
Guidelines for Paddling Trail Development



Rapids on the Aucilla River

Trail Scouting

- During the initial planning phase, visit all roads and ramps along the route by vehicle. Inventory each site - type of ramp, disabled access, facilities available, etc. In an unpopulated area determine if adding a remote boat ramp to a map will be beneficial to a paddler. For example, if someone is looking for help in an emergency, will they be likely to find it?
- Visit the trail during different seasons, different tidal levels, and after periods of low or high water. You may discover a campsite that floods during a storm surge or a site that is not accessible during low tide. Ask local people about the history of prevailing and extreme conditions on the waterway.
- Examine topographical maps and aerial images of the waterway or coastline to identify sites with enough elevation and land cover for camping. Aerial photos are a good way to check for possible road access to a potential campsite; a feature that should be avoided if possible to reduce user conflict. Consider regional environmental concerns when choosing campsite locations, i.e., are elevated sites with breezes helpful for finding relief from summer insects?
- Early in the planning stage, visit each potential campsite by boat. A powerboat can be used to do the initial survey, but be sure to paddle the route and stay at potential campsites as well. This provides a wealth of detailed information that can't be ascertained by powerboat alone and is essential to making a successful trail.

- Collect GPS points for important channel markers, points of interest, campsites, confusing navigation points, etc. Take photos of navigation aids to help identify location of campsites, river channels, etc., on your map.
- Paddle the entire route to verify GPS data and to determine where markers should be placed to clarify routes and identify campsites. Plan route to minimize the number of markers needed. This will provide initial and long-term savings and preserve the wilderness experience of the area.
- At the onset of your project contact any land managers from public agencies or private landowners who may be affected by the development of a new trail near their property.



Cat Island

Determine Target Audience(s)

- Know your audience. Inland and urban paddling trails can offer a variety of recreation options and can be marketed to a wide range of paddlers. Many lakes, creeks and rivers are appropriate for users with minimal experience and offer beginner paddlers a great opportunity to become acquainted with the natural areas near home. Keep trails and navigation simple. Write map information and signage clearly and gear it towards your targeted user group.
- Know that your target audience for a potential trail may be dictated by the conditions of the available water body and available facilities.
- Look at existing paddling trail and recreation opportunities; determine needs, contact local outfitters and paddling clubs for input.



Fishing on the Withlacoochee North

Build in Trail Safety

- **Keep safety the most important factor in trail development!**
- Target the appropriate user group. For an open-water or coastal paddling trail, your trail to experienced sea kayakers with open water experience and rescue skills; don't invite paddlers in canoes! There are plenty of sheltered lakes and rivers for canoeists to enjoy. Steer them to enjoy these other safe options. Promoting a waterway trail to the wrong user group or not adequately outlining inherent dangers can be disastrous.
- If the proposed paddling trail shares a busy waterway such as the ICW or other heavily-used channel there are special safety concerns for paddlers and possible regulation issues. Be sure to provide clear safety warnings in your guides and maps about crossing busy boating channels and following navigation rules. Proposed paddling trail signage requirements may be different in these areas and concerns should be discussed beforehand with Tara Alford at the Florida FWC Boating and Waterway, (850) 410-0656, ext. 17169 or E-mail: tara.alford@fwc.state.fl.us
- Stress the importance of paddlers wearing personal flotation devices (PFDs) or life jackets. When taking photos for promotional material or during events with the media, assure that models are displaying all necessary safety gear and wearing a PFD.

Trail Publication Information

- Emphasize the importance of users filing a float plan; offer a downloadable form on

your supporting trail website.

