

Chapter 2—Physical, Social, and Managerial Attribute Guidelines



Physical, Social, and Managerial Attribute Guidelines



Top, trails are important to access water. Bottom, this patrol boat and the law enforcement it provides are important management tools.

Recreation managers provide opportunities for visitors to participate in an activity within a specific setting, which is defined by its important physical, social, and managerial attributes. The opportunity will ensure that visitors realize a particular type of experience and its subsequent benefits (refer to figure 1.1 in chapter 1). This chapter contains recommended guidelines for many setting attributes that, when considered together, encompass and define the WALROS class and its corresponding recreation opportunity. The guidelines provided are for water-based and associated land-based attributes. For example, if an entity is managing a section of a lake or river and its associated land base for rural developed recreation, the guidelines in the rural developed column should be considered.

The physical, social, and managerial guidelines are intended to provide guidance while adapting to unique local situations. They serve as indicators to signal that further assessment or action may be necessary (e.g., more monitoring, patrols, or discussion). Failing to meet a guideline or standard does not necessarily obligate or direct management action. Rather, it indicates that the appropriate level of due diligence has been taken by conducting the assessment. Guidelines also are critical for an efficient monitoring program since they provide a reference point, baseline, or anchor by which managers can compare current actual conditions to the preferred conditions reflected in the guidelines.

Managers may decide to deviate from the recommended guidelines occasionally, but they need to carefully consider all the facts and circumstances before making this decision. It is important for them to first address this basic question: What is the justification for this deviation and will it violate the integrity of the WALROS system? Sound professional judgment and the rule of reasonableness (see chapter 1) should be the standards for decisionmaking. It is important to include a written detailed explanation in the administrative record for future administrative or judicial inquiries.

However, managers must keep in mind that continued modification of the attributes within any given recreation setting and a deviation from the recommended guidelines may result in physical, social,

and managerial inconsistencies over time. Scenarios that may result from a deviation from established guidelines include the below factors:

- a decrease in user satisfaction;
- a change in available opportunities;
- an increase in user conflict;
- an eventual decrease in visitation; and
- environmental impacts, such as a decrease in water quality, loss of wildlife habitat, and degradation of cultural resources.

Managers need to remember that continued modification of the attributes within any given recreation setting and deviation from the recommended guidelines may result in physical, social, and managerial inconsistencies over time.

Due to the potential social and environmental impacts, the monitoring of program activities addressed in chapter 4 may become more important. Urban areas may require more comprehensive monitoring efforts than primitive areas.

Refer to **Chapter 3—Inventory** for additional information on identifying and mitigating inconsistencies identified between the physical, social, or managerial settings.

This section provides guidelines for the physical, social, and managerial attributes across each WALROS class. It will continue to evolve and improve over time with management experience and greater input from professionals.



Areas within a setting that attract multiple users may have negative environmental impacts, such as poor water quality, and require management that is more intensive.

For each specific attribute in this section, such as the degree of human activity, recreation use, and the presence of structures, a qualitative descriptor conveys the appropriateness, recommended degree, or extent to which the attribute may be present for each WALROS class. Table 2.1, below, is repeated from chapter 1 (table 1.8) for clarification of the descriptors used in the following guidelines.

Table 2.1 (repeated from chapter 1).—The scale of degree of major development used in WALROS

Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
80-100%	50-80%	20-50%	10-20%	3-10%	0-3%
Dominant	Very prevalent	Prevalent	Occasional	Minor	Very minor
Extensive	Widespread	Common	Infrequent	Little	Very little
A great deal	Very obvious	Apparent	Periodic	Seldom	Rare
Extremely	Very	Moderately	Somewhat	Slightly	Not at all

Physical Setting Attribute Guidelines

Changes to the physical setting are often irreversible.

The physical setting may encompass unique scenic and visual features that offer a primitive type of recreation opportunity or highly developed features that are associated with a modified landscape albeit visitors enjoy an urban style recreation experience. Among other things, the degree of human development, natural resource modification, and sensory perception to the sights, sounds, and smells of a typical community will determine the type of recreation experience a visitor can expect within a defined area. The size of the area, its topography and vegetation, and the access to it are also relevant in determining the type of recreation experience available to the public. A large area with abundant vegetation and topographical relief but very little road access will offer the public a more primitive type of recreation experience.

It should be noted that the physical setting within WALROS cannot be changed easily, although changes will likely become irreversible if they are undertaken.

Table 2.2 provides several physical setting attribute guidelines that can assist managers in determining an area's WALROS classification.



Facilities and scenic views can define a recreation experience.



Service facilities within a setting, such as restaurants, may enhance the recreation experience.

Table 2.2.—Physical setting attribute guidelines

Physical attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Degree of development: Extent that human built structures dominate the viewshed (e.g., dams, major bridges, docks, commercial businesses, residential areas, marinas, roads, resorts, highways, communities, airports, utilities, and other business or industrial complexes).	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Distance from major development: Mileage from dams, major bridges, marina resorts, communities, commercial, or residential areas.	Less than 0.5 mile	0.5–2 miles	2–5 miles	5–8 miles	8–10 miles	More than 10 miles
Degree of natural resource modification: Extent of visitor awareness that natural resources have been altered by human activity, technology, or development.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Sense of closeness to a community: Degree that visitors sense a close proximity to the sights, sounds, and smells typical of a community.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Degree that natural ambiance dominates the area: Extent to which a sense of tranquility and opportunity to see, hear, and smell nature exist.	Very minor, very little, or rare 0–3%	Minor, very little, or seldom 3–10%	Occasional, infrequent, or periodic 10–20%	Prevalent, common, or apparent 20–50%	Very prevalent or widespread 50–80%	Extensive, dominant, or a great deal 80–100%
Water quality standards	Meets or exceeds State standards	Meets or exceeds State standards	Meets or exceeds State standards	Meets or exceeds State standards	Exceeds State standards	Exceeds State standards
Air quality standards	Meets or exceeds State standards	Meets or exceeds State standards	Meets or exceeds State standards	Meets or exceeds State standards	Exceeds State standards	Exceeds State standards

Table 2.2 (cont'd).—Physical setting attribute guidelines

Physical attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Visual quality objective of nature	Maximum modification	Maximum modification	Modification	Partial retention	Retention	Preservation
Communication towers	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Grain silos and smoke stacks	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Water break wall, riprap, channelization	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Other human built structures and activities	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Commercial air traffic (e.g., noise, contrails, quantity)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Restricted areas (i.e., administrative sites, cultural sites, environmentally sensitive areas)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A

Social Setting Attribute Guidelines



Developed campgrounds provide an appropriate setting for those individuals who wish to socialize with other recreation users.

The social setting can range from a defined recreation area where many visitors interact with one another while participating in their recreational pursuits to a defined area where other visitors are seldom encountered. Among other things, the degree of visitor preference, congestion, solitude and remoteness, and nonrecreational use will determine which type of recreation experience a visitor can expect.

Table 2.3 provides several social setting attribute guidelines that can assist land managers in the supervision of visitors who prefer to recreate in a defined area with other recreationists.

Table 2.3.—Social setting attribute guidelines

Social attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Degree of visitor presence: Degree that the sights, sounds, and smells of other visitors, their equipment, their impacts, or their litter is present.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Degree of visitor concentration: Degree that visitors congregate in the area (e.g., service area, launches, entrances, swim areas, trailheads, picnic, or camp areas).	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Degree of recreation diversity: Degree that there is a mixture of recreation activities being participated in or equipment being used.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Distance to visitor services, security, and safety: Conveniences, comforts, and security, approximately measured in miles.	Less than 0.5 mile	0.5–2 miles	2–5 miles	5–8 miles	8–10 miles	More than 10 miles
Degree of solitude and remoteness: Degree that visitors view themselves as being alone and far away from civilization in a wild and remote place.	Very minor, very little, or rare 0–3%	Minor, little, or seldom 3–10%	Occasional, infrequent, or periodic 10–20%	Prevalent, common, or apparent 20–50%	Very prevalent or widespread 50–80%	Extensive, dominant, or a great deal 80–100%
Degree of nonrecreational activity: Degree that the sights, sounds, and smells of nonrecreational users are present (i.e., shipping, trains, factories, roads, houses, airplanes, mining, and farming).	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Reasonable standard for the percent of “extremely” or “very” satisfied visitors.	80%	80%	80%	80%	80%	80%

Table 2.3 (cont'd).—Social setting attribute guidelines

Social attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Reasonable standard for the percent of “extremely” dissatisfied visitors.	10%	10%	10%	10%	10%	10%
Reasonable standard for the percent of visitors who would like to visit the area again.	70%	70%	70%	70%	70%	70%
Reasonable standard for the percent of visitors who would tell others that this site is a good place to visit.	80%	80%	80%	80%	80%	80%
Reasonable number of boat heard per day.	N/A	N/A	N/A	N/A	Less than 10 boats per day	Less than 3 boats per day
Reasonable number of boats seen per day.	N/A	N/A	N/A	N/A	Less than 10 boats per day	Less than 3 boats per day
Reasonable standard for percent of boating accidents per number of boat launches.	0.01%	0.01%	0.01%	0.005%	0.005%	0.001%
Reasonable standard for the percent of emergency medical responses per number of recreation groups.	0.01%	0.01%	0.01%	0.005%	0.005%	0.001%
Reasonable standard for the percent of verbal or physical conflicts per number of boat launches.	0.01%	0.01%	0.01%	0.005%	0.005%	0.001%
Reasonable standard for the percent of noise disturbances per number of recreation groups.	10%	10%	10%	5%	1%	1%
Reasonable standard for percent of visitors perceiving “extreme” or “very” high crowding.	25%	20%	20%	10%	5%	5%

Table 2.3 (cont'd).—Social setting attribute guidelines

Social attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Reasonable standard for percent of repeat visitors indicating the resource is “extremely” or “very” adversely affected.	20%	20%	20%	20%	10%	10%
Reasonable standard for the percent of repeat visitors indicating the experience has been “extremely” or “very” adversely affected since a previous visit.	20%	20%	20%	20%	20%	20%
Reasonable standard for the percent of visitors complaining about a recurring issue.	10%	10%	10%	5%	5%	5%

Managerial Setting Attribute Guidelines

Among other things, the managerial setting may encompass an established degree of management presence, public access facilities such as roads, developed recreation facilities, and visitor services. Managers can easily change the recreation spectrum within a defined area by implementing the many managerial attributes that are available to them. The conscientious development of an area may result in inconsistencies with the physical and social setting. Careful monitoring of the actions implemented by managers, evaluating the collected monitoring data, and appropriately adapting to each situation will likely mitigate the inconsistencies.

Managers must also understand that it is easy to go from a more primitive type of recreation spectrum to an urban spectrum. Once substantial development has occurred within a defined area and the spectrum has shifted toward an urban experience, it is unlikely that those developments will be eliminated. Therefore, it is important that managers put forth effort to protect and/or conserve some areas that are on the primitive end of the spectrum for future use.

It is readily apparent that the diversity of recreation opportunities will decrease as one moves from an urban to a primitive classification.



Popular recreation sites often require intensive management.



Rules and regulations can be important factors in maintaining a recreation experience.

Likewise, it should be obvious to managers that the managerial attribute guidelines imposed at a site will be greater in an urban area than in the five other recreation classifications.

Table 2.4 provides several managerial setting attribute guidelines that can assist land managers in providing the appropriate facilities, opportunities, and administrative actions for each of the six recreation classifications.

Table 2.4.—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Degree of management structures: Degree of management facilities, buildings, interpretive signage, equipment, buoys, mileage markers, entry stations, towers, security lighting, administrative offices, and compounds are present.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor, little, or seldom 3–10%	Very minor, very little, or rare 0–3%
Distance to on-site developed recreation facilities and services: Mileage to developed campgrounds, restaurants, stores, marinas, resorts, pump stations, amphitheaters, picnic sites, play areas, telephones, showers, visitor centers, etc.	Less than 0.5 mile	0.5–2 miles	2–5 miles	5–8 miles	8–10 miles	More than 10 miles
Distance from developed public access facilities: Mileage to developed and well-maintained access points such as parking lots, trailheads, entrances, boat launches, access roads, and other staging or launching areas.	Less than 0.5 mile	0.5–2 miles	2–5 miles	5–8 miles	8–10 miles	Varies

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Frequency of noticing management personnel: The likelihood of sighting management personnel such as rangers, local sheriff or police, entrance station staff, hosts, maintenance workers, lifeguards, marina operators, concessionaires, guides, and other persons of authority.	Extensive, dominant, or a great deal 80–100%	Very prevalent or widespread 50–80%	Prevalent, common, or apparent 20–50%	Occasional, infrequent, or periodic 10–20%	Minor or seldom 3–10%	Very minor, or rare 0–3%
Reasonable maximum decibel levels for boat motors	65-75 dB	65-75 dB	55-65 dB	55-65 dB	45-55 dB	35-45 dB
Reasonable maximum boat speed	35-45 mi/hr	35-45 mi/hr	35-45 mi/hr	15-30 mi/hr	5-15 mi/hr	0-5 mi/hr (no wake)
Reasonable watercraft launch time	Less than 30 minutes	Less than 30 minutes	Less than 30 minutes	Less than 15 minutes	No wait	No wait
Reasonable watercraft retrieval time	Less than 30 minutes	Less than 30 minutes	Less than 30 minutes	Less than 15 minutes	No wait	No wait
Quiet times	10 pm to 6 am	10 pm to 6 am	10 pm to 6 am	10 pm to 6 am	24/7	24/7
Reasonable number of flat water acres per boat	1 to 10 acres	10 to 20 acres	20 to 50 acres	50 to 110 acres (¼ sq mi)	110 to 480 acres (¾ sq mi)	480 to 3200 acres (5 sq mi)
Reasonable separation between river boating groups	⅛ mile (220 yards)	¼ mile (440 yards)	¼ mile (440 yards)	½ mile or a 20-minute separation	2 miles or a 1-hour separation	4 miles or a 2-hour separation
Vehicle parking at beach and picnic areas	25 plus per acre	20 to 25 per acre	15 to 20 per acre	10 to 15 per acre	N/A	N/A
Houseboat use	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be very prevalent	Appropriate and may be occasional	Appropriate and may be occasional	N/A
Tour boats	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Sea planes	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be very prevalent	Appropriate and may be occasional	N/A	N/A
Space between houseboats on mooring balls	1.25 times the length of the boat	1.25 times the length of the boat	1.25 times the length of the boat	1.25 times the length of the boat	N/A	N/A
Minimum number of acres per group campsite in developed campground	5	5	5	10	N/A	N/A
Campsites per acre in developed campground	5 to 10 per acre	5 to 10 per acre	3 to 5 per acre	3 per acre	N/A	N/A
Minimum distance between dispersed shoreline campsites outside of developed campgrounds	N/A	N/A	1/8 mile (220 yards)	1/4 mile (440 yards)	1/2 mile or out of sight and sound of other parties	1 mile or out of sight and sound of other parties
Minimum distance between floating or boat in campsites outside developed campgrounds	N/A	N/A	1/8 mile (220 yards)	1/4 mile (440 yards)	1/2 mile or out of sight and sound of others	1 mile or out of sight and sound of others
Picnic and day use areas	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Designated beach areas	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Paved boat ramps	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Unpaved boat ramps	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Overnight security lights	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Marine sanitation devices	Appropriate and may be required	Appropriate and may be required	Appropriate and may be required	Appropriate and may be required	Appropriate and may be required	Appropriate and may be required

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Modern restrooms (e.g., flush toilets, electricity, and showers)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Rustic septic or vault toilets	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Floating camping platforms	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Designated campsites	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be very few
Interpretive signs	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Directional signs	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Regulatory signs	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Administrative office signs	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Informational signs	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Visitor centers	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Paved trails	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Unpaved or unimproved trails	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be very few

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Water-based trails (e.g., boat, raft, canoe, and scuba)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be seldom
Paved parking	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Unpaved parking	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Modern, full service RV and tent campgrounds	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Rustic or primitive campgrounds (i.e., no utilities or amenities)	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Large group picnic and camping facilities	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Full service resorts	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Full service marinas	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Fuel services and storage	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Golf courses	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Sports fields (e.g., baseball, soccer)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Community boat docks	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Youth camps and dude ranches	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Interpretive programs (e.g., trail or boat tours)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Fishing tournaments	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	N/A
Motorized boat racing events	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	N/A	N/A	N/A
Water skiing events	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be seldom	N/A	N/A
Life guards	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Reservation systems (e.g., launch times, picnic areas, camping, tours, back country hiking, river rafting)	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
User fee systems (e.g., camping, tours, entrance fees, launches, back country hiking, river rafting)	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Administrative buildings (e.g., employee housing, office buildings, equipment storage)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Land-based food service concessions	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Long-term use permitted	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Outdoor shooting or archery ranges	N/A	N/A	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Amphitheaters	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Wildlife viewing stations	Appropriate	Appropriate	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
General utilities (e.g., electricity, sewer, water)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Access for persons with disabilities	Appropriate and established by law	Appropriate and established by law	Appropriate and established by law	Appropriate and established by law	Appropriate where reasonable and established by law	Appropriate where reasonable and established by law
Fireplaces/grills	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Fish cleaning stations	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	N/A	N/A
Fish habitat improvements	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent
Vegetative management	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent
Wildlife management	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent
Wildfire management	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent
Resource monitoring	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent
Visitor monitoring	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate but not intrusive	Appropriate but not apparent

Table 2.4 (cont'd).—Managerial setting attribute guidelines

Managerial attributes	Urban	Suburban	Rural developed	Rural natural	Semiprimitive	Primitive
Minimum standard for monitoring visitor use (e.g., type, amount, location, duration)	Daily in primary season, weekly in secondary	Daily in primary season, weekly in secondary	Daily in primary season, weekly in secondary	Weekly in primary season, monthly in secondary	Weekly in primary season, monthly in secondary	Monthly in primary season, monthly in secondary
Minimum standard for monitoring visitor satisfaction, perceptions, or preferences	Every 3 years	Every 3 years	Every 3 years	Every 3 years	Every 3 years	Every 3 years
Minimum standard for monitoring regional recreation demand and supply trends	Every 3 years	Every 3 years	Every 6 years	Every 6 years	Every 6 years	Every 6 years
Limit on the number of visitors to protect the resources	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Limit on the number of visitors to protect special or important values	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Limit on the number of visitors to protect quality of experience	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Limit on the number of visitors to protect health and human safety	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Management zoning (e.g., wakeless areas, no camping, security areas, wildlife habitat)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be very little
Speed limits for boats	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Law enforcement presence	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Volunteers	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Camp hosts	Appropriate	Appropriate	Appropriate	Appropriate	N/A	N/A
Cooperating associations	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Man made reservoir operations (e.g., 34 drawdown for municipal, industrial, and agriculture purposes)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be very minor
In-stream flow changes (e.g., flushing flows for fish habitat improvements)	Appropriate and may be extensive	Appropriate and may be very prevalent	Appropriate and may be common	Appropriate and may be occasional	Appropriate and may be seldom	Appropriate and may be very minor

Visitor Capacity Guidelines

In 2002, the Federal Interagency Task Force on Visitor Capacity on Public Lands and Waters, delivered its final report to the Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior. The Task Force was a 2-year effort to improve visitor capacity decisionmaking affecting the lands and waters managed by the Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service, Forest Service, and National Park Service. The report contains important background information on the concept of visitor capacity, a set of principles and criteria for decisionmaking, seven tools to help make better and more defensible capacity decisions, and a directory of 100 locations in the United States that have numerical visitor capacities. Pages 10 to 22 of the report are particularly relevant to WALROS and to this handbook. Refer to appendix G for pertinent excerpts from the interagency task force report. The full report can be obtained by contacting the National Recreation and Park Association in Ashburn, Virginia.

The citation for the final report is:

Haas, G. E. 2002. *Visitor Capacity on Public Lands and Waters: Making Better Decisions*. A Report of the Federal Interagency Task Force on Public Lands. Submitted to the Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior, Washington, D.C. May 1, 2002. Published by the National Recreation and Park Association, Ashburn, Virginia. (ISBN 0-929581-66-0)

Reasonable Flat-Water Recreation Boating Capacity Coefficients

To help managers make better and more defensible boating capacity decisions, a set of boating capacity coefficients has been developed based on collaborative expert opinion, professional experience, published articles and plans, sound professional judgment, the rule of reasonableness, and the sliding scale rule of analysis discussed in chapter 1 of this handbook. The boating coefficients in table 2.5 would be reasonable for a Level 1 analysis. (See table 1.7.)

Table 2.5.—A range of reasonable boating capacity coefficients

WALROS class	Range of boating coefficients (acres per boat)	
	Low end	High end
Urban	1	10
Suburban	10	20
Rural developed	20	50
Rural natural	50	110 (¼ sq mi)
Semiprimitive	110	480 (¾ sq mi)
Primitive	480	3,200 (5 sq mi)

A boating capacity coefficient is defined as the number of water surface acres adequate for each recreational boat in a particular WALROS class. These coefficients can be multiplied by the suitable or available water surface acres for each WALROS class on a body of water to help justify and defend a boating capacity decision. Additional scientific study and monitoring can help refine these boating capacity coefficients.

A boating capacity is defined as the number of recreational boats at one time (BAOT) that will be accommodated in an area, or the BAOTs for an area. BAOT refers to the number of boats that are untethered from the shoreline or any docking apparatus whose occupants are pursuing recreational opportunities. The following coefficients do not account for the inactive recreational boats moored at a dock, marina, or along the shoreline, nor do they account for nonrecreational boating activity (e.g., commercial fishing, shipping, and law enforcement).

Because of the many factors that influence a boating capacity decision, a range of reasonable coefficients is provided for each WALROS class in table 2.5. A decision tool is also provided in table 2.6 to help ensure that important factors are duly considered by managers when deciding what part of the range may be most appropriate for the area in question.



Boating capacity decisions are important.

Table 2.6.—A boating capacity range decision tool

Instructions: The purposes of this decision tool are to help ensure that managers consider important factors affecting boating capacity and to help document the reasoned analysis used in making a boating capacity decision. For each WALROS zone, consider the following factors that may affect boating capacity. *Circle the descriptor that best matches the situation.* The preponderance of the answers will indicate which part of the capacity range may be more reasonable.

Factor	Higher Capacity	Medium Capacity	Lower Capacity
Typical size of boats	<15 feet	16 to 25 feet	>25 feet
Typical speed of boats	<10 mi/hr	10 to 25 mi/hr	>25 mi/hr
Diversity of boating: <ul style="list-style-type: none"> • Different types of boats • Different size of boats • Different speed of boats 	low low low	moderate moderate moderate	high high high
Boater visitation pattern	simple/ predictable	moderate	complex/ unpredictable
Level of boater stewardship/ civility/respect for resource and others visitors	high	moderate	low
Shoreline configuration	simple/ circular	moderate	complex/ meandering
Boater destination or pass-through area	pass-through corridor/in-transit	mixed	destination area/overnight area
Extent of sensitive resources/ potential for impact	low	medium	high
Compatibility with adjacent recreation/nonrecreation land uses	high	moderate	low
Islands/shallows/hazards	infrequent	occasional	frequent
Historic public safety record/ accidents/complaints/conflicts	infrequent	occasional	frequent
Level of boater management/rules/information/education/ compliance	high	moderate	low
Suggested capacity range	lower end (more boats)	mid-range	higher end (fewer boats)