

4.0 Recommended Public Use and Access Improvements

This chapter describes recreational land use allocations and improvements that will be completed or installed in order to accommodate safe and orderly public access at the Ma-le'l Dunes CMA. This information is presented in the following sections:

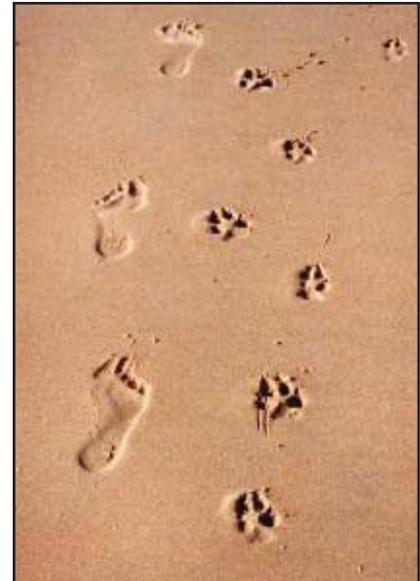
- 4.1 Types of Recreational Use
- 4.2 Estimated Use Levels
- 4.3 Access and Circulation
- 4.4 Access Infrastructure
- 4.5 Signing, Interpretation and Information

4.1 Types of Recreational Use

The entire Ma-le'l Dunes CMA will be open to non-motorized recreation uses with the following restrictions (discussed in more detail below):

- Pedestrian use and associated activities are allowed only on designated trails, open sandy areas, and the wave slope.
- Equestrian use allowed only on designated trails in Ma-le'l South and on the wave slope.
- Dogs allowed off leash on designated trails and open sands throughout Ma-le'l South and along the wave slope of the Ma-le'l Dunes CMA consistent with Humboldt County ordinances and guidelines. Dogs must be leashed in the Ma-le'l South parking/picnic area.
- Overnight camping is prohibited.
- Organized group camping for special events may be approved on a case-by-case basis on Ma-le'l South. only
- Vegetation gathering for personal use is allowed May to November along designated trails at Ma-le'l South and otherwise by special permit.
- Fires allowed only in designated sites on Ma-le'l South.
- Canoe and kayak launching and landing in designated locations only.
- Motorized vehicles, firearms, except for legal waterfowl hunting, crossbow/bow shooting, mineral sales, and livestock permits and leases are prohibited throughout the CMA.

The infrastructure to support these uses is discussed in Section 4.4.



Footprints and paw prints in the sand.

4.1.1 Pedestrian Use

Pedestrian use and associated activities will be allowed on designated trails within the forest and nearshore dunes, on the waveslope, and throughout the open dunes of the Ma-le'l Dunes CMA.

4.1.2 Horseback Riding

Horseback riding will be allowed on two designated trails within the nearshore dunes of Ma-le'l South and along the wave slope of the entire Ma-le'l Dunes CMA. The BLM will monitor equestrian use of the area to ensure that riding is contained within designated areas. The BLM will also monitor equestrian trails for the potential introduction of invasive weed species that might fall out of horse trailers or be produced from manure. New infestations that might arise from such use will be removed.

4.1.3 Dog Walking

Walking unleashed dogs will be allowed on designated trails and the open dunes within Ma-le'l South and along the wave slope of the Ma-le'l Dunes CMA. Dogs must be leashed in the parking and picnic areas of Ma-le'l South.

Humboldt County ordinance requires dogs to be under the control of the owner at all times when away from the owners premises (County Ordinance 541-21). The Humboldt County Parks Department guidelines for activities at Humboldt County Parks states that "control" means that the dog is within view and voice range of the owner and the dog comes at first calling and that it is not allowed to approach people in a threatening manner or in anyway harass people or wildlife, or other dogs or horses (Humboldt County Parks, 2003).

Dogs are not allowed within Ma-le'l North, including the Ma-le'l North parking area, with the exception of aid dogs for disabled persons and on the waveslope . This policy was derived from a determination by USFWS that dog walking in this area would likely result in adverse impacts to sensitive ecological and cultural resources (USFWS, 2004).

4.1.4 Camping and Nighttime Use

Camping and nighttime use will not be allowed within the Ma-le'l Dunes CMA except by special permit on Ma-le'l South. USFWS found that such use would likely result in adverse impacts to sensitive and cultural resources and that the costs to develop and staff facilities to accommodate these activities are beyond the resources currently available or expected to be available in the future.



Horseback riding will be allowed on two designated trails in Ma-le'l South.



