



**POINT REYES NATIONAL SEASHORE ASSOCIATION
CLEM MILLER ENVIRONMENTAL EDUCATION CENTER**

SCHOOL PROGRAM TEACHERS' MANUAL

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POINT REYES NATIONAL SEASHORE ASSOCIATION

The Clem Miller Environmental Education Center is a project of the Point Reyes National Seashore Association (PRNSA), the primary nonprofit 501(c)(3) cooperating partner to Point Reyes National Seashore. PRNSA works with the National Park Service and the surrounding community to address endangered species recovery and wildlife protection, habitat and wetlands restoration, preservation of cultural and historic legacies, and access to natural lands for people. PRNSA dedicates its efforts to building a future in which healthy ecosystems thrive, historic legacies are preserved, environmental education opportunities are available to all, and people enjoy the enormous benefits of healthy natural lands.

Individuals, families and organizations can join PRNSA and receive the following benefits: 15% discount on visitor center purchases, discount on Field Seminars, invitations to special member events. Visit www.ptreyes.org for more information and to become a member.

INTRODUCTION TO THE CLEM MILLER ENVIRONMENTAL EDUCATION CENTER

The Clem Miller Environmental Education Center (CMEEC) is an 80-bed residential facility nestled in a peaceful valley just two miles from Limantour Beach within the Point Reyes National Seashore. The CMEEC is a safe, secluded and private place for groups of all ages to explore, discover and connect with themselves, each other, and the natural world. The location and setting lend themselves to environmental and natural history programs and retreats of all kinds – from marine and coastal field ecology to environmental ethics, critical thinking, leadership development and team building.

The Center is designed as a model of ecological sustainability with composting, recycling, and waste monitoring practices, solar-heated water, and photovoltaic modules providing electricity. Facilities include a large cedar lodge with dining room, library/science center, and commercial kitchen, five spacious dormitory-style cabins, a bathhouse with hot showers, an infirmary, a large central meadow and a campfire circle.

Founding & Mission of CMEEC

The land where the Center is located, formally Laguna Ranch, was acquired in 1971. Clem Miller, the U.S. Representative from California whose vision and determination led to the establishment of Point Reyes National Seashore, believed the Laguna Ranch was an ideal site for an environmental education center. The Clem Miller Environmental Education Center was founded through a collaboration between the local educational community, the National Park Service, and the Point Reyes National Seashore Association and is administered according to the following principles.

The Center shall:

- Promote Point Reyes National Seashore as a living classroom by providing a residential teaching facility.
- Facilitate field based environmental and natural history education experiences that encourage participants to develop a sense of ecological stewardship and conservation.
- Provide teachers and group leaders with the knowledge and background necessary to facilitate their own program thereby insuring that environmental concepts, principles and practices are integrated into the classroom or program.
- Provide an affordable residential environmental education experience to schools, especially those from the densely populated urban areas of the greater San Francisco Bay region.

We strongly believe it is in the national interest to capitalize on the few remaining clear opportunities to save our vanishing shoreline for public recreational use, particularly the very few still unspoiled and outstanding shoreline areas near large concentrations of population ... It seems to us ...that Point Reyes Peninsula presents such a clear opportunity... If we act sensibly and foresightedly now, while the opportunity remains, we shall have preserved for America and for California and for the people of Marin County a priceless heritage to be enjoyed many times over, not only by our generation, but also by those which follow.

Clem Miller, U.S. Representative, & Clair Engle, U.S. Senator
Joint statement upon introducing bill to establish Point Reyes National Seashore
87th Congress. January, 1961

HOW TO RESERVE THE CMEEC

CMEEC staff provides support and assistance during the planning phase as well as an orientation and welcome on arrival day. Aside from these, the entire site is reserved for the exclusive use of the contracted group. The group leaders arrange transportation, food planning and preparation, activity schedule and overall logistics. Here are the basic requirements for reserving the CMEEC:

1. Classroom teachers are required to attend a weekend-long natural history and environmental education intensive course prior to making a reservation to use the CMEEC. This course includes an overnight stay at the CMEEC. Leaders of non-school groups may schedule a pre-trip site orientation with CMEEC staff in lieu of completing the training.
2. The CMEEC can accommodate a maximum of 80 participants. School groups and groups with minors (those under 18) in attendance must have one adult chaperone per eight minors. NPS regulations prohibit all pets (including those kept inside vehicles).
3. Programs may be three- to five-days in length and may be scheduled during weekdays, weekends or holidays.
4. Priority reservations are made via a lottery system. Once the lottery has been completed, unreserved dates are made available.
5. A deposit is required to secure a reservation. Current rates and refund policies are available at www.ptreyes.org. A use agreement contract and proof of insurance are also required.

