

GLATOS WEB Data Portal

User Manual

Draft Version 20161021

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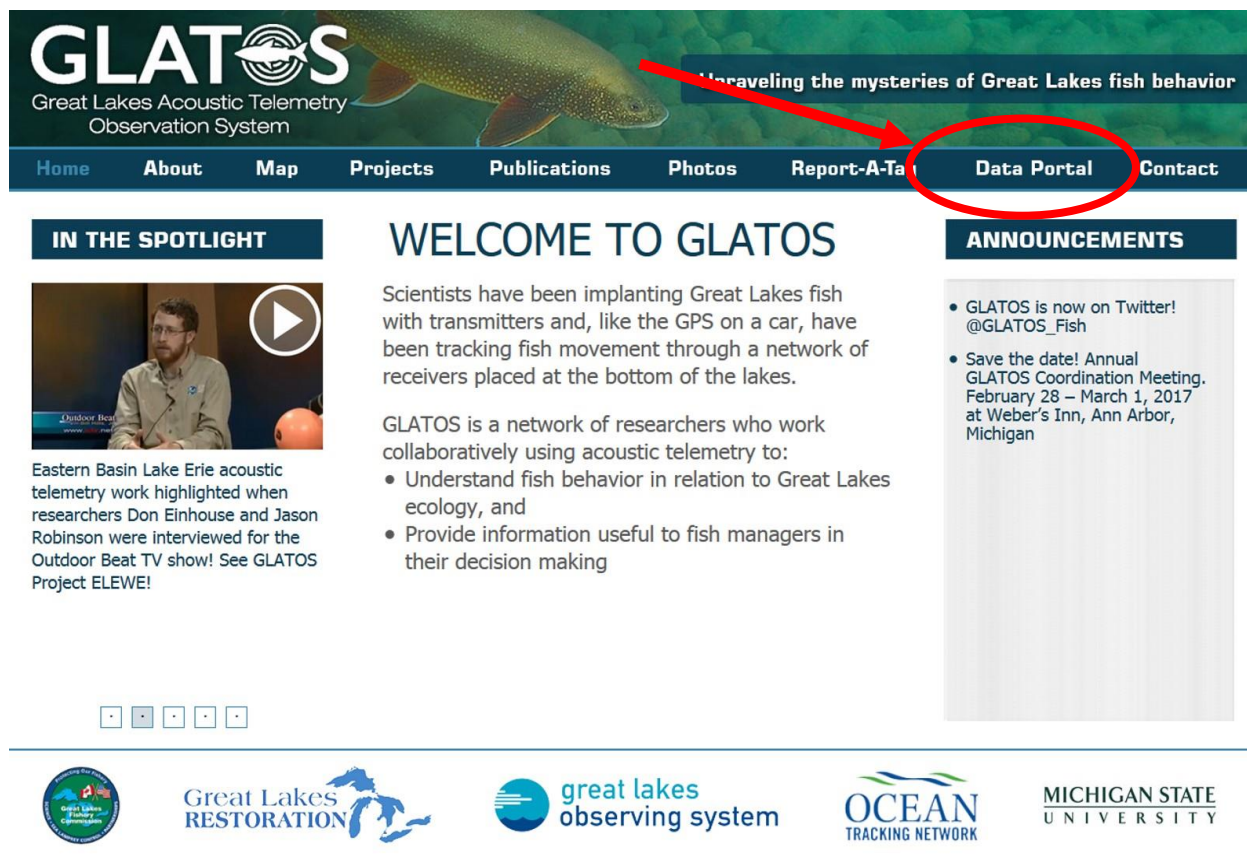
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Data Portal

The GLATOS Data Portal is the gateway for GLATOS members to access data and information such as archived data submissions and exports, project descriptions, general information, GLATOS network status, and tools.



GLATOS
Great Lakes Acoustic Telemetry
Observation System

Unraveling the mysteries of Great Lakes fish behavior

[Home](#) [About](#) [Map](#) [Projects](#) [Publications](#) [Photos](#) [Report-A-Tag](#) [Data Portal](#) [Contact](#)

IN THE SPOTLIGHT



Eastern Basin Lake Erie acoustic telemetry work highlighted when researchers Don Einhouse and Jason Robinson were interviewed for the Outdoor Beat TV show! See GLATOS Project ELEWE!

