel. After dinner, students in their teams continue analyzing data collected from the field studies, in preparation for Final Presentations.

## Day 4 -- Saturday, January 13—

Breakfast at the Sonesta. Presentations in morning, including by the **USDA Natural Resources Conservation Service** on its priorities, programs, and important environmental role. NRCS is the only federal agency whose mission is to work exclusively with private land owners—farmers, ranchers, growers, and more. Like the U.S. Forest Service, NRCS is a long-standing funder of NHEC's Institutes.

Like FS, NRCS staff will give a presentation on the many internship, job, career, science, and other opportunities for STEM students at the agency, especially in science and research.

Following this, board bus for **a site tour of a local farm in Somis where NRCS has provided the owners with an array of technical assistance.** Meet owners, tour Farm, engage with NRCS staff and learn about NRCS conservation assistance to private land owners.

NRCS services include sustainable farm practices, soil replenishment, water/wetlands management, and conservation practices for times of drought and flooding, both of which occur in California. Also discussed will be current USDA science and research to aid CA farmers and improve ecosystems.

Afterwards, board bus for the trailhead leading to the **Arroyo Conejo Nature Preserve.** Escorted by Instructors, hike trail to Preserve, including stops to view/discuss/continue learning about CA landscapes, terrain, and Mediterranean-type ecosystems. After this, board bus, depart for **Channel Islands Regional Park—Calleguas Creek.**

Students in teams **begin Second Environmental Field Study.** Conduct water and soil testing, biological assessments, plant inventories, tree mensuration, birding, and more. FS and NRCS staff/scientists are welcome to accompany students to participate, share their expertise, and/or serve as role models.

After this, board bus and depart for the Sonesta Hotel. Dinner in Hotel. More presentations after dinner. Students continue working to collate/analyze data from the Environmental Field Studies, in preparation for Final Presentations.

## Day 5 -- Sunday, January 14—

Breakfast at the Sonesta. Board bus and depart for **site tour of the Santa Clara River Estuary Natural Preserve and Wetlands at McGrath State Beach,** in Ventura. This is where the Santa Clara River enters the Pacific. Happening here is a public-private ecological restoration partnership that contains multiple federal, state, county, Indian tribe, and non-profit involvement and partners.

The project is designed to correct several long-standing problems (both man-made and natural), improve river flow, assist with flooding, and provide a range of ecological benefits to the Santa Clara River. FS and NRCS staff/scientists are welcome to accompany students to participate, share their expertise, and/or serve as role models.

Once there, students will cross the Santa Clara River by pedestrian walkway to Estuary. As the U.S. Fish and Wildlife Service is a key partner in this restoration project, students are met by USFWS biologists who will give the site tour and provide interpretation of the natural resources and project work. Students will walk the estuary banks and beach as they view the area.

After this, recross pedestrian and board bus for **the Los Padres National Forest--Matilija Dam Ecosystem Restoration Project (MDERP)**. Like the Santa Clara River Estuary, this is also an ecological restoration, public-private partnership that features a range of federal, state, and county agencies, and non-profit stakeholders in collaboration.

MDERP is designed to remove a long defunct dam at Matilija Lake and Creek, restore stream flow for fish, and provide a variety of ecological improvements/benefits. The dam removal is managed by the Ventura County Dept. of Public Works. Met by FS staff/scientists who will guide students on the site tour and area, located at the foot of the beautiful Nordhoff Ridge.

After this, board bus for short drive to **begin the Third Environmental Field Study—at MDREP**. In teams, students conduct water and soil testing, biological assessments, plant inventories, tree mensuration, birding, and more. FS biologists will also bring/demonstrate their electroshock fishing backpack, a device used to temporarily stun fish in order to collect, measure, take photos (and then release), for the purpose of conducting fish surveys/inventories.

After this, board bus, depart for Sonesta Hotel. Dinner in Hotel. Afterwards, students continue researching/data collation/analysis of field study data, in preparation for Final Presentations.

## **Day 6--Monday, January 15—**

Breakfast at the Sonesta. Students go to classroom to **continue preparations for their Final Presentations**. Working Lunch at Sonesta.

At 1 pm **Student Teams Begin Final Presentations**, with powerpoints. Having worked collaboratively over the last 10 days, each science team's presentation collates, analyzes, and draws conclusions from all the research, data, metrics, samples, and biological observations conducted at the 3 Environmental Field Study sites.

**Following each team's presentation, NHEC Instructors sit as a panel to question students**, probe their data analysis and conclusions, and more, to ensure they have learned/applied the correct science principles and data usage, and field techniques/methodologies.

Instructors also critique and provide guidance as to the presentations "scientific look"-- their professional appearance, sequencing of information, flow and specificity of data, clarity of conclusions, its contribution to citizen science, and its overall effectiveness. Staff from Institute sponsors are welcome see the Final Presentations and ask questions.

After this, final photos and goodbyes. Students with late afternoon and evening flights will be transported by chartered bus to LAX airport for flights home. Some students with longer flights

will depart the next morning, transported to the airport by NHEC staff. For those staying overnight, dinner at the Sonesta and a final evening activity.

## 9<sup>th</sup> CA ENVIRONMENTAL STEM INSTITUTE ENDS

### “6 DAYS OF LEARNING, A LIFETIME OF EXPERIENCE”

#### ABOUT NHEC:

The National Hispanic Environmental Council (NHEC) is a national, non-profit membership organization founded in 1998 and based in Alexandria, VA (just outside Washington, D.C). With over 3,000 members, NHEC is the oldest national Latino environmental and natural resource organization in the country, and we advocate for policies and run programs that further our mission.

NHEC seeks to educate and engage Latinos and people of color on environmental and natural resource issues; encourage Latinos and especially students to actively preserve and protect our environment; provide a voice for Latinos before federal and other national environmental decision-makers; and assist our community to pursue the many career, educational, programmatic, and policy opportunities in the environmental and conservation arena. **Our guiding credo is: “....because it’s our environment too”.**

**For questions/more information: contact the NHEC Institutes Coordinator, Sochi Uwakweh, at [suwakweh@nheec1.org](mailto:suwakweh@nheec1.org) or call her at 703-861-6064. Or call NHEC at 703-683-3956. Or see the NHEC website at [www.nheec1.org](http://www.nheec1.org)**