Dog walking will be allowed on designated trails in Ma-le'l South as well as on the waveslope throughout the CMA.

4.1.5 Special Group Camping Events

Group organized camping events may be allowed on a case-by-case basis at the Ma-le'l South Special Event Area with a special recreation permit from BLM. Criteria for determining permit issuance includes: 1) size of group, 2) number of permits per month, and 3) purpose of event and if it benefits the overall community in some way. Additional criteria may be developed as an adaptive management measure.

4.1.6 Plant Gathering

Gathering plants, and plant material including mushrooms and berries for personal use from designated trails will be allowed from *May to November* in Ma-le'l South only. Off-trail collection of vegetative material will require a permit during the same time period, in Ma-le'l South only. Ma-le'l North will be closed year-round to gathering of plants and plant material, including mushrooms and berries, except by special permit.

4.1.7 Traditional Resource Gathering

Traditional resource gathering by local Native American tribal members, including vegetative material gathering for personal use, will be allowed throughout the Ma-le'l Dunes CMA in accordance with a memorandum of agreement with the Wiyot Tribe.

4.1.8 Kayak and Canoe Launching & Landing

Non-motorized public boat launching into Mad River Slough and boat landing from the slough will be accommodated during high tide at the Ma-le'l North parking area during day use hours. Due to potential erosion and adverse impacts to sensitive species, boat access and landing will be limited to a designated site located at Ma-le'l North parking area.

Boater-only camping was found to be beyond the resources available to the USFWS currently or in the future. In addition, boat-only camping and access at locations not specifically designed for ingress/egress was found to likely result in adverse impacts to sensitive ecological and cultural resources (USFWS, 2004).



Acornmushbasket, United Indian Health Services permanent collection. Spruce roots are most often used in cooking and eating baskets because they swell up and make the basket water tight.

4.1.9 Fishing

Fishing will be allowed within the Ma-le'l Dunes CMA consistent with CDFG regulations at the Ma-le'l North boat ramp and at the end of the railroad berm.

4.1.10 Motorized and Non-Motorized Vehicle Use

The use of motorized vehicles outside the parking areas within the CMA will not be allowed except in an emergency or for authorized maintenance, construction, restoration, or research purposes.

4.1.11 Restoration Activities

On-going environmental restoration activities will continue in the dunes and forests of the CMA. Both BLM and the USFWS will continue to eradicate European beachgrass, ice plant, yellow bush lupine, English ivy and other invasive plant species on their respective properties in order to benefit the native plant communities. BLM and USFWS will conduct restoration work and weed eradication efforts with the assistance of contracted labor, such as the CCC, and FOD restoration programs. In addition, USFWS will implement CDC funded restoration activities throughout the nearshore dunes and forest at Ma-le'l North over the next three years (EDAW, 2005).

4.1.12 Educational Activities

Access for educational field trips related to natural resources, sciences, and native culture by local schools, non-profits, and tribes will be allowed, and is expected to occur regularly. Coordination and scheduling of group tours is expected to be facilitated with the assistance of FOD.

4.1.13 Access for People with Disabilities

Access for people with disabilities will be provided at the following locations:

- Ma-le'l South parking, picnic area, and restroom
- Ma-le'l North parking area, picnic area, and restroom

To the extent feasible and compatible with agency objectives, these areas will meet the guidelines of the California Disabled Accessibility Guidebook (CalDAG, 2003).



Non-motorized public boat launching and landing will be accommodated at Ma-le'l North during high tide.



On-going restoration activities will continue in the dunes and in the forest throughout the Ma-le'l Dunes CMA.

4.2 Estimated Use Levels

The recommendations contained in this Plan are derived from estimated use levels based on USFWS and BLM staff experience with similar sites, as well as use levels observed when the CMA was managed as the Mad River Slough and Dunes Cooperative Management Area from 1990 to 1994. User surveys were not conducted.

Visitors to the Ma-le'l South and Ma-le'l North areas are expected to total approximately 16,500 and 8,000 persons per year, respectively (Bruce Cann and Andrea Pickart, personal communication, 2005). Expected boat use is approximately ten per weekend day during peak summer hours. During the weekdays, a maximum of five boats per day is expected in good weather. Use levels for traditional resource gathering are expected to be low, perhaps five visits per year by one or a few tribal members. No more than 50 program participants/special groups are expected to visit Ma-le'l North with no more than six special groups per month.

