



**LOWER MERCED RIVER STEWARDSHIP PROGRAM**  
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**SCHOOL & YOUTH GROUP PROGRAMS**

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# TABLE OF CONTENTS

2

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Lower Merced River Education .....	3
Day Camps & Field Trips .....	4
Program Activities .....	5
Program Activities by Grade Level .....	7
Sample: 3 Station Field Trip Schedule.....	8
Sample: 6 Station Field Trip Schedule.....	8
Service-Learning.....	9
Clean Water Team .....	10
Guidelines for Field Trip Planning.....	11
Registration.....	11

**The Lower Merced River Stewardship Program is a project of the  
East Merced Resource Conservation District**

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Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006  
(Proposition 84) Merced River Education and Enhancement Program.**



# LOWER MERCED RIVER EDUCATION

The Lower Merced River Stewardship Program provides classroom and outdoor learning experiences for students focused on the Merced River and natural resource conservation. Merced County outdoor study sites include: Henderson Park, McConnell State Recreation Area, Hagaman Park, Hatfield State Recreation Area, and Lake Yosemite. All learning experiences are designed to address California content, common core, and environmental education standards, and promote stewardship.

The Program emphasizes an inquiry-based, experimental approach to learning that integrates several curricular areas. Students participate in hands-on activities and field studies that develop critical thinking and problem solving skills and utilize a variety of learning styles. The Program also addresses critical environmental issues facing Californians including California Water Resources.

In addition to an academic program focused on the environment and natural sciences, the Program offers programs in leadership and team building. Students are empowered to learn about themselves, their peers, and the natural environment while participating in fun and educational activities. The Program will help your students grow by facing challenges, overcoming obstacles, and doing things they never believed they could.

**Let the Lower Merced River be your outdoor classroom, contact us today for an exciting and educational outdoor adventure!**





## CLASSROOM PRESENTATIONS, DAY CAMPS & FIELD TRIPS

The Program offers classroom presentations, day camps and field trips for schools, scouts, and youth groups. The Program has credentialed teachers and experienced natural resource docents on staff to guide learning experiences. Camps and field trips involve a wide variety of interactive activities designed to challenge participants to explore nature and discover that science has real life applications.

Day camps and field trips are a less expensive alternative to overnight camps, taking place Tuesdays through Fridays. Two and three day camps are available; field trips are one day only. Day camps and field trips begin between 9:00am and 10:00am and participants depart between 12:30pm and 2:00pm. The Program works with groups to accommodate their transportation schedule.

Classroom presentations, day camps and field trips can be planned for small or large groups, a single class or an entire grade level. Canoeing, kayaking, stand up paddling, fishing and leadership programs can be incorporated into camp and field trip activities. All activities address California Academic Content Standards.

Depending on the activities selected and the staff required the cost for day camps and field trips range from \$10 to \$20 per day, per participant with no charge for chaperones. **We do have grant funding available for free or reduced cost trips. Please contact us!**

**We will work with you to design a program that fits your budget!**

"This was a great trip with a convenient location. It gives students a natural environment close to home but outside their usual routine."

"We will be talking about this field trip for weeks to come in our classroom as part of our science program!"



"Why didn't they have programs like this when I was in school? This is a great way for kids to learn about science and be outdoors!"

## PROGRAM ACTIVITIES

**Grade:** Activities are age and grade level appropriate. Please choose activities that are suitable for your group.

**Season:** Some activities are seasonal and may not be offered due to weather or time of year.

**Time:** Most activities require at least one hour to complete. During field trips and day camps participants normally complete 3 to 4 activities a day.

**Group Size:** We recommend that group size for most activities be limited to 25 participants.

### AQUIFER IN A CUP

**Grade: 3-4** **Season: Year Round**  
**Time: 1 Hour** **Group Size: 25**

Students construct a groundwater aquifer and learn the impacts humans can have on groundwater.

### CLEAN WATER TEAM FIELD DAY

**Grade: 7-12** **Season: September-May**  
**Time: 3 Hours** **Group Size: 25**

Students follow Clean Water Team protocols to perform water quality testing and rapid bio-assessment.

### COLOR ME A WATERSHED

**Grade: 6-8** **Season: Year Round**  
**Time: 1 Hours** **Group Size: 25**

Students investigate how land use affects runoff, water quality, and watersheds.

### COMMON WATER

**Grade: 1-12** **Season: Year Round**  
**Time: 1 Hours** **Group Size: 25**

Students investigate how water is allocated in California and learn that water is a limited resource with unlimited resources.

