



He'eia NERR

NERRS Site Profiles Users' Needs Assessment

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PROJECT BACKGROUND

The National Estuarine Research Reserve System (NERRS) comprises 29 coastal sites tasked with the protection and study of estuarine systems. It was established through the Coastal Zone Management Act. The reserves represent a partnership program between National Oceanic and Atmospheric Administration (NOAA) and the coastal states.

Each Reserve has a Site Profile - a compilation of information gathered during Phase I (Environmental Characterization Phase), which provides an overview of the Reserve in terms of its resources, issues, management constraints, and research needs. The purpose of the Site Profile is to review the existing state of knowledge for each Reserve's research and monitoring activities and to identify research and monitoring needs that should be addressed in the future.

In this evaluation report, we present the results of a survey developed to gather thoughts, perspectives and needs of NERRS Site Profiles users. The evaluation was performed by the Lake Superior and He'eia Reserves in partnership with the Evaluation Unit of the Natural Resources Institute, University of Wisconsin-Madison Division of Extension.

The report covers the evaluation aim, the process of survey development, key findings, cross tabulations of some key variables, recommendations and conclusions. There is an appendix at the end of the report which contain summarized frequencies of responses to survey questions.



Aim of project

To gather information for the development of an updated, dynamic online Site Profile template that could be used as a resource for existing and future NERRS sites interested in developing profiles that are interactive, spatially organized, and easily navigable by end users.



Survey development and administration

The survey was developed by evaluation specialists with input and feedback from the NERRS team. The NERRS team piloted the draft survey. Based on their feedback, the survey was finalized on an online survey platform called Qualtrics. The final survey consisted of 25 questions grouped under the following themes:

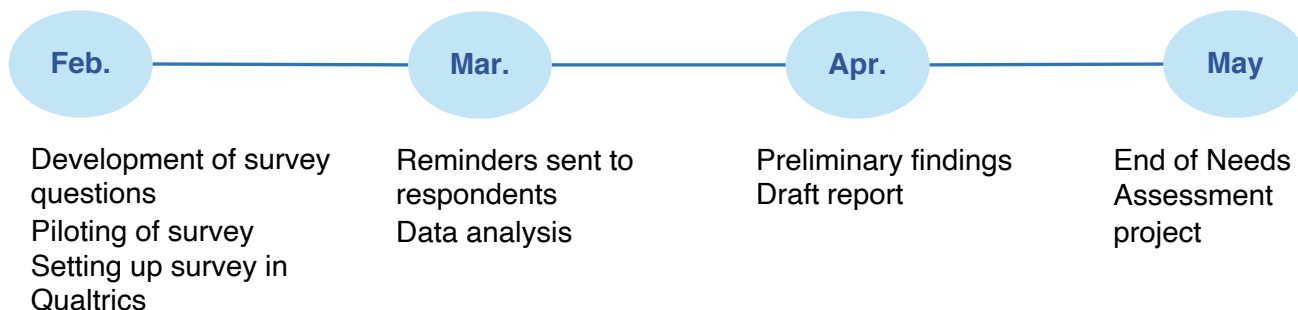
- ☞ Familiarity with and use of NERRS Site Profiles
- ☞ Satisfaction with use of NERRS Site Profiles
- ☞ Preferred additions to NERRS Site Profiles
- ☞ Users of NERRS Site Profiles
- ☞ Components of interest to users of Site Profiles
- ☞ Demography of respondents

The Evaluation team administered the survey via email to 244 participants. The link to the survey remained active between February 18th – March 18th.

Data Analysis

We closed the survey on March 18th and excluded surveys which were less than 50% completed. Data from **70 responses** from across **22 states/territories** in the US were synthesized and analyzed statistically to the extent practicable. This included descriptive frequencies per question and cross tabulations designed to meet the aims of the evaluation.

Timeline of Evaluation



KEY FINDINGS



Familiarity and use of NERRS Site Profiles

- **Majority (80%)** of respondents were at least moderately familiar with Site Profiles.
- **Nearly half (47%)** used the NERRS Site Profiles. About a third (**37%**) used it every couple of months. A few (**7%**) used it monthly, and some (**15%**) had never used it.
- Respondents who have never used the NERRS Site Profiles reported that it **was not relevant to their work/research**. A few (**3 respondents**) had never heard about them.
- About a **fifth** of respondents used the *Ecological, Biological and Environmental settings a great deal*.
- *Description of Reserve protection efforts is not used much*.
- **Most (75%)** respondents prefer to access the NERRS Reserve Site Profiles **online as a PDF**.