CMEEC FACILITIES

Note: There is no internet or mobile phone service on site.

Main Lodge

The 4500 sq ft cedar Lodge includes a large dining/multipurpose room, a smaller library/classroom, a large commercial kitchen fully outfitted for cooking and serving up to 80 people, a teacher/group leader room with instructor library, desk and telephone, and a bathroom. In addition, the lodge has a very large covered porch and two outdoor picnic areas. The lodge is heated by a large woodstove and firewood is provided. Groups are asked to bring their own kindling and newspaper.

Cabins

Visitors sleep in one of five solidly built, open-beam, pine cabins furnished with sturdy wooden bunk beds and vinyl covered 3-inch foam mattresses. Each guest provides their own bedding. The cabins have ample skylights but no heat, electricity or running water. Gas lanterns, propane heaters and candles are strictly prohibited. Two cabins are wheelchair accessible.

Annex

This multipurpose building includes two private bedrooms with two single beds in each, an infirmary with two single beds, a private bathroom, a laundry room and a small private shower. The Annex is carpeted, has electricity and heat, and is wheelchair accessible.

Bathhouse

The centrally located bathhouse has toilets, sinks and hot showers with separate facilities for males and females. There is no electricity, however a photosensitive light comes on as it becomes dark. The bathhouse is wheelchair accessible.

Campfire Area

Located in beautiful woodland a short walk from the main compound, the campfire area includes a campfire pit, wooden bench seating for 70 and a stage.

Bus Access & Personal Vehicle Parking

Buses are not permitted on the CMEEC access road; bus parking and loading takes place at the Bus Parking Area on Limantour Road just $\frac{3}{4}$ mile from the Education Center. Participants who arrive by bus must hike $\frac{1}{2}$ mile downhill from the bus parking area to the main compound.

Vans, trucks and cars may use the CMEEC parking area during loading and unloading only. These vehicles must be parked outside the CMEEC grounds in the Laguna Parking lot or overflow parking area outside the Laguna lot. Up to two personal or program vehicles may be parked in the CMEEC parking area.

CMEEC RULES & SAFETY

The Clem Miller Environmental Education Center is located in Point Reyes National Seashore on property of the National Park Service. Groups using this facility must abide by all NPS regulations as stated in Title 36 of the U.S. Code of Regulations.

National Park Service Regulations

1. All natural, cultural, and archaeological resources in the Seashore are protected from removal, destruction, defacing, digging, or disturbing from its natural state. This includes rocks, plants, animals, fossils, and archaeological items. The gathering of small amounts of some mushrooms, berries, and seashells may be permitted as designated by the Superintendent. (36 CFR 2.1)
2. The taking of wildlife, or the feeding, touching, teasing, frightening, or intentional disturbing of wildlife nesting, breeding, or other activities is prohibited. (36 CFR 2.2)
3. Possessing, carrying, or using a weapon, trap, or net is prohibited. (36 CFR 2.4)
4. Camping is permitted only in designated sites in the four backcountry camps with a wilderness permit. Quiet shall be maintained in the campgrounds between the hours of 10:00 pm and 6:00 am.
5. Fires are allowed under appropriate conditions only in government-provided grills in the campgrounds and picnic areas, and in the campfire ring at the Center. Only charcoal, gas stoves or canned heat may be used for cooking. Driftwood fires are allowed on beaches away from all vegetation. Fires should not be left unattended. Beach fires require a permit (36 CFR 2.13, Compendium).
6. Disposal of refuse in other than refuse receptacles is prohibited. Polluting or contaminating waters or water courses is also prohibited. Human waste should be disposed of at designated public restroom facilities where available. In the backcountry where facilities are unavailable, disposal should take place at least 100 feet from water sources, the high water mark of any body of water, campsites, or hiking trails. (36 CFR 2.14)
7. Pets are not allowed at the Environmental Education Center. (36 CFR 2.15)
8. Smoking is prohibited in all Education Center buildings. (36 CFR 2.21)
9. A person involved in an incident resulting in personal injury or property damage exceeding \$300 shall report the incident to park authorities as soon as possible, in addition to any other state-applicable reporting requirements. (36 CFR 2.33)
10. Disorderly conduct is prohibited. (36 CFR 2.34)

11. Taking plants, fish wildlife, rocks, or minerals must be in accordance with the terms and conditions of a specimen collecting permit issued by the Superintendent. (36 CFR 2.5)
12. Traffic and the use of vehicles within the Seashore are governed by the California State Vehicle Code and the Code of Federal Regulations, Part 4.