### CREEPY

#### CRAWLERS

**Grade: 2** **Season: Year Round**  
**Time: 1 Hour** **Group Size: 25**

Using 3-way viewers students observe creepy crawlers (aquatic insects) and make predictions about the quality of their habitat.

### CRITTER

#### COUNT

**Grade: K** **Season: Year Round**  
**Time: 1 Hour** **Group Size: 25**

Students observe and describe similarities and differences in the appearance and behavior of Lower Merced River animals.

### GROUNDWATER MODEL

**Grade: 4-6, 9-12** **Season: Year Round**  
**Time: 1 Hour** **Group Size: 25**

Working with a docent, students study a groundwater model and use the model to investigate human impacts on aquifers and water quality.

### INITIATIVE & CONFIDENCE PROGRAM

**Grades: 3-12** **Season: Year Round**  
**Time: 1-4 Hours** **Group Size: 25**

The Initiative & Confidence Program uses outdoor activities to teach leadership and team building skills.

### INTERPRETIVE KAYAK TRIP

**Grade: 7-12**  
**Season: April-October**  
**Time: 4-6 Hours** **Group Size: Kayak 32**

Students explore the Lower Merced River in kayaks, study its unique ecosystem and learn of the effort being made for its restoration.

### Just Passing Through

**Grade: 3-6** **Season: Year Round**  
**Time: 1 Hours** **Group Size: 25**

Students investigate how water flows downhill with and without plant cover and learn best management practices to reduce erosion.

### THE LIFE BOX

**Grade: 1-3** **Season: Year Round**  
**Time: 1 Hours** **Group Size: 25**

Students create a life box using soil, water, and seeds and learn the essential factors necessary for life.

### MACRO INVERTEBRATE STUDY

**Grade: 3-12** **Season: Year Round**  
**Time: 1-2 Hours** **Group Size: 25**

Students use 3-way viewers to identify aquatic macro invertebrates and use their data to determine the health of the river or stream where they live.

### MIGRATION HEADACHE

**Grade: 4-5, 9-12** **Season: Year Round**  
**Time: 1 Hour** **Group Size: 25**

Students simulate the movement of migratory waterfowl between their nesting and wintering habitat to learn how they depend on the environment for survival and are related to other animals in food chains and food webs. *(Adapted from Project Wild)*

### THE LONG HAUL

**Grade: 3-12** **Season: Year Round**  
**Time: 1 Hours** **Group Size: 25**

Students investigate their water supply, water delivery, and the work needed to meet a community's needs.

### NATIVE AMERICANS OF THE MERCED RIVER

**Grade: 3-4** **Season: Year Round**  
**Time: 1-2 Hours** **Group Size: 25**

Students study how Native Americans lived at their field trip site and their unique relationship to the natural environment.

**NATIVE AMERICANS OF THE MERCED RIVER****Grade: 3-4**      **Season: Year Round****Time: 1-2 Hours**      **Group Size: 25**

Students study how Native Americans lived at their field trip site and their unique relationship to the natural environment.

**NATURE ART****Grade: K-12**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students observe an outdoor landscape and create a work of environmental art.

**NATURE WALK****Grade: K-12**      **Season: Year Round****Time: 1-2 Hours**      **Group Size: 25**

K - 2 students study the similarities and differences of plants and animals and learn how they adapt to the places they live. 3 - 12 students explore the outdoor environment, identify plants and animals, study their function in the ecosystem, and learn how they are related in food chains and food webs

**PAWS & JAWS****Grade: 3-5**      **Season: Year Round****Time: 1-2 Hours**      **Group Size: 25**

Students study the paws and jaws of different animals and learn how adaptations contribute to their survival.

**PASS THE JUG****Grade: 1-12**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students investigate how water resources are divided among different users in California and learn the importance of conservation.

**RIVER FRIENDS****Grade: 2**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students study the plants and animals at their field trip site and learn their life cycles.

**RIVER GEOLOGY****Grade: 2-12**      **Season: Year Round****Time: 1 Hours**      **Group Size: 25**

Students study the geology at their field trip site to learn how weathering and erosion has shaped the landscape, how sand is formed and how to identify igneous and metamorphic rocks.

**RIVER SCIENCE****Grade: 9-12**      **Season: Year Round****Time: 1-8 Hours**      **Group Size: 25**

Students use natural resource professional protocols to collect data, perform experiments, determine river health, and monitor flora and fauna.

**SALMONID ART****Grade: K - 12**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students use a model of a trout or salmon to create a fish print. They study the life cycle of the salmon and their Merced River habitat.

