



USDA Forest Service
Shasta-Trinity National Forest

Pacific
Southwest
Region

Standards and Guidelines for Shasta-Trinity Marina Facilities



Photo by Eric Cassano

Shasta-Trinity National Recreation Area
Management Guide

Standards and Guidelines for Shasta-Trinity Marina Facilities

*Shasta-Trinity National Recreation Area
Management Guide*

The Standards and Guidelines for Shasta-Trinity Marina Facilities may be updated periodically. The most current version will be located on the Shasta-Trinity National Forest website. Please check the website to make sure you have the most current version.

**This copy of the Marina Standards and Guidelines is
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Preface and Approval

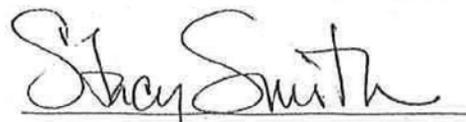
This document is intended as a compilation of the applicable laws, standards, guidelines and policies governing marina operations within the Shasta-Trinity National Recreation Area. Because it is not practical or feasible to include the specific language of each document, they have been referenced and summarized under each heading. We recognize that these laws and policies are fluid and will continue to change as technological and legal developments warrant. As a result, the summarized information will be updated periodically and additional laws may be added to revisions of this document.

The Shasta-Trinity National Recreation Area has chosen to adopt standards and guidelines of the California Department of Boating and Waterways and have incorporated guidance and recommendations from other boating organizations where practical and appropriate. National codes (National Electric Code, National Fire Protection Association, etc.) have also been used wherever possible. Current standards for accessibility (from the US Access Board as adopted by the Federal government) have been incorporated into the marina standards.

Because this document represents current standards, many of the existing marina components will not meet these standards. It is not our expectation that current operations will cease, but rather that these standards and requirements will be incorporated into any new or replacement facilities. Upgrade to current standard will also be required in the Master Development Plans and Transition Plans for each marina. Although many of the marinas within the NRA also contain resort components (restaurants, motel, campgrounds, etc.), these improvements are beyond the scope of this document.

In many instances, the Forest Service is not the primary responsible agency for compliance with health and safety laws and in these cases, the responsible agency or organization is noted. The Shasta-Trinity NRA falls within two separate Basin Plans with regards to the Water Quality Control Board (North Coast and Central Valley) and differences between the plans have created differing standards for some portions of this document. Those have been noted where necessary.

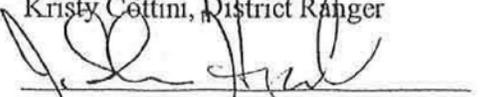
Prepared by:


Stacy Smith, Special Use Officer

Recommended by:


Kristy Cottini, District Ranger

Approved by:


J. Sharon Heywood, Forest Supervisor

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Standards and Guidelines for Shasta-Trinity Marina Facilities

Shasta-Trinity National Recreation Area Management Guide

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Standards for Marinas

Applicable Standard	Regulatory Authority
Built Environment Image Guide (BEIG)	Forest Service
National Water Safety Congress B-15, NFPA 303	Engineer of Record- with Forest Service review
<u>Design Guidelines for Small Craft Berthing Facilities</u> by the State of California Department of Boating and Waterways (DBW)	Engineer of Record –with Forest Service review
<u>Marinas</u> by the National Marine Manufactures Association	Engineer of Record- with Forest Service review
Vehicle Registration	Dept. of Motor Vehicles
Americans with Disability Act and Architectural Barriers Act Accessibility Guidelines (ADAABAAG)	Forest Service

Marinas within the Shasta-Trinity National Recreation Area serve as the commercial gateways to the lakes. Marina facilities shall include at a minimum the capability to launch and retrieve vessels, septic pump out, boat rentals and/or long term moorage for private vessels, restrooms and adequate parking. Marina facilities may also include:

- fuel service
- public boat ramp
- public parking
- public restrooms
- retail store
- food/beverage service
- public telephone
- dock boxes
- picnic areas
- dry dock storage
- laundry facilities
- boat repair service
- ski schools
- recreational trails
- other customer services responsive to the recreational user

Marina facilities shall be designed to complement those services authorized by the Forest Service. Marinas must have public or private land above the high water line and immediately adjacent to the marina that is capable, suitable and readily available for development of support facilities for the marina operation. Marina facilities should be designed to match the visual theme of the marina in color, shape and materials. The level of service and development should correspond to the appropriate Opportunity Class designated in the Water Recreational Opportunity Spectrum (WROS).

Marina layout, design, and signing should facilitate customer use. The marina office should be centrally located, easily accessible and well-marked. The transition from the office to the other primary components (courtesy docks, rentals, moorage, public restrooms, retail sales, etc.) should be clear and understandable, and supported by both the physical design and signing plan.

Facilities should be in good physical condition, well painted or otherwise treated to protect against deterioration, and kept clean and in good repair. Marina grounds, including facility entrances, stairways, parking areas, trails, driveways, walkways, etc., should be well maintained, uncluttered, and free of litter and debris. Loose or rotten boards should be repaired or replaced. Native species shall be used for landscaping and erosion control.

The moorage area of the marina shall be secure and accessible from land by rental and moorage customers. Marinas may restrict fishing from the marina docks, although fishing from the shoreline within the permit boundary shall be permitted unless the marina can demonstrate a clear public safety issue. Boat sales, repair operations or other ancillary services should not be conducted directly out of the marina office. Non-public areas shall be functional and accessible, but screened from public use.

Subject to Forest Service approval, marinas will be allowed to charge for activities for which they provide operating dollars to enhance or maintain. For example, marinas may charge for boat launching, septic pump-out services, or parking if the marina provides and maintains the improvements to support these activities.

Marina staff shall be reachable on a 24/7 basis when the marina is in full operation.

Unless otherwise authorized, a marina may not have more than two administrative residences at the site. Marinas may restrict or limit nighttime access by vehicles if they can demonstrate that such action is necessary to protect people and property.

All boat ramps, major road intersections, and major facilities (restrooms, group shelters, entrance stations, etc.) will have adequate lighting. Energy efficient lighting is encouraged as is lighting controlled with timers and/or motion sensors. Marina lighting should preserve the view of the night sky.

All marina vehicles shall have a current DMV registration sticker appropriate to the intended use of the vehicle. Off highway vehicles (OHV's) must have an off highway green sticker registration. Machinery, such as cranes, tractors, etc., (including those that have been fabricated on site) can be registered under "special equipment." The registration is valid for 10 years but the equipment or machinery must have an identifying number. If there is no number, a number must be stamped on it.

For marinas that operate in shallow areas, temporary locations for low-water conditions must be approved in advance. Marinas must identify their low-water permit area and describe the services and equipment that will be relocated for approval by the authorized officer.

Upon approval by the Forest Service, marinas may merge or consolidate. Each proposal will be evaluated based on the following criteria:

- Proposal is consistent with existing laws and regulations relative to Forest Service management.
- The proposal is consistent with the purposes identified in the National Recreation Area legislation.
- The proposal is feasible and viable as demonstrated in a Business Plan or other similar document.
- The proposal is consistent with the desired Water Recreation Opportunity Spectrum (WROS) class for the location.
- The site can adequately support the required land and/or water based facilities.
- If the proposal does not utilize an existing marina location, the land required for the service has been minimized to the extent possible.
- The proposal is compatible with existing and planned public recreation sites, facilities, and marina operations.

Special Status Species and Recreational Species Management

Marinas may be required to cooperate with the Forest Service and the U.S. Fish and Wildlife Service to protect Bald Eagle nesting sites along the lake shore during the nesting/fledgling period of January 1 to August 1. This may include the installation and maintenance of floating boom closures within or near the dock area and informational signing on land within the permit area. Marinas may also choose to cooperate with survey and monitoring programs (including electronic video cameras) and Watchable Wildlife information.

Marinas may also participate in fish rearing cages in cooperation with the Forest Service and the California Department of Fish and Game.

Standards for Accessibility

Applicable Standard	Regulatory Authority
Americans with Disabilities Act, Architectural Barriers Act Accessibility Guidelines (ADAABAAG)	Forest Service

The items listed below are not intended to be a comprehensive list of accessibility requirements, but rather general guidelines to show how the pieces fit to provide excellent customer service, and to meet the ADA/ABA requirements. For all facility design, the most important point to keep in mind is that all visitors should be able to access services and facilities, without barriers, and with equal opportunity. Marinas need to abide by both ADA and ABA accessibility design standards and use those that are most stringent. Marinas should check with their federal, state and local government for the most current standards.

Accessibility Laws

Facilities and services on Federal lands must offer equal opportunities to people of varying abilities. In order to ensure equal opportunity for persons with disabilities, all facilities shall comply with the Americans with Disabilities Act (ADA), and the Architectural Barriers Act (ABA). Adherence to the current enforceable standards for accessibility will ensure compliance with ADA and ABA. Also, all programs and services shall comply with the Rehabilitation Act, Section 504.

ADA/ABA – Who Is It For?

ADA/ABA pertains to people with varying abilities including: limited vision, hearing impairments, severe arthritis, and cognitive impairments. People without disabilities also benefit from facilities designed to meet ADA/ABA standards. These include: visitors with injuries (crutches, etc.), parents with strollers, deliveries by handcart, or visitors with rolling luggage; all of whom would benefit from facilities designed to comply with ADA/ABA guidelines. Universal Access is the term for facilities that meet accessibility standards, and serve people of varying abilities. Facilities of this nature contribute to excellent customer service.

Customer Service – Putting It All Together

Universal Access is achieved by carefully considering all connecting elements of the facility. Consider the visitor experience from the time a visitor arrives, until their departure. Entry, parking, route of travel, goods and services, restrooms, stores, docks, and moorage must be accessible.

Arrival Experience

The visitor will be directed toward the parking area and the information/service station.

Access Route

The access route ensures that a visitor can get from the parking area to the facilities and services. Facilities and services include the restrooms, stores, rental offices, docks, vessels, moorage, etc. The access route must meet standards for surface, width, resting areas, slope and pedestrian ramps with railings. An access route in this context is not a trail and the accessibility requirements for a trail are different than for an access route. While nearly all components of the marina can be modified to meet current requirements for the access path, the fluctuating water surface and steep slopes on the reservoirs pose a serious challenge in making sure the access route reaches the ramp at all water levels. This issue will be addressed on a case-by-case basis within the marina Master Development Planning process.

Buildings

Facilities such as restrooms and stores include requirements for door width, handles, unobstructed pathways, counter height, reach range, and a turning radius for wheelchairs (these are general, not comprehensive guidelines for building design).

Program Access

A primary basis of accessibility laws is that access goes well beyond physical structures, and needs to include the programs and services provided. Section 504 of the Rehabilitation Act, addresses this need. Program access means that a person with a disability receives the same benefits from a program or service as anyone else. Perhaps the easiest way to think of program access is in terms of the services that are provided. For example, a marina that offers boating services to the public would offer transportation from the parking area to the docks to fulfill the Section 504 requirement (offering a 'hoya lift' service would not be necessary). For more information, please see the FS-757 booklet, 'Accessibility Guidebook for Outfitter/Guides Operating on Public Lands.'

Where to Find Current Standards

Current ADA/ABA design standards for facilities can be located through the Access Board at (800) USA-ABLE, or on the internet at: www.access-board.gov. Forest Service Outdoor Recreation Accessibility Guidelines, (FSORAG) for campgrounds and picnic areas and Forest Service Trail Accessibility Guidelines (FSTAG) can also be located on the Access Board web site.