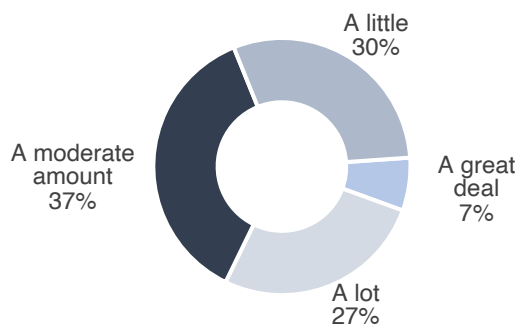
- Respondents were interested in **data** such as:
 - Spatial/geospatial data relevant to the reserve
 - Local and regional governance frameworks
 - Socioeconomic data
 - Hydrologic data,
 - Oceanographic data and
 - Biological data



✓ Satisfaction with use of NERRS Site Profiles

- **A little over half (54%)** of respondents were at least *somewhat* satisfied with the use of the NERRS Site Profiles. Some were *neither satisfied nor dissatisfied (32%)* and few were *somewhat dissatisfied (15%)*.
- **More than 40%** were at least *somewhat satisfied* with *Technical language, Ease of use, and Accessibility* of the characteristics of NERRS Site Profiles. **More than half** were *neither satisfied nor dissatisfied, somewhat dissatisfied or extremely dissatisfied* with them.
- **Very few** reported **extreme satisfaction** with overall experiences using NERRS Site Profiles.
- **Most (71%)** respondents reported that their Reserve's NERRS Site Profile needs were at least *moderately met*.

Extent Reserve's NERRS Site Profile meets Reserve's needs (n = 60)



Users of NERRS Site Profiles

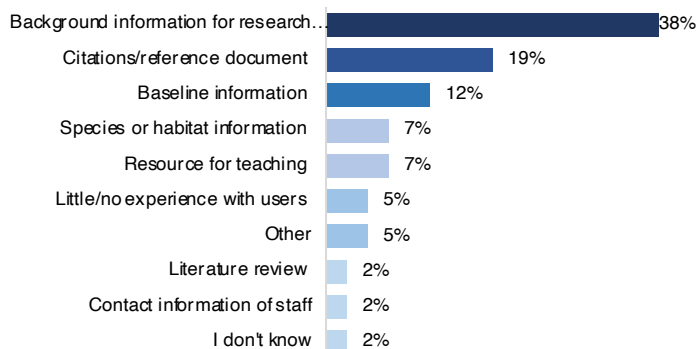
- **Top 3 users** of NERRS Site Profiles:
 - Researchers - **(78%)**
 - Undergraduate and graduate students - **(60%)**
 - Resource managers - **(32%)**
- Very few Municipalities **(5%)** and Tribal Partners **(2%)** use them.
- **Sectors/groups** which use the NERRS Site Profiles include:
 - Research and monitoring - **(80%)**
 - Stewardship - **(68%)**
 - Managers and Administrators - **(55%)**

+ Preferred additions to NERRS Site Profiles

- Respondents would like to see:
 - Interactive online maps
 - Cultural and Community information
 - Illustrations and photos
 - Ecological information
 - Videos
 - Historic and recent photos,
 - Accessible digital library of published articles about the Reserve
- **Top 3 changes** respondents would like to make to their Reserve's NERRS Site Profile include:
 - Updated and relevant information – **62%**
 - Digital, Searchable, Accessible – **20%**
 - Cultural and historical context – **5%**

- The general public **does not use or access** the NERRS Site Profiles very much.
- Majority **(38%)** of users access information on the Site Profiles for use in research proposals, publications and projects.

