



SUBJECT Biology Mitigation Monitoring Standards	FINAL NUMBER GE09-04(B)	EFFECTIVE DATE 04/01/2009	VALIDATION DATE 06/03/2014	SUPERSEDES or RESCINDS
TOPIC/PROGRAM National Resources Unit: Biology Team	WEB LINK(S) http://www.oregon.gov/ODOT/HWY/TECHSERV/Pages/technicalguidance.aspx APPROVED SIGNATURE Original signed by: Susan Haupt Geo-Environmental Manager			

PURPOSE

The guidance presents standards for post-construction monitoring and management of biology mitigation sites for the purpose of providing consistent data collection, reporting, and tracking of mitigation site success. Consistency in these areas allows Regions and the Geo-Environmental (GE) Section to evaluate and compare mitigation actions, thereby accomplishing the Oregon Department of Transportation's (ODOT or Agency) objectives of improving cost-effectiveness of mitigation compliance activities. The over-arching goal is improved mitigation success for permit compliance and environmental stewardship.

GUIDANCE

This guidance for Agency Environmental employees (and their consultants) provides information and direction needed to complete the most common types of post-construction biology mitigation monitoring requirements for **mitigation projects owned by ODOT**. The monitoring guidelines described here **do not** apply to mitigation/conservation banks, Special Management Areas, or local agency-owned projects funded by ODOT or Federal Highway Administration (FHWA) programs.

This document describes use of a system for project tracking, field monitoring procedures, report preparation and submittal procedures, and post- construction site management responsibilities. Details on procedures and document links may be found on the Biology Monitoring website:

http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/biology_mon.shtml

DEFINITIONS

The following types of ESA consultations and environmental permits require post-construction or annual biological monitoring:

- Individual Consultation
- SLOPES Programmatic BiOp (II, III, or IV)
- ODOT Cut/Fill Emergency/Urgency Programmatic BiOp (BiOp)

- OTIA III Bridge Programmatic BiOp
- DSL fill/removal permit for work in Essential Salmonid Habitat (non-wetland permits)
- Corps Section 404 permit for work in waters of the United States (non-wetland permits that require riparian monitoring)

Annual Monitoring Report- a report required as a term and condition in most ESA Section 7 BiOps or as required by the environmental permit on an annual basis until relevant permit requirements have been met. The annual monitoring report provides permitting agencies with a description of how well the project is meeting performance standards or success criteria set forth in the permit.

Mitigation Feature - a component of the mitigation site that is being tracked for success according to permit requirements, such as an area with riparian plantings, a section of stream with root wads, a patch of noxious weeds, etc.

Mitigation Site - the landscape area that encompasses all mitigation features associated with a regulated and permitted project, including the entire area of temporary and permanent disturbances within the construction limits and the area where off-site mitigation was performed, if applicable.

Mitigation Site Management- the combination of monitoring, reporting, and maintenance at a mitigation site as needed to meet permit requirements.

Permit Requirements – Specific legally required conditions of a BiOp or other environmental permit, as well as regulatory compliance commitments presented in the permit application (i.e., BiOp or fill/removal permit application).

Post-Construction Monitoring Report- a report that is required in most ESA Section 7 BiOps. The post-construction monitoring report describes how a project met the terms and conditions of a BiOp during construction, such as work area isolation, erosion control, and vegetation removal. The due date for the post-construction monitoring report is specified in the BiOp (typically 120-days after completion of construction).

Project Completion Report- a specific type of post-construction monitoring report for programmatic BiOps, such as SLOPES, OTIA III and the STIP Programmatic BiOp.

BACKGROUND/REFERENCE

Previously, ODOT had no standardized methods or procedures for biology mitigation site monitoring and management, so the work was conducted differently by each staff biologist. Sometimes site management was limited to only the minimum necessary to meet the re-vegetation success criteria in the BiOp, while at other times all resource features of a mitigation site were managed, regardless of specific permit requirements. Monitoring reports often indicated lack of success at meeting permit requirements, but it was often difficult to determine the cause, or to determine if similar problems were occurring on a widespread basis, or were localized problems. Monitoring reports varied considerably, making tracking success on a project / Region / statewide basis very

difficult. Although template forms and tracking spreadsheets have been developed in the past, these too were inconsistently implemented, negating their utility in regional or statewide tracking.

The lack of purposeful or consistent reporting and tracking standards meant that the GE Section had no basis for implementing some major roles of our Section including improving cost-effectiveness of permit compliance activities, managing the post-construction monitoring budget, quality assurance and permit streamlining.

ACTION REQUIRED

Statements in **Bold font** are requirements for Tech Center Environmental employees, and consultants to Tech Centers and ODOT who perform biological monitoring.

Monitoring Databases

The GIS Unit and GE Section cooperatively maintain Biology Mitigation GIS databases to map and track mitigation compliance for all projects with biology mitigation and monitoring requirements. The databases are on the statewide GIS server, requiring check-out, as described in Field Monitoring Protocols. Access to the databases is restricted to ODOT Environmental employees and consultants.

Most of the permit and annual performance information is in the Project_Pt (Site Point) database. There are separate databases for project boundaries and mitigation features (such as revegetation areas or in-stream habitat features). At this time, the GE Section updates the Project_Pt database based on annual monitoring reports. The GE Section uses information in this database to forecast and justify needs for the ODOT post-construction monitoring budget, to insure that monitoring funds are continually available. GE also uses this database to track success of statewide mitigation efforts, and provide continuous improvement of ODOT mitigation efforts.

Environmental employees and Region environmental manager may use the GIS databases for project tracking, and preparing maps for maintenance contracts and monitoring reports (as described below).

Field Monitoring Protocols

ODOT Environmental employees shall ensure that all active mitigation sites are mapped in the Biology Mitigation GIS Project_Pt and Boundary databases.

The GPS applications developed by ODOT's GIS Unit are excellent tools for tracking changes over time, creating maps for monitoring reports, or developing site plans for maintenance contracts. However, employees should maintain rough sketches or As-Built Plans of site location and mitigation features as back-up (in case of technical glitches with the electronic applications).

Methods for mapping Biology Mitigation sites are found on the Biology Monitoring website (referenced in guidance section) and the geographic information systems (GIS) website: <http://intranet.odot.state.or.us/gis/gps.htm>

- The location (site point and boundary) of all active mitigation sites shall be mapped, either:
 - in the field using Geographic Positioning System (GPS) technology, or
 - hand-digitized in a desktop GIS environment.

Note: GPS field mapping is more accurate, and ODOT's GIS Unit has ArcPad/GPS software specifically for ODOT Biology monitoring.

- ODOT's Biology Monitoring ArcPad applications, ArcPad equipment, and software are required if GPS mapping is used.
- ODOT's GIS Unit provides support and training on use of the Biology Mitigation GIS and GPS applications.
- A user-guide has been developed for the ODOT Biology Mitigation GPS applications (see Biology Monitoring website).

GE recommends Environmental employees also map important mitigation features (such as revegetation areas or in-stream habitat features) using GPS (ArcPad applications for biology mitigation features are also available), although this is not mandatory.

Template Monitoring Reports

To improve consistency and compliance reporting, **all ODOT biology mitigation monitoring reports shall be prepared with the most current Template Monitoring Report** (see Biology Monitoring website).

Monitoring reports must cite the exact permit requirements or terms and conditions relevant to mitigation and monitoring requirements. This may be mitigation commitments in the permit application or Biological Assessment, or monitoring conditions in the BiOp or fill/removal permit.

Transmittal Requirements

All mitigation monitoring reports shall be sent directly to the permitting authority from the Region Tech Centers, regardless of action agency (ODOT, FHWA, or Corps), and copied to NRU-trans (e-mail). Updated transmittal requirements may be found on the Biology Monitoring website.

Monitoring Budgets

GE provides budgets for post-construction site management (monitoring and site maintenance). Environmental Monitoring expenditure accounts and sub jobs are assigned per Region and Program (wetland, biology, Special Management Areas), with a loaded budget that was developed based on site-specific projections from Environmental employees. Mitigation sites that require substantial corrective work must use a project-specific Corrective Action expenditure account rather than the Region/Program accounts. Refer to the Biology Monitoring website for updates on guidelines for types of projects that require Corrective Action expenditure accounts. Region Environmental employees shall provide post-construction site management budget forecasts (when requested by GE for budget development purposes), track environmental monitoring accounts, and limit expenses to within the loaded budgets.

GE will be tracking post-construction site management budgets by subjob, and will periodically report the budget status Region Tech Centers. GE retains the authority to close expenditure accounts when they are expended. Environmental employees may apply for additional budget on an as-needed basis for Corrective Action Budget projects, according to the Corrective Action Plan process (see below).

Site Management

ODOT Environmental employees are responsible for post-construction monitoring and to oversee mitigation site establishment as part of the overall construction project and environmental permits. However, even after the construction projects closes, ODOT is responsible for managing the mitigation site sufficiently to meet permit objectives.

The Environmental employee must coordinate site management each year during the permitted monitoring period.

Management activities may be conducted by ODOT's Maintenance employees or under consultant contracts, but the ODOT Environmental employee must coordinate directly with the Maintenance Supervisor or Consultant plan and schedule the work.

The GE provides Contracting Services for maintenance work in Regions where contracts were successfully bid.

Typically, regular coordination with the Maintenance Supervisor or consultant is needed to ensure the work takes place as agreed-upon.

Site management shall discontinue after related permit obligations have been met, unless otherwise approved in writing by GE or the Region Tech Center, on a case-by-case basis.

GE maintains a Mitigation Site Management Contract for post-construction site management of ODOT projects delivered under the OTIA III Bridge Delivery Program. Region Tech Centers may add projects to this contract for full-service post-construction mitigation monitoring and management services (wetland or biology). If a Region elects to use this Mitigation Site Management Contract for a project, it must be for all subsequent post-construction biological and wetland monitoring and maintenance services (monitoring, Site Maintenance, Corrective Action). For example, this Contract may not be used for site maintenance alone, while monitoring is conducted by Region Environmental employees. Contact the GE Monitoring Program Coordinator for more information.

Site Maintenance and Corrective Action Plans are required for use of GE Corrective Action Budgets. The Environmental employee must complete a Site Maintenance or Corrective Action Plan (see Monitoring Budget section in the Biology monitoring website) as soon as possible when the need is identified, and prior to submittal of monitoring reports with recommendations to regulatory agencies. Submit the proposal to the GE Monitoring Program Coordinator for approval and to obtain a Corrective Action Budget EA/subjob.

RESPONSIBILITIES

Establishment and monitoring of mitigation sites is generally conducted by Region Tech Centers or other major programs (e.g., OTIA III projects, Consultant Project Management projects managed by Regions, Maintenance Districts) because they are commitments made by our Agency under project permits. While it is the responsibility of our entire Agency to adhere to mitigation commitments, standardized procedures for monitoring by Region Tech Centers are needed so that GE can track status of mitigation success and monitoring, statewide. The main role for GE within our Agency is to develop standards, guidelines, and asset management systems.

The following information summarizes the major types of mitigation site management and Region responsibilities:

Phase	Typical Schedule	Funding	Region Activity	GE Activity
Construction	Depends on Construction Schedule	CE or Maintenance Budget	Ensure CE budget includes time for monitoring during construction and the establishment period. Ensure mitigation is constructed as specified.	N/A
Contract Establishment	1 Year After Project Completion	CE or Maintenance Budget	Ensure 1-year establishment period included in project special provisions for all riparian plantings, stream bank protection, and habitat enhancements,	N/A
Construction Monitoring	During Construction and the Contract Establishment Period	CE or Maintenance Budget	Perform construction and site establishment monitoring as per permit requirements. Submit PCM report as per this bulletin.	Provide standardized template monitoring reports and mechanisms for tracking results.
Post-Construction Site Maintenance	2-5 Years After Project Completion*	GE Monitoring and Maintenance Budget (per Region)	Regions may implement necessary or routine preventative maintenance without GE oversight, using the program and region-specific Environmental Monitoring expenditure accounts. Utilize environmental monitoring budget as projected. The Corrective Action Phase is described below.	Provide statewide maintenance contracts, maintenance cost-estimation tools, and mapping tools and procedures.

Phase	Typical Schedule	Funding	Region Activity	GE Activity
Annual Monitoring	2-5 Years After Project Completion*	GE Maintenance Budget (per Region)	Perform monitoring according to permit requirements and GE standards, using the program and region-specific Environmental Monitoring expenditure accounts. Utilize environmental budgeting as projected. Submit annual monitoring reports, prepare GIS maps of site point and boundary as per this Bulletin.	Provide standardized template monitoring reports, mechanisms for tracking results, and eventually, standardized biology monitoring methods.
Corrective Action	As needed, typically during Site Maintenance Period	GE Corrective Action Budget	Submit Corrective Action Plan for GE approval if work meets definition of Corrective Action (see Biology Monitoring website). Ensure implementation of corrective work according to the scope and schedule in the approved Plan and the budget project-specific Corrective Action expenditure account.	Review and approve Corrective Action requests. Coordinate creation of new Corrective Action expenditure accounts.
Major Restoration	After Corrective Action tried and failed	GE Corrective Action Budget or possibly new STIP project	Case-by-case coordination with GE; typically if work is over \$10,000 per site per year.	Provide case-by-case guidance or recommendations for alternative mitigation options.

* Or longer if success has not been reached.

SPECIAL INSTRUCTIONS

This Bulletin has been developed in coordination with the project close-out and post-construction monitoring for the OTIA III Bridge Program.

CONTACT INFORMATION

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