

Below is a summary of the purpose of each question or module of questions contained within the question bank.

Core Module

Section 1. Participation

Question 1: What is your ZIP code?

This question will be used to determine the spatial relationship of the respondent to the <site name>. The researchers will also use the spatial data to assess the distance traveled by the respondent to the <site name>.

Question 2: How many years have you lived in the [NERR/NMS site] area?

This question will be used to assign longevity to the relationship of the respondent with the general geographic area.

Question 3: And do you consider yourself a seasonal or permanent resident?

This question will be used to determine whether the respondent has a year round or seasonal relationship with the geographical area.

Question 4: Have you ever visited the <site name> or areas nearby?

Question 5: If you answered yes or unsure to question 4, about how often do you visit?

Questions 4 and 5 will help to define the relationship that the respondent has with the site.

Section 2. Conditions of <site name>

Questions [6a-6h] are designed to obtain information on the stakeholder's perceptions of the condition of the NERR/NMS amenities. This information provides a long term view of the health of the amenities and establishes if there is a need for educating users about particular conditions within the site. Respondents will be asked rank their perception of the condition of each amenity on five point Likert-type scales ranging from "Large Increase" to "Large Decrease." "Neutral," "Unsure" or "Don't Know" can be selected as well (Cole, 2012; Loerzel et al., submitted).

Question 6a: shellfish habitat

Question 6b: fish to catch

Question 6c: Blue crab habitat

Question 6d: sea grass habitat

Question 6e: shoreline erosion

Question 6f: birds and wildlife

Question 6g: public access to land and water resources

Question 6h: frequency of adverse conditions (i.e. red tides, algal blooms, jellyfish, etc.)

Section 3. Place Attachment

Questions [7a-7g] are designed to assess the respondent's attachment to the <site name>. Respondents will be asked rank their perceptions of each statement on a five point Likert-type scale ranging from "Strongly Agree" to "Strongly Disagree" with options of "Unsure" or "Don't Know" and "Neutral" (Kil, 2008).

- Question 7a:* The <site name> is the best place to satisfy my outdoor recreation needs.
- Question 7b:* The <site name> represents a way of life in my community.
- Question 7c:* The <site name> is important for providing habitat for fish and other wildlife.
- Question 7d:* I am very attached to the <site name>.
- Question 7e:* I get more satisfaction out of visiting the <site name> than any other place.
- Question 7f:* My community's economy depends on the natural resources of the <site name>.
- Question 7g:* The <site name> contributes to the character of my community.

Section 4. Values

Questions [8a-8m] are designed to obtain information on the stakeholder's valuation of ecosystem services available in the NERR/NMS sites. Because each person values NERR/NMS resources differently, respondents will be asked to read each social value type in the following list and assign an amount to those ecosystem services they value. The total amount allocated shall not exceed 100 pennies. The following page represents an example of how this module will be presented to the respondent (Brown, 2012; Clement and Cheng, 2011).

8. Imagine that you could "spend" a bag of 100 pennies to ensure that the <site name> is able to preserve or develop the characteristics that you most value. You may allocate or spend the 100 pennies in any way you like, but your total spending may not exceed 100 pennies. You might "spend" all 100 on one value (and 0 on all others), or you might "spend" 50 on one value, 25 on another value, and 25 on yet another value. Remember, the total pennies you spend should equal 100.

(The use of money for this exercise is **not made to actual money**, your own or an agency's budget, but is just a convenient way to compare your choices).

Begin by looking over all of the value types, and then decide what value each has for you.

- 8a. \$ ____ **Aesthetic (A)** — I value the <site name> because I enjoy the beauty, sights, sounds, and smells.
- 8b. \$ ____ **Biodiversity (B)** — I value the <site name> because it provides a variety of fish, wildlife, plant life, etc.
- 8c. \$ ____ **Economic (E)** — I value the <site name> because it provides timber, fisheries, minerals, and/or tourism opportunities such as outfitting and guiding.
- 8d. \$ ____ **Legacy (Lg)** — I value the <site name> because it allows future generations to know and experience the area for its contribution to wisdom, knowledge, traditions and way of life.
- 8e. \$ ____ **In and of Itself (I)** — I value the <site name> in and of itself, whether people are present or not.
- 8f. \$ ____ **Learning (L)** — I value the <site name> because we can learn about the environment through scientific research and education.
- 8g. \$ ____ **Human Needs (H)** — I value the <site name> because it helps produce, preserve, clean, and renew air, soil, water and food.
- 8h. \$ ____ **Recreation (R)** — I value the <site name> because it provides a place for my favorite outdoor recreation activities.
- 8i. \$ ____ **Spiritual (S)** — I value the <site name> because there are sacred, religious, or spiritually special places for me or because I feel reverence and respect for nature

there.

8j. \$ ____ **Therapeutic (T)** — I value the <site name> because it makes me feel better, physically and/or mentally. It is calming.

8k. \$ ____ **Wilderness (W)** I value the <site name> because it is undeveloped with minimal human impact,

8l. \$ ____ **Inspiration (Ip)** I value the <site name> because it motivates me to action or thought.

8m. \$ ____ **Socializing (So)** I value the <site name> because it allows me to comfortably interact with others.

Remember, the total of all your values should add up to 100.

Section 5. Mapping Values

This question allows respondents to identify locations on a map that they consider important then select the values from Section 4. Q. 8 (above) that they hold for the location. Analysis of this data will provide information on the values of places in relationship to environmental and access features of the <site name> (Brown, 2012; Clement and Cheng, 2011).

1. This map includes the area of the <site name>. We have also included boat ramps and other general reference points to help you orient to places you know. Please make a mark on the map at each place that you most value. You may place up to 20 markers. Next to each mark please put the abbreviation of the value (**in red**) (for paper based maps), or use the drop-down menu to select the value type (for the on-line version) that represents the most important reason you value that place. You may select different values for different locations.

Section 6. Management Modules (see below)

Section 7. Demographics

In this section we ask basic demographic questions that will allow the researchers to explore whether particular social or economic groups subscribe to particular values or more heavily utilize particular areas of the <site name>. The data will allow the management staff to better understand the demographic groups that respond to surveys about the <site name> as well as to better understand the groups that utilize the <site name>. Questions 19 and 20 are formatted as required for OMB PRA clearance.

Question 12. Does your household income depend on products or services related to <site name> resources?

Question 13. If yes, please describe the source of the income:

Question 14. In what year were you born?

Question 15. Are you male or female?

Question 16. What is your highest level of education?

Question 17. What is your average yearly income?

Question 18. What is your occupation?

Question 19. What is your ethnicity?

Question 20. With which racial group(s) do you most identify?

6. Management Modules

Management Module 1

Place Attachment (MM#1) (Note: Same as Section 3, Additional prompts)

This Module contains 7 statements. The statements are designed to obtain information on and assess the respondent's attachment to the site. Respondents will be asked rank their perception of each statement on five point Likert-type scales ranging from "Strongly Agree" to "Strongly Disagree" with options of "Unsure or "Don't Know" and "Neutral" (Kil, 2008).

Question 1: Mine or my family's income or livelihood depends on the <site name>.

Question 2: The tourism dollars that the <site name> attracts are essential to my community's economy.

Question 3: I identify strongly with the <site name>:

Question 4: The <site name> means a lot to me.

Question 5: Many important memories of my family are tied to the <site name>.

Question 6: The <site name> is a special place for my family.

Question 7: No other place can compare to the <site name>.

Question 8: In any development plan, it is important to consider protecting the environment of the <site name>.

Question 9: I feel a sense of pride in my heritage when I am in the <site name>.

Question 10: My community's history is strongly tied to the <site name>.

Question 7k: It is important to preserve/conservate natural and unique ecosystems like the <site name>.

Management Module 2

Changes over Time (MM#2)

This Module contains four statements. Respondents will be asked to rank their level of agreement with the statement from "Strongly Agree" to "Strongly Disagree." They will also have options of "Neutral," "Unsure" and "Don't know." Information on stakeholder attitudes or perceptions about changes in the area is important for inclusion in management plans and <site name> communications. Statements 3 and 4 are used to gauge stakeholder opinion as to the management activities within the particular site being investigated.

Statement 1: I am interested in what happens in the <site name> in the next 10-15 years.

Statement 2: I have seen an improvement in the natural environment of the <site name> since I have been living/visiting the area.

Statement 3: Since I have been living/visiting the <site name> there are more opportunities to recreate and enjoy the area.

Statement 4: Development has reduced my access to an enjoyment of the <site name>

Management Module 3

Public Access (MM#3)

Questions [1-22] are designed to obtain information on the stakeholder's perceptions as to the accessibility of the NERR/NMS amenities. Respondents will be asked rank the accessibility of

each amenity on five point Likert-type scales ranging from “More than Adequate Access” to “Little or No Access.” Because there are a number of different amenities available in each NERR and NMS site, and because the amenities vary greatly from site to site, it is important that each site select the prompts necessary to inform the <site name> of user’s needs (Cole, 2012; Loerzel et al., submitted).

Question		Question	
1	Boat Ramps	12	Mooring buoys
2	Beaches	13	Whale watching sites
3	Boat Slips	14	Diving sites
4	Public Dry Storage Berths	15	Camping sites
5	Restaurants and restaurant dockage	16	Surfing sites
6	Scenic View Points	17	Kayaking sites
7	Waterway Nature Trails (Blueways)	18	Fishing sites
8	Nature trails adjacent to water	19	Clamming areas
9	Natural Swimming Areas	20	Board sailing sites
10	Boardwalks	21	Tide pooling
11	Dune walkovers	22	Spearfishing

Management Module 4

Conditions of <site name> (MM#4) (Note: Same as Section 2, Question 6, Additional prompts)

Questions [1-12] are designed to obtain information on the stakeholder’s perceptions of the condition of the NERR/NMS amenities. This information provides a long term view of the health of the amenities as well establishes if there is a need for educating users about what assessing particular conditions. Respondents will be asked rank their perception of each condition on five point Likert-type scales ranging from “Large Increase” to “Large Decrease.” “Neutral,” “Unsure” and “Don’t know” can be selected as well. Because there are a number of different issues in each NERR and NMS site and because the issues vary greatly from site to site providing choices for prompts is necessary (Cole, 2012; Loerzel et al., submitted).

Question number	Conditions
1	Debris and trash in the water
2	Congestion at water and beach access sites
3	Natural areas and associated wildlife

4	Restaurant and other shoreline recreational opportunities
5	Natural shoreline due to development
6	Public education programs
7	Parking spaces at water and beach access sites
8	Boats
9	Hunters
10	Waterway maintenance (canals, channels, passes)
11	Safe operation of vessels
12	Vessel discharges

Management Module 5

Management Goals (MM#5)

Questions [1-13] are designed to obtain information on the stakeholder's attitudes toward the management goals of the NERR/NMS site. Respondents will be asked rank their attitude toward each management goal on five point Likert-type scales ranging from "Strongly Agree" to "Strongly Disagree." Because there are a number of different goals within each NERR and NMS site, and because the issues vary greatly from site to site, many possible prompts are needed.

Question number	Management Goals of <site name>
1	Improve water quality
2	Manage the quantity and improve the quality of stormwater runoff
3	Restore shoreline and wetland habitats.
4	Eliminate further loss of shoreline and wetland habitats
5	Restore and sustain fish stocks and other living marine resources
6	Provide increased levels of public access to natural resources.
7	Increase the resilience of coastal communities in the face of natural and human-induced disasters (such as hurricanes and rising seas)
8	Incorporate local social and cultural heritage into management of the [NERR/NMS site] resources (such as public input and community advisory boards).
9	Increase understanding of human-use patterns that influence resource sustainability (such as commercial development and/or recreation).
10	Integrate understanding of human uses with knowledge of natural processes
11	Purchase additional non-wetland areas to add to public owned lands
12	Create "fishery reserve areas" in the [NERR/NMS site] where no fishing is allowed.
13	Establish areas in the [NERR/NMS site] where motorized crafts are limited to no-wake and non-motorized crafts are encouraged to use.

Management Module 6

Place Attachment > (MM#6) (Note: Same as Section 3, Question 7, Additional prompts)

Questions 1-11 are designed to obtain information and assess the respondent's attachment to the <site name>. Respondents will be asked rank their perception of each statement on five point Likert-type scales ranging from "Strongly Agree" to "Strongly Disagree" with options of "Unsure," "Don't Know" and "Neutral" (Kil, 2008).

Question number	Attachment Agreement
1	Mine or my family's income or livelihood depends on the <site name>.
2	The tourism dollars that the <site name> attracts are essential to my community's economy.
3	I identify strongly with the <site name>:
4	The <site name> means a lot to me.
5	Many important memories of my family are tied to the <site name>.
6	The <site name> is a special place for my family.
7	No other place can compare to the <site name>.
8	In any development plan, it is important to consider protecting the environment of the <site name>.
9	I feel a sense of pride in my heritage when I am in the <site name>.
10	My community's history is strongly tied to the <site name>.
11	It is important to preserve/conservate natural and unique ecosystems like the <site name>.

Management Module 7

Knowledge (MM#7)

Questions [1-6] will help resource managers assess the baseline self-reported knowledge of managed features of the <site name> users. Questions [3-6] will assist managers in determining the reach of their communication activities.

Question numbers	Managed features
1	Policy
2	Ecology
3	History/Culture
4	Recreational Opportunities
5	Engagement Opportunities
6	Educational Opportunities

BIBLIOGRAPHY

- Brown, G. G., 2012. Public participation GIS (PPGIS) for regional and environmental planning: reflections on a decade of empirical research. *Journal of the Urban and Regional Information Systems Association*, 24(2), pp. 7-18.
- Clement, J. M. & Cheng, A. S., 2011. Using analyses of public value orientations, attitudes and

- preferences to inform national forest planning in Colorado and Wyoming. *Applied Geography*, Volume 31, pp. 393-400.
- Cole, Z. D., 2012. *Mapping social values of ecosystem services in Sarasota Bay, Florida: e-Delphi application, typology development, and geospatial modeling*. Gainesville, Florida, USA: University of Florida.
- Kil, N., 2008. *Integration of sense of place into recreation planning and management in Ocala National Forest, Florida*. Gainesville, Florida, USA: University of Florida.
- Loerzel, J., Lovelace, S. & Dillard, M., submitted. Mapping perceptions of social values in the Ashepoo-Combahee-Edisto (ACE) Basin, South Carolina.