Standards for the NRA Built Environment

Applicable Standard	Regulatory Authority
Built Environment Image Guide (BEIG) for National Forests and Grasslands	Forest Service
FS-2700-5c XIII.C. Esthetics	Forest Service Permit
FS-2700-5c II.D. Plans	Forest Service Permit

The Built Environment Image Guide (BEIG) advocates structures that will resonate in form, shape, scale, color and materials with the natural environment. The term “built environment” refers to structures, facilities, and signs installed or operated by the Forest Service, its cooperators and/or permittees which influences the visitor’s experience.

General Guidelines

Visitors are coming to the NRA to be in the natural environment; when materials are used that complement nature in color, shape and form, it enhances and supports the visitors experience.

Materials

- High quality materials will result in high quality facilities; avoid using recycled items that would otherwise be discarded. Metal, recycled plastic and concrete may be used if they support the ‘natural look’ in form and color.

Color

- In forested areas, choose beige, tan, brown and dark green.
- On or adjacent to the lakes, weathered blue and gray are acceptable.
- Avoid shiny aluminum surfaces and bright colors.

Roofs

- Avoid the use of flat roofs and gambrel roofs.
- Roofing materials must be fire resistant, and may include, patterned asphalt, shingles, textured colored concrete, treated cedar shakes or standing-seam color-embedded metal.
- All roofs shall be a neutral color, e.g. gray or brown, not pastels, such as yellow.
- Roofs in forested areas shall be brown or dark Forest Service green.
- Roofs on or near the water may be gray.

Massing and Scale

- Use building materials in scale with the surrounding environment. For example, in areas with large trees, larger dimensioned timbers reflect the natural environment. Close to and on the lakes, smaller timbered structures may be appropriate.

Standards for Parking

Applicable Standard	Regulatory Authority
Department of Boating and Waterways (DBW) and Shasta-Trinity NRA	Engineer of Record with USFS review
ADAABAAG	Engineer of Record with USFS review
AASHTO	Engineer of Record with USFS review
Uniform Building Code (UBC)	Engineer of Record with USFS review
FS-2700-5c II.D. Plans	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Surfacing

Parking areas above the lake high water mark must be a hardened surface, either asphalt paving for primary use areas or following the hardened surface guidelines below for secondary and overflow parking areas. All public parking areas must abide by ABA/ADA standards. The primary service areas open to the public e.g. stores, restaurants and offices must utilize asphalt paving. The asphalt-paved area must include the correct proportion of ADA accessible parking spaces to cover both the number of asphalt paved parking spaces and the other non-asphalt hardened surface parking spaces.

Non-asphalt Hardened Surfacing Guidelines:

Class II Aggregate Base placed a minimum of 6” in thickness compacted to 95% of maximum density at optimum moisture content as per AASHTO T 180, method D, and AASHTO T 310. Surface shall be maintained to meet the following performance criteria:

- Compatible with year round use and use during adverse weather conditions.
- Eliminates dusty conditions.
- Maintains a smooth uniform surface without ruts or washboarding.
- Allows sheet flow or storm runoff without channeling, rutting or eroding.

Parking Spaces

Marinas shall provide an adequate amount of parking for their customers.

Parking spaces shall be a minimum of 10 feet by 20 feet for single car spaces and 10 feet by 40 feet for car/trailer spaces. Surface grade will be a minimum of 1%, and a maximum of 5%. Exceptions of up to 10% may be allowed on a case by case basis with Forest Service approval.

The following guidelines will be used to determine the amount of parking needed at each marina:

- 4 parking spaces for each commercial houseboat with a capacity of 12 or fewer occupants.
- 5 parking spaces for each commercial houseboat with a capacity of more than 12 occupants.
- 0.75 parking space for all other rental vessels (fishing boat, patio boat, PWC).

- 0.33 parking space, for each private moorage space.
- 2 parking spaces for each private residence (manager, security).
- 0.75 parking space for each employee (except motel or cabin staff).
- 1 parking space for each 300 square feet of store or office area (choose larger).
- 1 parking space for each motel guest room or cabin.
- 1 parking space for every 2 employees working in the motel or cabins.
- Destination restaurant (a restaurant that is frequently used by local residents or travelers on Interstate 5): 1 parking space for every 250 gross square feet of restaurant/bar area; or every 4 seats, whichever is greater.
- Ancillary restaurant (a restaurant used almost exclusively by marina/resort customers): 1 parking space for every 500 gross square feet of restaurant/bar area; or every 8 seats, whichever is greater.
- 20-30 parking spaces for each lane of public launch ramp.

With the new standards* in place, adaptive management will be utilized to monitor how well the reduced requirements are working and propose changes if needed. Marinas will be monitored on high use weekends such as Memorial Day and if parking is overcrowded or chaotic, the standards may be changed to require additional parking. If additional parking is required a marina may choose to either develop parking or request reduced commercial houseboat allocations. We strongly recommend marinas ensure sufficient parking for busy weekends by planning for offsite parking, shuttles and/or valet parking.

(*Previous standards were:

Commercial Houseboat Parking

- 4 parking spaces for each commercial houseboat with a capacity of 12 or fewer occupants.
- 6 parking spaces for each commercial houseboat with a capacity of more than 12 occupants.

Restaurant Parking

- 1 parking space for every 250 gross square feet of restaurant/bar area; or every 4 seats, whichever is greater.)

Driveway widths between rows of diagonal car/trailer parking spaces are 20 feet for one-way and 24 feet for two-way traffic. Minimum width is 30 feet for both one-way and two-way traffic with 90 degree parking stalls.

For marinas that provide parking on the lakebed when the lake drops below the high water mark, designated parking areas may not exceed 10% slope and must have a smooth, compacted surface.

The accessible parking spaces must be those closest to the facilities in the proportionate number for the size of the facility. They must meet slope requirements, include a loading zone, a hard surface, and be appropriately signed.

All parking shall meet current Accessibility Guidelines which can be found at: www.access-board.gov. Surface material, slope, cross-slope, pedestrian loading zones, van accessible spaces, access routes from the parking to the facility and the number of required spaces are included in the guidelines.

Standards for Restrooms

Applicable Standard	Regulatory Authority
County Building Permit	County Health Department
DBW	Engineer of Record with USFS review
ADAABAAG	Engineer of Record with USFS review

Marinas shall provide a minimum of 2 toilets/lavatories on shore, and 2 toilets/lavatories on water. Restrooms shall meet all local, state and federal public health requirements including Accessibility standards.

To the extent possible, restroom buildings are to be constructed of vandal resistant, low maintenance materials. Toilets shall be vault-style or low volume flush.

Restrooms are to be located as convenient to the launching ramps as practicable, but no further than 600 feet when the lake is at maximum pool. When the lake recedes and parking becomes separated from the floating facilities, marinas shall consider providing an accessible portable restroom in the parking area for arrivals.

Floating restroom holding tanks shall be designed, constructed and maintained to prevent discharge of sewage to the lake.

Standards for Roads, Trails and Signs

Applicable Standard	Regulatory Agency
Forest Service Trail Accessibility Guide (F.S. T.A.G.)	Forest Service Guidelines
Sign and Poster Guidelines for the FS – EM-7100-15	Forest Service Guidelines
ENG Form 1721 (33 CFR 325 and 404(b)(1) Clean Water Act)	Corps of Engineers
AASHTO	Engineer of Record with USFS review
Americans with Disability Act/Architectural Barriers Act Accessibility Guidelines (ADAABAAG)	Engineer of Record with USFS review
Forest Service Manual 2343.03	Forest Service
FS-2700-5c III.E. Signs	Forest Service Permit
FS-2700-5c III.F. Nondiscrimination	Forest Service Permit
FS-2700-5c IV.E.(3) Damage to Roads	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Roads

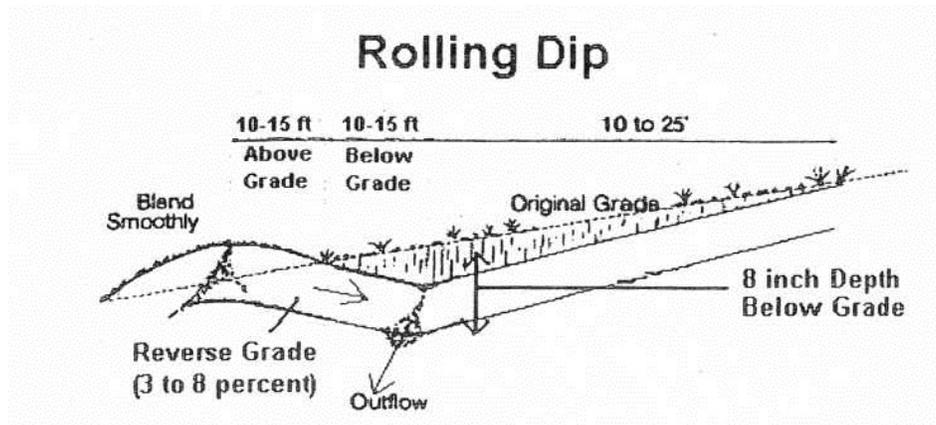
Roads above the high water line must be a minimum of 24 feet wide for two-way traffic, and include a maximum grade of 10 percent. Road signs shall be the responsibility of the marina operator and shall be posted and maintained as agreed to with the Forest Service.

Roads below the high water line should be 24 feet wide but may be a minimum of 14 feet wide where topography is a constraint. Roads less than 24 feet wide are considered single lane roads and shall have inter-visible turnouts not more than 300 feet apart. Road grade should not exceed 6% except in short pitches of up to 10% for a maximum of 150 feet. Roads shall be surfaced where possible but at a minimum, resorts shall provide dust abatement for safety and visibility.

Any variation from the road standard for reasons including adverse topography or severe lake draw-down, must be approved by the Authorized Officer in advance and in all cases, only where public safety can be assured.

Low Water Road Maintenance Guidelines

1. Always keep vehicular and pedestrian safety foremost in mind with any roadwork.
2. Outslope the road slightly so when it rains, water flows off the road surface and does not create a gully alongside the cutbank or across the road.
3. Do not create an outside berm if at all possible.
4. Utilize rolling dips to redirect any surface water off the road.



The outflow channel should be angled at about 30 degrees.

Road Grade (%)	Approximate Placement (feet)
0-3	250
4-6	160
7-9	130
10	115

5. Road grade should not exceed 6% except in short pitches of up to 10% for a maximum of 150 feet.
6. DO NOT cross any drainage that may contain fish during any part of the year without contacting the Forest Service first.
7. DO NOT operate heavy equipment by an eagle's nest during nesting season.

Trails

All trails shall follow the Forest Service Trail Accessibility Guidelines (FSTAG). Included in the guidelines are surfacing requirements, slope, width, length, obstructions and exceptions.

Access Routes

Pathways leading to facilities are called access routes and are required to meet ADAABAAG (see definition above). Access route guidelines are more stringent than trail guidelines. Included are slope, cross-slope, width, obstructions, and hard surface material requirements. A hard surface can be accomplished with compacted crushed rock, soil stabilizers, asphalt, concrete, hard rubber, or other treated surface depending on the nature of the trail or access route. Nature trails may have a compacted natural surface.

Each marina will provide and maintain a Forest Service "Family of Shapes" entrance sign in a visible and prominent entrance location. The sign will be painted in the approved NRA colors (blue/gray) and identify the marina, the Shasta-Trinity National Recreation Area, and the fact that the marina operates under Special Use Permit.