Use of information gathered from NERRS Site Profiles (n = 42)



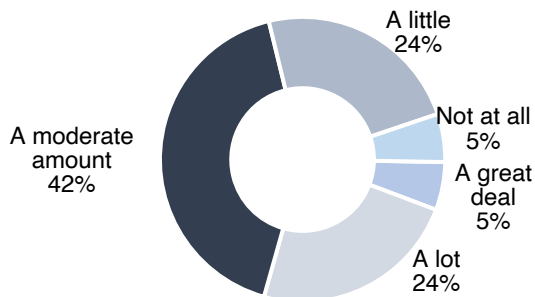


Components of interest to users of Site Profiles

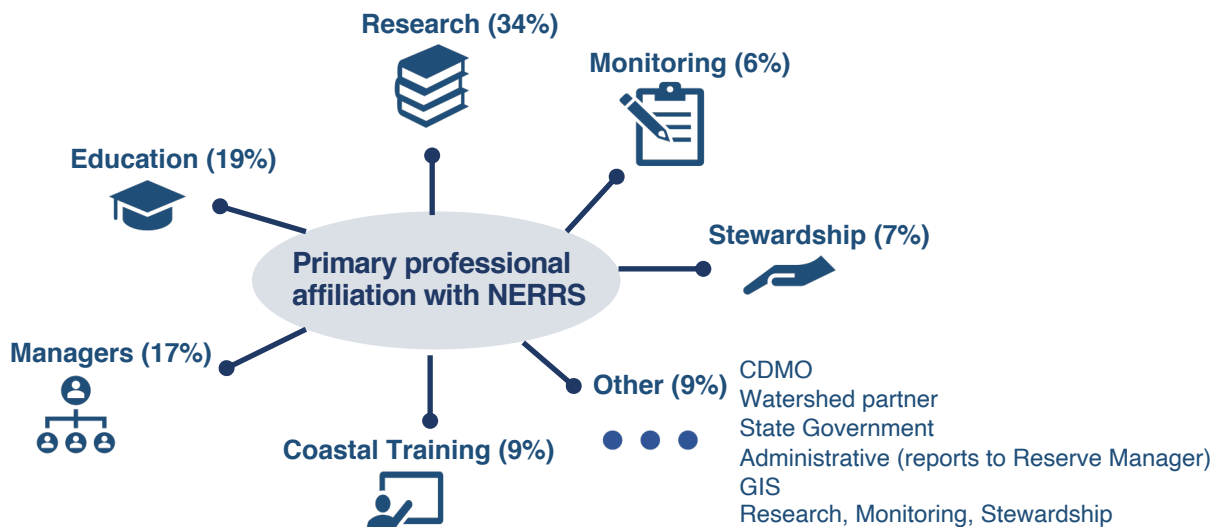
- **Top 3 components** of NERRS Site Profiles which users were interested in:
 - Biological setting (habitats, plankton, plants, invertebrates, birds, reptiles, mammals)
 - Ecological setting (community structure and processes, biological productivity etc)
 - Environmental setting (climate and weather, geomorphology, water quality etc).

- Majority of respondents (**71%**), reported that their Reserve's NERRS Site Profile met their needs at least *a moderate amount*.

Extent Reserve's NERRS Site Profile meets needs of users (n = 55)



Demography of respondents



Responses were received from **22 states/territories**. States with more than 10% representation were **Florida (15%)** and **South Carolina(12%)**. All the other states/territories had less than 10% representation.

- Majority (**62%**) of respondents identified as **females**.
- Most (**86%**) were white.

- About (**82%**) respondents were between **25 – 54 years old**.
- More than half (**60%**) have worked in or with the Reserve system for between **1 – 10 years**.
- Majority (**78%**) of respondents have at least a **Master's degree**.



CROSS TABULATIONS

In this section, we present results of crosstabulations done to investigate the effect of respondents' **primary affiliation with NERRS** on certain variables. The **seven** affiliation types were - **Research** (n = 24), **Education** (n = 13), **Manager** (n = 12), **Coastal Training** (n = 6), **Stewardship** (n = 5), **Monitoring** (n = 4) and **Other** (n = 6).

Considering the small sample sizes, results are reported using majority of responses. No further analysis was done to determine significance of the results.