- Spell out in detail the necessity of paddlers staying hydrated, and wearing sunscreen, protective clothing, proper footwear, and hats. Make sure visitors from other areas are aware of the ill effects of sun exposure and dehydration. Advise them to carry a gallon of drinking water per day, per person.
- Include equipment check lists of appropriate clothing and safety gear, first aid and camping supplies for extended trips on your publications and websites. This site offers checklists and float plans: <http://www.kayakinstruction.us/resources.htm>
- Include local emergency phone contacts and regional medical facilities in guide publications and trailhead kiosks.
- Cell phone coverage for emergencies may not be an issue in an urban area but the public should not be encouraged to count on a cell phone for emergency help in lieu of careful preparation and making contingency plans. Stress to trail users that cell phone coverage cannot be counted on in wilderness areas. Identify any points along the route where one can receive help in an emergency, including populated areas with year-round residents and landline phones. This can be included as a 'telephone' icon on any publications.
- Inform users how to identify and avoid poisonous plants and animals. Be sure that paddlers are aware of: poison ivy, prickly pear cactus, sandspurs, ticks, mosquitoes, no-see-ums, biting flies, poisonous snakes, stingrays, and alligators.
- Be sure to stress in paddling guides and maps the importance of paying attention to tidal changes, water currents, and weather conditions. Provide links to tide tables, water level gauges and weather websites.
- To increase user's comfort and safety, promote the best months to use the trail, and when to avoid it. Be sure to stress the importance of tracking storms during hurricane season, and the necessity of carrying a weather radio and extra batteries to monitor weather conditions. Warn users to avoid paddling during thunderstorms and lightning and take shelter **before** getting caught in bad weather.
- Identify safe areas for public parking, especially if your trail offers overnight trips. When possible choose areas with nearby residences, security lighting, or good visibility from the road. Check with local law enforcement to ascertain any problems at remote

parking sites. Are there local outfitters that offer shuttling and/or safe parking? Provide this information or web links in your publication.

- Ensure that paddlers can easily see access points from both the water and road during the day and night (use reflective signs).



Identify safe parking

Resource Protection and Trail Management

- There are numerous management issues to consider in early planning stages. Identifying these challenges up front will prevent problems later, and increase the sustainability of a trail:
- Consider how you will handle human waste at remote campsites. Identify existing public facilities along the route and obtain permission to include in map information. Contact '[Leave No Trace](http://www.lnt.org)' to provide user guidelines in dealing with solid waste if no facilities are available: <http://www.lnt.org/programs/lnt7/index.html>
- It is critical to protect the carrying capacity of campsites and access points along the waterway. To maintain control over the amount of usage, consider instituting a campsite permit and reservation system. This also benefits paddling groups by avoiding group overlap and helps preserve the wilderness experience for each group. Keep the permit application process simple and at low or no cost (if possible) to increase compliance. It may be necessary to limit group size or the number of tents to minimize impacts on fragile environments.

- Pick campsites that are not accessible by road where possible; this greatly reduces illegal camping and user conflict. When possible, choose sites with a shallow water approach that are not accessible by powerboat. Verify ownership of land through public records or the property appraiser and exercise care to protect the rights of property owners and land managers. Enlist the support of land managers early in the process to identify appropriate camping areas. If agency land use policy will need to be changed, allow for plenty of time.
- Develop a monitoring and maintenance plan and visit campsites and access points at least two times annually to look for signs of overuse, erosion, litter, and vandalism. It may be necessary to contract with a private vendor to provide campsite maintenance if staff are not available. It may also be possible to have a Citizens' Support Organization (CSO), a 'Friends' group, or other volunteers to accept responsibility for routine maintenance.
- Identify early in planning who will be responsible for installing and maintaining signs and markers, and applying for a waterway marker permit. The permits are provided at no charge but it may take three or four months to complete the permitting process. Applications and permits are issued by the FWC Boating and Waterways Section. It is a legal requirement for signs to be permitted and follow a standardized format. Once the signs are installed, monitor the paddling trail on a routine basis and develop a contact mechanism for users to report vandalized or missing signs. See the section "[Waterway Trail Markers](#)" below for more details.
- Promote trail stewardship and provide low impact guidelines for users. Include applicable low impact tips on map guides and camping permits.
- Be sure to ascertain the existence of any rare plant or animal species impacted by access points or camping sites, regardless of private or public land ownership. Contact the appropriate agency for species information. In Florida, look at the [Florida Natural Area Inventories site \(FNAI\)](#) at <http://fnai.org> to query their database by quadrant to determine location of these species. The website will walk you through the process.
- Protect sensitive natural and cultural resources. Route the trail to avoid bird rookeries, eagles' nests, or cultural sites, and include wildlife viewing ethics and other resource conservation information in your guide. [Wildlife viewing tips](#) are available on-line: <http://myfwc.com/viewing/info/index.htm> . Avoid directing people to areas of archaeological importance where collection of artifacts must be avoided. Work with the

