USEPA Great Lakes National Program Office

Great Lakes Restoration Initiative Environmental Accomplishments in the Great Lakes Implementation Manual

Data Management and Quality Assurance
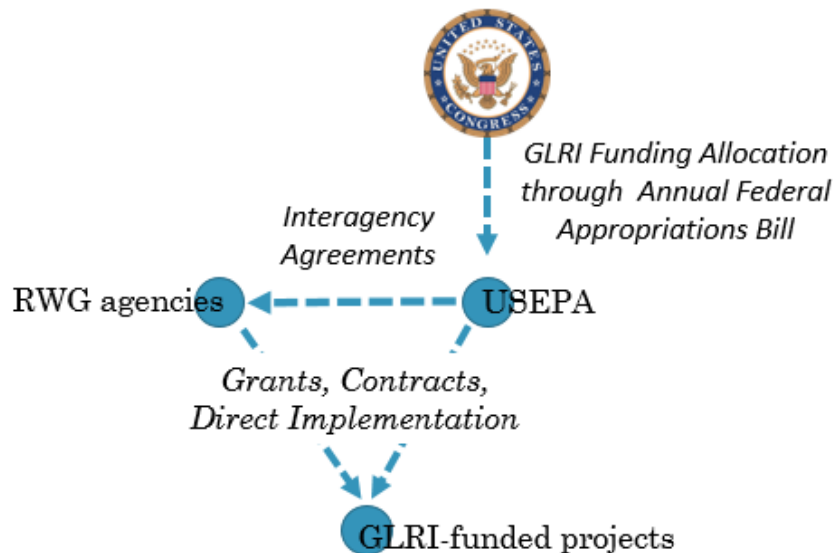
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Data Management and Quality Assurance

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A. Introduction

A.i. Great Lakes Restoration Initiative Funding Framework

GLRI Funding Framework

Regional Working Group (RWG) agencies work together collaboratively to plan projects that meet Great Lakes' environmental needs and Great Lakes Restoration Initiative (GLRI) program goals as identified in GLRI Action Plan II. Since fiscal year 2010, the United States Congress has allocated funding for the Great Lakes Restoration Initiative through annual federal appropriation bills. Following appropriation, RWG Agencies obligate this funding for programs, projects, or activities (collectively referred to as "GLRI-funded projects") that support the GLRI.

Authorization for GLRI interagency agreements has been done through EPA's annual appropriation bills through fiscal year 2016, at which time authorization was also enacted as part of Public Law No: 114-113. This authorization supports the leveraging of RWG Agencies' existing federal authorities to implement GLRI-funded projects.

RWG agencies use a variety of mechanisms to obligate the funding provided through these interagency agreements for the implementation of GLRI-funded projects. Some GLRI-funded projects are directly implemented using agency staff. Others are implemented through contracts, grants, or other interagency agreements.

A.ii. Environmental Accomplishments in the Great Lakes Reporting Framework
The Environmental Accomplishments in the Great Lakes (EAGL) reporting framework, including the delineation of EAGL reporting roles and responsibilities and the EAGL website structure, is derived from the GLRI funding framework. The RWG Agencies that directly

implement GLRI-funded projects or issue the grants, contracts, or interagency agreements to implement GLRI-funded projects are responsible for reporting into the EAGL information system. These RWG Agencies are the **data owners** of results achieved by their GLRI-funded projects under their GLRI interagency agreements. As the chair of both the Interagency Task Force and the Regional Working Group, EPA coordinates activities of the GLRI, including reporting pursuant to congressional requirements and Action Plan commitments. As the entity requesting the data and reporting results, EPA is the **data system sponsor**.

B. Roles and Responsibilities

B.i. Data System Sponsor:

- EPA, as coordinated by Great Lakes Nation Program Office (GLNPO) staff

GLNPO Reporting Coordinator

- Transmits general communications regarding EAGL reporting to RWG Agency Data Contacts, copying RWG Members
- Coordinates data transformation processes for final reporting purposes
- Ensures GLRI final reporting obligations are fulfilled. Final reporting includes:
    - Annual Report to Congress and the President
    - Semiannual updates to the project lists and the project map on GLRI.us
    - Government Performance and Results Act reporting, including EPA Annual Commitments System reporting
- Promotes consistency in reporting across the EAGL Information System

EPA Measure Leads

For their respective Measure(s) of Progress, each EPA Measure Lead:

- authors and keeps up-to-date a definition of progress in the Measures Reporting Plan;
- conducts data transformation processes for final reporting of data submitted to the EAGL Information System;
- coordinates the resolution of data reporting discrepancies identified through the course of data transformation processes;
- identifies and resolves data collection needs for fulfilling final reporting obligations; and
- conducts periodic audits of data submitted to the EAGL Information System by all RWG Agencies.

EAGL System Administrator

- Manages the EAGL Information System website and thus:
    - makes updates to the EAGL information system for changes to the GLRI and to reporting procedures and requirements that affect site elements;
    - manages user accounts, permissions, access, and security.
    - Monitors and ensures that servers supporting the EAGL information system are functioning properly and up-to-date, as necessary.

o   Monitors and ensures that necessary software and hardware supporting the EAGL Information System are functioning properly and up-to-date, as necessary.

- Hosts regular training webinars to inform RWG Agency Data Contacts of changes made since the preceding EAGL Data Call that affect reporting procedures and requirements.
- Facilitates training to assist RWG Agency Data Contacts with issues pertaining to particular data elements or focus areas as needed or requested.
- Oversees the process of submitting data into the EAGL Information System.
- Extracts data from EAGL to facilitate data transformation processes and system-wide audits.
- Facilitates the transfer of information for updates to GLRI.us.
- Archives data submitted to EAGL for short term and long term storage.

B.ii. Data Owners

RWG Agencies

- Develop internal procedures to ensure that data entered into EAGL Information System Spreadsheets is accurate, current, complete, and consistent with EAGL reporting guidance, including the storage and maintenance of documentation that support results submitted to EAGL.
- Ensure data entry is completed in time so that the RWG Agency's Data Contact may submit completed EAGL Information System Spreadsheets on a semiannual basis in accordance with reporting deadlines.
- Conduct periodic internal audits on data the RWG Agency has submitted to the EAGL Information System.