Signs within the marina must be appropriately located, accurate, attractive and well maintained. Signs of a permanent nature shall be prepared in a professional manner, consistent with the marina theme, and appropriate for the purpose they serve. Restrict advertising outside of buildings to attractive and approved signs that simply state the services and accommodations available in each building. All directional signing outside of the marina will be coordinated with the Forest Service, Caltrans, and/or the County.

Directional signing shall be approved in advance and shall be incorporated into the NRA Directional Signing Plan. Advertising signs are restricted to the permit area and shall comply with the specifications noted in the Standard for Business Operations. All boat ramps and office/rental areas shall display the Boating Safety/Obstacle Marking Sign and provide low water obstacle maps.

Standards for Launch Ramps

Applicable Standard	Regulatory Authority
Department of Boating and Waterways (DBW)	Engineer of Record with USFS review
ENG Form 1721 (33 CFR 325 and 404(b)(1) Clean Water Act)	Corps of Engineers
American Association of State Highway and Transportation Officials (AASHTO)	Engineer of Record with USFS review
National Electric Code (NEC)	Engineer of Record with USFS review
Uniform Fire Code (UFC)	Engineer of Record with USFS review
National Fire Protection Association (NFPA)	Engineer of Record with USFS review
Uniform Plumbing Code (UPC)	Engineer of Record with USFS review
ADAABAAG	Engineer of Record with USFS review
FS-2700-5c I.I.D. Plans	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Boat launch ramps shall be constructed of reinforced concrete, using cast-in-place concrete or pre-cast concrete panels and planks with a 3' to 5' perimeter of riprap, gunite, geotextile fabric or other protection. A V-grooved finish should be provided on all concrete launching ramps to ensure maximum traction. On cast-in-place ramps, reinforced cutoff wall not less than 6 inches thick and 16 inches deep should be constructed on all edges with geo-technical fabric and rip rap down each side and across the bottom.

Public ramp slope shall be a minimum of 12% and a maximum of 15% slope. A 15 foot to 20 foot vertical curve shall be constructed at the head of the ramp to avoid trailer hang-ups. The head of the ramp should be constructed to not less than 1 foot above the design high water level, and the toe of the ramp should be constructed to an elevation not less than 3 feet below design low water level. The public will not be allowed to use launching facilities which exceed 15% grade. In these instances, marina personnel will be required to launch customer vessels using marina towing equipment.

Ramps over 200 feet long and less than 60 feet wide shall include one 60 foot minimum diameter turn-around for each 200 foot section. One lane ramps shall be a minimum width of 20 feet for marinas with houseboats and 16 feet for those without. Multiple lanes will be a minimum width of 15 feet wide.

Boat launch ramps shall meet current Accessibility Guidelines which can be found at: www.access-board.gov. The Guidelines as of 2005 are the American with Disabilities Act and Architectural Barriers Act Accessibility Guidelines. Included in the standards are criteria for boarding piers (boarding floats) at launch ramps and the access route exceptions.

Standards for Gangways

Applicable Standard	Regulatory Authority
Department of Boating and Waterways (DBW) and National Water Safety Congress (NWSC)	Engineer of Record with USFS review
National Electric Code (NEC)	Engineer of Record with USFS review
Uniform Fire Code (UFC)	Engineer of Record with USFS review
National Fire Protection Association (NFPA)	Engineer of Record with USFS review
Uniform Plumbing Code (UPC)	Engineer of Record with USFS review
ADAABAAG	Forest Service
FS-2700-5c I.D. Plans	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Gangways shall be designed to support a minimum uniform live load of 100 psf with a clear minimum width of 3 feet. Gangway decks shall be covered with a non-skid surface material and shall have a standard 34” to 38” high solid handrail depending on slope. Openings between guard rails shall be less than 4”.

Maximum slope shall be no more than 3:1 90% of the time and 2 ½:1 no more than 10% of the time. Maximum toe plate slope is 3:1 and transition plates shall not exceed 1:12.

All gangways shall meet current Accessibility Guidelines which can be found at: www.access-board.gov. The guidelines include gangway length, slope, cross-slope, width, transition plates, differences in elevation, access route, edge protection, turn around space and exceptions allowed.

For Fishing Piers and Platforms the same standards apply to the accessible route, gangway, edge protection, railings and turn around space.

Standards for Moorage and Dock Facilities

Applicable Standard	Regulatory Authority
Department of Boating and Waterways (DBW) As amended for S-T NRA	Engineer of Record with USFS review
American with Disabilities Act, and Architectural Barriers Act Accessibility Guidelines (ADAABAAG)	Engineer of Record with USFS review
National Electric Code (NEC)	Engineer of Record with USFS review
Uniform Building Code (UBC)	Engineer of Record with USFS review
Uniform Plumbing Code (UPC)	Engineer of Record with USFS review
Uniform Fire Code (UFC)	County Fire Marshall
National Fire Protection Association (NFPA)	County Fire Marshall
FS-2700-5c II.D. Plans	Forest Service Permit
FS-2700-5c III.A. Conditions of Operation	Forest Service Permit
FS-2700-5c XIV.S. Moorage Space	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit
FS-2700-5c F. Timeshare	Forest Service Permit

Marinas shall construct, operate, and maintain all the moorage slips allocated in their Special Use Authorization. Changes to this allocation shall be by Amendment to the Special Use Authorization as approved by the Authorized Officer. When marinas propose changes or additions to moorage, consideration will be given to the balance of slip sizes which serve a variety of customers. Permission will not be granted to increase the number of large-boat slips at the expense of small boat slips.

Both open and covered moorage is allowed. Open or covered moorage with sidewalls (e.g. boathouses) is not allowed. Temporary relocation of moorage and dock facilities during low water conditions must be approved in advance by the authorized officer. Long-term boat storage on land is not allowed unless approved in advance or where the Special Use Authorization designates an area for long-term dry dock storage.

Marginal docks and walkways must have a minimum width of 8 feet, with an unobstructed width of 6 feet and provide an accessible, non-skid, pathway to the moorage slips. Main (secondary) walkways must have a width of at least 6 feet with an unobstructed width of 4 feet. All finger docks that are designed for walking, shall be at least 3 feet wide (except accessible finger docks which shall be 5 feet wide) and include tie downs. All floating docks and moorage shall have a freeboard of 14 to 24 inches under Dead Load conditions and a minimum of 10 inches when fully loaded unless specifically authorized to serve a demonstrated need.

Design loads shall reflect the local County standard for live load, wind load, and snow and ice loads; and be specific to the marina location. In areas with snow, a snow removal plan is required. Docks shall have a minimum Live Point Load of 400 pounds.

Flotation material must be closed cell, and encased or encapsulated; exposed foam is not permitted. Hollow flotation devices must be filled with expanded foam, or block foam with a

tight fitting shell. Wood is not permitted in new construction for any structural framing. Wood is permitted for decking and whalers. All decking must have a non-slip textured surface.

All deck surfaces shall have a maximum cross slope of 2% (1/4" per foot and not more than 1" maximum. Decking shall be designed such that the "grain" (lumber, concrete brushing, knurling) runs perpendicular to the path of travel.

At least one throw-type lifesaving device with 60 feet of line attached and/or a reach pole shall be available on each dock. A minimum of one first aid kit which meets OSHA standards shall be available at each marina.

All moorage and dock facilities shall meet current Accessibility Guidelines which can be found at: www.access-board.gov. Each marina shall provide accessible slips in proportion to the total slips available. Fuel dock slips, service dock slips and courtesy docks slips are included in the total calculation. Also included in the Guidelines, are the design criteria for dock clear width, edge obstructions, and utility tower heights.

Accessible docks and berthing slips must also comply with design standards. The number/percent of docks that must be accessible is derived by a percentage of the total, similar to the parking calculation. Some components of an accessible dock include: a clear unobstructed path at least 5-feet wide, utility posts that are within the required reaching range, and edge clearance.

Standards for Channels

Applicable Standard	Regulatory Authority
Department of Boating and Waterways	Engineer of Record with USFS review
ENG Form 1721 (33 CFR 325 and 404(b)(1) Clean Water Act)	Corps of Engineers

Entrance and interior channels shall have a minimum bottom width of 75 feet at design depth. Entrance channels shall have a minimum water depth of 5 feet at low water and/or of 3 feet below deepest draft vessel. Interior channels shall be a minimum of 4 feet and/or 2 feet below deepest draft vessel.

Standards for Fairways

Applicable Standard	Regulatory Authority
Department of Boating and Waterways	Engineer of Record with USFS review
ENG Form 1721 (33 CFR 325 and 404(b)(1) Clean Water Act)	Corps of Engineers

This area shall be absolutely clear of navigational hazards and obstructions and have a minimum water depth of 4 feet at low water operation. For fairways between finger docks, the fairway shall be a minimum of 1.75 times the length of the longest finger berth. For side-tie docks, the minimum fairways width is 1.5 times the length of the longest allowable vessel to be tied.

Standards for Berths

Applicable Standard	Regulatory Authority
Department of Boating and Waterways	Engineer of Record with USFS review

Berth depth shall be a minimum of 6 feet and may be up to 10 feet or more for vessels over 65 feet. Minimum berth width should be calculated based on length of berth and type of vessel. Berth width is generally based on average boat beam (width) plus two feet. Double berth should be twice the width of a single berth.

Accessible berths shall meet the minimum current Accessibility Guidelines which can be found at: www.access-board.gov. Minimum number of accessible docks required shall be based on total number of moorage slips.

Standards for Mooring Systems

Applicable Standard	Regulatory Authority
Department of Boating and Waterways	Engineer of Record with USFS review

All moorage will maximize capacity while minimizing lake surface area used and visual impacts.

Unless an exception is specifically authorized, all marina moorage will have shore access and a design to accommodate water level fluctuations. Marinas must provide anchor systems using underwater cables and anchors. Permanent anchor points that facilitate adjustment of docks as water levels change will be allowed. Cable and anchor systems must be in good condition and inspected annually.

Anchor systems such as dead-man or ground stakes should be installed flush with existing grade. Anchor cables or other securing devices shall not be attached to trees, stumps, power poles, or guardrail posts without approval from the authorized officer. Cables must be installed in a manner that will not create tripping or navigational hazards.

Existing “offshore” moorage for private vessels will be phased out. This moorage consists of individually anchored devices (usually metal balls/buoys or small docks), in open water as opposed to docks secured to land. Marinas that have offshore moorage shall address modifications in the scheduled Master Development Plan. Moorage will be replaced with an approximate equivalent of dock slips that are shore-based, unless otherwise approved within the Master Development Plan. Until Master Development Plans are completed and approved, individual floating devices used for private boat moorage must be provided (owned and maintained) by the marina operator. Offshore moorage devices must be of a minimal size to secure the boat, and shall not include private decks or platforms for personal use recreation.

Temporary offshore moorage will be considered for approval on a case-by-case basis for the commercial fleet if the marina configuration meets other moorage objectives.

Standards for Booms and Buoys

Applicable Standard	Regulatory Authority
Tire Booms	Forest Service
Lighting/Signs on Booms and Breakwaters	U.S. Coast Guard
National Electric Code (NEC)	Engineer of Record with USFS review

Booms

The objective of the boom is to provide protection for the floating marina facilities and private boats, while minimizing the visual impact to the surrounding NRA. All booms or boom designs must be approved by the authorized officer prior to purchase and installation. Booms may be pre-constructed and made of natural or recycled materials. All boom materials, especially tires, must be secured tightly, and connected so that they lie flat on the water surface; move in unison; and appear orderly.