guidelines and laws of the state concerning artifact collection and present clear information to the public. In Florida, access the [Division of Historical Resources](http://www.flheritage.com/preservation/sitefile/) master site link: <http://www.flheritage.com/preservation/sitefile/>



Promote wildlife viewing ethics

Waterway Trail Marker

Frequently Asked Questions (FAQs):



Sign on Lake Lafayette

- It is not legal to design your own paddling trail signs. According to F.S. 327.41 and 68D-23.104 FAC, all waterway markers must comply with state and federal regulations

pdfs: [Checklist for Waterway Marker Application](#) and [Waterway Marker Application](#) or contact **Tara Alford** at the Florida FWC Boating and Waterway Section, (850) 410-0656, ext. 17169 or E-mail: tara.alford@myfwc.com.

- If the proposed paddling trail shares a busy waterway such as the ICW or other heavily-used channel, there are special safety concerns for paddlers and possible regulation issues concerning signage. This should be discussed beforehand with Tara Alford at the Florida FWC Boating and Waterway Section, (850) 410-0656, ext. 17169 or E-mail: tara.alford@myfwc.com
- Waterway markers and campsite information signs are a minimum of 12" x 12" and a maximum of 18" x 18". Signs of smaller dimensions may be allowed in narrower waterways; check with Tara Alford at the numbers above for size variance.
- Minimize trail markers as much as possible to preserve the wilderness experience and to reduce installation and maintenance costs. Avoid placing signs at every mile to mark the distance of the trail. Limit signs to relay only essential information at 'decision points' where navigation is confusing or to locate campsites. The type of water body and target audience will also dictate the number of needed signs. In urban areas where users are more likely to be inexperienced or the trail has multiple branches, it may be prudent to post more signs to keep users on the trail.
- Provide sufficient navigation information in your maps and guides so that users will not have to rely on signage to navigate a route. Signs can disappear from vandalism or storm activities. When placing an initial sign order, obtain duplicate copies of waterway signs to reduce time in replacing missing ones.
- Signs are constructed of .125 gauge 5052-H38 Allodined, or equivalent (corrosion proof) aluminum, with reflective white background and orange border with black block characters, and brown crossed paddles. They are recommended to be erected on Schedule-40 4" PVC pipe or pressure treated wood posts with 80lb concrete added to set the post (if installed on shore). Use a larger diameter PVC post if sign will be posted in an area likely to receive abuse from users or the elements. The signs should be a minimum of 5' above the average high water line. Reflective white striping should be placed on the PVC post just below the sign. Place a PVC 'cap' on top of the pole to exclude rain. Mount the signs with a spacer or extra washers on the uppermost hardware or install at a slight forward leaning angle to deter birds from roosting and leaving droppings.