WELCOME TO GLATOS

Scientists have been implanting Great Lakes fish with transmitters and, like the GPS on a car, have been tracking fish movement through a network of receivers placed at the bottom of the lakes.

GLATOS is a network of researchers who work collaboratively using acoustic telemetry to:

- Understand fish behavior in relation to Great Lakes ecology, and
- Provide information useful to fish managers in their decision making

ANNOUNCEMENTS

- GLATOS is now on Twitter! @GLATOS_Fish
- Save the date! Annual GLATOS Coordination Meeting. February 28 – March 1, 2017 at Weber's Inn, Ann Arbor, Michigan

Great Lakes RESTORATION

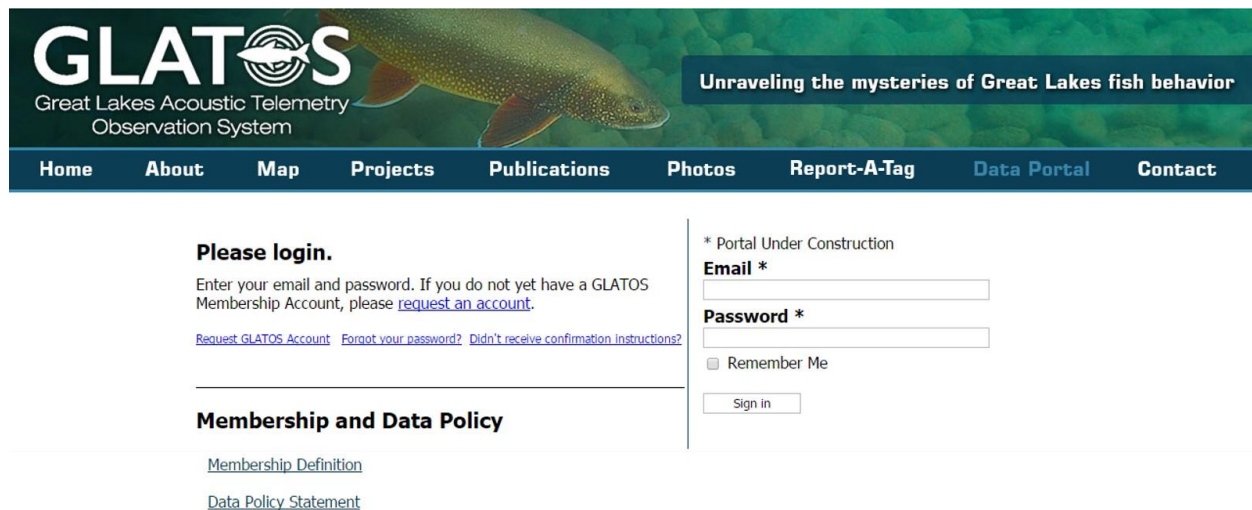
great lakes observing system

OCEAN TRACKING NETWORK

MICHIGAN STATE UNIVERSITY

Clicking on the Data Portal link on the main menu opens a log on screen. Enter your GLATOS credentials to log in. If you do not have a GLATOS account, you can request an account from this screen.

Data Portal Log On Screen



The screenshot shows the GLATOS Data Portal Log On screen. At the top is a banner with the GLATOS logo (Great Lakes Acoustic Telemetry Observation System) and a fish. To the right of the logo is the tagline "Unraveling the mysteries of Great Lakes fish behavior". Below the banner is a navigation menu with links: Home, About, Map, Projects, Publications, Photos, Report-A-Tag, Data Portal (highlighted), and Contact.

Please login.
Enter your email and password. If you do not yet have a GLATOS Membership Account, please [request an account](#).
[Request GLATOS Account](#) [Forgot your password?](#) [Didn't receive confirmation instructions?](#)

Membership and Data Policy
[Membership Definition](#)
[Data Policy Statement](#)

* Portal Under Construction
Email *

Password *

☐ Remember Me

Request a GLATOS Account

The first step to becoming a member is to click on the [Request GLATOS Account](#) link on the Data Portal Log On page. Enter the information on the Sign Up form, and click the “sign up” button to submit your request for a GLATOS account. Note the GLATOS password needs to be a minimum of 8 characters long. Your account request will be reviewed by GLATOS administrators and you will receive a confirmation e-mail once your membership is approved.



