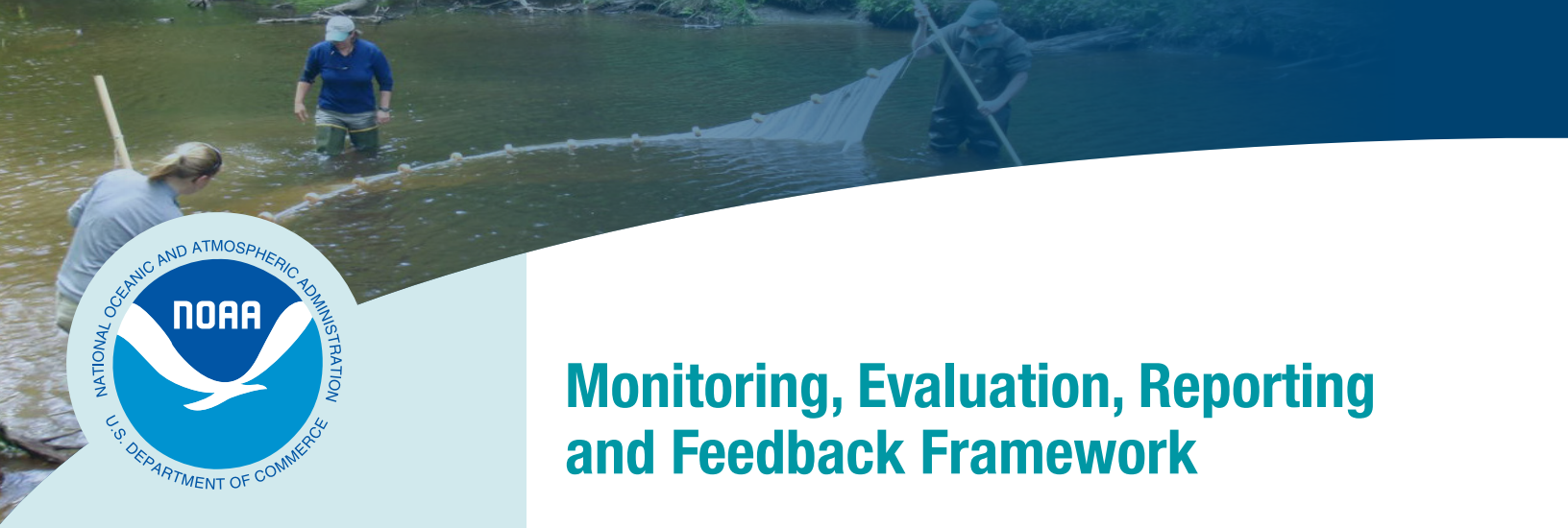
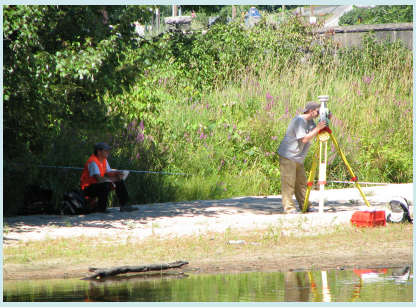


Monitoring, Evaluation, Reporting and Feedback Framework

NOAA FISHERIES

Office of Habitat Conservation

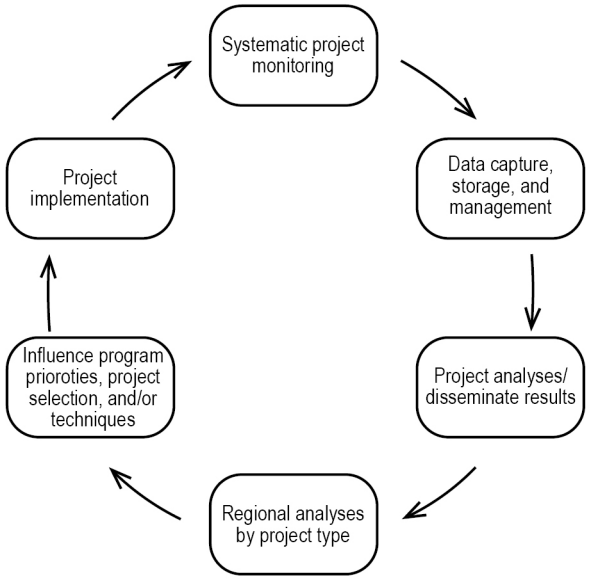


Restoration Center efficacy through cost-effective monitoring

The Restoration Center is implementing this Framework to establish consistent processes for monitoring and evaluating the performance of individual and collective restoration actions and reporting this information in a manner that allows us to use the feedback to improve future projects and ultimately improve the performance of our programs.

Monitoring and Evaluation Framework: Key Elements

- Integrated monitoring approach - see diagram
- Tiered monitoring targeted for major project types
- Increased emphasis on data management
- Increased emphasis on dissemination and feedback to projects and programs
- Partnership-based