The boom must have yellow blinking lights installed every 100 feet, on or immediately adjacent to the boom so as to be visible at night. Boating entrances through booms will display red and green navigation lights on either side of the boom for nighttime navigation. Booms shall include “No Wake” marker buoys, in accordance with U.S. Coast Guard Navigation Rules. Advertising is not permitted on booms, directional signing is allowed.

Design elements for booms

- Must have encased floatation material, exposed foam is not permitted.
- Include an underwater wave attenuator.
- Have a low surface profile.
- Utilize one type of boom for entire length; do not mix and match booms.
- Do not use old docks or other worn materials.
- Constructed or surfaced with materials that blend with the natural environment and are visually unobtrusive.
- Include navigational lights.
- Directional signs allowed, advertising prohibited.

Booms must be maintained in a safe condition, compatible with the environment and general navigation. Booms must not be more than 200 feet from the docks, and cannot encroach on the minimum channel width. If a boom is used to close-off the entire marina entry, such as during high debris flows, an entry point with sign and lighting must be provided to allow access.

Buoys

Buoys should be of contrasting colors which can be easily seen and should be constructed of material which will not damage vessels or cause personal injury upon contact. In addition to contrasting colors, it shall include a blinking yellow light visible from 360 degrees for night boating safety.

Standards for Operating Plan

Applicable Standard	Regulatory Authority
California Code of Regulations, Title 8	Cal OSHA
SPCCP, SWPP	Regional Water Quality Control Board
Spill Prevention	County Division of Environmental Health
FS-2700-5c III.B. Operating Plan	Forest Service Permit
FS-2700-5c XII. A. (2) Boating Safety Plan	Forest Service Permit

Marina Operating Plans must be approved by April 1 each year on Shasta Lake and May 1 each year on Trinity Lake.

List of Contacts for Marina and Forest Service

- Personnel Contacts
- Emergency Contact Numbers
- Licensed Water Treatment Contact
- Certified Hazardous Waste and Materials Contact (labeling, disposal, manifesting, and record keeping)
- Marine Electrical Inspector (may be internal or private contractor)

Emergency Protocols: Accident Reporting and Procedures

- Fire Response, Control, Evacuation
- Hazardous Spill/Release Response, Notification, Handling Procedures
- Medical Emergency Response, First Aid, Notification

Inspection Schedule, documentation and procedures for all systems

- Fuel
- Electrical
- Floatation/docks
- Sewage
- Water
- Health and safety

Copies of all completed inspection forms must be appended and available to the Forest Service.

Spill Prevention Control and Countermeasure Plan

Storm Water Pollution Prevention Plan

- Surface Drainage Plan

Sewage Pump-out System Operations Plan

Operation and Maintenance Schedule for all facilities and infrastructure

- Buildings
- Docks
- Roads and Trails
- Booms and Buoys
- Signs
- Utilities
- Commercial vessels

Accessibility – Transition Plan for the Marina

Sign Plan - include informational, interpretive and educational signs and information.

Employee Development Plan

- Staffing levels
- Minimum training requirements
- Public Service Standards

Employee Health and Safety: Equipment and Protocols

- Personal Protective Equipment
- Hearing Protection
- Respiratory Protection
- Bloodborne Pathogen
- Confined Space
- Power tool Operation
- Winch Safety
- Crane/hoist Safety
- Heat Stress/Stroke
- Compressed Gas
- Dive Program
- Hazardous Material Handling (Waste, Flammable liquids, flares, etc.)
- Office Safety

Hazardous Materials Business Plan

- Hazardous Materials Inventory
- Weekly Inspection Program for all containers
- Biennial Report to Cal EPA
- Fuel Tank Integrity testing schedule and results
- Biennial report for fuel storage tanks

Boating Safety Plan

Snow Removal Plan (if required)

Low Water Relocation Plan

Standards for Electricity and Drinking Water

Applicable Standard	Regulatory Authority
NFPA-70 National Electric Code (NEC)	County or Engineer of Record
NFPA-303 Fire Protection Standards for Marinas	County or Engineer of Record
Uniform Plumbing Code (UPC)	County or Engineer of Record
Water Supply	County Division of Environmental Health
Code of Federal Regulations (CFR)	Forest Service
Uniform Building Code (UBC)	Engineer of Record
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XIII. B. Water Pollution	Forest Service Permit
FS-2700-5c XIV. Q. Drinking Water Systems	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Authorize electricity, water and sewage services at moorage slips only when safeguards exist that prevent extended occupancy of boats, or result in gray water discharge to Shasta Lake while moored at marinas. Prior to receiving written approval from the authorized officer for utility services at the moorage slips, marinas shall develop procedures and policies acceptable to the authorized officer that prevent extended occupancy of boats while moored at the facility.

Electricity

All electrical service on floating structures shall conform to Article E555 Title 24 of the State Building Standards, current National Electric Code and the National Fire Protection Association for marine installations. All raceways and cables shall have an equipment grounding conductor provided or installed. Cables supplying shore power to docks shall be “W” or “WG” type. Any request to use an alternate type must be approved by the engineer providing the stamped plans and the authorized officer. All metal dock sections shall be bonded to the electrical grounding system.

When lighting is provided on floating structures, the lighting circuits shall be separate from the berthing service circuits. Dock walking surface and shore access should be illuminated consistent with the guidance noted previously (Standards for Marinas).

No utility lines shall be attached to the top of the deck on floating structures. No utility lines, conduits, pull boxes and/or other parts of the utility system shall be installed with less than 6” of clearance above the waterline under dead load conditions, nor less than 2” clearance under dead plus live load conditions.

Permanent feeders serving docks installed below high water line from shore service equipment shall be in conduit. All splices in feeders shall be waterproof. Sections of the feeder not in use (when the lake is full), shall be de-energized and disconnected from the section of feeder in use. Receptacles on docks providing shore power to docks shall be of the locking type and shall be grounded. Outdoor receptacles (15 and 20 ampere) on docks, serving other than shore power for boats, shall be GFCI protected.

Marinas shall have the over-water electrical systems inspected every two years by a licensed electrical contractor or licensed electrical engineer, and ground integrity testing shall be performed annually at a minimum.

Except where specifically authorized by the authorized officer, no overhead power lines will be permitted over parking areas, launching ramps, driveways, approach areas, and/or any other areas where a vehicle can drive while towing a boat trailer. If specifically permitted, minimum height from ground to wire shall be no less than 42 feet.

Water

Water service shall be in accordance with Uniform Building Code, Uniform Plumbing Code and local County Division of Environmental Health requirements. Waterlines must be pressure rated and should deliver water at not less than 35 psi when 10% of the hose bibs are in use. The water supply system is to have positive drainage or fittings for blowing water out of the system in winter. The water supply line system is to incorporate a main shutoff valve where the dock piping system joins the water supply.

Utility hoses and/or lines shall not be allowed across the deck of main walkways or marginal walkways.

The dock water system is to include a drain line and shall be equipped at the shore end with appropriate anti-siphon device. The water supply used for flushing holding tanks for boats shall be completely separate from the Potable Water supply. In no way shall the Potable Water system and the holding tank flushing system be connected together. Holding tank flushing system shall be clearly marked and/or otherwise identified as ***NOT FIT FOR HUMAN CONSUMPTION***. Non potable water supply shall be provided on or adjacent to the sewage pump-out facility.

Drinking water fountains shall be provided. Fountains and dock utilities must be universally accessible and meet ADAABAAG.

Standards for Fuel

Applicable Standard	Regulatory Authority
National Fire Protection Association (NFPA) 70 (NEC)	County or Engineer of Record
NFPA 30A, Motor Fuel Dispensing Facilities and Repair Garages	County or Engineer of Record
NFPA 30, Flammable and Combustible Liquids Code	County or Engineer of Record
NFPA 302, Fire Protection Standards for Pleasure and Commercial Motor Crafts	County or Engineer of Record
NFPA 303, Fire Protection Standards for Marinas and Boatyards	County or Engineer of Record
Uniform Fire Code/ California Fire Code (UFC/CFC) Article 52	County or Engineer of Record
40CFR part 112 (Spill Prevention)	US EPA; Regional Water Quality Control Board
California Health and Safety Code, Chapter 6.6 and 6.7 Sections 25270-25270.13 (Above Ground Storage Tanks)	Regional Water Quality Control Board, County Division of Environmental Health, County Air Quality Management District
California Code of Regulations (CCR) Title 23, Chapter 10, (Underground Storage Tanks)	Regional Water Quality Control Board, County Division of Environmental Health,
NFPA 58 Liquefied Petroleum Gas Code	County or Engineer of Record
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XII. A. Compliance with Environmental Laws	Forest Service Permit
FS-2700-5c XIII. B. Water Pollution	Forest Service Permit
FS-2700-5c XIII. H. Consent to Store Hazardous Materials	Forest Service Permit
FS-2700-5c XIII. J. Cleanup and Remediation	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

General Fuel Requirements

(For the purposes of these standards, fuel is defined as gas, pre-mix, and diesel.)

Fuel installations shall be designed to prevent fuel spillage, and shall be provided with spark protection safety equipment. The quantity stored should not exceed 15,000 gallons aggregate capacity. Owners and/or operators of above ground storage tanks containing greater than 660 gallons of fuel must have an on-site Spill Prevention, Control, and Countermeasure Plan (SPCC). Requirements of an SPCC Plan include operating procedures to prevent the occurrence of an oil spill; control measures to prevent a spill from entering navigable waters; and countermeasures to contain, clean up, and mitigate the effects of an oil spill that impacts navigable waters.

All devices in the fuel system such as valves, disconnects, flexible joints at fifth wheels and dispensers shall be equipped with containment devices that are easily opened for visual

inspections. Documented daily visual inspections for these devices will be adequate in place of automatic monitoring devices.

Fuel storage tanks may be floating, or on shore (above or below ground) but must include secondary containment. Fueling pumps must have an emergency disconnect clearly identified and located no more than 50 feet from the dispensing unit, in a conspicuous location. In addition, a disconnect switch is required in the fueling pump circuit that disconnects all conductors, including the neutral, to the pump. The emergency disconnect could meet both requirements. Check valves are also required in the system. Provisions should be made for thermal expansion of the fuel lines between the dispenser and the fuel tanks and a fuel recovery system for the fuel lines between the dispenser and the fuel tanks. All fuel dispensing facilities must be equipped with containment booms and petroleum absorbing pads.

Over-Water Fuel Requirements

Where fuel dispensing is from a floating structure, suitable lengths of oil-resistant flexible hose may be employed between the shore piping and the piping on the floating structures as made necessary by change in water level or shoreline. Dispensing of any petroleum product shall only be at a designated marina by trained staff. All floatation material used in and adjacent to the fuel platform shall be highly resistant to hydrocarbons. The use of unprotected polystyrene for fuel float construction is specifically prohibited.

All fuel product lines on floating structures shall be installed so as to provide maximum protection from the elements, and mechanical wear and damage. No fuel product lines shall be attached to the top of the deck on floating structures. Light fixtures installed over a fueling dispenser and within a 20 foot radius of the dispenser, shall be an enclosed type of fixture.

The service area of the fuel dock should be wide enough to provide stability, room and cleats for tying up vessels, fire protection equipment, and personnel operations. Fueling docks shall be protected from wind and wave action to the extent possible, and oriented to allow safe ingress and egress of vessels for fueling. Fuel docks containing fuel storage tanks and fuel barges shall be a separate floating structure from the berths, and designed to disconnect from the main dock in a fire emergency. Each section designed to disconnect shall be equipped with electrical and fuel disconnecting means to prevent electrical arc and fuel spillage, and provide for controlled movement to an isolated area so that any fire or explosion would have limited opportunity to spread.