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Sign up

First Name*

Last Name*

Email*

Organization*

Password*

Password confirmation

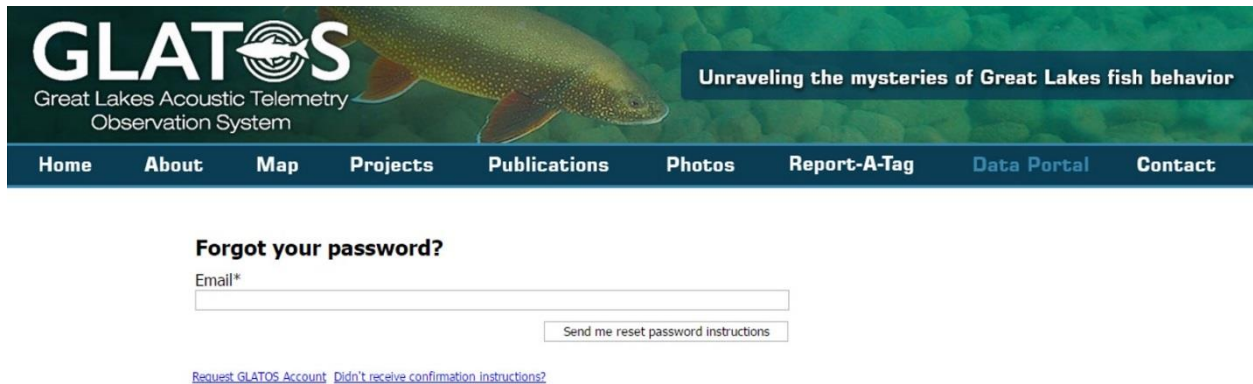
[Forgot your password?](#) [Didn't receive confirmation instructions?](#)

Membership is granted to any individual serving as a principal Investigator (PI) or as a co-principal investigator of a past, on-going, or future acoustic telemetry project focused in the Laurentian Great Lakes, their connecting waters, or Lake Champlain who plans to contribute or access detection data.

Criteria for Granting Membership: Evidence of active [telemetry] research activity through affiliation with a university, government agency, or environmental consulting business (e.g., email address such as *.gov, agency website personnel listing, telemetry project proposal).

Forgot Your Password

Click on the [Forgot your Password?](#) link at the Log On screen to open a form to submit your e-mail and receive instructions for resetting your password.



The screenshot shows the GLATOS website header with the logo and navigation menu. Below the header is a form titled "Forgot your password?". The form includes an "Email*" input field and a "Send me reset password instructions" button. At the bottom of the form, there are two links: "Request GLATOS Account" and "Didn't receive confirmation instructions?".

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Forgot your password?