RWG Agency Data Contacts

- Serve as the point-of-contact of their representative RWG Agency for EAGL Data System Sponsors.
- Coordinate RWG Agency activities to fulfill their EAGL reporting obligations as listed above.
- Stay informed of reporting guidelines by reading EAGL reporting guidance, noting changes to EAGL (including changes to EAGL Spreadsheets, data needs, reporting guidance, etc.), and remaining receptive to communications from EAGL Data System Sponsors.
- Submit their representative RWG Agency's completed EAGL Information System Spreadsheets on a semiannual basis and in accordance with reporting guidelines.
- Notify the GLNPO Reporting Coordinator of any previous data reporting discrepancies.

C. Submission to EAGL

C.i. Overview of Submission to EAGL

The EAGL Information System is a Microsoft SharePoint-based website. The general site structure consists of a single EAGL homepage from which RWG agencies can access EAGL subsites designated for each RWG agency.

RWG agencies enter data into Microsoft Excel spreadsheets. On a semiannual basis, the EAGL System Administrator posts a single standardized EAGL Information System Spreadsheet to each agency's EAGL subsite for RWG agencies to update. Broadly, each RWG agency's EAGL Spreadsheet is comprised of records of all GLRI-funded projects to which the RWG Agency has obligated funding, and the result(s) achieved respective to each record for any relevant GLRI Action Plan II Measure of Progress.

As the data owners, the RWG Agencies, via their Data Contacts, are responsible for accessing and updating their agency's EAGL Spreadsheet to ensure the data contained within are current, complete, accurate, and are consistent with EAGL reporting guidance, including the most current version of the Measures Reporting Plan and Spreadsheet Guidance available at the time of data entry (see Appendix F). After completing data entry into their EAGL Information System Spreadsheet, RWG Agency Data Contacts submit their Agency's data to EAGL. Submission to EAGL means the RWG Agency Data Contact has uploaded the updated EAGL Spreadsheet to the RWG Agency's respective EAGL subsite.

C.ii. Access

User accounts, permissions, access and security are managed by the EAGL System Administrator.

Accessing EAGL

Users with an EAGL account may access EAGL online in two ways:

1) EAGL can be accessed directly by visiting and logging in to https://share.glnpo.net/sites/eagl.
2) EAGL can be accessed by visiting and logging in to the Great Lakes Restoration Initiative Portal at https://login.glnpo.net and clicking the link to "Environmental Accomplishments in the Great Lakes (EAGL)".

Requesting an Account

Staff from RWG Agencies may request an EAGL user account by completing the Great Lakes Restoration Initiative Portal Account Request form, accessible online at http://apply.glnpo.net/useraccount.html. The form requests users to provide the following information:

- First Name
- Last name
- Organization (selected from a drop-down list)
- Email Address
- Phone number

EAGL user account requests are screened by the EAGL System Administrator and only granted by the System Administrator when the Organization and Email Address associated with the request are consistent and correspond with an RWG Agency.

After the EAGL System Administrator grants an account request, the user receives an email that contains a username and temporary password. The user is directed to access the Great Lakes Portal at https://login.glnpo.net to change the temporary password to a user-generated password. As per EPA IT policy, the password expires every 90 days. Users are notified via email to change their password when the 90 day expiration date is approaching.

C.iii. Account Management
Access to the EAGL information system is limited to members of RWG agencies and their designated RWG Agency Data Contacts. The GLNPO Reporting Coordinator maintains an e-mail listing of RWG Agency Data Contacts that is updated following notification by RWG agencies and provided to the EAGL System Administrator when it is revised. The EAGL System Administrator disables accounts for users who no longer represent their agency.

User Account Permissions

The EAGL System Administrator assigns user account permissions at the time when an EAGL user account request is granted. There are 2 types of permissions the System Administrator may grant to a user account:

- Edit permissions means a user with this permission can upload an EAGL Information System Spreadsheet to an EAGL subsite.
- Read permissions means a user with this permission can download and view an EAGL Information System Spreadsheet from an EAGL subsite.

Read permissions are granted to all users for every EAGL subsite. However, Edit permissions are only granted to users for the subsite affiliated with the user's RWG Agency, as designated in the Organization field and confirmed by the Email Address field in the Great Lakes Restoration Initiative Portal Account Request form.

C.iv. EAGL Reporting Schedule
EAGL reporting generally operates on the following schedule:

EAGL Data Call:	Mid Year	End Of Year
Data Call Initiated:	3/31	9/30
Data Call Concluded:	5 weeks after Reporting Period Initiated	
Data Transformation Completed:	2 weeks after Reporting Period Concluded	

EAGL Data Call

RWG agencies report into the EAGL Information System semiannually during EAGL Data Calls. The EAGL Data Call refers to the length of time that EAGL is open for RWG agencies to access, complete and submit their EAGL Information System Spreadsheet. The semiannual Data Calls are at mid-year, for reporting results achieved and projects identified in an October 1st

through March 31ˢᵗ reporting period, and end-of-year, for reporting results achieved and projects identified in an April 1ˢᵗ through September 30ᵗʰ reporting period. Each RWG agency is expected to submit one EAGL Information System Spreadsheet per Data Call.

Reporting Period Initiated

The Mid-Year Data Call is initiated annually on the final business day of the first half of the fiscal year (generally March 31). The End of Year Data call is initiated annually on the final business day of the fiscal year (generally September 30).

To initiate the Data Call, the GLNPO Reporting Coordinator transmits a Data Call initiation email to designated RWG Data Contacts, copying the RWG, notifying them that the Data Call has begun, and that the RWG Agency Data Contacts may access, complete, and submit their respective EAGL Information System Spreadsheets.

Data Call Concluded

The Data Call is generally concluded 5 weeks after the Data Call is initiated. The Data Call conclusion date is the final day for RWG agencies to submit their completed EAGL Information System Spreadsheets to EAGL.

The Data Call conclusion date is communicated to RWG agencies and the RWG Data Contacts: through the EAGL website, where it is accessible to EAGL information system users year-round; in the Data Call initiation email transmitted by the GLNPO Reporting Coordinator to the RWG Data Contacts; in EAGL data entry training webinars for RWG Agencies hosted by the EAGL System Administrator; and in periodic e-mails transmitted during the Data Call by the GLNPO Reporting Coordinator.

