

Measurement Protocol: Change in Recreational Activity and Expenditures Associated with Project Site Visitation

Project: GEMS
<http://bit.ly/NI-GEMS>

If you are encountering GEMS protocols for the first time, please read:

- The GEMS protocols can help you develop a monitoring plan for a restoration project. They were developed based on existing published monitoring methods, but should not be considered prescriptive or the only appropriate way to monitor.
 - Each protocol is written as if you are monitoring a single outcome, but it is very possible you will be measuring multiple outcomes and may be able to use the same or similar methods to do so. Think about ways to be strategic and efficient when combining methods from different protocols. For example, are there ways to ask questions about multiple outcomes using a single survey instrument? Or is there a way to host a workshop that asks community members about barriers to accessing multiple types of outcomes?
 - Please be aware that the “who” methods—aimed at documenting who will be affected by social and economic changes caused by a restoration project—are quite similar across protocols. Where possible and sensible, you should consolidate community engagement methods that assess stakeholder perceptions of project outcomes to avoid stakeholder fatigue.
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Background

This document provides an overview of methods available for estimating total recreational activity and expenditures associated with a restoration project site.

Recreational activity expenditures are typically calculated by multiplying the number of recreational activity trips or visitors¹ to the project site (estimated from random sampling counts of either recreational activity trips or total visitors as part of structured monitoring) by the average trip or individual expenditure. If data on expenditures is not available, it can also be estimated from random sampling surveys or the [individual travel-cost method](#). This method helps practitioners estimate and detect trends related to recreational activity and expenditures following project implementation. It cannot estimate the economic impact or contribution of the site to local economies or easily assess whether recreational activity occurring at the project site would have taken place elsewhere if the project did not exist.

The “*how much*” methods provide options for data collection that allow practitioners to measure how much recreational activity and expenditures on the project site have changed with the installation of the project.

The “*who*” methods describe methods for the project to assess the distribution of recreational activity and expenditures benefits among different communities and whether that distribution is representative of the community. Some of these methods require social science expertise, while others can be done by members of the restoration project team without special training.

The tables below list when methods would benefit from the expertise of social scientists trained in survey design and implementation, statistics, and economics. These experts should have experience with [human subject research](#), following best practices and, if relevant, conducting research in a way that

¹ Sometimes recreational visits are counted by trips and sometimes they are counted by the total number of recreational visitors. A “trip” can include multiple visitors all traveling to the site to engage in an activity together, for example a group of friends all going out in a single boat to fish, or a family all traveling to the site to go camping.

is accountable to their respective institution’s oversight body, often called an [Institutional Review Board](#). If you do not have such expertise in your project or program, many university programs and consulting firms should be able to assist.

Relevant Coastal Restoration Approaches

Habitat Restoration – Salt Marsh, Mangrove Restoration, Beach and Dune Restoration

Recreational Enhancement – Boat Ramps, Fishing Piers, Trails and Boardwalks

Water Quality Improvement – Sewage System Improvements, Wastewater Treatment Plant Upgrades, Treatment Wetlands, Green Infrastructure, Agriculture Best Management Practices

“How much” method:

Overview. This method help the project answer: How much are recreational activity and expenditures changing at the project site due to project installation?

This method describes how social scientists and economists can use intercept surveys, where trained field interviewers visit public access sites or the restoration site itself and survey recreational activity participants as they complete their trips. Data collected in these surveys is then used to estimate how recreational activity and expenditures are changing due to the restoration project. If a site has regular monitoring of recreational activity and expenditures, they could determine how recreational activity and expenditures are changed by a restoration project by comparing them before and after project installation. However, we provide method guidelines for surveying visitors only after project installation, which is the approach more commonly found in the literature because very few sites have existing monitoring at this time.

“How much” method:

Method (click on method title to see more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
Intercept Surveys	Estimate of recreational activity and expenditures after project installation.	Apply intercept-survey methods to count recreational trips or visitors and ask them about their expenditures	Yes	High

*Refer to the [NIH Definition of Human Subjects Research](#) for more information

“How Much” Metric Summary:

Social or economic outcome this metric is linked to:	Economic Activity
“How much” metric tier:	<input type="checkbox"/> 1 (easier) or <input checked="" type="checkbox"/> 2 (harder)
“How much” measurement interval:	Annually
Use this protocol if:	The total number of visitors visiting the site to participate in recreational activities is expected to change due to the project. There is a public access site or vantage point from which random sample data collection can take place

“Who” methods:

Overview. These methods help the project answer: Who has access to and is affected by changes in the distribution of recreational activity and associated expenditures? Are those benefitting from the activity and expenditures representative of the population around the site?

These methods can help restoration practitioners assess equity of recreational activity and expenditures. Some of the methods suggested here can be integrated as modifications of the “how much” protocol described above. Others would require new methods. These methods will help identify a) vulnerable groups and historically underrepresented stakeholders in the project service area;² b) the accessibility and distribution of recreational activities and expenditures to communities in the project service area; and c) whether groups may be disproportionately accessing or benefitting from the expenditures or opportunities. You can use these methods to better understand if the project has had an impact on recreational activity and expenditures in a way that may benefit or harm vulnerable communities.

The table below describes a suite of methods that build off each other to provide a more holistic understanding of the communities that are and can be affected by changes in recreational activities and expenditures associated with the project site.

The methods below that involve focus groups, surveys, or participatory exercises require inclusive stakeholder engagement³ of all relevant communities within the project service area.

“Who” methods:

Method (click on method title to see more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
Describe stakeholders	Project service area boundaries	Identify geographic boundary that encompasses all communities that could be visiting the project site for recreational activity	No	Low
	Demographics and social vulnerability of those in the project service area	Collate comprehensive demographic data of the communities in the project service area	No	Low
	Identity of potential visitors or businesses catering	Conduct a stakeholder assessment to understand who is interested in visiting the project and participating in recreational activity, and whose businesses may serve	No	Low

² The geographic boundary containing those stakeholders for whom a particular project outcome is relevant

³ There are many resources available that provide best practices and guidance for inclusive engagement. Some examples include: [Five step approach to stakeholder engagement](#) (BSR); [Equitable Community Engagement Toolkit](#) (Boston Public Health Commission); [Designing equity-focused stakeholder engagement to inform state energy office programs and policies](#) (NASEO); [Inclusive community engagement](#) (C40 Cities), and; [Stakeholder engagement for inclusive water governance](#) (OECD).

	to recreational activity	recreational activity in the project service area		
Accessibility checklist (from project perspective)	Status of recreational activity accessibility	Fill out a project checklist to identify accessibility of the site and the information about recreational activity at the site that is provided by the project	No	Low
Assess stakeholder perceptions on access and distribution of recreational activity and expenditures	Identification of access, barriers to access, and distribution of recreational activities and associated expenditures. Understanding of whether access and distribution is disproportionate in the project service area.	Step 1. Use focus groups, workshops, surveys, and/or participatory mapping <i>targeting people in the project service area</i> to ask questions about access, distribution, and barriers to accessing recreational activity and identify which businesses receive associated revenues. Step 2. Consider information collected through step 1 in the context of the “who” information you already collected.	Yes	High

*Refer to the [NIH Definition of Human Subjects Research](#) for more information

To see all GEMS project metrics and protocols, [visit this page](#).

