

TECHNICAL NOTES

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Use of the SLEWS and FARMS Programs

The following information outlines how to set up a SLEWS (Student and Landowner Education and Watershed Stewardship) program in your area.

Currently, under the leadership of the Center for Land-Based Learning in Winters, California, the SLEWS program is working successfully with high school students throughout the state in partnership with NRCS and local RCD (Resource Conservation District) offices, as well as other partners.

For further information you may contact:

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How to set up the SLEWS Program

Approximately six years ago, the SLEWS (Student and Landowners Education and Watershed Stewardship) program began as a part of the Center for Land-based Learning based in Winters. There are currently SLEWS programs associated with ten high schools in Sacramento and Yolo Counties. The Winters SLEWS staff works with UC Davis, California Audubon and other partners. In Chico, SLEWS staff is working this year with five schools, the NRCS, the Nature Conservancy and River Partners (a technical restoration company). In San Joaquin and Stanislaus Counties, SLEWS staff partners with the San Joaquin Resource Conservation District, EBMUD (East Bay Municipal Utility District) and River Partners.

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The SLEWS program is a community-based program which partners locally with landowners, Resource Conservation Districts, restoration biologists, ecologists and high school students. As a team, a class of high school students, plus various partners and mentors, work together on a parcel of land that needs restoration. The class adopts the site for one school year. SLEWS staff works with the participating teacher for each site to determine how to most effectively integrate the restoration project into the curriculum and requirements for that class.

The SLEWS program provides students and teachers with an opportunity for hands-on, place-based learning, team building, and leadership opportunities, resulting in the cultivation of a holistic understanding of the link between community, land stewardship and connection to the watershed. A further goal of the program is to interest students in careers in natural resources and teach students about their own valley, its history and ecology. While students are planting seeds, installing irrigation, observing birds and wild life or monitoring the plants which they planted earlier, they begin to see their world from a different perspective. SLEWS students play an active role in creating wildlife habitat on farms, ranches and open spaces, and make a significant contribution to the future of the watershed.

Participating SLEWS schools commit to a year-long project that evolves from season to season according to the restoration plan. Field days may include: seed collecting, plant propagation, planting native vegetation, building and installing bird boxes, removing invasive species, installing irrigation equipment and monitoring. Students also take part in ecological field studies focusing on the plants, animals, water quality, and soil erosion issues on the site. In an effort to support participating SLEWS teachers, we work together to determine how the program can meet individual curriculum needs and requirements, and help teachers take advantage of the project site as a place to introduce or emphasize classroom concepts.

On a practical level, SLEWS provides funding for a substitute teacher, a school bus, and lunches for each of the field trips. The program includes an introductory visit when SLEWS staff explains the program to the class. Subsequently, the program includes five field days where partners and mentors assist the SLEWS staff with project activities, providing a staff to student ratio of approximately four or five students to every adult. The partners and mentors each work with their group of students, guiding them through the field day's activities. The day's activities usually include an ice breaker exercise, the restoration project for the day, lunch; and reflection time, during which all write, draw or paint in their field notebooks about their experience of the day's activities. Students who wish to share their reflections of the day with the group, are invited to do so.

Each class will also participate in a community action project. Students use the tools and

experiences gained from the SLEWS program to help their individual community in some way. The project is student driven and needs to relate to the students' lives in some way for it to have meaning to them. Throughout the SLEWS' experience, we strive to relate what we do to the students' lives.

SLEWS partners are local Resource Conservation Districts, California Audubon, the NRCS and Nature Conservancy.

What SLEWS requires of the partners:

- Be the primary contact with the landowner(s) or land manager for logistical, scheduling and programmatic communications;
- Take the lead in developing the site plan, along with the landowner/manager, and get that plan to the SLEWS Coordinator(s) before August 15 of the current year.
- Work with the site team to design student field days for the project;
- Take the lead in determining the work plan for each field day and communicate that plan to site team before the field day event;
- Prepare the site before the field day for the work to be implemented;
- Maintain and monitor the project after completion of the SLEWS project, as provided by the site plan;
- Secure and arrange payment for the restoration-related resources needed for the field day event (including, but not limited to, plants, irrigation supplies, bird box materials and tools);
- Supply at least two (2) staff people to be mentors for the field days;
- Attend regular SLEWS program planning and assessment meetings (three per year).