- Signs should extend 6' above the water and must be installed only on one side of the waterway, as close to the shoreline as possible, to avoid being a hazard to powerboats. Do NOT fasten signs to trees!
- Buoys may also be used as trail markers and must extend at least 36" above the mean high water mark. Buoys can be as small as 5" but no larger than 9" in diameter. They have the same color and format as the signage and must display a permit number.
- Permits are required for the uniform waterway markers and are provided at no cost. The waterway marker application and sign checklist from FWC Boating & Waterways Section is available here: [Waterway Marker Application Checklist](#) and [Waterway Marker Application](#). FWC must review the permit application and issue permits. A permit number must be posted in the lower left hand corner on all waterway marker signs and buoys once issued from FWC.
- In larger navigable waterways it may be necessary to contact the Coast Guard, Army Corps of Engineers, and Department of Environmental Protection to receive permits. You will be advised by **Tara Alford at 850-410-0656, ext. 17169**, when you submit your application as to whether or not the other agencies must be contacted.
- If your waterway trail exists on an inland lake or canal then a permit may not be required if the signs are posted less than 50 feet from the ordinary high water line. Even if a permit is not required the signs must still have the standardized format. Contact **Tara Alford at 850-410-0656, ext. 17169**. Or send e-mail to: tara.alford@myfwc.com to see if your trail qualifies for this permit exemption.

Launch Design

- The National Park Service Rivers, Trails, and Conservation Assistance Program has an on-line document called "[Logical Lasting Launches](#)". This guide provides design tips for developing canoe and kayak launches. Case examples, designs, and photos of launch sites are included.
http://www.nps.gov/ncrc/programs/rtca/helpfultools/ht_launch_guide.html



Make the Trail Enjoyable

- Provide a mix of wilderness and comfort where appropriate. Many paddlers on an extended trip will enjoy the opportunity to stay overnight at waterside or nearby lodging, take a hot shower, and eat something other than freeze-dried food. You will also be providing an economic opportunity for communities along the route. Link to local TDC or Chamber of Commerce sites instead of mentioning businesses individually to keep amenity listings up-to-date.
- Include sources of potable water in your guide; this is especially critical in a saltwater environment. Let paddlers know how much they need to acquire at a source before their next opportunity to re-supply. One way of doing this has been to identify potable water sources in paddling guides with a 'water drop' icon and inform paddlers of the quantity of water needed based on one gallon per person, per day minimum. If freshwater sources are available and can be filtered, inform paddlers accordingly.
- Identify safe swimming opportunities, such as a public beaches or springs along the route. Paddlers appreciate an opportunity to swim in fresh water, especially on saltwater trips.
- Include accessible 'Points of Interest' such as hiking trailheads and other public recreation opportunities. Paddlers welcome the opportunity to access hiking trails from the water to 'stretch their legs'. Work with land managers to identify existing trails or develop new trail options for your map publications.

to a variety of destinations.

- The majority of users will appreciate a short trail of 3 to 5 miles or less; provide a variety of options for diverse users. The average paddler will travel about 2 miles an hour. This speed varies widely between paddlers and does not take in to account any currents or tidal effects. The closer your trail is located to an urban area, the more likely it is that there will be many beginning paddlers; plan accordingly by providing campsites and access points a maximum of 5 to 6 miles apart to allow for slow or inexperienced users.
- On coastal trails place campsites a maximum of 10 miles apart to allow time for paddlers to handle challenging weather and tide conditions. This is not a long distance for an experienced paddler, but it allows a safety margin when adverse tides, winds, and currents present a challenge. A coastal trail should be marketed to experienced, well-prepared sea kayakers with primitive camping experience. Emphasize the importance of paddlers being well equipped and experienced with primitive wilderness camping and low impact techniques.



Camping along the Big Bend Saltwater Paddling Trail

Testing Results

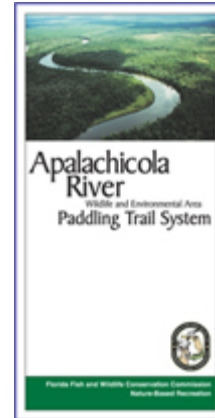
- Once a route has been determined and a rough draft guide produced, plan an event for volunteers to paddle the route to 'ground-truth' or 'field-verify' the results. Choose paddlers with varying degrees of navigation and paddling skills to represent a typical sampling of the intended user group. Provide temporary signage along the waterway

afterwards and elicit feedback, find out if navigation instructions are clear, signage adequate, distance between access points and campsites appropriate, and listen to their suggestions to improve the trail experience and make the trail safer.