**TEMPERATURE WALK****Grade: K-1**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students study the weather by measuring the temperature at different locations at their field trip site.

**THE INCREDIBLE JOURNEY****Grade: 5**      **Season: Year Round****Time: 1-2 Hours**      **Group Size: 25**

Students participate in a series of kinesthetic activities to learn the water cycle. *(Adapted from Project WET)*

**TIME FOR DINNER****Grade: 1**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students study the plants and animals that live at their field trip site to learn how they meet their basic needs.

**TREE TREK****Grade: 3-12**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students use a dichotomous key to identify trees and study the role of trees in the ecosystem.

**WATER OLYMPICS****Grade: 5-8**      **Season: Year Round****Time: 1 Hours**      **Group Size: 25**

Students will learn about properties of water: cohesion, adhesion, and surface tension, through a series of experiments while using the steps of the scientific method.

**WATER QUALITY TESTING****Grade: 3-12**      **Season: Year Round****Time: 1-2 Hours**      **Group Size: 25**

Students perform a series of investigations to determine the quality of water at their field trip site.

**WATERSHED MODEL****Grade: 4-6, 9-12**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Working with a docent, students study a watershed model and use the model to investigate human impacts on the environment and water quality.

**WEB OF LIFE****Grade: 4-5**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students construct a food web using plants and animals found at their field trip site and learn how organisms are related to one another and may compete for ecosystem resources.

**WET WORK SHUFFLE****Grade: 9-12**      **Season: Year Round****Time: 1 Hours**      **Group Size: 25**

Students investigate water related careers.

**WETLAND SOILS IN COLOR****Grade: 2-8**      **Season: Year Round****Time: 1 Hour**      **Group Size: 25**

Students learn about the properties of wetland soils and about the organisms that live in there.

## PROGRAM ACTIVITIES BY GRADE LEVEL

ACTIVITY	K	1	2	3	4	5	6	7	8	9-12
Aquifer in a Cup				✓	✓					
Clean Water Team Field Day								✓	✓	✓
Color Me a Watershed							✓	✓	✓	
Common Water	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Creepy Crawlers	✓	✓	✓							
Critter Count	✓	✓								
Ground Water Model					✓	✓	✓			✓
The Incredible Journey					✓	✓				
Initiative & Confidence Program				✓	✓	✓	✓	✓	✓	✓
Interpretive Kayak Trip								✓	✓	✓
Just Passing Through				✓	✓	✓				
The Life Box		✓	✓	✓						
The Long Haul				✓	✓	✓	✓	✓	✓	✓
Macro Invertebrate Study				✓	✓	✓	✓	✓	✓	✓
Migration Headache					✓	✓	✓			✓
Native Americans of the Merced River				✓	✓					
Nature Art	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nature Walk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pass the Jug	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paws & Jaws				✓	✓	✓				
River Friends			✓							
River Geology			✓	✓	✓	✓	✓	✓	✓	✓
River Science										✓
Salmonid Art	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
The Incredible Journey					✓	✓				
Time for Dinner		✓								
Tree Trek				✓	✓	✓	✓	✓	✓	✓
Water Quality Testing				✓	✓	✓	✓	✓	✓	✓
Watershed Model					✓	✓	✓			✓
Web of Life					✓	✓				
Wet Work Shuffle										✓
Wetland Soils in Living Color			✓	✓	✓	✓	✓	✓	✓	✓

## SAMPLE: 3 STATION ACTIVITY SCHEDULE

Station No.	Activity	Teacher	Location	9:00am-9:30am	9:30am-10:30am	10:30am-11:30am	11:30am-12:30pm	12:30pm-1:00pm	1:00pm-1:30pm	1:45pm-2:00pm
1	Nature Walk			Arrival	TROUT	BEARS	SALMON	Lunch	Group Activities	Departure
2	Macro Invertebrate Study				SALMON	TROUT	BEARS			
3	Salmon Art				BEARS	SALMON	TROUT			

Maximum Group Size: 75

## SAMPLE: 6 STATION ACTIVITY SCHEDULE

Station No.	Activity	Teacher	Location	9:00am-9:30am	9:30am-10:30am	10:30am-11:30am	11:30am-12:30pm	12:30pm-1:00pm	1:00pm-1:30pm	1:45pm-2:00pm
1	Nature Walk			Arrival	TROUT	BEARS	SALMON	Lunch	Group Activities	Departure
2	Macro Invertebrate Study				SALMON	TROUT	BEARS			
3	Salmon Art				BEARS	SALMON	TROUT			
4	Nature Walk			Arrival	EAGLES	REDTAIL HAWKS	RACCOON	Lunch	Group Activities	Departure
5	Macro Invertebrate Study				RACCOON	EAGLES	REDTAIL HAWKS			
6	Salmon Art				REDTAIL HAWKS	RACCOON	EAGLES			

Maximum Group Size: 150



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## SERVICE LEARNING

The Lower Merced River is a valuable natural resource with many beneficial uses. The Stewardship Program is actively involved in monitoring and improving the natural habitat of the river. Volunteers may participate in a wide variety of Service-Learning activities.