CMEEC Rules

1. No food or drink (with the exception of water) is to be taken into the cabins at any time, to prevent attracting animals into the buildings.
2. Alcohol and other drugs are not permitted.
3. Styrofoam is not permitted.
4. Fire extinguishers are for emergency use only. The unofficial use of any extinguisher will result in a refilling fee.
5. The hill behind the cabins and the banks of all streams (except for designated study areas), are off limits to groups to protect ecological integrity.
6. Climbing on or jumping off the roofs, railings or cabin windows is not permitted.
7. After unloading, vehicles must be parked in designated parking areas. Up to two vehicles may park in the Center parking lot. Vehicles are not permitted to travel or park off road.
8. Overnight camping in a vehicle is not permitted.
9. Group leaders are responsible for making sure that all members of their group understand and comply with NPS and CMEEC regulations and all terms of the Use Contract.

TRIP PLANNING & PREPARATION

We strongly recommend that teachers/group leaders recruit the assistance of parents or other responsible adults to assist in trip planning and implementation. As much as possible, involve program chaperones and participants in the early planning phase: Fundraising, meal planning, program scheduling, gear acquisition and general logistics.

1. Reserve CMEEC via lottery or by talking with CMEEC staff. Make sure to cross check all calendars and schedules to eliminate conflicts. Once a contract is signed, it is very difficult to change a reservation.
2. Draft a budget including CMEEC rental fee, food & beverages, equipment & supplies, transportation, etc.
3. Reserve transportation, rental equipment & supplies.
4. Identify available funds & fundraise as necessary.
5. Formulate program goals & objectives. Design program schedule & activities. *Program schedule must be sent to CMEEC staff at least 30 days prior to scheduled trip date.*
6. Decide how you will run meals, organize clean-up, manage activities, arrange shower schedule, chore schedule, etc.
7. Recruit program chaperones, assistants, cabin counselors, kitchen crew, drivers, etc.
8. Provide participants with and track the return of all necessary forms (health history, permission slips, waivers).
9. Provide participants with packing list, directions, additional information as needed.
10. Arrange cabin groups and cabin chaperones (*1 adult is required for each group of 8 minors*).
11. Hold a training & orientation meeting with co-leaders, chaperones, counselors.
12. Gather teaching supplies, gear, equipment and necessary paperwork.
13. Organize transportation of participants, gear, and food.
14. Plan meals and coordinate shopping. *We strongly recommend that you recruit two or three responsible adults to organize shopping and run the kitchen.*
15. Clearly review trip preparation and expectations with all participants. Go over packing list, explain living conditions, answer questions.

EDUCATION CENTER SUPPLIES & EQUIPMENT PROVIDED

Kitchen

- 1 double size commercial refrigerator
- 1 large commercial freezer
- Wolf range: 6 burners + griddle & 2 ovens
- Large hot water urn
- 12 cup coffee maker with extra carafe & reusable filter
- Large cook pans with lids
- Various sized saucepans with lids
- Various sized frying pans
- Large & small sheet pans
- Muffin tins
- Various sized hotel pans, steamers and lids
- Various sized mixing bowls
- Pitchers
- Colanders & strainers
- Measuring cups/spoons
- Kitchen knives & pizza cutters
- Graters
- Can/bottle openers
- Wire whisks, hand masher, garlic press, vegetable steamer
- Pancake turners/spatulas
- Large spoons/forks/ladles
- Oven mitts
- Grill scraper & scouring brick
- Large & small plates, bowls, tumblers, cups, silverware for 80

Cleaning Supplies

The Center stocks cleaning supplies that are safe for human health & environmentally sensitive

- All Purpose Cleaner (for floors & surfaces)
- Window cleaner (vinegar & water)
- Food Grade Multi-Quat Sanitizer
- Bio-Kleen Degreaser
- Bon Ami Sourcing Powder
- Hand soap (dispensers at all sinks)
- Brooms, hand brooms & dustpans
- Dry & wet mops
- Mop buckets & wringers
- Toilet scrubbers
- Rubber gloves
- Sponges, Scouring Pads, Steel Wool, Scrub Brushes
- Garbage bags

Misc

- Firewood
- Outdoor barbeque grill
- 12 6x3 folding tables
- 12 outdoor picnic tables
- 90 stacking chairs

Audio visual cart & extension cord
Pull-down projector screens
Emergency kit including water filter, electric lanterns, weather radio
Extra sleeping bags (5)
Compost, recycling & garbage bins

EDUCATION CENTER TEACHING SUPPLIES & EQUIPMENT AVAILABLE

(for check-out upon arrival)

Discovery Kits & Activities

Animal Clue Game
Beach Scavenger Hunt
Creek Study & Water Quality Kits (2)
Duplication Game
Fire Box (background on fire ecology)
Fire Slide Show & Script (*Covers Mt Vision fire of 1995 including recovery of area around CMEEC*)
Jays & Juncos (a.k.a. Wren Tits & Scrub Jays)
Tidepool Scavenger Hunt
Tracking Kit (mammal track molds & plaster of paris)
Tree Key
UnNature Trail
Who Am I Game?