Frequency of use of NERRS Site Profiles



- **Education, Manager, Research, and Stewardship** - *Every couple of months*
- **Coastal Training, Education, Manager, and Research** - *Once a year or less*
- The NERRS Site Profiles are used least frequently by **Coastal Training** and **Education** professionals

Extent of use of Site Profile components



- **Coastal Training** – *A little* (Biological setting and Ecological setting)
- **Education** – *None at all* (Description of NERRS and the Reserve, Historical and Cultural resources and context, Ecological setting and Research and Monitoring activities.
- **Research** – *A moderate amount* (Description of NERRS and the Reserve, Historical and Cultural resources and context)
- **Other** – *A little* (Description of NERRS and the Reserve)

Preferred method to access NERRS Site Profiles



- **25 – 34-year-old group** - Equal preference for all three methods
- **35 – 64-year-old groups** – Online as a pdf
- **65 or older group** - Equal preference for all three methods.

Cross tabulations

Groups not using Reserve's NERRS Site Profiles



- **Coastal Training** - Local leaders and professionals, decision makers, practitioners, resource managers, and visitors.
- **Education** - State Partners/agencies, Friends Group, Resource Managers, Teachers, Tribal communities, Research institutions, Municipalities. Education.
- **Managers** - Local planning districts, non-profit conservation groups, partners
- **Research** - land managers, educators, community members, tribal representatives, public audiences (external researchers, non-technical outreach, etc), general public
- **Other** - Surrounding community and general public.

Extent of satisfaction with characteristics of NERRS Site Profiles



- **Education** – *Extremely satisfied* with Accessibility, Ease of use, and Technical language.
- **Coastal Training** – *Somewhat dissatisfied* with Accessibility and Technical language. *Neither satisfied nor dissatisfied* with Ease of use.
- **Managers** - *Neither satisfied nor dissatisfied* with Accessibility, Ease of use, and Technical language.
- **Monitoring** - *Neither satisfied nor dissatisfied* with Accessibility and Technical language.
- **Research** - *Somewhat satisfied* with Ease of use and Accessibility. *Neither satisfied nor dissatisfied* with Technical language.
- **Stewardship** – *Neither satisfied nor dissatisfied* with Technical language.
- **Other** - *Somewhat satisfied* with Accessibility and Ease of use.

Extent of satisfaction with overall experience using NERRS Site Profiles



- **Managers and Research** - *Somewhat satisfied*
- **Education** - *Neither satisfied nor dissatisfied* -
- **Coastal Training** - *Somewhat satisfied* -



RECOMMENDATIONS

- The NERRS Site Profiles are moderately known. Awareness could be increased by providing information via online messaging, local newsletters, local news papers and wall posters in institutions affiliated with Reserves.
- Information on the Site Profiles should be relevant and regularly updated to increase interest in their use.
- Some characteristics of NERRS Site Profiles such as technical language, ease of use and accessibility should be improved to make them more appealing to both Reserve staff and the general public. This will increase satisfaction and frequency of use among all users.



EVALUATIVE CONCLUSIONS

The evaluation was successful in that the results reflected the thoughts, perspectives and needs of NERRS Site Profiles users.

The top three users of NERRS Site Profiles are Researchers, Students (undergraduate and graduate) and Resource Managers. Very few Tribal partners and Municipalities use them. The general public do not use or access the NERRS Site Profiles very much.

Most users reported being moderately familiar with the Site Profiles. Most use them less frequently. *Description of Reserve protection efforts* is a component not used much. There is, however, high interest in data such as spatial, socioeconomic, hydrologic, oceanographic and biological data

Over half of respondents are at least somewhat satisfied with their use of the NERRS Site Profiles. Most respondents reported that their Reserve's Site Profiles needs are at least moderately met.

Respondents would like their Site Profiles to include interactive online maps, cultural and community information, illustrations, and photos of the site. Most respondents want the Site Profiles to be regularly updated and have information with cultural and historical context.

Components of interest to most Site Profile users include Biological, Ecological and Environmental settings.

Most respondents of the survey were white and identified as female. Majority were between 25 – 54 years old. More than half have been working with the Reserve system for between 1 – 10 years and most had at least a Master's degree.

Due to the small sample sizes of the various categories of professional affiliations with NERRS, we were unable to investigate significant differences based on the crosstabulations.

References

<https://coast.noaa.gov/data/docs/nerrs/reserves-site-profile-guidance.pdf>

<https://coast.noaa.gov/nerrs/reserves/management-profiles.html>

<https://coast.noaa.gov/nerrs/>



APPENDIX

Q3 How familiar are you with Site Profiles?