What SLEWS provides:

- A person to coordinate all the partners and facilitate the field days;
- Cost for a substitute teacher;
- Cost of a school bus;
- Snack and lunch for all;
- Volunteer mentors to lead each team of five students at the field day;

Farms Leadership Program as developed by the Center for Land-Based Learning

The following information outlines how to set up a Farms Leadership Program in your area. Currently, under the leadership of the Center for Land-Based Learning in Winters, California, this program is working successfully with high school students throughout the state in partnership with NRCS and local RCD offices, as well as other partners.

For further information you may contact:

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There are a limited number of experiential programs that address both environmental education and agricultural literacy simultaneously, which makes the Farms Leadership Program unique. Thirty participants are recruited from up to five area high schools. Selected participants attend monthly field days at farms, ranches, and ecological preserves during the school year. A combination of talks, tours, and hands-on learning shapes each field day.

Through the program, students gain a basic awareness of California's agricultural commodities and the importance of California's contributions to agriculture as a whole. Students learn about fish and wildlife conservation, along with land use successes and challenges shaping the fabric of agriculture in their own county and state. Learning is reinforced by visits to innovative projects that address complex resource management needs.

The program orients youth in how to think about these issues, not what to think about them. It raises the level of critical thought about natural resource conservation and enables students to become informed participants in their own community dialogues on these important issues. It builds leadership skills.

When students understand the larger context of agriculture, coupled with an understanding of the limits to our water supply and land for household and recreational needs, they become citizens and consumers able to make objective decisions. These decisions impact a wide range of conservation issues; from backyard conservation to supporting large scale sustainable agriculture and environmental conservation concerns and decisions.

It is reasoned that we value most what we see, hear, and practice firsthand. The principles of this program combine learning and practice. Participants engage in restoration and farming related projects that benefit the community, promote resource conservation, and sustainable agricultural production.

The Farms Leadership Program also links students to career and occupational pathways through the introduction of mentors and academic programs that help them develop professional skills. Program volunteer mentors and farmers provide important connections to the transition from the academic to the working world.

Students and their teachers attend six to nine hands-on field days during the school year. These five hour field events bring experts and professionals together with the students and farmers to address some of the challenges, as well as successes of today's farmers. Students also spend time at local colleges learning about educational opportunities and participate in some part of the college curriculum. One farmer is designated "lead farmer." He hosts at least one field day and shares his perspective on sustainable agriculture and his approach to farming. Depending on the time of year, the farmer may have the students participate in planting or pruning, or students may simply learn about how the farmer manages his or her operation.

A typical day begins with a snack and a welcome by the coordinator. A different school presents a summary of the day's coming events and introduces the day's presenter. Often, an ice breaker or energizer activity is next, after which, students may be divided into teams (mixing schools) to participate in the activities of the day. Activities may include: a field day with a visit to the Mokelumne River Fish Hatchery and an interactive program with PRBO, and/or a wildlife biologist providing instruction on preservation and restoration of habitat. Another day may include: a day at the USDA-NRCS Lockeford Plant Materials Center learning about the operation, conducting water sampling, soil testing, and possibly planting native vegetation as part of a bigger project.

The six students and their teacher bring their field experiences back to the classroom, sharing with the other students, and at times doing research on upcoming field days.

Each school also completes either a research project or a community action project that explores an area of concern or interest. Mentors are available to students for support during this phase of the project.

On a practical level, the Farms Leadership Program provides funding for a substitute teacher for each school, snacks and lunches, and a classroom visit to introduce the program at the beginning of the school year. We also host an end of the year celebration with students presenting their projects or research.