It is expected that most visitors to the Ma-le'l Dunes CMA will arrive by private vehicle. Field trip classes, volunteers and work crews are expected to arrive at the site by bus and/or by van. Equestrians will arrive at Ma-le'l South with horse trailers. Some visitors to Ma-le'l North will arrive by bicycle, kayak, or canoe.

Improvements to the access road are described in the next section, and are followed by a description of improvements to the parking areas, the caretaker's area, trails, trail amenities, fences, and signing.

4.3 Access and Circulation

This section describes vehicular, pedestrian and boat access to the Ma-le'l Dunes CMA. Signing along access routes is discussed in Section 4.5.

4.3.1 Motorized Vehicle

Vehicles will access the designated parking areas via the Ma-le'l Road (a.k.a. the access road). The Ma-le'l North access road will be open to vehicular traffic Friday through Monday, and open to bicycles and pedestrians seven days per week. Vehicles will be prohibited everywhere else including on the HBMWD pipeline easement except for authorized maintenance or emergencies. To the extent possible, the existing gravel Ma-le'l Road leading to designated parking areas in both Ma-le'l North and Ma-le'l South, and to the caretaker trailer area, will be improved and resurfaced to support the expected increase in traffic. Ma-le'l Road will remain single lane at 16 to 20 feet in width. Improvements for road safety, drainage and

durability are expected to include:

- The construction of pull outs in areas where no fill in wetlands or bank cuts are required.
- A 50-foot-wide turning radius at the Young Lane-Ma-le'l Road intersection to accommodate a vehicle turn-around.
- Elevation of the roadbed prism so the crown area is at least one full foot over a one-foot depth base layer.
- Alteration of the longitudinal profile to provide for passive drainage away from the confined sections to open areas so water can drain to the side.
- Construction of a gutter section along the roadway edge where needed.
- Construction using only well-compacted, well-graded crushed crusher run rock or quarry shale.
- Coordination with representatives of the Redwood Gun Club to review and discuss construction methods and materials.

4.3.2 Bicycle Access

No separate bicycle paths or lanes along the Ma-le'l Road will be developed. Bicyclists entering the CMA will be expected to use caution when accessing the site and will be made aware of the one-lane, gravel nature of the road. Signing will be used to alert motorists of the presence of bicyclists.

4.3.3 Gates and Gateway

The Ma-le'l South gate will remain as it currently exists. Improvements to the other gates include:

- The Ma-le'l North gate located near the high voltage tower will be moved approximately 80 feet south, closer to the Young Lane-Ma-le'l Road intersection.
- The USFWS northern gate will be locked open.

The relocation of the gate near the high voltage tower will eliminate the existing roadside parking area that nearby residents have stated is a nuisance due to cars parking there at night after the gates are closed.

Relocation of the Ma-le'l South gate to the Young Lane-Ma-le'l Road intersection was considered as a means to eliminate access road traffic when the CMA is closed. However, this alternative was determined infeasible because it would eliminate access to the private driveway located adjacent to the existing Ma-le'l South gate.



Bicyclists entering the Ma-le'l Dunes CMA will be expected to use caution when accessing the site and will be made aware of the one-lane, gravel nature of the road.

4.3.4 Pedestrian Access

Improvements to accommodate pedestrian access from offsite will not be provided. However, walking throughout the CMA will be accommodated along trails discussed further in section 4.4.5 Trails Routes. e

4.3.5 Kayak and Canoe Access

Canoe and kayak landing and launching within the Ma-le'l Dunes CMA will be accommodated by the construction of a kayak and canoe ramp located at the Ma-le'l North parking and picnic area along the Mad River Slough and at the end of railroad berm trail. This facility will be available for carry-in and carry-out access for canoeists and kayakers during daylight hours only. The ramp at the Ma-le'l North parking area will be accessible only during high tide.

4.4 Access Infrastructure

This section describes proposed access improvements to the Ma-le'l Dunes CMA that will accommodate the recreational uses and use levels discussed in section 4.1 and 4.2. Figure 4.1 illustrates the proposed access improvements.

4.4.1 Parking Areas and Amenities

Ma-le'l South

The Ma-le'l South parking area was recently improved with the installation of access route amenities, including a re-surfaced gravel parking area, post and cable fencing, a metal entrance gate, and day use picnic amenities, including picnic tables, trash receptacles, a temporary toilet, two information kiosks, and directional signs. Improvements at Ma-le'l South that were included in the previous environmental review process but have not yet been installed are a vault toilet and cooking grills.

In addition this Plan recommends that the following new improvements to the Ma-le'l South parking/day use include:

- A water spigot for equestrian use.
- A bicycle rack.
- Post and cable fencing along the access road that will serve as a pedestrian safety corridor along Ma-le'l Road from the PG& E high voltage tower to a trail that crosses the dune and leads to the Ma-le'l South parking lot.
- Possible reconfiguration of the existing parking area to provide additional parking spaces if visitor use and demand increase beyond estimates..

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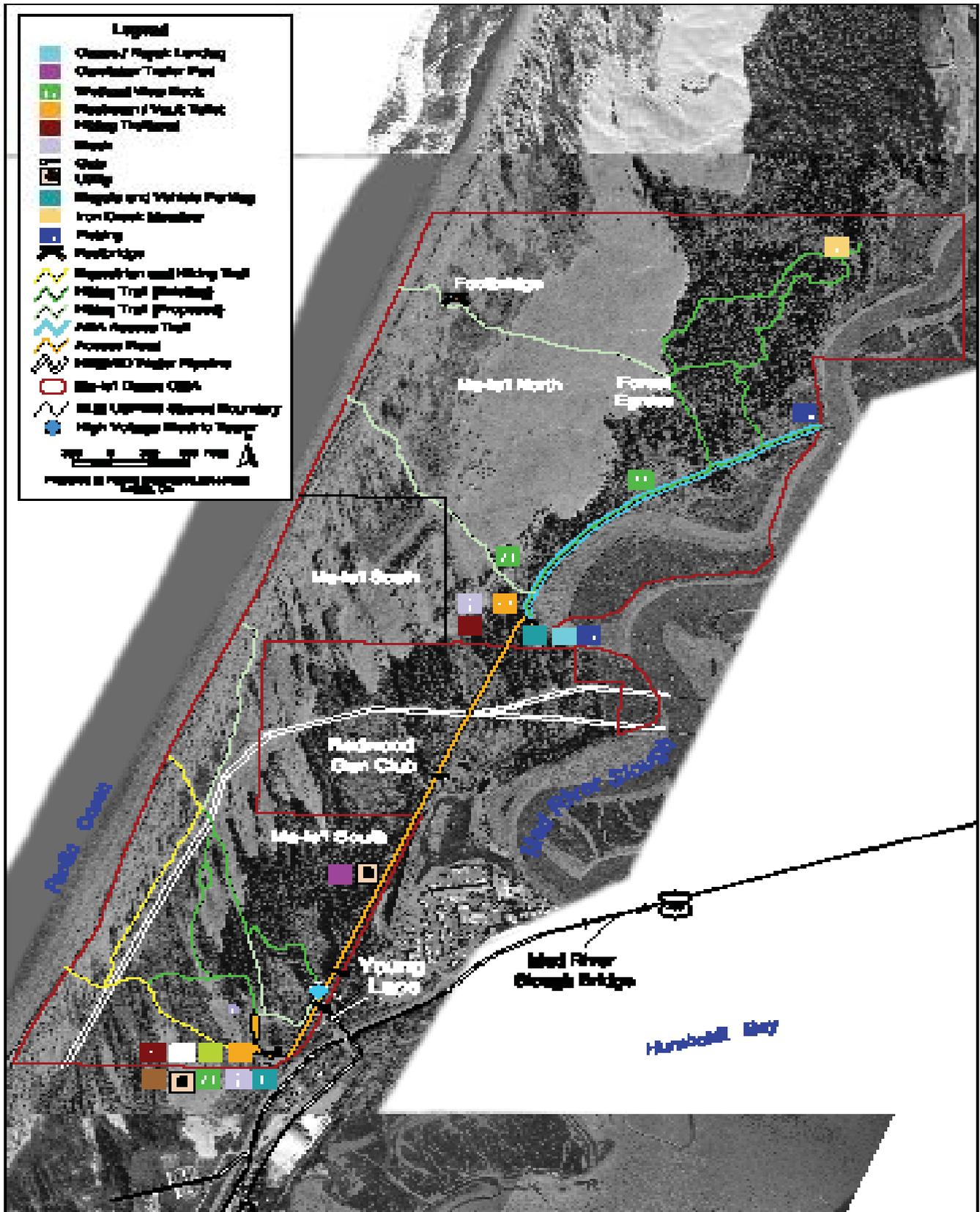


Figure 4-1. Proposed Access Improvements Map

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Ma-le'l North

In order to accommodate expected use levels, the Ma-le'l North parking area will be enlarged and re-oriented. Figure 4-2 illustrates the proposed layout of the Ma-le'l North parking area.

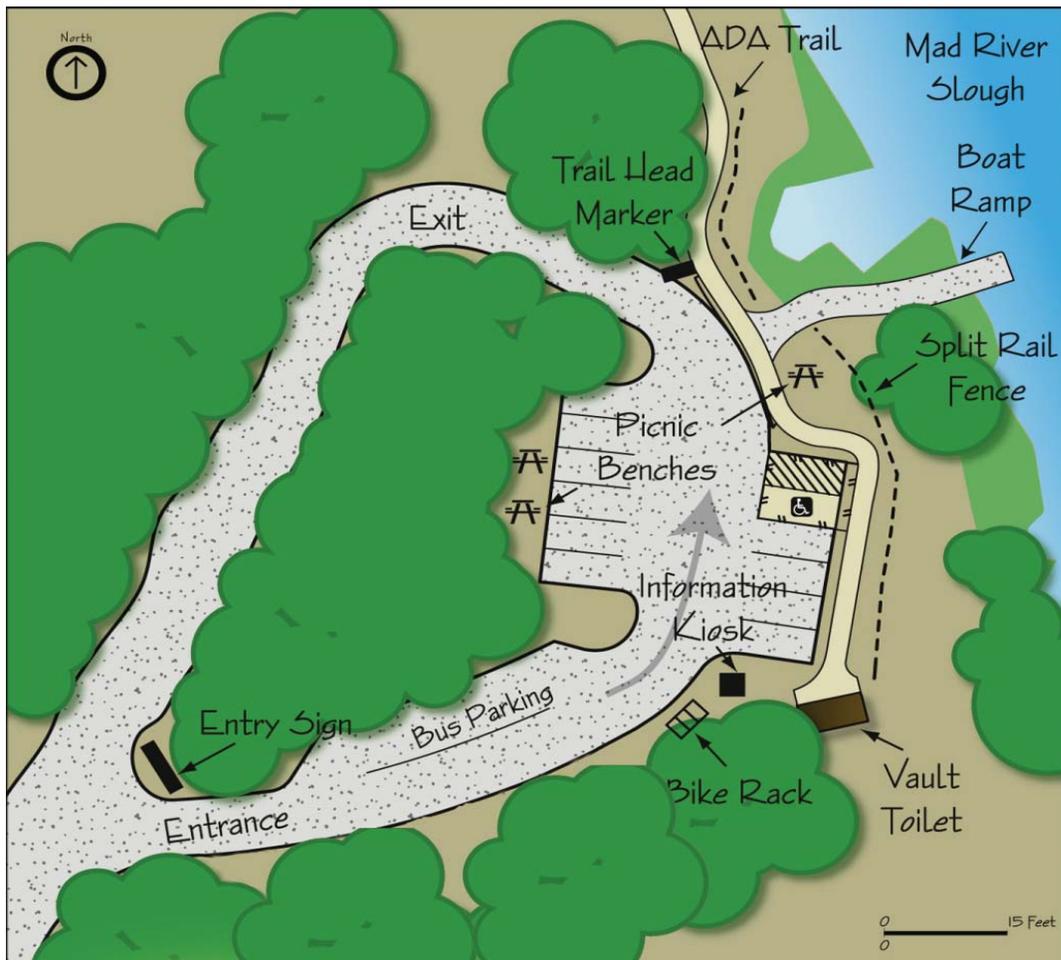


Figure 4-2 Proposed layout of the Ma-le'l North Parking Area

The access road and parking area will be re-surfaced with crushed gravel. The parking and day use area will be upgraded to include the following amenities:

- Ten motorized vehicle spaces and bus parking
- One ADA vehicle space
- Future expansion for nine additional motorized vehicle spaces
- Kayak and canoe ramp
- ADA accessible vault toilet

- ADA accessible trailhead
- Bicycle rack
- Information kiosk
- Picnic tables
- Trash and recycling receptacles
- Split rail fence to keep visitors from walking to the edge of the slough and trampling sensitive vegetation located there.