Providing trail information



Big Bend Paddling Trail guide



Apalachicola River Paddling Trail Guide

A good example of a paddling trail website and trail guide can be found at the [Big Bend Saltwater Paddling Trail](http://myfwc.com/recreation/big_bend/paddling_trail.asp) website:

http://myfwc.com/recreation/big_bend/paddling_trail.asp.

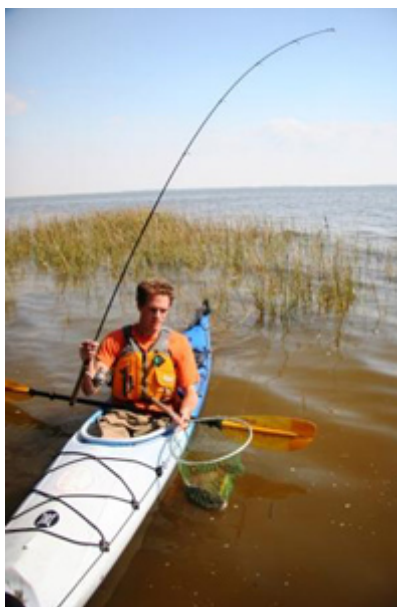
For more information on the Apalachicola Paddling Trail system and to download maps, access this website: http://myfwc.com/recreation/apalachicola_river/paddling.asp.

- The creation of effective websites, brochures, paddling guides or maps is important to increase public safety and enhance a paddler's appreciation of the area's natural and cultural resources. Describe the trail conditions accurately in all promotional materials. Submit a draft map guide to managers of public lands impacted by the trail for review.
- The inventories and data collected in the previous steps will be used to produce the guide. To reduce production costs, make a downloadable .pdf map available online instead of, or in addition to, providing hard copy maps.

Consider adding the following items to map information:

- GPS coordinates, average distances between campsites, points of interest, and towns with amenities.

- Provide track of paddling route where appropriate, including access points and boat ramps. Consider distinguishing between isolated ramps and those where phones or assistance may be available in an emergency; use appropriate icons on publications.
- Include major and local roads to access points.
- For lodging, restaurants and other amenities, provide websites or phone numbers of local tourism development councils and chambers of commerce to keep updated list of commercial vendors.
- Gear and safety equipment checklists.
- Points of Interest including cultural, historical, recreation, and interpretive features.
- Sources of potable water.
- Provide a mechanism for feedback on trail conditions by providing contact information, and an on-line survey.
- Display links to weather, tides, local emergency information.



Promoting and Marketing Trail

- From the onset, work with outfitters and paddling clubs to develop 'buy-in' and support from the local community affected by the addition or expansion of a trail.
- Once the trail is completed, organize a kick-off event with local paddling groups or outfitters. Some possibilities include planning a kayak fishing tournament, offering a demonstration day, or coordinating with other local clubs to provide birding or nature tours. Invite media contacts to attend the event and offer tours for the media to promote your new trail.
- To maintain ongoing trail support and possible volunteer assistance, develop alliances with a number of different sources: form 'Friends of the Trail' groups, Community Support Organizations (CSO), develop partnerships with corporate sponsors, work with local Tourism Development Councils (TDC), and VISIT Florida.
- Plan annual clean-up events with local civic groups or volunteers to maintain interest and support for the trail.
- Speak at local paddling and outdoor clubs and provide links to on-line paddling sites, TDCs, and outfitters.

For assistance with the planning and design of paddling trails, please contact Liz Sparks in the Office of Recreation Services at Liz.Sparks@MyFWC.com or 850-922-6160



Fisheating Creek