Propane Requirements

All propane cylinders and/or bottles shall be stored in a dedicated area that is directly communicating with the outdoors. No such cylinder or bottle shall be stored in an enclosed building. All bottles and cylinders shall be equipped with an 'Overfill Protection Device' (OPD). Filling of bottles and cylinders shall take place in the out of doors. Only those employees trained in filling practices by an approved fuel supplier shall refill cylinders or bottles. The employee must have a certification of completion for this training in their file. All cylinder or bottles that have been damaged to the point of being unserviceable shall be removed from the property to an approve disposal site.

Standards for Sewage

Applicable Standard	Regulatory Authority
Uniform Plumbing Code (UPC)	Engineer of Record with USFS review
CCR Title 23, Chapter 20, Section 2815	Regional Water Quality Control Board
Section 13260 Porter-Cologne Water Quality Control Act	County Division of Environmental Health
Uniform Building Code (UBC)	Engineer of Record with USFS review
FS-2700-5c XII. B. Sanitation	Forest Service Permit
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XII. A. Compliance with Environmental Laws	Forest Service Permit
FS-2700-5c XIII. B. Water Pollution	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

For the purposes of these standards, sewage is defined as both gray water and black water on Shasta Lake, and as black water on Trinity Lake as defined by the Central Valley Water Quality Control Board (Shasta) and the North Coast Water Quality Control Board (Trinity).

A minimum of one pump-out installation shall be provided at every marina on Shasta and Trinity lakes. Pump-out facilities shall provide the equipment and have the capacity to pump or otherwise receive and transfer contents of vessel holding tanks into a retention and/or disposal system designed and constructed to comply with the local and State land regulations and policies. The pump-outs may be portable or fixed, and located to provide easy access to users. Marina shall provide a suitable facility to empty and wash down portable toilet units. The pump-outs shall be available during normal marina operation hours, and shall be available to all vessel owners regardless of marina affiliation. Marinas may charge for the pump-out service. Minimum pump-out equipment should include a pump capacity of a minimum of 10 gallons per minute.

The pumps shall be self-priming and non-clogging, and constructed of corrosion resistant material. Storage tanks shall be constructed to allow for complete emptying of contents into a disposal system or waste haulers tank, and be equipped with a means of determining the amount of sewage in the tank. Sewage piping must be designed to withstand pumping or vacuum pressure encountered in addition to solar radiation and deterioration from sewage and added chemicals.

A non-potable pressurized water line and hose shall be provided to flush out boat holding tanks. Non potable water supply shall be provided on or adjacent to the sewage pump-out facility.

Standards for Fire Protection and Hazardous Materials Storage

Applicable Standard	Regulatory Authority
National Fire Protection Association (NFPA) 70 (National Electric Code)	County or Engineer of Record
NFPA 30A, Motor Fuel Dispensing Facilities and Repair Garages	County or Engineer of Record
NFPA 30, Flammable and Combustible Liquids Code	County or Engineer of Record
NFPA 302, Fire Protection Standards for Pleasure and Commercial Motor Crafts	County or Engineer of Record
NFPA 303, Fire Protection Standards for Marinas and Boatyards	County or Engineer of Record
Uniform Fire Code/ California Fire Code (UFC/CFC) Article 52	County or Engineer of Record
Hazardous Materials Business Plan	County Division of Environmental Health
NFPA 307, Marine terminals, piers and wharves	County or Engineer of Record
NFPA 312, Fire Protection of Vessels During Construction, Repair and Lay Up.	County or Engineer of Record
29 CFR Part 1910.151 Emergency Services and First Aid	County Division of Environmental Health
U.S. DOT Hazardous Materials Regulations (49 CFR Chap.1)	California Highway Patrol
CCR Title 22, sections 66266.80 and 66266.81	California EPA
40 CFR section 273	U.S. EPA
Material Safety Data Sheet (MSDS)	Forest Service
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XIII. H. Consent to Store Hazardous Materials	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Fire Protection

Marinas must have equipment, systems and sustainable water resources to suppress, control and extinguish fires on boats, docks, buildings, fueling stations and other marina service centers. Fueling stations should be equipped with a fire-call device, such as an emergency fire call-box or telephone located not further than 100 feet from the fuel dispensing equipment.

Adequate aisles shall be maintained for unobstructed movement of personnel and fire protection equipment. Combustible waste material and residues in a building or unit operating area shall be kept to a minimum, stored in covered metal receptacles, and disposed daily.

Portable fire extinguishers of an approved type 2A:20-C:C, and suitable to the hazards and circumstances, shall be provided throughout the property. Fire extinguishers shall be inspected monthly. Smoking shall be prohibited where hazardous materials are stored, and “No Smoking” signs should be posted in storage rooms and on the outside walls of the room.

Hazardous Material Use and Storage

If authorized, hazardous materials, including deodorizers and petroleum products used for maintenance, boat housekeeping and retail products stored must be provided with secondary containment. Maintenance and operating practices should be in accordance with Hazardous Materials Management Plan. Spills should be cleared up immediately and cleaning materials should be disposed of properly. Reportable spills should be documented and notification should occur as detailed in the Operations Plan.

Store all new and useable used lead-acid batteries on a covered pallet over a non-reactive, curbed and sealed surface such as coated concrete or asphalt, and secure spill containment area that is not exposed to high or low temperatures. Batteries should be stored upright and care should be taken to prevent the terminals from short-circuiting. Used batteries should not be stored in bone yards, cabinets, on workbenches, in closets, storage lockers, on docks or around buildings.

If lead-acid batteries are serviced (e.g. charge, clean, add acid), marinas must have a designated location which has proper venting, secondary containment, and placarding. Marinas must store and transport damaged batteries in non-reactive, structurally-secure, closed containers. “Damaged batteries” are batteries that are cracked, broken, or missing one or more caps.

The entire marina area should be kept neat and clean, with equipment properly stored so it does not pose any type of safety hazard to the public or marina employees. Where feasible, minimize the use and storage of hazardous materials on-site.

Standards for Stormwater Treatment

Applicable Standard	Regulatory Authority
40 CFR Part 122, 123 and 124; Storm Water Pollution Management/Treatment	Regional Water Quality Control Board
FS-2700-5c XIII. B. Water Pollution	Forest Service Permit
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XII. A. Compliance with Environmental Laws	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Statewide Industrial Storm Water Permit

Marinas with maintenance facilities or those that allow private maintenance operations must obtain coverage under the Statewide Industrial Storm Water permit and develop a Storm Water Pollution Prevention Plan (SWPPP). The objective of the permit is to reduce or eliminate the discharge of pollutants in storm water.

Pollution prevention is accomplished by way of “Best Management Practices” (“BMPs”), which stipulate schedules for certain activities, prohibitions on certain practices, maintenance procedures, and other management practices to prevent or reduce the pollution of storm waters. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with the general Industrial Storm Water permit.

Storm Water Pollution Prevention Plan

A SWPPP is a site-specific plan consisting of all the BMPs, which will be implemented at the marina. The two main objectives of a SWPPP are to identify and evaluate sources of pollutants at the facility, and to describe and ensure implementation of site-specific BMPs to reduce or prevent pollutants. At a minimum, the SWPPP must contain:

- site map
- pollutant source identification
- source controls/practices to reduce pollutants
- material inventory
- preventative maintenance program
- spill prevention and response program
- employee training
- facility inspections
- record keeping
- elimination of non-storm water discharges

SWPPPs should be developed, maintained on site, and most importantly, implemented.

Typical marina activities that must be addressed in the SWPPP include:

- boat washing
- maintenance and repair
- storage and handling of petroleum and other hazardous materials
- spills
- fueling facilities
- solid waste disposal

The marina owner must also develop and implement monitoring and reporting programs. During the wet season, dischargers are required to collect and analyze samples of storm water runoff from at least two storm events per year. The samples must be analyzed for:

- pH
- total suspended solids (TSS)
- specific conductance
- total organic carbon (TOC); and
- toxic chemicals and other pollutants likely to be present in significant quantities

(Oil and grease may be substituted for toxic chemicals and other pollutants).

Sampling consists of a grab sample from a storm event that produces significant storm water discharge and is preceded by at least three working days of dry weather. All analyses must be conducted at a certified lab in accordance with Title 40 CFR 136.

In addition to sample collection and analyses, the marinas must conduct visual observations throughout the wet and dry season; an annual site inspection; noncompliance reporting; and annual permit and SWPPP compliance certification. Annual Reports providing monitoring data must be submitted to the Regional Board no later than July 1 of each year.

Additional information can be found at: <http://www.swrcb.ca.gov/stormwtr/training.html>
California Best Management Practices Handbooks, Erosion & Sediment Control Field Manual

Standards for Solid Waste

Applicable Standard	Regulatory Authority
California Water Code, Solid Waste Containment	Regional Water Quality Control Board
ADAABAAG	Forest Service
Garbage hauling regulations	D.O.T.
FS-2700-5c XII.C. Refuse Disposal	Forest Service Permit

Trash receptacles shall be provided near the launching ramp and restrooms, and elsewhere as needed in a reasonable number to discourage littering. A trash receptacle shall be placed at the shore end of each dock and in any concentrated service area such as a fueling dock, convenience store, restroom, launching ramp, etc. Some receptacles in the most highly used areas shall meet accessibility standards.

Container type dumpsters should also be provided to allow for the frequent emptying of smaller trash receptacles and shall be bear-proof. All trash collection devices will be located in areas and/or placed in enclosures or behind landscaping so as to minimize visual impact. Waste shall not accumulate in trash containers to the point of overflowing.

If a recycling program is in effect, recycling containers should be clearly labeled and provided in appropriate numbers and locations. Fish cleaning stations, if provided, must be maintained in clean and good working condition. Wastes must be collected for treatment and not directly discharged into the lake.

Signs should identify solid waste and recycling containers. Signs should clearly note any prohibited wastes. Disposal of liquid waste in solid waste receptacles is not allowed. The marina should be posted to advise users that overboard discharge of solid waste in the marina or reservoir is prohibited.

Standards for Maintenance and Repair

Applicable Standard	Regulatory Authority
NFPA 70 (National Electric Code)	County or Engineer of Record
NFPA 30A, Motor Fuel Dispensing Facilities and Repair Garages	County or Engineer of Record
NFPA 30, Flammable and Combustible Liquids Code	County or Engineer of Record
NFPA 302, Fire Protection Standards for Pleasure and Commercial Motor Crafts	County or Engineer of Record
NFPA 303, Fire Protection Standards for Marinas and Boatyards	County or Engineer of Record
Uniform Fire Code/ California Fire Code (UFC/CFC) Article 52	County or Engineer of Record
California Water Code	Regional Water Quality Control Board
	Environmental Protection Agency
FS-2700-5c XII. E. Health, Safety, and Environmental Protection.	Forest Service Permit
FS-2700-5c XII. A. Compliance with Environmental Laws	Forest Service Permit
FS-2700-5c XIII. B. Water Pollution	Forest Service Permit
FS-2700-5c I.C. Rules, Laws, and Ordinances	Forest Service Permit

Marinas may provide their own on-site repair and service shop for moorage and rental customers. Marinas may also permit private vessel repair contractors to service moorage customer vessels. Only vessel maintenance and repair activities approved by the marina manager will be conducted by marina customers and/or mechanics. Individuals or businesses that provide repair services shall enter into sub-lease agreements to conduct business within the permit area.