Field Guides & Species ID Cards/Charts

Local Rocks of North America
Mac's Field Guide to Salmon and Trout
Reptile & Amphibians guide
Sky Charts
Species lists for the Point Reyes area

BIRDS

Local Birds of Marin County
Local Tracks of North America Quick Guide
Mac's Field Guide to California Coastal Birds
Peterson's Flash Guide to Ducks (North America)
Peterson's Flash Guide to Hawks
Peterson's Flash Guide to Waterfowl
Bird Finders
Identiflyer bird song player & sound cards

INVERTEBRATES

Intertidal Finders
Laminated Guide to Tidepool Invertebrates
Mac's Field Guide to Coastal Invertebrates
Local Butterflies of Marin County
Peterson's Flash Guide to Butterflies

MAMMALS

Mac's Field Guide to Land Mammals of North America
Mac's Field Guide to Marine Mammals
Marine Mammals of Eastern North Pacific National Marine Sanctuaries
Mammal Finders

PLANTS

Mac's Field Guide to Northern California Wildflowers
Plants Found at Point Reyes National Seashore
Species Binder for Plants at Clem Miller Environmental Education Center
Berry Finders
Fern Finders
Tree Finders

Books & Storybooks

This is a small sampling of the collection; books in the library are available to visitors throughout their stay.

Keepers of the Night
Natural History of Point Reyes
Owl Moon
The Stars

Instructor Reference Library

A California Flora and Supplement, Munz
Andy Goldsworthy: Collaboration with Nature, Goldsworthy
Animal Skulls, Elbroch
Bird Tracks and Signs, Elbroch
California Insects, Powell & Hogue
Coyote's Guide to Connecting with Nature, Young, Haas & McGowan
Geology of the Point Reyes Peninsula
Intertidal Invertebrates of California, Stanford
Mammal Tracks and Signs, Elbroch
Mushrooms Demystified, Arora
National Geographic Field Guide to Birds of North America
Native American Medicinal Plants, an Ethnobotanical Dictionary, Moerman
Peterson's Field Guide to Western Reptiles & Amphibians
Plants of the San Francisco Bay Region, Beidleman & Kozloff
The Beachcombers Guide to Seashore Life of California, Sept
The National Parks, Duncan & Burns
Wildflowers of Northern California's Wine Country and North Coast Ranges, Parker

Miscellaneous Equipment & Supplies

bug viewers & bug boxes
set of binoculars (in a daypack)
set of hand lenses
slide projector & AV cart
spotting scope & tripod
owl wing & turkey vulture feather

GROUP GEAR PACKING LIST FOR LEADERS

Your ecological footprint: As much as possible, please purchase foods, beverages and supplies that are in alignment with the principle and practice of environmental education. Avoid heavily processed foods/beverages and products that are not packaged in recycled/recycleable materials. *Styrofoam packaging is not permitted.*

FEDERAL HEALTH CODE REQUIRED KITCHEN SUPPLIES

- White hand towels (15 per day, minimum) for use in kitchen.
- Disposable one-time-use gloves (200 per day) for food preparation
- Dish washing liquid

BASIC SUPPLIES

- All required foods & beverages
- Kindling for woodstove & campfire pit
- Quarters for clothes washer (\$2.25 per load)
- Laundry detergent
- Large base camp first aid kit & smaller kits for field groups
- Extra sleeping bags &/or blankets
- Extra jackets & rain ponchos
- Extra water bottles
- Calling Card for long distance calls
- Matches, briquettes and starting fluid (if you plan to barbeque)

TEACHING SUPPLIES & EQUIPMENT

- Materials & equipment for activities
- Games, Craft Supplies
- Recreational equipment
- Musical Instruments
- Paper, pencils, pens, scissors, etc.