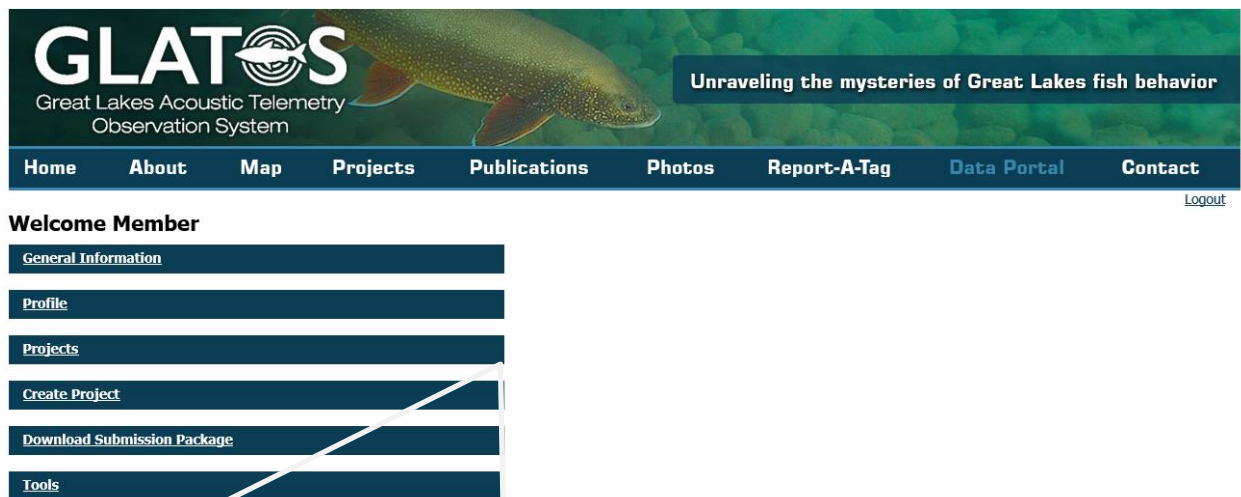
Email*

[Request GLATOS Account](#) [Didn't receive confirmation instructions?](#)

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Data Portal Menu for Members

A successful log in to the Data Portal presents a menu of options accessible only to members and customized to the member who is logged in.



Welcome Member

[General Information](#)

[Profile](#)

[Projects](#)

[Create Project](#)

[Download Submission Package](#)

[Tools](#)

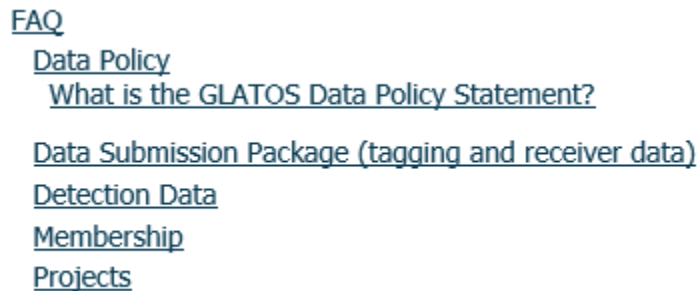
General Information

The General Information menu provides useful information to all members (across all projects), such as answers to frequently asked questions, tag search, receiver location lists, station status plots, a user manual, and a document archive.



Frequently Asked Questions

The frequently asked questions are organized by topic. Click on each topic to expand questions.



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Tag Search

Search to locate the owner of mystery tags by querying the GLATOS database. Search results may be viewed on screen or exported. Code space and ID are required for each tag, as shown below. The entry box will accept several multiple tags at once, so you can simply paste a block of tag numbers from excel or a text editor. If more than one match is found for a tag in the GLATOS database (i.e., tag was used more than once), then only the most recent (active) release event will be returned.

[Tag Search](#)

A69-1601-15060
A69-1601-50484
A69-9002-71694
A69-9002-72404

10 results per page

search

Enter the Tag Code Space combined with a – and the Tag ID Code on separate lines to search.

Example:

A69-1601-15060

A69-1601-15061

Results export buttons

Copy CSV / Excel

Code Space	ID Code	Project	Title	Common Name	Release Location	Investigator	Project Page
A69-1601	15060	HECSL	Huron Erie Corridor Sea Lamprey Pilot Study	sea lamprey	Detroit River	Christopher Holbrook	Link
A69-1601	50484	Not found					
A69-9002	71694	Not found					
A69-9002	72404	Not found					

Search results

Link to project page

GLATOS Network Status

Select a file to download most recent receiver locations and station status plot. The receiver locations file contains receiver station data (deployment and recovery location, date, and time). The station status plot shows when (by day) a receiver was deployed at a given station and if the data have been loaded to the GLATOS database.

Network Status

 [Receiver Locations](#)

 [Station Status Plot](#)

Network status files
download links

User Manual

Click on the User Manual link to open up and download the user manual.

Document Archive

The document archive contains documents and files of general interest to GLATOS members.

Document Archive

May/30/2016  [GLATOS-NewPike.jpg](#)

May/27/2016  [GLATOS lookup20160329.xlsx](#)

May/27/2016  [may152016.docx](#)

Archive files uploaded by
GLATOS Administrators

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Profile

The Profile tab within the Member's Menu contains a form to update contact information, affiliation, e-mail address and password. Navigate to the Profile menu, update the information, and click the Update button. Once the information has been updated, you should see a "complete" message on the form to the left of the update button.