All repairs, beyond very minor work, must be conducted out of the water and in a facility or area that meets State and County standards for capture and containment of any contaminants produced or used during repair work. This includes fluids (engine fluids, pressure washing, solvents, etc.) and air-borne particulates (sanding, airless sprayers, etc.).

If authorized, vessel maintenance and repair (including paint removal and painting, welding, brazing, soldering and metal cutting, woodworking, fiber-glassing, machine shop activities, and battery servicing) is conducted in accordance with NFPA 303, the Fire Protection Standard for Marinas and Boatyards. Wastes created during maintenance or repair activities shall not cause pollution of the lake or its drainage courses.

If painting is authorized, brushes and rollers shall be used; spray painting is only authorized on land with drop cloths and other controls to collect over-spray. Spray guns shall be high volume low pressure or otherwise designed to minimize over-spray. If sanding is authorized, dustless sanders shall be used.

Drop cloths or filter cloth shall be placed beneath vessel hulls to collect sanding dust and paint. Dockside sanding and painting is discouraged. If pressure washing is authorized, wash water collection and treatment systems shall be used. These include the use of filter fabric or other measures to filter wash water before discharge. This system shall be regularly monitored and maintained in good condition. Dockside boat bottom washing shall not be conducted or is discouraged.

Vessel repair facilities shall be provided with equipment and controls to reduce the potential for releases to the environment. For land-based activities these include, but are not limited to, oil/water separators or other systems to control petroleum discharges to floor drains. Vessel repair shops in over-water locations shall be designed to contain releases to the water. No work is permitted below the high water line which could leave pollutants in the lake when the area is inundated. Examples include water blasting and sand blasting, mechanical repairs, lubricant work, etc.

Marinas must develop a facility maintenance plan, and maintenance monitoring shall be part of the daily routine. The plan shall include timeframes for inspections, training and certifications for inspectors, applicable regulations and laws, forms for reporting data, and task initiation and completion forms. The plan shall be based on a current site plan or diagram and identify which components shall be inspected and on what interval, as part of a maintenance monitoring program.

Standards for Vessel Rentals (including houseboats)

Applicable Standard	Regulatory Authority
Harbors and Navigation Code Sec. 680-685 Carbon Monoxide stickers	Shasta County Sheriff's Boating Safety
FS-2700-5c XII. A. Boating Safety	Forest Service Permit
FS-2700-5c V.E. Determining Sales and Other Revenue	Forest Service Permit
FS-2700-5c V.I. Access to Records	Forest Service Permit
FS-2700-5c. XIV. F. Timeshare	Forest Service Permit

Each marina shall operate their allocated vessels as described in their Special Use Authorization. Any changes to the number or type of vessel shall be by Special Use Amendment and must be approved by the authorized officer. Temporary increases in allocation may be granted for a maximum of one recreation season if the Forest Service determines that unused allocations are available. To be considered for these allocations a marina must demonstrate that they have adequate support facilities (parking spaces, sanitation capacity, moorage slips) to operate the additional vessel(s) and be in full compliance with the terms and conditions of their Special Use Authorization.

Marinas shall keep boat rental registers which include:

- name of the renter and contact information
- rental period
- description of the boat
- boat number cross referenced to the CF number

Registers shall be available to the Forest Service for review. Written rental agreements shall be executed for each boat rental. Any waiting list will be on a first-come, first-served basis. Identification of all rental vessels shall be in accordance with United States Coast Guard, State of California Vessel permit, and local regulations. Identification numbers may be visible from the air to assist in identifying disabled vessels. Rental houseboats must clearly identify the name of the marina.

Each marina shall have an operating protocol for responding to rental vessels in distress. Vessels over 30 feet in length shall be equipped with a means of marina communication, and marina staff shall notify either the Sheriffs Boating Safety Unit or provide on-site chase boats to ensure that customers are accounted for.

Rental vessels shall be in good operating condition and must be inspected annually and certified by resort personnel before the first rental of the season. Certified vessels will be issued a current year sticker for operation by the Forest Service. After each rental, houseboats and rental boats will be thoroughly cleaned and inspected to ensure that all proper equipment and amenities are available for the next renter. All missing and/or defective equipment and amenities must be replaced prior to the next renter.

All rental vessel customers will be given hands-on instructions in the operation of the vessel and proper use of all equipment, applicable regulations including but not limited to water quality,

“rules of the road”, weather, underwater obstacle program, and emergency information. All vessels rented to visitors shall have appropriate safety equipment, including life jackets, carbon monoxide warnings, etc., as required by the California Boating Laws.

A list of general hazards to individuals using the boat must be discussed with the renter, and a printed safety sheet on hazards made available to all renters.

Standards for Business Operations

Applicable Standard	Regulatory Authority
Forest Service Manual 2343.03	Forest Service
FS-2700-5c V. Fees	Forest Service Permit
FS-2700-5c VI. Transfer of Title to the Improvements	Forest Service Permit
FS-2700-5c VII. Change in Control of the Business Entity	Forest Service Permit
FS-2700-5c XIV. B. Regulating Services and Rates	Forest Service Permit
FS-2700-5c XIV. Subleasing	Forest Service Permit

Transition Plan

Accessibility Review and Barrier Removal Time Tables

1. Overview: Current laws, policy, guidelines that apply to the type of use.
2. Introduction: Table of Contents.
3. Requirements for Barrier Removal in Existing Buildings and Facilities review of applicable law, policy, and guidelines.
4. Basis for Determination of Readily Achievable Barrier Removal: Identification of barriers that must be removed under current law and applicable guidelines.
5. Individual Barrier Matrix:
 - area
 - marina component that does not meet current standard
 - reference to ADAABAAG
 - upgrade required and ease of accomplishment
 - cost opinion? estimated cost and/or entity responsible for repair
 - anticipated date for barrier removal
 - date accomplished

Business Plan

1. Cover Sheet
2. Statement of Purpose
3. Table of Contents
 - I. The Business
 - A. Description of business
 - B. Marketing
 - C. Competition
 - D. Operating procedures
 - E. Personnel
 - F. Business insurance

II. Financial Data

- A. Loan applications
- B. Capital equipment and supply list
- C. Balance Sheet
- D. Breakeven analysis
- E. Pro-forma income projections (profit and loss statements)
 - Three-year summary
 - Detailed by month, first year
 - Detailed by quarters, second and third years
 - Assumptions upon which projections were based
- F. Pro-forma cash flow

III. Supporting Documents

- A. Tax returns of principals for last three years Personal financial statements (all banks have these forms)
- B. For franchised businesses, a copy of franchise contract and all supporting documents provided by the franchiser
- C. Copy of proposed lease or purchase agreement for building space
- D. Copy of licenses and other legal documents
- E. Copy of resumes of all principals
- F. Copies of letters of intent from suppliers, etc.

Advertising Plan

Decisions relative to signing must be approved in advance by the authorized officer. For the purposes of the Special Use Permit, commercial advertising is permitted as part of authorized special use permit activities or services as follows:

1. Advertisements or logos are restricted to the interior of buildings and facilities; they should not be displayed in windows.
2. The name of a business and/or logo may be posted on the outside of buildings in which they operate so the public will be able to recognize the nature of the service provided.
3. Promotional material relating to the permit holders own or related authorized operations.
4. Sponsorship of recreation events, such as wakeboard events, which are of limited duration. This does not apply to events that take place over an entire or major part of a season. The banners, posters, and other types of sponsor advertisement are allowed only during the event.
5. Partnerships or sponsorships with others for long term services which provide timed racing programs for the public and have sponsors to support off-site as well as on-site services or operation.

The signing for sponsors who support such organizations, or provide the service, may be posted at the service entry and/or exit area only. Recognition is limited to the name and/or logo of the

organization. Safety fences or lineal signing, large signs or banners are not allowed except as under #4 above.

Non-discrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Abbreviations

AASHTO: American Association of State Highway and Transportation Officials
ADAABAAG: Americans with Disabilities Act, Architectural Barriers Act Accessibility Guidelines (California Accessibility Laws will be used where most stringent)
BEIG: Built Environment Image Guide
BLM: Bureau of Land Management
BOR: Bureau of Reclamation
CCR: California Code of Regulations
CFR: Code of Federal Regulations
COE: Army Corps of Engineers
CRWQCB: California Regional Water Quality Control Board (Central Valley and North Coast)
DBW: California Department of Boating and Waterways
FS-2700-5c: Forest Service Resort Special Use Permit clauses
FSTAG: Forest Service Trails Accessibility Guidelines
MOAA: Marina Operator Association of America
NEC: National Electric Code
NFPA: National Fire Prevention Association
NPS: National Park Service
NRA: National Recreation Area (specifically the Whiskeytown-Shasta-Trinity NRA)
NWSC: National Water Safety Congress
SPCC: Spill Prevention, Control, and Countermeasure Plan
SWPPP: Storm Water Pollution Prevention Plan
ODEQ: Oregon Dept. of Environmental Quality
pcf: pounds per cubic foot
psf: pounds per square foot
psi: pounds per square inch
UFC: Uniform Fire Code
UPC: Uniform Plumbing Code
WROS: Water Recreation Opportunity Spectrum

Definitions

Except where noted, these definitions are drawn directly from the California Department of Boating and Waterways publication Guidelines for Marina Berthing Facilities, Layout and Design, July 2005.

Accessible route	a continuous unobstructed path connecting all accessible elements and spaces of a marina, including such features as parking access aisles, curb ramps, crosswalks at vehicular ways, walkways, ramps, lifts, gangways, boat slips, main walkways, marginal walkways, finger floats, boarding piers, boat launch ramps, etc.
Adaptive management	a systematic process for continually improving management practices by monitoring the results of management decisions and using the resulting information to improve existing management practices and strategies. Adaptive management is a continuous cycle of implementing a management decision, monitoring the results of the decision, evaluating the results, modifying the decision, monitoring the results, etc.
Boarding float	a platform-type structure, either floating or fixed, stationary or adjustable; located on, along side of, or near a boat launch ramp; designed for short-term moorage of boats, and to facilitate pedestrian access to and from boats in the water; synonymous with boarding pier.
Boat launch ramp	a sloped paved surface designed and constructed for launching and retrieving trailered boats and other water craft to and from a body of water.
Boat slip	a delineated water surface mooring area delineated by either floating or fixed dock structures for the purposes of embarking, disembarking, and the wet storage of recreational boat. Also “berth.”
Channel	a natural or artificially dredged route on a river, bay, sea, or ocean, delineated for the safe passage of boats.
Cleat	an object (1) used to secure a boat line, or (2) to provide improved traction on a gangway deck.
Dock	a platform, either floating or fixed, provided in a marina for the wet storage of a boat and pedestrian access to and from the boat.
Dump station	a facility located in a marina on docks, or on shore, specifically designed to receive sewage from portable toilets carried on vessels.
Fairway	a watercourse, within a marina, by which boats travel between interior channels and marina berths.