PACKING LIST FOR PARTICIPANTS

ESSENTIAL CLOTHING

- Warm jacket
- Sweater or sweatshirt
- Windbreaker or rain jacket or poncho
- Long pants (2-3 pair)
- *optional:* Shorts
- T-shirts (2-3)
- Long-sleeve shirts (2)
- Underwear (1 per day)
- Socks (1 per day) heavy and mid-weight
- PJs or sweats for sleeping
- Shoes (3-4 pair)
 1. Sturdy lace-ups for hiking (sneakers or hiking shoes)
 2. Sturdy sandals with straps or water shoes
 3. Extra pair of shoes (often shoes get wet &/or muddy)
- Hats (2)
 1. Sun hat or visor with brim
 2. Beanie or equivalent for cold weather

ESSENTIAL NON-CLOTHES

- Prescription medication
- Day pack with the following:
 1. Water bottle/canteen (quart size)
 2. Sunscreen & Lip Balm (SPF 15 or higher)
 3. Inhaler and/or EpiPen, if required
- Towel (*optional*: washcloth)
- Toothbrush & toothpaste
- Personal toiletries as needed
- Warm sleeping bag (plus extra blanket during colder months)
- Flashlight or headlamp & extra batteries
- Reading book and/or puzzle book
- Pens and/or pencils

PARTICIPANT EQUIPMENT LIST - OPTIONAL

Pillow
Journal, sketchbook
Camera
Binoculars

ITEMS NOT ALLOWED AT THE CENTER

Candles (no fire or flame allowed except woodstove, barbeque, campfire pit)
Radios, Ipods, video games
Gum & candy
Pocket knives
Illegal drugs, alcohol, cigarettes

DIRECTIONS TO THE CENTER

From Hwy 101 in Novato or Hwy 37

Driving time from Hwy 101 is about 1 hour. Take the South Novato Blvd exit onto South Novato Blvd. Continue on Novato Blvd. for approximately twenty minutes. You will go through the town of Novato and eventually end up in a rural area, passing Stafford Lake. The road will end a few miles after at Point Reyes/Petaluma Rd. Turn left onto Point Reyes/Petaluma Rd. and continue on this road until you reach a stop sign at Platform Bridge Road. Go straight on Platform Bridge Rd for two miles until the road ends at Sir Francis Drake Blvd. Turn right and continue until you reach the stop sign in Olema on Hwy 1. See (*) below.

From Hwy 101 In Petaluma (coming from the North)

Driving time from Hwy 101 is about 1 hour. From Hwy 101 take Petaluma Blvd North Exit. Stay on Petaluma Blvd North all the way through town to D street. Turn right on D Street. D Street will eventually turn into Point Reyes/Petaluma Rd. Continue on this road until you reach a stop sign at Platform Bridge Road. Go straight on Platform Bridge Rd for two miles until the road ends at Sir Francis Drake Blvd. Turn right and continue until you reach the stop sign in Olema on Hwy 1. See (*) below.

From Hwy 580 – San Rafael Richmond Bridge

Driving time from the West end of the San Rafael/Richmond Bridge is about one hour. From the 580-San Rafael/Richmond Bridge, take the Sir Francis Drake Blvd exit (it will be the second exit after you get off the bridge, right after the San Quentin exit). Continue straight on Sir Francis Drake as you pass through a continuation of small towns, and through Samuel P. Taylor State Park until you come to a stop sign in Olema on Hwy 1 (about 21.5 miles from the bridge). See (*) below.

From Hwy 101 North – Golden Gate Bridge

Driving time from the Golden Gate Bridge is about 90 minutes. From 101 North take the San Anselmo exit which will merge you onto Sir Francis Drake Blvd. While on Sir Francis Drake, you will pass through a continuation of small towns, and through Samuel P. Taylor State Park until you come to a stop sign in Olema on Hwy 1 (21.5 miles from 101). See (*) below.

*Turn right (north) towards Point Reyes Station; in one block turn left at the Point Reyes National Seashore sign onto Bear Valley Road. Continue for 1.3 miles on Bear Valley Road until you see a brown sign for Limantour Rd. Turn left onto Limantour Road.

FOR BUSES: Proceed for 5 miles to bus parking on left side.

For private vehicles: Proceed for 6 miles until you come to a sign for the Youth Hostel and Environmental Ed Center. Turn left and proceed past the Youth Hostel to CMEEC driveway and to temporary loading/unloading parking area. After unloading, move personal vehicles to Laguna Parking lot and overflow area adjacent.

For recorded directions to the Park call (415) 464-5100 (Press 2, then 2, then 1 and choose which city you are traveling from). The Education Center is approximately 25 minutes from the Bear Valley Visitor Center.

Please review a Marin County map prior to departure.