The layout of the area has been designed to accommodate estimated use levels while minimizing impacts to the surrounding natural resources. The design also strived to minimize potential vehicle and pedestrian conflicts in a relatively small area. The parking lot will be gravel which is semipermeable, and Best Management Practices will be employed to control runoff in accordance with the California Stormwater Quality Associations Best Management Practices Handbooks(2004)

4.4.2 Vault Toilets

Prefabricated vault toilets with the following features will be installed at the Ma-le'l North and Ma-le'l South parking areas:

- 1 door, 1 stall
- Wood or "rustic" motif
- 1,000 gallon vault capacity per toilet
- ADA-accessible

There are several suppliers of prefabricated vault toilets. Typical models and specifications can be viewed at www.romtec.com and www.cxtinc.com. Both USFWS and BLM have experience installing similar facilities in the region.



An example of a single vault toilet building supplied by CXT Incorporated.

4.4.3 Kayak and Canoe Loading and Launching Ramp

To enhance boat access during high tides, a kayak and canoe loading and launching "ramp" will be constructed at the Ma-le'l North parking area to the edge of the slough. Symbolic fencing will be installed on either side of the ramp and walkway to discourage entry into the adjacent salt marsh habitat. Prior to the installation of the ramp rare and special status species plants known to exist in the vicinity will be dug up and moved to suitable habitat nearby. Figure 4-3 illustrates the conceptual cross section for the ramp. The following criteria will be used in ramp installation:

- The ramp will be five-feet wide, approximately 35 ft long, and surfaced with the gravel confined by a heavy-duty, polyethylene cellular product (e.g. Geoweb™).
- The upland slope of the "ramp" should not exceed 12%.

- The slope of the submerged portion of the ramp should not exceed 20%.

The objective of the structure is to accommodate canoe and kayak landing and launching while confining such activity to a small area so as to protect sensitive salt marsh habitat from trampling and erosion. The "ramp" is intended to assist in the ferrying of boats by hand from vehicles to the slough. It is not intended for vehicular access. It will require an incidental amount of wetland fill area of less than 300 square feet).

A floating dock was considered infeasible for this location as the area is only accessible during high tides, and during low tides a boater would need to cross as much as 400 feet of mud flat to reach open water. This significantly limits boating accessibility from this location.

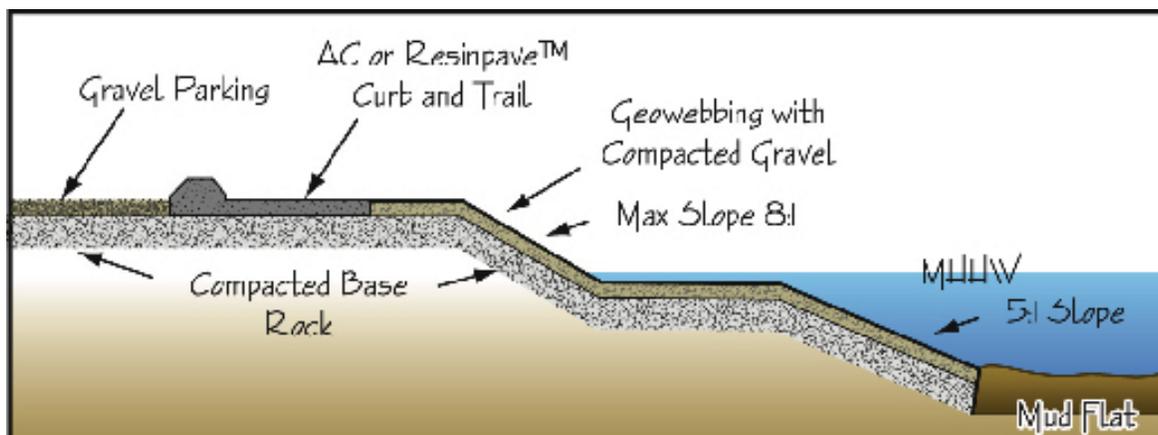


Figure 4-3 Kayak and Canoe Ramp Cross Section (not drawn to scale)

4.4.4 Caretaker Trailer Pad

The existing caretaker trailer pad and surrounding area will be upgraded to accommodate a new trailer and caretaker amenities. Upgrades will entail re-grading of the pad area, placement of road gravel, and vegetation clearing.

4.4.5 Trail Routes

Two miles of new hiking trails will be added to the CMA's existing three-mile network of hiking trails. Both hiking and equestrian trails will be improved, repaired, or re-aligned as necessary to protect both resources and visitors. Figure 4-4 illustrates the recommended trail routes within the Ma-le'I Dunes CMA.

All hiking trail upgrades, including paths, stairs, puncheon style bridges, and other associated amenities will be constructed using guidelines provided in the "Trails Handbook" (Resources Agency, Department of Parks and