The screenshot shows a web form titled "Profile" in a dark blue header. The form contains two rows of input fields. The first row has fields for "First Name" (containing "Member"), "Last Name" (containing "Lastname"), "Email" (containing "member@member.com"), "Organization" (containing "ORG"), and "Password" (containing "password"). The second row has fields for "Address" (containing "3230 Range road"), "City" (containing "Mycity"), "State" (containing "CA"), and "Zip" (containing "123456"). To the right of these fields is an "Update" button. Two callout boxes are present: one pointing to the top of the form with the text "Your profile information section", and another pointing to the "Update" button with the text "Update profile button".

First Name	Last Name	Email	Organization	Password
Member	Lastname	member@member.com	ORG	password
Address	City	State	Zip	
3230 Range road	Mycity	CA	123456	

Update

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Projects

Click on the Projects link to display a custom list of projects specific the member logged into the system at the time. The Projects list includes all projects associated with the member, including projects where the member is the principal investigator as well as projects where the member is authorized to upload data, update project information, or access exports for another member's project (i.e., an "[Associated User](#)" on another project). The [GLATOS Data Policy Statement](#) states: "Each principal investigator (member) determines who can access their project's detailed biological tagging data and subsequent detections of those tagged fish, consistent with their own agency or funding source policy."

The screenshot shows the GLATOS website interface. At the top is a banner with the GLATOS logo (Great Lakes Acoustic Telemetry Observation System) and a fish. Below the banner is a navigation bar with links: Home, About, Map, Projects, Publications, Photos, Report-A-Tag, Data Portal, and Contact. A 'Logout' link is in the top right corner. The main content area shows a welcome message 'Welcome Christopher' and three tabs: 'General Information', 'Profile', and 'Projects'. The 'Projects' tab is selected, displaying a list of projects: 'HECSL Huron Erie Corridor Sea Lamprey', 'LEPSL Lake Erie Parasitic Sea Lamprey', 'SMRSL St Marys River Sea Lamprey Migration', '(Associated User) HECST Lake Sturgeon Metapopulation Structure', and '(Associated User) TTEST test'. Two callout boxes provide additional context: one points to the 'Projects' tab and explains that it shows projects created by the logged-in user, and another points to the '(Associated User)' projects, explaining that these are projects where the logged-in member is not the principal investigator but has some level of data access.

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Logout

Welcome Christopher

General Information

Profile

Projects

HECSL Huron Erie Corridor Sea Lamprey

LEPSL Lake Erie Parasitic Sea Lamprey

SMRSL St Marys River Sea Lamprey Migration

(Associated User) HECST Lake Sturgeon Metapopulation Structure

(Associated User) TTEST test

Projects created by the person logged in.

(Associated User) projects are projects where the logged in member is not the principal investigator, but has some level of data access. Data access can include access to edit Project Detail, submit data, or receive exports, all or any combination of these privileges.

Member's Project List

Click on an individual project link in the custom list to expand tabs to update the project web page, submit data, or access data exports for that project. For “Data Projects” where the member logged in is an associated user, tabs will only be visible according to the level of permission to access that feature (e.g., if a person only has permission to export data on a project, the Data Exports tab will be the only visible tab).

Projects

[HECSL Huron Erie Corridor Sea Lamprey](#)
[LEPSL Lake Erie Parasitic Sea Lamprey](#)
[SMRSL St Marys River Sea Lamprey Migration](#)

Project Detail **Data Submission** **Data Exports**

You must use the Data Submission Package to submit tagging and receiver data. The Data Submission Package may be downloaded [here](#).

The uploaded file should have the extension zip and be the result of clicking on the **Create Submission Package** button in **GLATOSWeb_DataForms.xlsm**.

To submit detection data, select the Submission Type: Detections from the pulldown menu, then upload your *.vrl files. Detection files must be unprocessed, straight-from-the-receiver files with a *.vrl extension".

Click browse to select single or multiple files in the file window to upload.

Submission Type:

No files selected.

[Past Data Submissions](#)

(Associated User) [HECST Lake Sturgeon Metapopulation Structure](#)
(Associated User) [TTEST test](#)

Project Detail - Project Web Page

Project Detail **Data Submission** **Data Exports**

The Project Detail tab opens a web form to populate the project's web page (<http://data.glos.us/glatos/projects>), as well as to authorize other GLATOS members to edit project web

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pages, submit data, or access data as [Associated Users](#) on a project. For new projects, the basic information (i.e., project code, short title, long title, region, begin date, end date, and status) is already populated on the Project Detail form from information entered in the [Create Project](#) data input form.

Enter or update information on this form at any time. To create bulleted lists in certain areas (e.g., Objectives), enter the first bullet, then click Add.

Always click the **Update Project** button (lower right) to commit updates to the database and website.

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Project Detail form

Project Code	EEEE		
Short Title	My project		
Long Title	My title goes here		
Description	A description of this project		
Begin Date	04/30/2016		
End Date	05/31/2016		
Region(s)	• St. Marys River Lake Superior		Delete Add
Status	Proposed		
Species	American eel		Add
Objectives	• Sample list item		Delete Add
Benefits			Add
Organizations			Add
Funding			Add
PI	Member		
Investigators			Add
Publications			Add
URL			
Associated Users			Add
Video URL			

Area to create bulleted items – click on the Add button to add each item.

Associated Users: Type an e-mail address of a GLATOS member to authorize privileges to edit project details, submit data, or access exports. Any or all privileges may be selected. Associated users must be members of GLATOS.

Associated Users

Associated Users are GLATOS members who are not the principal investigator on a specific project, but who are authorized by the PI to edit project web page details, submit data, or access data exports. To add an Associated User to a project:

1. Open the Project Detail data input form.
2. Begin typing the email address of the Associated User you would like to add. As you type, possible matches will appear. Select the email address of the Associated User you wish to add from the list. If no match is found, then check that the person is a member and that the email address is the one they used to register.
3. Specify the level of access for the new member by checking the appropriate box. Any or all privileges may be selected.
4. Click the green 'Update Project' button (bottom right) to apply changes.

The screenshot displays the 'Associated Users' management interface. It features a list of users on the left and their access permissions on the right. The first user, cholbrook@usgs.gov, has 'Project Detail' and 'Data Submission' permissions unchecked, while 'Data Exports' is checked. The second user, nnate@usgs.gov, has all three permissions checked. Each user entry has a red 'Delete' link to its right.

Associated Users	Allowed Sections	Delete
• cholbrook@usgs.gov	☐ Project Detail ☐ Data Submission ☒ Data Exports	Delete
• nnate@usgs.gov	☒ Project Detail ☒ Data Submission ☒ Data Exports	Delete

An associated user must be a member of GLATOS. If an e-mail address is entered for a person who is not yet a GLATOS member, or if the e-mail address entered does not match the

e-mail used by an existing member (as part of their GLATOS log in credentials), the following error message will appear:

“The page was not displayed because there was a conflict.”

Non-members can [Request a GLATOS account](#) to become a member, or contact the existing GLATOS member to confirm the correct e-mail address associated with their GLATOS account.

Associated Users on a specific project may be removed at any time by clicking on the **Delete** button to the right of the checkbox, then click on **Update Project** (bottom right).

Photo Section-Upload up to five images.

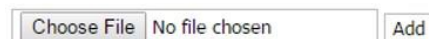
1. Click on the Choose File button and navigate to the image file to upload. Select the image, and click Add.
2. Move to the next photo input box to add another photo.
3. When you are done adding photos, click on the **Update Project** to save your updates.
4. Delete photos by clicking on the Delete link (upper right corner of image). Click on the **Update Project** button to save changes.

Second Image

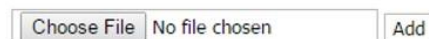


Browse local computer to select image file for upload. Click Add.