Data Transformation Completed

After the conclusion of the Data Call, each RWG agency is expected to have submitted a completed EAGL Information System Spreadsheet to EAGL. The GLNPO Reporting Coordinator works with the EAGL System Administrator and EPA Measure Leads to transform the data submitted into EAGL by RWG agencies for final reporting purposes. After data transformation processes are concluded, transformed final data are posted to the "GPRA" EAGL subsite. Final data are used to fulfill GLRI final reporting obligations.

Data transformation processes are dependent on accurate, complete, current, and consistent data submitted by RWG agencies. In the instance that one or more RWG agencies submit their EAGL Spreadsheet after the Data Call conclusion date or need to re-submit a revised EAGL Spreadsheet to correct errors after the Data Call conclusion date, data transformation processes may extend beyond two weeks after the conclusion of the Data Call.

C.v. No Submission, Late Submission, and Revised Submission Processes
Late submission

RWG Agency Data Contacts are responsible for notifying the GLNPO Reporting Coordinator and EAGL System Administrator five days in advance of the Data Conclusion Date if their

agency will be submitting their EAGL Spreadsheet beyond the Data Call conclusion date and providing an estimated late submission date. Upon uploading their RWG Agency's completed EAGL Spreadsheet into the EAGL information system, the RWG Agency Data Contact is responsible for notifying the GLNPO System Administrator and the GLNPO Reporting Coordinator. Data transformation processes may proceed after the RWG Agency Data Contact gives notice that the RWG Agency's EAGL Spreadsheet is uploaded to EAGL.

No submission

If an RWG Agency Data Contact fails to submit an EAGL Spreadsheet before the Data Call is concluded and has not provided a late submission notification, the GLNPO System Administrator will contact them to ascertain reasons for the omission and determine when a submission will be made.

If the omission is because there is no progress or projects to report, the Data Contact will submit the unaltered EAGL Spreadsheet as confirmation. Data transformation processes may proceed after the RWG Agency Data Contact gives notice that the RWG Agency's EAGL Spreadsheet is uploaded to EAGL.

If progress or projects should have been reported, the RWG Agency data contact will provide a late submission due date and will subsequently notify the GLNPO System Administrator and the GLNPO Reporting Coordinator when the EAGL Spreadsheet has been uploaded to EAGL. Data transformation processes may proceed after the RWG Agency Data Contact gives notice that the RWG Agency's EAGL Spreadsheet is uploaded to EAGL.

Revised submission

Data Contacts shall submit revised submissions if errors are identified in their EAGL Spreadsheet after the Data Call. Promptly upon identification of an error, the GLNPO Reporting Coordinator and System Administrator and applicable Data Contacts and Measure Leads shall be notified by the individual (whether from EPA or the other RWG agency) identifying the error. Thereafter, the Agency Data Contact shall promptly: (i) identify the reason for the error, (ii) provide an estimated re-submission date, (iii) upload a corrected spreadsheet to the EAGL information system, and (iv) notify all parties when the spreadsheet has been uploaded. Data transformation processes may proceed after the RWG Agency Data Contact gives notice that the RWG Agency's revised EAGL Spreadsheet is uploaded to EAGL.

Prolonged or Consistent Failure to Submit an EAGL Information System Spreadsheet

The applicable EPA Measure Lead(s) and/or the EAGL System Administrator will notify GLNPO management of prolonged or consistent failures to submit EAGL Information System Spreadsheets. RWG Agencies will cooperate with EPA to resolve spreadsheet submission issues.

C.vi. EAGL Information System Spreadsheet File Codes
EAGL Information System Spreadsheets are named using the following file codes:

[Department Acronym]-[RWG Agency Acronym]-FY[Last 2 Digits of Fiscal Year]-[Q2 or EndofFY]

This core string is present in the file name of the submitted spreadsheet to identify the spreadsheet. Any addition or modifier to the string is for EPA's or the reporting RWG Agency's internal tracking purposes.

[Department Acronym]-[RWG Agency Acronym]

- Denotes the RWG agency that is the data owner of the data contained on the EAGL Spreadsheet

FY[Last 2 Digits of Fiscal Year]

- Denotes the fiscal year of the semiannual project reporting period through which the data contained on the EAGL Spreadsheet has been updated

[Q2 or EndofFY]

- Denotes the semiannual project reporting period of the fiscal year through which the data contained on the EAGL Spreadsheet has been updated

Example: DOI-USGS-FY16-Q2

- DOI-USGS: Indicates that the United States Geological Survey of the Department of the Interior is the data owner of the data contained within the submitted EAGL Spreadsheet
- FY16-Q2: Indicates that the data contained within the submitted spreadsheet is updated through the first semiannual project reporting period (October 1st through March 31st) of fiscal year 2016.

U.S. Federal Executive Department	RWG Agency	[Department Acronym]-[RWG Agency Acronym]-
Department of Homeland Security	United States Coast Guard	DHS-USCG
Department of Commerce	National Oceanic and Atmospheric Administration	DOC-NOAA
Department of Defense	United States Army Corps of Engineers	DOD-USACE
Department of the Interior	United States Geological Survey	DOI-USGS
	National Parks Service	DOI-NPS
	Bureau of Indian Affairs	DOI-BIA
	United States Fish and Wildlife Service	DOI-USFWS
Department of Transportation	Federal Highway Administration	DOT-FHWA
	Maritime Administration	DOT-MARAD
Human Health Services	Agency for Toxic Substances and Disease Registry	HHS-ATSDR
	Centers for Disease Control and Prevention	HHS-CDC

United States Department of Agriculture	Animal and Plant Health Inspection Service	USDA-APHIS
	Natural Resources Conservation Service	USDA-NRCS
	United States Forest Service	USDA-USFS
United States Environmental Protection Agency*	United States Environmental Protection Agency	USEPA

*USEPA is a Cabinet-rank agency and is not an operating unit in any U.S. federal executive department

Fiscal Year	Calendar Year Dates (MM/DD/YYYY)	FY[Last 2 Digits of Fiscal Year]-
2015	10/01/2014 – 09/30/2015	15
2016	10/01/2015 – 09/30/2016	16
2017	10/01/2016 – 09/20/2017	17
2018	10/01/2017 – 09/30/2018	18
2019	10/01/2018 – 09/30/2019	19

Semiannual Data Call of Fiscal Year	Dates (MM/DD)	[Q2 or EndofFY]
Mid Year	10/01 – 03/31	Q2
End of Fiscal Year	04/01 – 09/30	EndofFY

File Versioning

The EAGL Information System uses existing Microsoft SharePoint capabilities to track file version history. A file uploaded to the same Microsoft SharePoint document library with the same file name as an existing file in the library will overwrite the existing file. The current version of the file can be restored to previous versions of the file by accessing the Version History of the file.