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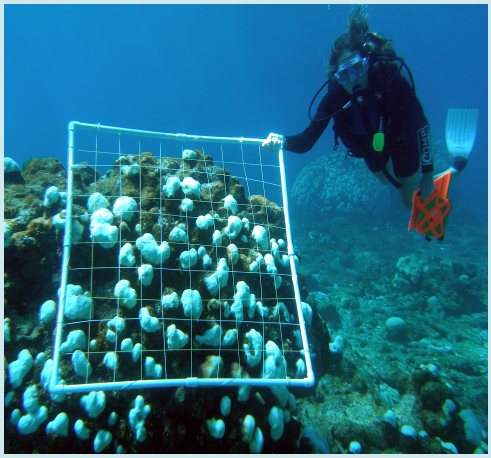
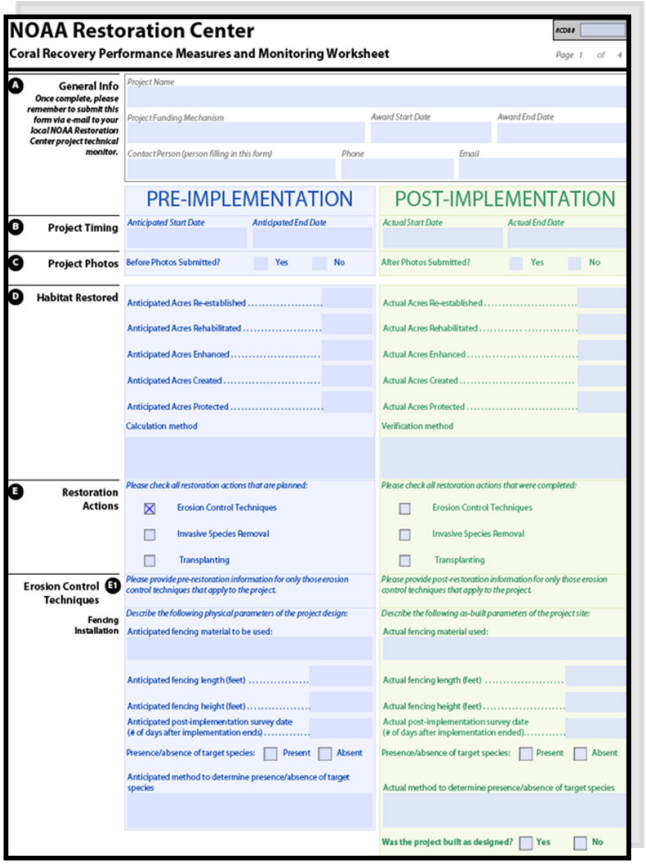


Monitoring and Evaluation Framework Guiding Principles

Monitoring and evaluation should be:

- Cost-effective
- Integrated with other Restoration Center activities to advance program and restoration practice generally
- Managed like other projects to assure the success of these guiding principles and to maintain a consistent and familiar process across all activities



NOAA Restoration Center

Coral Recovery Performance Measures and Monitoring Worksheet

RC0## Page 1 of 4

A General Info — Once complete, please remember to submit this form via e-mail to your local NOAA Restoration Center project technical monitor.

Project Name

Project Funding Mechanism | Award Start Date | Award End Date

Contact Person (person filling in this form) | Phone | Email

	PRE-IMPLEMENTATION	POST-IMPLEMENTATION
B Project Timing	Anticipated Start Date / Anticipated End Date	Actual Start Date / Actual End Date
C Project Photos	Before Photos Submitted? Yes No	After Photos Submitted? Yes No
D Habitat Restored	Anticipated Acres Re-established; Anticipated Acres Rehabilitated; Anticipated Acres Enhanced; Anticipated Acres Created; Anticipated Acres Protected; Calculation method	Actual Acres Re-established; Actual Acres Rehabilitated; Actual Acres Enhanced; Actual Acres Created; Actual Acres Protected; Verification method
E Restoration Actions	Please check all restoration actions that are planned: ☒ Erosion Control Techniques ☐ Invasive Species Removal ☐ Transplanting	Please check all restoration actions that were completed: ☐ Erosion Control Techniques ☐ Invasive Species Removal ☐ Transplanting
E1 Erosion Control Techniques — Fencing Installation	Please provide pre-restoration information for only those erosion control techniques that apply to the project. Describe the following physical parameters of the project design: Anticipated fencing material to be used; Anticipated fencing length (feet); Anticipated fencing height (feet); Anticipated post-implementation survey date (# of days after implementation ends); Presence/absence of target species: Present Absent; Anticipated method to determine presence/absence of target species	Please provide post-restoration information for only those erosion control techniques that apply to the project. Describe the following as-built parameters of the project site: Actual fencing material used; Actual fencing length (feet); Actual fencing height (feet); Actual post-implementation survey date (# of days after implementation ended); Presence/absence of target species: Present Absent; Actual method to determine presence/absence of target species

Was the project built as designed? Yes No

Why a tiered monitoring approach?

We distinguish between implementation monitoring (Tier I) and effectiveness monitoring (Tier II). Tier I monitoring allows us to simply evaluate whether we executed a project as designed. Implementation monitoring is essentially quality assurance for project construction. Tier I monitoring is completed for all major project types shortly after implementation is complete. Tier II monitoring investigates more sophisticated ecological, socioeconomic, and/or technique effectiveness questions. With effectiveness monitoring we are evaluating whether the project is functioning as intended. Because Tier II monitoring is longer-term and often requires detailed field investigations of multiple physical, biological, and geochemical phenomena, it is more expensive and thus we can only complete effectiveness monitoring for a subset of our major project types. We try to carefully choose Tier II monitoring sites so that they represent commonly found habitats for given project types. By doing so, we may be able to generalize what is learned at one Tier II site to the larger setting it represents and increase the cost effectiveness of our monitoring program.

Tier I: Implementation monitoring

- Evaluates structural changes (e.g., as-built surveys)
- Evaluates basic effectiveness parameters, as appropriate
- Consistent parameters
- Quantitative target values
- Before-After design
- Standardized data sheets (see above)
- Tier I for all major Restoration Center projects

Tier II: Effectiveness monitoring

- Evaluates ecological, socioeconomic, and/or technique effectiveness
- Guided by priority questions we want answered
- Questions developed regionally and nationally by NOAA Restoration Center (RC) staff and regional partners
- Provides science base to advance RC programs and restoration practice
- Tier II implemented only on subset of RC projects