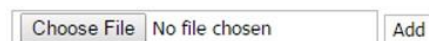
Third Image



Forth Image



Fifth Image



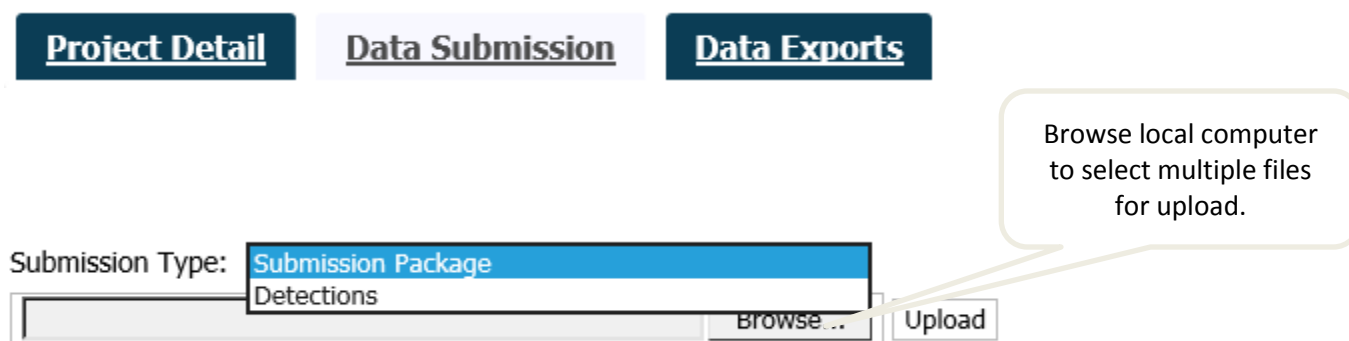
Update Project

Click on the Update Project button to save all changes to the Project Detail form.

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Data Submission

Clicking on the Data Submission tab opens the interface for submitting tagging and receiver metadata (i.e., tagging and receiver deployment and recovery details) in the standard [Data Submission Package](#) as well as detection VRL files.



The screenshot shows the 'Data Submission' tab selected among three tabs: 'Project Detail', 'Data Submission', and 'Data Exports'. Below the tabs, the 'Submission Type' dropdown menu is open, showing 'Submission Package' (highlighted in blue) and 'Detections'. To the right of the dropdown is a 'Browse...' button, and further right is an 'Upload' button. A yellow callout box with an arrow pointing to the 'Browse...' button contains the text: 'Browse local computer to select multiple files for upload.'

To upload data:

1. Select the submission type from the pulldown menu (Submission Package or Detections)
2. Browse local computer to select the file, and click the upload button. A message will appear below Browse button to indicate the progress of the upload.
3. Once files are uploaded, they appear under the [Past Data Submissions](#) link.

Uploaded files will be stored under a batch folder reflecting the date the files were uploaded (format yyyyymmdd). The data files stored on the GLATOS website are only accessible to the principal investigator or a designated associated user.

If Submission Package is selected: Only zipped excel workbook files created by running the zip workbook macro in the workbook should be uploaded.

If Detections are selected: Only unprocessed detection VRL files should be uploaded. Unprocessed means files with *.vrl extension that come directly from the receiver. Files should NOT be processed through the VEMCO VUE software (e.g., for time-correction) or exported as *.csv. *.vrl files containing “RLD” (Vemco Raw Log) in the file name should also NOT be uploaded.

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Past Data Submissions

Expand the link called “Past Data Submissions” to view files that have been uploaded for a particular project.

Project Detail **Data Submission** **Data Exports**

You must use the Data Submission Package to submit tagging and receiver data. The Data Submission Package may be downloaded [here](#).
The uploaded file should have the extension zip and be the result of clicking on the **Create Submission Package** button in **GLATOSWeb_DataForms.xlsm**.
To submit detection data, select the Submission Type: Detections from the pulldown menu, then upload your *.vrl files. Detection files must be unprocessed, straight-from-the-receiver files with a *.vrl extension".
Click browse to select single or multiple files in the file window to upload.