**River Cleanup** activities are held throughout the year. Volunteers collect trash and debris from the channel and shores of the Merced River and perform trash surveys. River Cleanup with canoes and kayaks is one of the most popular volunteer activities.

The **Native Plant Nursery** propagates and grows native plants for river restoration. Volunteers can assist with collecting seeds, potting and propagation.

**Environmental Restoration** seeks to improve Lower Merced River habitat by recreating natural ecosystems. Volunteers remove invasive plants and plant native trees, shrubs, and grasses that will benefit wildlife and create riparian buffer zones of vegetation.

“Thanks for working with us to do a service-learning project. We loved planting trees and learning the importance of the River.”



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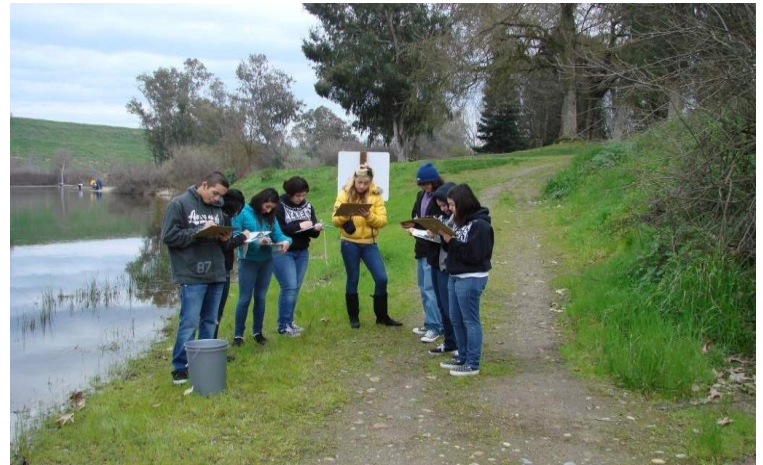
## CLEAN WATER TEAM

The Stewardship Program's Clean Water Team is a volunteer citizen monitoring group. The team monitors the health of the Lower Merced River by performing water quality tests, collecting and studying aquatic insects, and making visual observations of river and stream conditions and habitat. The Clean Water Team also performs regular river cleanups and trash assessments.

The Clean Water Team provides training for all activities so no specific skills or prior experience is required to join. Your monitoring can make a difference. You can help find sources of pollution and identify problems to correct. The data you collect can be used to plan restoration projects and/or evaluate the success of restoration projects. Your efforts will help to protect and improve the health of the San Joaquin River.

Student teams are establishing a baseline of data for the Lower Merced River. Teams go to selected monitoring sites to perform a stream walk (visual habitat assessment), collect field data, aquatic insect samples and photos. Sites will be field tested for dissolved oxygen, conductivity, pH, and temperature.

Monitoring is a great activity for individuals, families, and youth groups. It also promotes the conservation of our natural resources.





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## GUIDELINES FOR FIELD TRIP PLANNING

We offer classroom presentations and field trips September through November and February through June. Other dates are available by special request. May and June are our busiest months so you should schedule well in advance.

Events are normally scheduled on Tuesdays, Thursdays and Fridays. Trips on Mondays and Wednesdays are more difficult to schedule so please contact us.

Plan on arriving by 9:00am and leaving no later than 2:00pm. If you must depart by 12:30pm you should plan on doing 3 learning stations and one large group activity. If you can depart between 1:30 and 2:00 you can plan on doing 4 learning stations and one large group activity. Stewardship staff must finish all field trip activities no later than 2:30 pm.



## REGISTRATION

**You can complete a field trip request form online at:  
[www.lowermercedriver.org](http://www.lowermercedriver.org)**

Contact us by phone or email to discuss the type of event you would like to plan. Our staff will help you choose activities, recommend the appropriate site, determine fees, and schedule a date.

Online registration and additional information about all the programs offered through the Lower Merced River Stewardship Program is available on our website at: [WWW.LOWERMERCEDRIVER.ORG](http://WWW.LOWERMERCEDRIVER.ORG).

### CONTACT INFORMATION:

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