RWG agencies may elect not to use these existing Version History tracking capabilities. EAGL also tracks the date a file was uploaded to the system, and the user account that was used to upload the file. RWG agencies may instead add unique modifiers to the file name string such that when uploaded, no existing files are overwritten. Instead, all versions are displayed without needing to access Version History. In these cases, the latest file uploaded is accepted by the EPA as the most final version of the RWG agency's data submission for the Data Call that is indicated by the file name string, unless otherwise communicated by the RWG agency to the EPA.

Metadata

EAGL tracks metadata for each spreadsheet uploaded to the information system. This metadata is system-generated and cannot be overridden by EAGL users.

- File type

- o EAGL uses default Microsoft SharePoint file icons to track file type. All EAGL Information System Spreadsheets are in .xlsm format, a Microsoft Excel format. The file type icon associated with EAGL Information System Spreadsheets is the default Microsoft SharePoint icon for Microsoft Excel spreadsheets.
- Name
  - o The Name field tracks the name of the file uploaded to EAGL. The file name of EAGL Information System Spreadsheets contains the following information:
    - ▪ The data owner or RWG Agency that completed and uploaded the EAGL information system spreadsheet
    - ▪ The fiscal year of the achievements recorded in the spreadsheet
    - ▪ The Data Call for which that the spreadsheet was submitted

    The Name field should correspond with the File Naming Conventions detailed in this chapter.

- Modified
  - o The Modified field tracks the date (Month DD, YYYY) the current version of the file was uploaded to EAGL.
- Modified By
  - o The Modified By field tracks the name of the person associated with the user account that was used to upload the current version of the file to EAGL.
- Created
  - o For files with multiple versions, the Created field tracks the date and time the first version was uploaded to EAGL.
- Created By
  - o For files with multiple versions, the Created By field tracks the name associated with the user account that was used to upload the original version of the file to EAGL.
- Version Number
  - o For files with multiple versions, this field tracks the number of times the file has been overwritten with a new version.
- Last Modified
  - o This field tracks the date the current version was uploaded to EAGL.
- Size
  - o The Size field tracks the size (in bytes) of the file uploaded to EAGL.
- Comments
  - o When uploading a file, users are given the option to submit comments associated with the file or file version. The Comments field displays any comments associated with the file or file version.

D. Data Entry into EAGL Information System Spreadsheets
D.i. Overview of Data Entry into EAGL Information System Spreadsheets
RWG agencies enter data into Microsoft Excel spreadsheets. On a semiannual basis, the EAGL System Administrator posts a single standardized EAGL Information System Spreadsheet to

each agency's EAGL subsite for RWG agencies to update. Broadly, each RWG agency's EAGL Spreadsheet is comprised of records of all GLRI-funded projects to which the RWG Agency has obligated funding, and the result(s) achieved respective to each record for any relevant GLRI Action Plan II Measure of Progress.

As the data owners, RWG agencies are responsible for entering data into their respective EAGL Information System Spreadsheets. RWG Agency Data Contacts play a key role in coordinating this data entry for their RWG Agency.

The EAGL System Administrator assigns Read and Edit permissions to RWG Agency Data Contacts' EAGL user accounts on their RWG Agency's EAGL subsite. Data Contacts are able to access the Agency's blank EAGL Spreadsheet. They are the only EAGL users from their Agency able to upload a completed EAGL Spreadsheet to the system. RWG Agency Data Contacts are responsible for uploading the completed EAGL Spreadsheet to their Agency's EAGL subsite before the conclusion of each Data Call.

RWG Agency Data Contacts are the points-of-contact for data system sponsors (represented by the GLNPO Reporting Coordinator, the EAGL System Administrator, and the EPA Measure Leads) to disseminate information significant to RWG Agencies for completing their EAGL reporting. This information includes reporting deadlines, reporting instructions, contact information of data system sponsors, and notices regarding access and updates to reporting guidance such as EAGL Training Webinars, the Measures Reporting Plan, Spreadsheet Guidance, and any other such reference materials. Data system sponsors communicate this information to the RWG Agency Data Contacts so that the Data Contacts will disseminate this information to their RWG Agency's staff, as necessary, in order that the Data Contacts can submit a completed EAGL Spreadsheet.

RWG Agency Data contacts are generally the Agency members initiating and coordinating key Agency staff persons to complete data entry into the Agency's EAGL Information System Spreadsheet. Organizational structure, use of GLRI funding, and scope of EAGL reporting obligations vary amongst RWG Agencies, and so internal Agency processes for completing data entry into EAGL Spreadsheets vary accordingly. RWG Agencies are responsible for developing and documenting their procedures that ensure that data entered into the Agency's EAGL Spreadsheet is current, complete, accurate, and consistent with EAGL reporting guidance.

D.ii. Structure of an EAGL Information System Spreadsheet
EAGL Information System Spreadsheets are organized at various levels. As described throughout, for a given EAGL Data Call, RWG Agencies enter data into their EAGL Information System Spreadsheet designated for the Data Call in process, and submit this data by uploading the completed EAGL Spreadsheet to the Agency's EAGL subsite. Thus, at the highest level, EAGL Information System Spreadsheets are classified by RWG Agency, and then by the Data Call through which the data within is updated. This information is conveyed both by the file name, as described in III.C.vi EAGL Information System Spreadsheet File Codes, as well as by the subsite to which the file was uploaded and the metadata associated with the upload.

Each EAGL Spreadsheet features two tabs containing GLRI data. The first tab, titled "Projects with AP II Results" contains projects which have or are expected to contribute results for Action Plan II Measures of Progress. The second tab, titled "Other Projects," contains projects that have not and/or will not contribute results for Action Plan II Measures of Progress because they were funded during Action Plan I. Rules for sorting projects between these two tabs are described in further detail in Spreadsheet Guidance. Records of projects in EAGL are sorted between these two tabs to enhance the manageability of EAGL Spreadsheets, especially for RWG Agencies with a large number of records.

Records of projects are then organized by row and defined by column. A single row corresponds with a single record of a GLRI-funded project in EAGL. The columns across the spreadsheet delineate the data fields that describe each project. Definitions for each data field are provided in detail in Spreadsheet Guidance.

D.iii. EAGL Information System Spreadsheet Data Fields
Data fields in EAGL Information System Spreadsheets may be classified as follows in the table below:

Data Field*	Requirement Level		Data Purpose				Final Reporting Destination		
	Required	Where Applicable	Project Identification	Program Management	Project Results	Supplemental Project Results	GLRI.us	GPRA Reporting	Report to Congress and the President
Unique ID	x		x						
Year	x		x				x		
GLRI Amount	x		x				x		
Project Type	x		x				x		
Project Title	x		x				x		
Recipient Name	x		x				x		
Project Description	x		x				x		
Focus Area	x		x				x		
Project Start Date	x		x				x		
Project End Date	x		x				x		
Affected States	x		x				x		
Latitude	x		x				x		
Longitude	x		x				x		
Watersheds	x		x						
Status	x			x					
Tribal Nexus	x			x					
Template				x					
Primary Measure	x				x			x	x
PM Expected Results Upon Completion		x		x					
PM Results 10/1 3/31 each FY starting FY15	x				x			x	x

Field	C1	C2	C3	C4	C5	C6	C7	C8	C9
PM Results 4/1 9/30 each FY starting FY15	x				x			x	x
PM Comment						x			
PM Keywords	x					x			x
Second Measure		x			x			x	x
2M Expected Results Upon Completion		x		x					
2M Results 10/1 3/31 each FY starting FY15		x			x			x	x
2M Results 4/1 9/30 each FY starting FY15		x			x			x	x
2M Comment						x			
2M Keywords		x				x			x
Third Measure		x			x			x	
3M Expected Results Upon Completion		x		x					
3M Results 10/1 3/31 each FY starting FY15		x			x			x	x
3M Results 4/1 9/30 each FY starting FY15		x			x			x	x
3M Comment						x			
3M Keywords		x				x			x

*Definitions for these data fields are provided in Spreadsheet Guidance.

The following information references the data classifications and the data fields categorized into those classifications in the table above:

Requirement Level

The "Requirement Level" classification describes the degree to which data entry is required for projects identified in EAGL, as described in Spreadsheet Guidance. There are two such levels of required data, and a third level of unrequired data fields.

Required describes data fields listed as "Required" in Spreadsheet Guidance that RWG Agencies are required to complete for projects identified on their EAGL Spreadsheet, if possible. In some cases, sufficient data on a planned project may not be available until further into the project's implementation.

Where Applicable describes data fields listed as "Required" in Spreadsheet Guidance. However, not all required data fields are applicable to all projects. RWG Agencies are required to complete these data fields only to the extent that completion of these data fields is applicable to the project.

In the table below, data fields are classified as *Required* and *Where Applicable.* All remaining data fields with an unclassified Requirement Level are optional data fields.

Final Reporting Destination

Data collected through the EAGL Information System is used to fulfill final reporting obligations. The Final Reporting Destination classification classifies data fields by the final reporting obligation that the data entered into the field fulfills.

GLRI.US describes data fields that are directly posted to the project lists and project map on GLRI.us.

GPRA Reporting describes data fields that are used to fulfill final reporting obligations pursuant to the Governmental Performance and Results Act through the USEPA Annual Commitments System. EAGL Data System Sponsors subject these data fields to data transformation processes to fulfill GPRA final reporting obligations. As such, data entered into these fields by RWG Agencies are not directly reported into GPRA.

Annual Report to Congress and the President describes data fields that are used to fulfill final reporting obligations for the GLRI Annual Report to Congress and the President. EAGL Data System Sponsors subject these data fields to data transformation processes to fulfill final reporting obligations. Data entered into these fields by RWG Agencies are not directly reported in the Annual Report to Congress and the President.

Data Purpose Classification

While data collected through the EAGL Information System is ultimately collected to fulfill final reporting obligations, the data collected through EAGL may also be used for alternative purposes. The Data Purpose Classification classifies data fields by these alternative fields.

Project Identification describes data fields that "identify" a project in EAGL. They are data fields generally pertaining to project characteristics rather than project results. Generally, information from these data fields are posted to GLRI.us, although some exceptions exist, such as the Watersheds field.

Program Management describes data fields that program managers may use to assess the status of the program and any particular project recorded in EAGL.

Project Results describes data fields used to tabulate results against the Action Plan II Measures of Progress.

Supplemental Project Results describes data fields that are used to support data entered into *Project Results* data fields.

Standard definitions for each data field are detailed on Spreadsheet Guidance. The table below summarizes which Data Fields correspond to which Data Type.

D.iv. EAGL Information System Spreadsheet System Controls
RWG agencies use Microsoft Excel (versions 2007 and later) to enter data into EAGL information system spreadsheets. The following Microsoft Excel data validation functions are the current system controls on data entry into EAGL Information System Spreadsheets:

- Users are restricted from manually typing data into fields with drop-down menus if the typed string is not a selectable option listed in the drop-down menu.
- The selectable options listed in the drop-down menus on the following fields are dependent on data entered into other fields.
    - The list of selectable options for the Primary Measure field is restricted to the Measures of Progress from the Focus Area assigned to the project in the Focus Area field. EAGL Spreadsheet Guidance requires that the Primary Measure assigned to a project be from the Focus Area from which the project was funded.
    - The list of selectable options for the Keywords fields is dependent on the Focus Area of the corresponding Measure of Progress assigned to the project. The list of Keywords in EAGL is organized by Focus Area.

E. Other EPA Procedures to fulfill Data System Sponsor Responsibilities
E.i. Creating Blank EAGL Information System Spreadsheets
     The EAGL System Administrator is responsible for creating and posting blank EAGL Information System Spreadsheets to each RWG Agency's EAGL subsite prior to each Data Call.

     The blank EAGL Information System Spreadsheet is not an empty file. The blank EAGL Information System Spreadsheet contains the history of results reported since the start of GLRI Action Plan II and projects identified since the start of Action Plan I. However, the blank EAGL Information System Spreadsheet is empty in that it is not yet updated for results to be reported and GLRI-funded projects to be identified in the upcoming Data Call. As the data owner, RWG Agencies are responsible completing this data entry into their respective blank EAGL Information System Spreadsheet during the next Data Call.

In order to create the blank EAGL Information System Spreadsheet, the EAGL System Administrator creates a new file from the latest EAGL Spreadsheet submitted to each RWG Agency's EAGL subsite, and names it for the next Data Call according to the file naming codes defined in III.C.vi EAGL Information System Spreadsheet File Codes. The EAGL System Administrator may make the following changes, as necessary, to the new file to create the blank EAGL Spreadsheet:

- EAGL Information System Spreadsheets are structured to require new results reporting data fields for each Data Call into which RWG Agencies input the incremental result achieved toward any assigned Primary, Secondary, or Tertiary Measure of Progress. The EAGL System Administrator creates these new blank data fields on each RWG Agency's blank EAGL Information System Spreadsheet in anticipation of each Data Call.
- The EAGL System Administrator may add data fields or add more options to the list displayed in data fields with drop-down menus to collect data to meet newly identified reporting needs or to capture information previously collected by deleted data fields, as directed by the GLNPO System Administrator.
- The EAGL System Administrator may delete a data field or delete options on the list displayed in data fields with drop-down menus, as directed by the GLNPO Reporting Coordinator. In these instances, the EAGL Information System Spreadsheet is restructured so as to collect the information that was captured by the deleted data field elsewhere on the EAGL Spreadsheet.
- On rare occasions, the GLNPO Reporting Coordinator directs the EAGL System Administrator to delete a data field without capturing the deleted information elsewhere on the EAGL Spreadsheet. This information reported in prior Data Calls is still archived through routine short-term and long-term storage processes conducted by the EAGL System Administrator. Data fields are only deleted if it is determined that the data need fulfilled by the inclusion of the data field is no longer a data need and that the information captured by the data field no longer needs to be collected.

In creating the new blank EAGL Information System Spreadsheet, the EAGL System Administrator does not does not make changes to the history of previously reported data for specific projects. Rather, changes are applied globally to all EAGL Information System Spreadsheets usually to meet changing data needs. The data system sponsors communicate these changes in anticipation of the next Data Call to the RWG Data Contacts through updated EAGL reporting guidance documents, EAGL Training Webinars, and instructions in the Data Call initiation email.

E.ii. Long-term and Short-term Data Archival Procedures
Data Archival Schedule

The EAGL System Administrator is responsible for archiving data submitted to EAGL for short-term and long-term storage. In the instance that one or more RWG agencies submit their EAGL Spreadsheet after the Data Call conclusion date or need to re-submit a revised EAGL Spreadsheet to correct errors after the Data Call conclusion date, data archival processes are initiated 6 months after the Data Call conclusion date to ensure data is not archived before each

RWG Agency has submitted a final EAGL Information System Spreadsheet for the Data Call in question.

Short-Term Storage

Data submitted to EAGL is archived for short-term storage as a Microsoft Excel macro-enabled file (file extension .xlsm). The EAGL System Administrator compiles the final EAGL Information System Spreadsheet submitted by each RWG Agency into a single master EAGL spreadsheet, which is uploaded to a designated EAGL subsite in the document library for short-term storage. While all EAGL users have Read permissions for this document library, only the EAGL System Administrator has Edit permissions, and thus is the only EAGL user able to archive files for short-term storage or edit files archived for short-term storage.

[This section will be revised to specify metadata and file naming conventions associated with the short-term storage document library.]

Long-Term Storage Procedures

Data submitted to EAGL is archived for long-term storage in ASCII as text files (.txt) to maintain compatibility with future data viewing and processing systems. To do so, the EAGL System Administrator converts the master EAGL spreadsheet that was compiled for short-term storage into text files. A single text file is generated for each tab of the master EAGL spreadsheet compiled for short-term storage.

The System Administrator uploads these text files to the designated EAGL subsite in the document library for long-term storage. While all EAGL users have Read permissions for this document library, only the EAGL System Administrator has Edit permissions, and thus is the only EAGL user able to archive files for long-term storage or edit files archived for long-term storage.

[This section will be revised to specify metadata and file naming conventions associated with the long-term storage document library.]

Archival of Data Not Captured in EAGL Information System Spreadsheets

EAGL also collects data related to results reported against GLRI Action Plan II Measures of Progress that are not captured within EAGL Information System Spreadsheets. This data is reported to the "General Measures" page of the EPA EAGL subsite, where Measures Leads report results for Measures tracked at the program-level. "Program-level" means that a discrete result contributing to the annual target for the Measure of Progress reflects the coordination of many GLRI-funded projects, and as such, is not reported respective to any one record of a GLRI-funded project in EAGL. Rather, a result contributing to the annual target is reported respective to the fiscal year in which the result was achieved, and is reported solely by the EPA in the "General Measures" section of the EPA EAGL subsite. Because this data is taken from the General Measures page of the USEPA EAGL subsite and reported directly in the Annual Report to Congress and the President, it is not archived by the EAGL System Administrator for short-term or long-term storage.

E.iii. Data Transformation Processes
As the data system sponsor, the USEPA via Great Lakes National Program Office staff, is responsible for transforming data submitted to EAGL for final reporting. Data transformation procedures are conducted by the respective Measure Lead for each Measure of Progress, as facilitated by the EAGL System Administrator, and coordinated by the GLNPO Reporting Coordinator. Data transformation processes for each Measure of Progress are specified in Section 10 of the respective definition of progress for each Measure in the Measures Reporting Plan.

GLNPO staff compile the individual EAGL spreadsheets submitted by each RWG Agency into a single EAGL Master Spreadsheet and query the EAGL Master Spreadsheet to tabulate total results for each GLRI Action Plan II Measure of Progress for which such totaling is relevant. Through the course of data transformation, EPA Measure Leads may note data entry that is inconsistent with EAGL reporting guidance. In such cases, the Measures Leads contact the RWG Agency's Data Contact to resolve any issues, since those agencies are the data owners. It is the data owner's responsibility to ensure that results submitted to EAGL are current, accurate, complete, and consistent with EAGL reporting guidance.

Such totaling is not relevant for "General Measures" that track program-level accomplishments. Program-level accomplishments describe results achieved through the coordination of many projects, and these results cannot be attributed as an achievement accomplished by any single record of a GLRI-funded project. Instead, EPA Measure Leads report results contributing toward General Measures in the "General Measures" EAGL subsite as an accomplishment of the program and by the fiscal year in which the result is achieved.

Transformed results are posted to the "GPRA" EAGL subsite and are used to fulfill the GLRI's final reporting obligations including Government Performance and Results Act Reporting and the GLRI Annual Report to Congress and the President. The EAGL System Administrator uses the updated records of projects submitted through EAGL to update GLRI.us.

E.iv. Making Changes to EAGL to Meet Emerging Data Needs
As necessary, and usually on an annual basis, the Data System Sponsors work together to identify emerging data needs and determine how to update EAGL to meet those data needs. Typically, EPA Measures Leads and the GLNPO Reporting Coordinator identify emerging data needs to capture information that:

- Improves data quality
- Improves planning & budgeting process
- Better fulfills GLRI final reporting obligations
- Enables the GLRI to more effectively and efficiently respond to inquiries from EPA management and from private and public stakeholders such as elected officials, tribal governments and organizations, EPA headquarters, community groups, private citizens, etc.

The GLNPO Reporting Coordinator works the EAGL System Administrator to design and implement changes to the EAGL Information System to capture the information needed to meet

the identified emerging data needs. Changes are made accordingly where necessary, and notice of changes is communicated to RWG Agency Data Contacts through the dissemination of updated EAGL reporting guidance, in EAGL Training Webinars, and general emails of notice, including the initiation email for the next EAGL Data Call.

E.v. Making Changes to the EAGL Reporting Guidance
As necessary, the Data System Sponsors make changes to the EAGL Reporting Guidance. "EAGL Reporting Guidance" includes the GLRI Action Plan II Measures Reporting Plan and Spreadsheet Guidance. Generally, these changes are based on:

- o The need to address situations that arose in the prior Data Call that are not addressed in the existing guidance
- o The need to address newly identified data needs or new data fields
- o Common errors identified through system-wide audits or identified while conducting data transformation processes
- o Other changes to the GLRI that are relevant to the EAGL Reporting Guidance

As the owners and authors of their respective Measures of Progress, changes to the Measures Reporting Plan are usually initiated and made by EPA Measure Leads. While changes to Spreadsheet Guidance are made by the EAGL System Administrator, Data System Sponsors all work together to identify necessary revisions to Spreadsheet Guidance. The GLNPO Reporting Coordinator oversees and reviews these changes to ensure that changes are made so as to maintain consistency of reporting for the GLRI.

For the convenience of EAGL users, changes are summarized in the "Summary of Changes" section in the Measures Reporting Plan, noted in the introductory "Basic Instructions" section of Spreadsheet Guidance, and are communicated in EAGL Training Webinars that are hosted by the EAGL System Administrator in anticipation of the next EAGL Data Call.

As changes to EAGL Reporting Guidance is finalized, the EAGL System Administrator posts the final updated versions to EAGL. The GLNPO Reporting Coordinator emails RWG Data Contacts, copying the RWG, to inform them when the updated guidance is posted to EAGL.

Prior posted versions of the Measures Reporting Plan are stored in the EAGL System Administrator's files for reference when conducting system-wide audits.

E.vi. System Auditing Procedures
As the EAGL Information System data sponsors, USEPA will conduct annual system-wide audits beginning in FY2017. These system-wide audits will assess Project Results Data fields (see III.D.iii EAGL Information System Spreadsheet Data Fields) relevant to tracking the 10 *Action Plan II* Measures of Progress with annual targets. This includes submitted Project Results Data relevant to tracking the 10 Measures of Progress with annual targets. These 10 Measures of Progress are:

- Measure 1.1.1 – Areas of Concern where all management actions necessary for delisting have been implemented (cumulative)
- Measure 1.1.2 – Areas of Concern Beneficial Use Impairments removed (cumulative)

- Measure 2.1.1 – Number of GLRI-funded great Lakes rapid responses or exercises conducted
- Measure 2.2.1 – Number of aquatic/terrestrial acres controlled by GLRI-funded projects
- Measure 3.1.1 – Projected phosphorus reductions from GLRI-funded projects in targeted watersheds (measured in pounds)
- Measure 3.2.1 – Projected volume of untreated urban runoff captured or treated by GLRI-funded projects (measured in millions of gallons)
- Measure 4.1.1 – Number of miles of Great Lakes tributaries reopened by GLRI-funded projects
- Measure 4.1.2 – Number of miles of Great Lakes shoreline and riparian corridors protected, restored and enhanced by GLRI-funded projects
- Measure 4.1.3 – Number of acres of Great Lakes coastal wetlands protected, restored and enhanced by GLRI-funded projects
- Measure 4.1.4 – Number of acres of other habitats in the Great Lakes basin protected, restored and enhanced by GLRI-funded projects

The GLRI relies on the data owners − RWG agencies − to audit all data fields for data the RWG agency has submitted to the EAGL Information System. This includes any data fields not assessed by USEPA-directed system-wide audits (such as Project Identification Data Fields, Program Management Data Fields, Supplemental Project Results Data Fields, and Project Results Data Fields relevant to tracking *Action Plan II* Measures of Progress with no annual targets, as specified in III.D.iii EAGL Information System Spreadsheet Data Fields) This also includes any data fields that are assessed by USEPA-directed system-wide audits (Project Results Data for tracking *Action Plan II* Measures of Progress with annual targets, as specified in III.D.iii EAGL Information System Spreadsheet Data Fields). As a part of this internal audit, data owners are also responsible for revising the internal systems and procedures they use to complete data entry into EAGL Information System Spreadsheets in order to address any sources of errors affecting data quality.

EAGL System-Wide Audit Framework

The purpose of the EAGL system-wide audit is to assess the accuracy, completeness, consistency, and currency (respective to the Data Call for which the results were submitted) of reported results for each audited Measure of Progress. The periodic system-wide audits help to identify sources of error in order to implement systematic and procedural changes that improve the data quality of future results. The audit is considered "system-wide" because as opposed to internal audits conducted by RWG agencies on data they submit to EAGL, the system-wide audit reviews data submitted by all RWG agencies.