Submission Type: Detections
Browse... 124 files selected. Upload

Past Data Submissions

[Workbooks Submitted \(1\)](#)
[20161017](#)

File Uploaded	Name
10-17-2016 01:56 PM	LNRLS_GLATOS_20160926.xlsm.zip

[Detections Submitted \(124\)](#)
[20161017 \(124\)](#)

File Uploaded	Name
10-17-2016 01:59 PM	VR2W_106323_20151015_1.vrl
10-17-2016 01:59 PM	VR2W_109442_20150701_1.vrl
10-17-2016 01:59 PM	VR2W_109450_20150908_1.vrl
10-17-2016 01:59 PM	VR2W_109470_20150701_1.vrl
10-17-2016 01:59 PM	VR2W_109481_20150508_1.vrl

Expandable data submissions archive

Clickable link to download archived submission

Data Processing

Once data are submitted to the GLATOS website for a particular project, an e-mail will be sent to the member as well as to GLATOS administrators, confirming the upload. Administrators will retrieve data from the website and load data into the local GLATOSLink database (at Hammond Bay Biological Station). If an incoming VRL file from a specific project has already been uploaded into the GLATOSLink database, this file is skipped (not reloaded) during the upload process.

Steps during data processing and querying:

1. Timestamps are converted to UTC.
2. The variable, `min_lag` is calculated to facilitate false-positive filtering as the minimum difference in time between each detection and the next closest detection of that same transmitter on the same receiver (Pincock 2012 – Vemco Technical Note). Note that `min_lag` will be blank if a tag id code was only detected once on a given receiver.
3. Each detection of tag X is matched to fish Y only if the detection occurred between release and recovery of fish Y (or simply after release if fish was not recovered).
4. Each detection on receiver X is matched to station Y only if the detection occurred between deployment and recovery of receiver X at station Y.
5. All errors and conflicts are identified and resolved before export queries are executed.

Data Exports

Once the receiver metadata and detection data are loaded into the GLATOSLink database, the entire database is queried for detections of tagged fish for each project. Once the detection query is complete, a standard export package (SDEP) is then uploaded to the Data Exports folder for that project and may be downloaded by the member or their designee at any time. The SDEP includes a list of *.vrls received for that project, a station status plot, a list of receiver stations in the entire database, and the detections of fish from that project (queried across all receivers in the database). If custom queries are requested (e.g., for test tags, or tags not contained in a workbook), the results will also be posted in the Data Exports, Custom Queries link.



The map of receiver locations on the GLATOS website and the tag search database are updated after data from each new workbook is loaded into the GLATOSLink database and all errors have been resolved.

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Create Project

Create Project

New project

Project Code	
Short Title	
Long Title	
Region(s)	Select Region(s)
Begin Date	
End Date	
Status	▼

Create

Definitions

Project Code: 5 alpha characters for project code, typically a combination of location + species letters (e.g., St. Mary's River Sea Lamprey = SMRSL)

Short title: defines the GLATOS Project Code (e.g., LEPSL short title is 'Lake Erie Parasitic Sea Lamprey')

Long title: is more descriptive of the project (e.g., 'Testing assumptions required to estimate lake-wide parasitic sea lamprey abundance')

Region: select one or more regions that describe the project location. Regions are used to organize the project pages on the website.

All fields in the Create Projects form are mandatory. Complete the form, then select “Create” to add a project to GLATOS. The Project Code created must be unique in GLATOS. Entering a

project code that is already in use will result in an error message “code in use”. GLATOS administrators are notified when new projects are created or project details on the website are updated.

Download Data Submission Package

The Data Submission Package contains 1) an Excel workbook template for entering tagging and receiver deployment and recovery information, 2) a copy of the data definitions used in GLATOS, 3) instructions for completing the Excel workbook, and 4) instructions on using the GLATOS website. The package of files may be downloaded using the link on the website.

Download Submission Package

 [GLATOSWeb Submission Package.zip](#)

Link to download current
submission package

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Tools

Links to tools for study design, processing or visualizing acoustic telemetry data, or other purposes will be posted in this part of the website. Please email the administrator to request that any tools be added.

Tools

[Vemco Collision Calculator](#)

[Vemco Detection Range Estimator](#)

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Data Policy Statement

GLATOS is a collaborative network for the exchange of data owned by individual members. Each principal investigator (member) determines who can access their project's detailed biological tagging data and subsequent detections of those tagged fish, consistent with their own agency or funding source policy. To facilitate collaboration and planning, receiver locations and dates of operation are available to all members. Non-members do not have access to data. See Frequently Asked Questions inside the Data Portal for more information about the GLATOS data system.

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