Freeboard	the vertical distance from the water surface to the top of the deck of floats, docks, piers, etc., measured under various loading conditions, i.e. dead load only, live load plus dead load, etc.
Fuel dock	a dedicated structure or a delineated area on a larger pier, dock, bulkhead, or similar structure, that is specifically used for the dispensing of boat fuel (aka <i>marine service station</i> , <i>fuel dispensing facility</i> , or <i>fueling station</i>).
Fuel storage tank	a storage structure (i.e. tank) that contains boat fuel in storage for dispensing.
Gangway	a variable slope structure that provides pedestrian access between a point on land and a floating dock that moves up and down through a range of rising and falling water levels.
Guardrail	a railing system, including a top rail, located along the edge of an elevated walking surface for the purpose of minimizing the possibility of an accidental fall from the walking surface to a lower level; same as safety rail.
Holding tank	any retention system on-board a boat designed and operated to receive and hold sewage, and be periodically emptied at approved pump out sites.
Marina	a recreational boating facility on a coastal or inland waterfront that provides facilities and services for the wet and or dry storage of boats, as well as embarking and disembarking of boat operators and passengers.
Moorage	a delineated water surface, delineated by either floating or fixed dock structures, for the purposes of embarking, disembarking, and the wet storage of a recreational boat (a.k.a. boat slip or boat dock)
Parking space	delineated space in a marina parking area for the parking of vehicles of various types. <i>Single-vehicle parking space:</i> a delineated space for a single vehicle, including passenger cars, trucks, vans, and motorcycles. <i>Recreational vehicle parking space:</i> a delineated single vehicle parking space that is wider and longer than conventional single vehicle spaces in order to accommodate a single large vehicle know as a recreational vehicle (RV) <i>Accessible single vehicle space:</i> a marina parking space for a single vehicle that is designated by a sign and a pavement marking, and is reserved for use by a person who displays an approved placard or license plate sticker on their parked vehicle.

Accessible van vehicle space: the same as a single-vehicle space except it is marked as “van accessible” and is wider than a single vehicle space; van vehicle spaces are designated and reserved for barrier-free use, but are not designated for the exclusive parking of vans.

Pumpout station	a facility that pumps out and receives sewage from a Type III marina sanitation device (holding tank) on-board a boat.
Ramp	a pedestrian walkway on an accessible route, with a constant running slope greater than 1:20 (5%0 but not greater than 1:12 (8.33%), a maximum rise of 30 inches, and a maximum cross slope of 1:50 (2%).
Service float	a floating structure equipped to supply oil, fuel, water, sewage pump out, and other related services to boats.
Toe plate	a sloping plate, hinged to the lower end of a gangway, that provides a smooth transition between the variable slope gangway and the deck of a floating dock.
Transition plate	a sloping plate, hinged to the upper and/or lower end of an accessible gangway, that provides a smooth transition between the gangway and a floating dock or landing.
Walkway	<p><i>Finger float:</i> a finger-like floating structure typically attached perpendicular to a main walkway, which together define the length and width of a berth, provide direct pedestrian access to and from a boat in the berth, provide for the secure mooring of a boat in the berth, and may support the provision of various utility services.</p> <p><i>Main walkway:</i> a floating structure to which finger floats are attached to define individual berths and to provide pedestrian access between the berths and a marginal walkway or shore.</p> <p><i>Marginal walkway:</i> a floating structure that provides pedestrian access between two or more main walkways and shore, and may serve as a platform for lighting, fuel stations, sewage, pump out facilities, lift stations, and utility lines.</p>

Bibliography and Source Documents

Layout and Design Guidelines for Marina Berthing Facilities. July 2005, California Department of Boating and Waterways.

Guidelines for the Safe Operations and Maintenance of Marinas, 2001 Revision, National Water Safety Congress.

Engineering Manual 1110-1-400 Recreation Planning and Design Criteria, July 1987, U.S. Army Corps of Engineers.

Layout, Design and Construction Handbook for Small Craft Launching Facilities, March 1991, California Department of Boating and Waterways.

ABC's of the California Boating Law, 2005, California Department of Boating and Waterways.

Recreation Facility Design Guidelines (Draft), May 2000, U.S. Bureau of Reclamation.

Concessions Management Policy and Directives and Standards (LND P02 and LND 04-01), April 2002, U.S. Bureau of Reclamation

General Marina Standards for Marina Facilities (Draft), November 2003, National Park Service.

Marinas and Small Craft Harbors, Second Edition, by Tobiasson and Kollmeyer.

Best Management Practices for Oregon Marinas, May 2002, Oregon Department of Environmental Quality.

Accessible Fishing Piers and Platforms and Accessible Boating Facilities, June 2003, U.S. Access Board.

Appendix A -- Marina Standards Annual Marina Condition Report

This report will be used by Forest Service personnel to perform annual monitoring of the marina facility. It is not a formal inspection, but may lead to a formal inspection if conditions noted appear unsafe or poorly maintained. In addition, this form will be completed annually by the Marina Operator and included in the Annual Operation and Maintenance Plan. Discrepancies between the two reports shall be discussed with the Authorized Officer.

Items that are deemed “Below Satisfactory” shall be reviewed with the Marina Operator and will be included in the Annual Operations and Maintenance Schedule for repair or replacement as necessary. Items that require a large capital investment (e.g. docks) may be phased if necessary unless immediate health and safety is a concern.

Refer to Standards and Guidelines for Marinas.

Each component is rated from 1 to 5 on the following scale:

- 1 = Poor, may be immediate health and safety concern
- 2 = Below Satisfactory, item requires repair or replacement
- 3 = Satisfactory, adequate but replacement should be scheduled
- 4 = Good, item is functional and well maintained.
- 5 = Excellent, item exceeds the standard and provides exceptional quality service

1. Signing	Rating
a. Forest Service Required Signs: Marina has the proper Forest Service “Family of Shapes” entry sign, justice for all sign, and non-discrimination signs posted. Signs of a permanent nature are professionally prepared and approved before installation.	
b. Directional signing; parking, registration, boat launch, restrooms, rentals, etc. can be located easily. Signs are well maintained and consistent with the marina theme.	
c. Informational signs; Customers can easily find information on hours of operation, moorage fees, rental fees, fuel prices, launching or parking fees. It is clear where more information is available. Signs are accurate and reflect current information and conditions.	
d. Safety: hazard signs, caution signs. Contact information for after-hours emergencies	

Comments:

2. Parking Areas	Rating
a. Parking Spaces: Parking pattern is clearly marked and the minimum permitted number is available. Non-accessible spaces are a minimum of 10 feet wide	
b. Surface: Parking surface is paved, or hard surfaced in some manner and well drained. The slope and cross slope is accounted for in the parking direction and overall slope does not exceed 5 % except where previously approved.	
c. Accessible spaces: Spaces are the correct size, adequate number for total parking capacity, legal signing, slope and cross slope does not exceed maximum allowable	
d. Cleaning and Repairing: If the parking area is used for boat maintenance and repair, appropriate containment is provided for wash water. If the parking lot drains to a gutter or channel, water can be captured as necessary.	
e. Safety: Parking area is well lit and energy efficient lighting is used where possible. Driveway widths are a minimum of 20 feet.	

Comments:

3. Road and Trails	Rating
a. Roads are a minimum of 24 feet wide for two way traffic with a maximum grade of 10%. Roads below high water must be a minimum of 14 feet wide and include inter-visible turnouts. Un-surfaced roads shall be watered during dry periods.	
b. Trails are marked and maintained, drainage is provided and the surface is smooth and compacted.	
c. Accessible spaces: Spaces are the correct size, adequate number for total parking capacity, legal signing, slope and cross slope does not exceed maximum allowable	
d. Cleaning and Repairing: If the parking area is used for boat maintenance and repair, appropriate containment is provided for wash water. If the parking lot drains to a gutter or channel, water can be captured as necessary.	
e. Safety: Parking area is well lit and energy efficient lighting is used where possible. Driveway widths are a minimum of 20 feet.	

Comments:

4. Boat Launch Ramp	Rating
a. Slope: Slope is between 12% and 15% for self-service boat launching, steeper ramps include a warning sign, and launching assistance is provided when requested.	
b. Surface: Surface is v-grooved or otherwise scored to drain water and provide traction	
c. Ramp capacity: Ramp width, lane markings, curbing, and turnarounds are consistent with designed ramp capacity. Lanes are a minimum of 16 feet or 15 feet for multiple lanes. Ramps over 200 feet long include 60 foot turnaround.	
d. Boarding floats: If a boarding float is provided, it will meet minimum standard of a main dock, and anchor cables shall not create a hazard for boaters or pedestrians.	

Comments:

5. Marina Buildings	Rating
a. Appearance: Marina facility is attractive and visually consistent (colors, architecture, style). Roof, siding, paint, foundation, doors, windows, steps, ramps, railings, etc. are well maintained and functional. No visible signs of damage or rot.	
b. Accessibility: Marina provides an accessible route between the primary components (parking, office, docks). Ramps are provided with proper slope, width, railings and transitions. Door openings, desks, countertops are accessible.	
c. Landscaping: Vegetation is healthy and neatly trimmed, dead trees and brush have been removed. Grasses have been cut back and/or mowed. Container shrubs and plants are irrigated or otherwise watered and trimmed. Steep slopes have some erosion protection and surface water is properly drained and channeled through the marina facility.	
d. Storage Area: Maintenance yard, bone yard, utility area etc is screened from view, neat and well maintained. Hazardous materials are properly stored and labeled and containment is provided. Bone yard is not a garbage dump and materials stored are used annually. Old vehicles, broken parts, used drums, etc. are removed regularly.	
e. Lighting: Adequate for nighttime operations, shielded,	

Comments:

6. Restrooms and Sanitation	Rating
<p>a. Restrooms are accessible (approach, entry, stalls, sinks, towel or hand dryer), clean, well lit, odorless, well ventilated and well maintained. When parking becomes removed from the lake surface (during drawdown), a portable accessible toilet is provided in the parking area.</p>	
<p>b. The number of restroom stalls by sex is adequate for the size of the marina and types of services offered with a minimum of two toilets on land and two on water. Drinking water is available either at the office, store or drinking fountains. All non-potable water outlets are clearly marked.</p>	
<p>c. Trash: Containers are readily available near launching ramp, restrooms, store, and office on each dock and are emptied daily. Where animals are a concern, trash is in animal-proof containers.</p>	
<p>d. Recycling Program: Where possible, recycling containers are provided and clearly marked.</p>	

Comments:

7. Marina Management	Rating
<p>a. Moorage Agreements: Marina operator has records of each slip rental agreement, insurance information, rates for moorage, billing and payment records, and overall marina occupancy rates. Marina staff inspects docks on a regular schedule for violations of the lease agreement or unsafe conditions. Slips are not rented for commercial uses (timeshare, boat sales, etc.)</p>	
<p>b. Staff and Training: Marina staff is qualified and professional in appearance. Staff is knowledgeable about marina operations and available for assistance. Marina conducts training and has established procedures for customer service and complaints. Marina is in compliance with federal, state and local laws governing the marina operation. There is a mechanism to reach a staff member or other personnel in off-hours or off-season.</p>	
<p>c. Long Range Planning: Marina has a Business Plan and Marketing Plan that identify future needs and expectations.</p>	
<p>d. Additional Services: Boat repairs, commercial boat sales, and private boat sales are conducted and managed by the Marina to ensure compliance with law and policy, unless a specific sub-lease agreement has been approved by the Authorized Officer.</p>	
<p>e. Vehicles: Marina vehicles have a current DMV registration and sticker</p>	
<p>f. Special Status Species: For marinas that operate near Bald Eagle nesting sites, boom closures are observed and maintained.</p>	

Comments:

8. Formal Inspections	Rating
a. Annual electrical safety inspection and report	
b. Insurance inspection report	
c. Fueling inspection and report and employee training in fuel handling	
d. Water testing and reports and employee certification for potable water system	
e. Facility Maintenance Log – includes repairs for prior citations and unsafe conditions	
f. Hazardous Materials Storage inspection and report: Current Inventory and employee training for handling and storage	
g. Hazardous Waste: Training records, spill plan, spill kit, notification procedures, labeling, waste manifests	
h. Universal Waste Manifest: batteries, light bulbs, aerosol,	
i. Citations Report: documented violations, written warnings, fines	
j. Annual Marina Condition report by Marina Operator-	
k. Slip Rental Lease Agreement	
l. Occupancy Rate report	
m. Marina Business Plan	
n. Marina Marketing Plan	

Comments:

9. Gangway and Marginal Dock	Rating
<p>a. Gangway: In good condition, non-skid surface, railings and handrails are appropriate height (34 to 38 inches) and spacing (< 4”), the slope and cross slope do not exceed accessible standard, transition or toe plate is secured to the land side and provides smooth transition to the dock. Minimum of 3 feet wide.</p>	
<p>b. Surface and Decking: In good condition with an even, non-slip surface, surface material is within useable life, fasteners are working and edges are attached, surface is even and does not have large gaps (>3/8”) , broken planks or raised edges. Nails or screw heads are below the surface height and do not pose a hazard. Surface is clear of tripping hazards. Dock is a minimum of 8 feet wide with a minimum 5 feet of clear path. All hazards are clearly visible or brightly marked (anchor cables, winches, steps, etc.).</p>	
<p>c. Cleats and Bumpers: Cleats are available and properly sized for each slip, in good condition (not broken or bent), and properly secured to the dock. Bumpers are in good condition and securely attached.</p>	
<p>d. Floatation: No exposed foam bead-board, any foam is encapsulated. Floatation is attached securely to the dock structure and is sealed properly; freeboard height is between 12” and 24” during normal operation.</p>	
<p>e. Dock frame: In good condition, no damage, rust or broken structural members. Connections are tight from surface to structure and between dock components. Minimal surface list (<2%).</p>	
<p>f. Utilities: Cables and lines are secured in a chase or conduit and in good condition. Junctions between docks are secure, inspections of the lines are possible at regular intervals and inspections are current.</p>	
<p>g. Storage Boxes: If provided or allowed, they are neat and well maintained, do not encroach on the accessible path and do not compromise the structural design or integrity of the dock. Weight of storage boxes and contents are included in calculations for floatation and dead load.</p>	
<p>h. Anchoring System: Winches and cables are well maintained and in good condition. Winch platforms are sturdy and out of the accessible path. No visible damage to mounting brackets, dock or mechanisms. Cables do not show signs of wear, rust or other damage and include cable guards. Cables are clearly marked where visible and do not create an on-water hazard for boaters.</p>	

Comments:

10. Main Dock(s)	Rating
a. Transition plates: Plate covers the entire gap between docks, flat on surface, one end securely attached and the other end moves smoothly.	
b. Surface and Decking: In good condition with an even, non-slip surface, surface material is within useable life, fasteners are working and edges are attached, surface is even and does not have large gaps (>3/8") , broken planks or raised edges. Nails or screw heads are below the surface height and do not pose a hazard. Surface is clear of tripping hazards. Dock is a minimum of 6 feet wide with a minimum 3 foot wide clear path. All hazards are clearly visible or brightly marked (anchor cables, winches, steps, etc.).	
c. Cleats and Whalers: Number of cleats is adequate and properly sized for each slip, in good condition (not broken or bent), properly secured to the dock. Whalers function properly for the type of vessel moored. Whalers are not damaged or missing	
d. Floatation: No exposed foam beadboard, floatation is attached securely to the dock structure and is sealed properly; freeboard height is between 12" and 24" during normal operation.	
e. Dock frame: In good condition, no damage, rust or broken structural members. Connections are tight from surface to structure and between dock components. Minimal to no surface list.	
f. Utilities: Cables and lines are secured in a chase or conduit and in good condition. Junctions between docks are secure, inspections of the lines are possible at regular intervals and inspections are current.	
g. Anchoring System: Winches and cables are well maintained and in good condition. Winch platforms are sturdy and out of the accessible path. No visible damage to mounting brackets, dock or mechanisms. Cables do not show signs of wear, rust or other damage. Cables are clearly marked where visible and do not create an on-water hazard for boaters.	
h. Permanent Marking: All main structural components of the dock system (frame, floatation, winch, etc) must be marked with the marina name or symbol. Identification may be by branding, painting, tagging or otherwise but must be permanent in nature.	

Comments:

11. Finger Dock(s)	Rating
a. Transition plates: Plate covers the entire gap between docks, flat on surface, one end securely attached and the other end moves smoothly.	
b. Decking: In good condition with an even non-slip surface, surface material is within useable life, fasteners are working and edges are attached, surface is even and does not have large gaps (>3/8") , broken planks or raised edges. Nails or screw heads are below the surface height and do not pose a hazard. Surface is clear of tripping hazards. Dock is a minimum of 3 feet wide except accessible fingers which are a minimum of 5 feet wide. All hazards are clearly visible or brightly marked (anchor cables, winches, steps, etc.).	
c. Cleats and Whalers: Number of cleats is adequate and properly sized for each slip, in good condition (not broken or bent), properly secured to the dock. Whalers function properly for the type of vessel moored. Whalers are not damaged or missing	
d. Floatation: No exposed foam beadboard, floatation is attached securely to the dock structure and is sealed properly; freeboard height is between 12" and 24" during normal operation.	
e. Dock frame: In good condition, no damage, rust or broken structural members. Connections are tight from surface to structure and between dock components. Minimal to no surface list.	
f. Security: Private moorage and slip rental area is secured. Gates are operable and doors are not propped open.	
g. Slip service pedestals: Securely attached and well maintained, operable	
h. Offshore Mooring: Any remaining is scheduled for removal/replacement with berths.	

Comments:

12. Covered Docks	Rating
a. Structural: Supports are in good condition and well maintained. Truss system is sound, no visible damage, rust or rot; beams and cords are in good condition; all fasteners and joints are securely connected.	
b. Lighting: Lights are operable and protected from damage, no broken bulbs.	
c. Roofing: Material is in good condition and well maintained. Repaired sections are matched to existing roofing, fasteners are secure.	
d. Fire Protection: System is well maintained and operable. Worn or damaged line or fixtures are replaced, and the system is tested on a schedule to ensure operation. Fire extinguishers are inspected monthly and recharged annually.	

Comments:

13. Booms and Buoys	Rating
a. Visual: Booms are neat, secure, buoyant, well maintained, and clearly visible on water to boaters. Booms are adjusted as necessary to prevent obstruction of the main channels and include a signed opening if they are closed for periods of time to prevent debris accumulation. Booms may include directional signs but may not include advertising.	
b. Lighting: Booms shall have operable lights positioned every 100 feet along the surface.	
c. Anchoring: Cables do not create a hazard to boaters and are in good condition and well maintained.	
d. Floatation: If floatation material is used, it must be completely encapsulated and free from damage or punctures that would compromise integrity or create debris. Floatation must be adequate to make boom visible.	
e. Permanent Marking: All main structural components of the boom or buoy must be marked with the marina name or symbol. Identification may be by branding, painting, tagging or otherwise but must be permanent in nature. Booms include “No Wake” signing.	
f. Buoys: Buoys are brightly colored and constructed of materials that will not damage a boat unless the buoy includes lighting. Anchoring system is in good condition and well maintained.	

Comments:

14. Water Service	Rating
a. Water Supply: water service for boats is clearly marked “Potable” and “Non-Potable”.	
b. Water System: Design includes main shut-off valves, drain, pressure regulation, back flow valves, drains and hose bibs. Water lines shall be pressure rated.	
c. Hoses are neat and rolled or stored when not in use. Lines are not allowed across the deck or main or marginal walkways.	
d. Monthly water testing by certified marina personnel is current and water system is clean and well maintained.	

Comments:

15. Septic Service	Rating
a. Waste pump-out: System is well maintained and operable. System is inspected on a schedule for leaks or damage that require repair.	
b. Boat pump-out station is well marked and signing is clear. Station is neat and well maintained, and suitable for pumping and wash-down of portable toilets.	
c. Non-potable pressurized water line is available to flush out holding tanks.	

Comments:

16. Fuel Dock and Fire Protection	Rating
<p>a. Fuel Storage: Gas and oil is properly stored with secondary containment and visible caution signing. All tanks are secured and properly grounded and vented. Fuel storage is inspected on a schedule for operation, leaks, seals, and safety equipment. Fuel dock is located out of main traffic area and includes appropriate set back distances from tanks. Total storage does not exceed 15,000 gallons, SPCC plan in place and available.</p>	
<p>b. Fuel Dispensing: All sales or transfers of gas and oil are supervised by trained personnel. Dispensers do not have hold-open latches, and shut-off valves are readily available. Emergency spill plan with contact numbers are posted near radio, phone or other emergency call-device. Line cutter (axe, wire cutters, lopper, etc.) are readily available. Fuel dock is neat and free of combustible debris or waste.</p>	
<p>c. Fuel Piping: Piping should be located so it is accessible for inspection and protected from physical damage and grounded.</p>	
<p>d. Cleaning materials: All rags and waste are properly stored and disposed. Emergency containment/cleanup kit is available and fully stocked. Propane tanks have proper clearances and warning signs.</p>	
<p>e. Safety: No smoking signs and other appropriate hazard warning signs are posted and visible. Portable fire extinguishers are regularly spaced, clearly marked and inspections are current. Dock flotation is sound and does not indicate damage from spills or impacts.</p>	
<p>f. Propane: Securely stored in a dedicated, well ventilated area. Employees are certified for filling propane bottles and cylinders.</p>	

Comments:

17. Hazardous Materials and Waste	Rating
a. Hazardous Material Storage: Products identified as hazardous should be stored appropriately either in a fire-proof locker or secured building. The quantities stored should be recorded accurately. Storage buildings with flammable liquids should be ventilated.	
b. Warning Signs: No smoking signs and DOT hazard signs are conspicuously posted.	
c. Batteries: Must be stored and charged separately from other hazardous materials and waste. Storage area should be ventilated with “no smoking” signs posted and PPE available. First Aid kit and eye wash station is available.	
d. Fire Extinguishers: Inspections are current and easily accessible.	
e. Permanent Marking: All main structural components of the boom or buoy must be marked with the marina name or symbol. Identification may be by branding, painting, tagging or otherwise but must be permanent in nature.	
f. Buoys: Buoys are brightly colored and constructed of materials that will not damage a boat unless the buoy includes lighting. Anchoring system is in good condition and well maintained.	

Comments:

18. Electrical	Rating
a. Service Hook-ups: Hook-ups are available only where approved by the Authorized Officer and as identified in the Special Use Permit.	
b. Control Panels: Switch boxes are clearly marked and labeled and outdoor fixtures are in weatherproof boxes or enclosures.	
c. All metal parts are correctly grounded. GFCI switches provided on receptacles. Power to the dock is hard wired (no extension cords) and conduits are in good condition.	
d. No illegal hookups from boats, battery charging is provided in a designated location. Wiring on docks is protected from abrasion or damage and does not pose a tripping or overhead hazard.	
e. Utility service on land is underground. Where overhead powerlines are authorized, they do not cross over any area of the marina where vehicle travel is possible (i.e. roads, parking lots, service roads, ramps, service yards, etc.).	

Comments:

Review Completed By:
Date Completed:
Scheduled Meeting with Marina Operator:
Scheduled Meeting with Authorized Officer: