

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/conserve 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	My 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/conserve 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.