Familiarity	n	Percent
Extremely familiar	10	14%
Very familiar	19	26%
Moderately familiar	29	40%
Slightly familiar	10	14%
Not familiar at all	5	7%
	73	100%

Q4 How often do you use NERRS Site Profiles?

Frequency of use	n	Percent
Monthly	5	7%
Every couple of months	23	32%
Once a year or less	34	47%
Never	11	15%
	73	100%

Q5 What is the reason you have never used a Site Profile?

Reason	n
It is not relevant to my work/research	5
It is not user-friendly	1
It is outdated	1
This is the first time I've heard about Site Profiles	3
Other	1
	11

Q6 If you were interested in using a Site Profile to obtain background context or orienting information to a National Estuarine Research Reserve, what content might be relevant to your work/research?



Q7 To what extent do you use the following NERRS Site Profile components?

Component	A great deal	A lot	A moderate amount	A little	None at all
Description of the NERRS and the Reserve	16%	6%	26%	37%	15%
Historical and cultural resources and context	15%	6%	32%	29%	18%
Description of Reserve protection efforts	8%	3%	21%	44%	24%
Environmental setting (climate and weather, geomorphology, water quality etc)	21%	26%	18%	26%	10%
Biological setting, including habitats, plankton, plants, invertebrates, birds, reptiles, mammals	29%	23%	24%	21%	3%
Ecological setting, including community structure and processes, biological productivity etc	24%	19%	29%	21%	6%
Research and monitoring activities, past and current	16%	16%	24%	29%	15%

Q8 Please rank your preferred method to access a NERRS Reserve Site Profile by dragging your most preferred to the top.

Method	Ranking		
	1st	2nd	3rd
Online as part of a website	18%	68%	15%
Online as a PDF	75%	23%	3%
Order a hard copy online or via mail	8%	10%	83%

Q9 To what extent are you satisfied or dissatisfied with your overall experiences using NERRS Site Profiles?

	n	Percent
Extremely satisfied	6	10%
Somewhat satisfied	27	44%
Neither satisfied nor dissatisfied	20	32%
Somewhat dissatisfied	9	15%
Extremely dissatisfied	0	0%
	62	100%



APPENDICES

Q10 Which of the following components would you like to see added to NERRS Site Profiles? Select all that apply.

Component	Percent
Ecological information	65%
Cultural and community information	73%
Illustrations and photos	66%
Maps	74%
Video content	40%

Q11 To what extent are you satisfied or not satisfied with the following characteristics of NERRS Site Profiles?

Characteristic	Extremely satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Extremely dissatisfied
Accessibility	15%	31%	30%	23%	2%
Ease of use	11%	30%	31%	25%	3%
Technical language	15%	28%	43%	13%	2%

Q12 Which of the following components would you like to see added to NERRS Site Profiles? Select all that apply.

Component	Percent
Historic and recent photos	89%
Interactive online maps	84%
Accessible digital library of published articles about the Reserve	84%
Georeferenced SWMP locations and data	75%
Local knowledge	74%
Georeferenced research locations and data	66%
Regional Indigenous language and knowledge (as approved to share with the public)	62%
Video content that orients users to the Reserve	56%
Audio or video stories about the Reserve	54%

Q13 In your opinion, to what extent does your Reserve's NERRS Site Profile meet the needs of your Reserve?

Extent	n	Percent
A great deal	4	7%
A lot	16	27%
A moderate amount	22	37%
A little	18	30%
	60	100%

Q14 If you were to redo your Reserve's NERRS Site Profile, what would you change or include?

What to include	n	Percent
Updated and relevant information	26	62%
Digital, Searchable, Accessible	8	20%
Include cultural and historical context	2	5%
Geobased profile	1	2%
Habitats and research focus	1	2%
Increased engagement	1	2%
Link to CTP	1	2%
No change	1	2%
	42	100%

Q16 In your experience, who uses NERRS Site Profiles? Select all that apply.