The system-wide audit assesses whether stored records and documentation justify the submitted result and whether the reported result meets Measure of Progress definitions. RWG agencies are responsible for storing all records and documentation used to support results the agency submits to EAGL. Data is reviewed for its compliance with the reporting guidance and Measure of Progress definitions available at the time the data was submitted to EAGL.

GLNPO conducts system-wide audits of EAGL data annually. Audits will be conducted so that over a two year period, reported results from all projects would potentially be subject to audit. To minimize the workload on RWG agencies, approximately half of them will be selected for audit each year. The initial schedule is summarized in the table below.

FY of the Audit	FY in which Data is Reported	Data Owner
2017	2016	EPA, ACE, APHIS, USFS, NOAA
2018	2016 & 2017	USFWS, BIA, NPS, NRCS, FHWA
2019	2017 & 2018	EPA, ACE, APHIS, USFS, NOAA
2020	2018 & 2019	USFWS, BIA, NPS, NRCS, FHWA

FY of the Audit: This column refers to the fiscal year that the system-wide audit is initiated. The audit is initiated in the second half of the year listed. This allows sufficient time to ensure data transformation processes for the previous year are completed before the audit is initiated. (Data transformation processes are dependent on accurate, complete, current, and consistent data submitted by RWG Agencies. The lag provides time for late or revised submissions.)

FY in which Data is Reported: This column identifies the fiscal year of the reporting periods for which data has been submitted on EAGL Spreadsheets (see III.C.vi EAGL Information System Spreadsheet File Codes). Since FY15 was the first year for utilizing EAGL, EPA monitored, reviewed, and identified errors and corrections to the data owners in real time. Beginning in FY2018, data reported in the previous two FY's will be reviewed. For example, in FY2018, GLNPO will audit the Primary, Secondary, and Tertiary Measures and associated Project Results Data Fields for information reported for the reporting periods of:

- 10/1/2015 - 3/31/2016

- 4/1/2016 – 9/30/2016

- 10/1/2016 – 3/31/2017

- 3/31/2017 – 9/30/2017

Data Owner: This column specifies the RWG Agencies subject to audit in the respective FY's. Auditing of the Project Results Data Fields relevant to tracking the 10 *Action Plan II* Measures of Progress with annual targets is conducted on a 2-year cycle, with RWG Agencies subject to audit every other year. After reporting commences on projects by RWG Agencies not listed in the table (USCG, USGS, MARAD, ATSDR, and CDC) for the measures with annual targets, these Agencies will also be included in the audit process.

Results contributing to the annual target are reported at the project-level for eight measures (2.1.1, 2.2.1, 3.1.1., 3.2.1, 4.1.1, 4.1.2, 4.1.3, and 4.1.4), meaning that RWG Agencies report results respective to each record of a GLRI-funded project in EAGL that achieved a contributing result. To conduct the audit, **10%** of the projects associated with results for these measures from each applicable data owner in each FY spreadsheet are audited according to the schedule above. Projects are selected randomly to create a representative sample.

Measures 1.1.1 and 1.1.2 are tracked at the program-level. This means that a discrete result contributing to the annual target reflects the results from many contributing projects, and cannot be attributed to any single record of a GLRI-funded project. Rather, the result corresponds to the fiscal year in which the result was achieved, and is reported solely by the EPA in the "General Measures" section of the USEPA EAGL subsite. To conduct the audit, 100% of projects associated with the results for these measures from each applicable data owner are audited according to the schedule above.

Actions taken to address sources of error identified in the system-wide audit are determined after the audit is concluded. RWG Agencies will be involved in the providing input and advice to improve the audit process. The determined course of action is dependent on the results of the audit. Actions USEPA may take include, but are not limited to:

- Providing RWG Agencies with specific recommendations to improve the Agencies' reporting systems and procedures
- Requesting RWG Agencies to conduct an internal audit on 100% of their data to assess the complete reliability of reported results
- Improving and/or expanding EAGL reporting guidance
  Changing roles, responsibilities, and procedures

F. Appendices
F.i. Measures Reporting Plan

Great Lakes Restoration Initiative

Action Plan II Measures Reporting Plan

September 27, 2016

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F.ii. Spreadsheet Guidance

Spreadsheet Guidance

Basic Instructions

1. Navigate to your agency's sub-site. To do so, click on the link to your agency's sub-site from the list down the left side of the EAGL homepage.

2. Download a copy of your spreadsheet. The correct spreadsheet should be the most recent spreadsheet uploaded by the EAGL System Administrator (Ken Klewin). See the How-To Guide if you don't know how to download the file.

3. Find the downloaded file on your computer and open the file in Excel (any version from 2007 on). The file has macros, so click the "enable" button if it appears.

4. Verify that project lines are accurately sorted between the "PROJECTS with AP2 results" tab and the "other projects" tab (see "2 Tabs" section below for sorting rules).

5. Verify that basic project information in columns B – M is complete and accurate for all project lines on both tabs. See "Column Explanations" section below for column definitions. All information in columns B- M on both tabs will be made available to the Public on GLRI.us.

6. On the "PROJECTS with AP2 results" tab, update the "Status," "Watersheds, and "Tribal Nexus" columns. See "Column Explanations" below for column definitions and rules for assigning status, watersheds, and a tribal nexus. The "Template" column is optional.

7. On the "PROJECTS with AP2 results" tab, select a "Primary Measure" from the drop-down list and the corresponding result achieved in the current 6-month Reporting Period, the expected total result upon completion of the project, and all applicable Keywords. The Primary Measure should be from the Focus Area the project was funded through.

Following is a summary of key changes to completing the "PROJECTS with AP2 results" tab:

- The list of available Keywords has been expanded since end-of-FY15 reporting.
- The "Cumulative results" reporting field automatically sums the results from all Reporting Periods.
- Columns for past 6-month Reporting Periods are visible, but locked. If you need to make changes to past results, contact the appropriate EPA Measure Lead and in EAGL in the respective comment field, include a comment that a revision must be made. .

Because these changes may be confusing, it is especially important to read the "Column Explanations" section below for definitions for these columns.

All submitted results must be in accordance with the Measures Reporting Plan. Each RWG agency is responsible for verifying all data they submit, and storing all documentation used to support submitted results.

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