Users	Percent
Researchers	78%
Undergraduate and graduate students	60%
Resource managers	38%
State agencies	37%
Environmental and community educators	32%
NERRS Coastal Training programming	30%
Stewardship and land conservation programs	30%
Federal agencies	28%
Teachers	25%
I don't know/Not applicable	22%
Non-profit organizations	17%
Other (Please specify)	7%
Municipalities	5%
Tribal partners	2%



APPENDICES

Q17 Which Reserve sector(s) and/or group(s) use your Reserve's NERRS Site Profile? Select all that apply.

Reserve sector/group	Percent
Research and monitoring	80%
Stewardship	68%
Managers and administrators	55%
Education	52%
Coastal Training	50%
NERRS state partner/agency/university	30%
NOAA Office for Coastal Management	23%
Friends group/NERRA	22%
I don't know/Not applicable	22%

Q18 Please identify any groups that aren't currently using your Reserve's NERRS Site Profile, but you wish they were?



Q19 Based on your experiences with NERRS Site Profiles users external to your Reserve or NOAA, what components of NERRS Site Profiles are users interested in? Select all that apply.

Component of interest	Percent
Biological setting, including habitats, plankton, plants, invertebrates, birds, reptiles, mammals	70%
Environmental setting (climate and weather, geomorphology, water quality etc)	67%
Ecological setting, including community structure and processes, biological productivity etc.	67%
Description of the NERRS and the Reserve	55%
Research and monitoring activities, past and current	43%
Historical and cultural resources and context	30%
I don't know/Not applicable	27%
Reserve protection efforts	15%

Q20 From your perspective, to what extent does your Reserve's NERRS Site Profile meet the needs of those who use it?

Extent	n	Percent
A great deal	3	5%
A lot	13	24%
A moderate amount	23	42%
A little	13	24%
Not at all	3	5%
	55	100%

Q21 Based on your experiences with NERRS Site Profiles users, what do they do with the information they gather from NERRS Site Profiles?

Use of information	n	Percent
Background information for research proposals, publications, and projects	16	38%
Citations/reference document	8	19%
Baseline information	5	12%
Species or habitat information	3	7%
Resource for teaching	3	7%
Contact information of staff	1	2%
Other	2	5%
Literature review	1	2%
I don't know	1	2%
Little/no experience with users	2	5%
	42	100%

Q24 What is your primary professional affiliation with NERRS?

Primary affiliation	n	Percent
Research	24	34%
Education	13	19%
Manager	12	17%
Coastal Training	6	9%
Other	6	9%
Stewardship	5	7%
Monitoring	4	6%



APPENDICES

Q23 In which State/Territory is the Reserve you are affiliated with located? If you work with the NOAA Office for Coastal Management, please list that as your response.

State/Territory	n	Percent
Florida	10	15%
South Carolina	8	12%
Delaware	4	6%
Ohio	4	6%
Oregon	4	6%
Virginia	4	6%
Washington	4	6%
Alaska	3	4%
California	3	4%
Georgia	3	4%
Maine	3	4%
Maryland	3	4%
New Jersey	3	4%
Texas	3	4%
Mississippi	2	3%
Rhode Island	2	3%
Wisconsin	2	3%
West Coast	1	1%
Puerto Rico	1	1%
Massachusetts	1	1%
New York	1	1%
New Hampshire	1	1%
	70	~100%

Q25 How long have you worked in or with the Reserve system?

Number of years	n	Percent
Under 1 year	2	3%
1 - 5 years	25	36%
6 - 10 years	17	24%
11 - 15 years	12	17%
16 - 20 years	5	7%
More than 20 years	9	13%
	70	100%

Q26 What is the highest level of education you have completed?

Level of education	n	Percent
Some college or vocational training	1	1%
4-year bachelor's degree	15	21%
Master's degree	36	51%
Doctoral degree	18	26%
	70	100%

Q27 What is your gender?

Gender	n	Percent
Female	43	62%
Male	26	37%
Prefer not to say	1	1%
	70	100%

Q28 What is your age?

Age group	n	Percent
18 - 24 years	1	1%
25 - 34 years	14	20%
35 - 44 years	27	39%
45 - 54 years	16	23%
55 - 64 years	8	12%
65 years or older	3	4%
	69	100%

Q29 With which racial or ethnic group(s) do you identify?

Racial/Ethnic group	n	Percent
White	59	86%
Hispanic, Latinx, or Spanish origin	5	7%
Asian	3	4%
Other	2	3%
	69	100%