

EDDMapS Midwest User Guide

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The Minnesota Department of Natural Resources (DNR) began using EDDMapS Midwest as the primary platform for reporting and mapping aquatic invasive species (AIS) and infested waters in 2016. EDDMapS Midwest is available on a web browser at <http://www.eddmaps.org/midwest/> and a mobile interface is also available under the name “GLEDN” (Great Lakes Early Detection Network); links to download the mobile app

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are available here: <http://apps.bugwood.org/apps/gledn/>. EDDMapS is short for “Early Detection and Distribution Mapping System”.

How to use this guide

This guide was last updated June 6, 2017.

This guide was developed for DNR staff, interns and volunteers who are using EDDMapS Midwest to report, review or verify aquatic invasive species records.

This guide may be used by people outside the DNR but some guidance may not be applicable outside DNR.

In this guide, unless reference is being made specifically to the GLEDN app, references to EDDMapS should be considered to apply to the whole EDDMapS Midwest and GLEDN system.

Registering for EDDMapS

Anyone can sign up for EDDMapS. We recommend that DNR staff use their state email addresses as their usernames and choose a password that is different from the password you use for other state applications or log-ins.

If you create an EDDMapS account, you can (and in most cases, should) use that same login information for both the web-based and app interfaces. You can register for a new account using the online EDDMapS interface (<http://www.eddmaps.org/midwest/index.cfm?freg>) or the GLEDN app.

Identify your user group

When you register, answer “No” (default on drop down menu) to the question “Are you a First detector?” ([University of Minnesota AIS Detectors](#) will select “Yes”).

Under “User Group”, do select “Minnesota DNR – Ecological & Water Resources” (or another Division or affiliation if that’s more appropriate).

Entering reports into EDDMapS

Review [EDDMapS Midwest Training Using the Website](#).

When you enter a report into EDDMapS, complete as many fields as possible, and you must fill in the red fields which are required. Some of the fields in the EDDMapS record entry form may not apply to aquatic invasive species, such as “Canopy Closure” (which appears for plant records) - you can ignore these.

If you plan to use the GLEDN app on a mobile device, review this training PowerPoint: [EDDMapS Midwest Training Smartphone App](#).

Guidelines for creating a new record

EDDMapS records are public, so once the record is verified and released the content of your record becomes the official story of this aquatic invasive species discovery. Following are some guidelines for certain sections of the record.

- Location:
 - Identify the state and county using the drop-down menus. In most cases, you do not need to fill out the “Site Name” field.
 - Using the web browser interface, you can use the interactive map to select a location on the map, or you can enter a latitude and longitude. If you are using GLEDN on a mobile device with GPS, the device can automatically drop a point at its location.
 - EDDMapS Midwest will use the point location that you identify to associate the location with a lake name and DOW number. If the point is not within the outline of the water body (using DNR’s Hydrography GIS data, not the Google maps background layer), EDDMapS will not be able to associate the record with the correct water body. Therefore, whether you are using the web browser or mobile app to enter a new record, you may need to move the point to ensure that it is well within the lake.
 - Be sensitive to people’s privacy. If you confirm a new aquatic invasive species on someone’s dock or lift, for example, consider moving the point to an area away from the individual’s property. Because anyone can access EDDMapS Midwest, we don’t want individual property owners to be easily identifiable as the first known record of an aquatic invasive species in a particular lake. If the aquatic invasive species was confirmed on public property, such as an access point, you can use the exact location.
 - If you do use a location that is not exactly where you confirmed the aquatic invasive species, you can make a note in the “Comments” field that “Location is approximate.” You can also drop a point in the middle of a water body and include text in the “Comments” field such as the text we used for points generated from the infested waters polygons: “This point observation was generated from the Minnesota Department of Natural Resources infested waters list and may not reflect the actual location that this species was found within the lake, river or stream. This point only indicates that the species was confirmed somewhere within this water body.”
 - For the “Location Description/Nearest Address” field you may include more description about the location if it may not be obvious from the point you chose; for example, “At the public access on Lake X”. Alternatively, you can include more detail about where you found the species in the “Comments” field.
 - In most cases, you will choose “Public Water” from the drop down menu for “Ownership”.
- Images:

- Include clear photos of the species and/or the site and name them with descriptive captions.
- If you took the photo, list your name and affiliation (Minnesota Department of Natural Resources) in the “Photo by” field. If you did not take the photo ensure that you have permission to use the photo, and find out if the person who did take the photo wants to be credited with his/her name and/or affiliation.
- Additional Information:
 - The “Comments” field is a good place to tell the story of the record. Think of this as a brief, one-paragraph news release. Whenever possible, use the active voice and plain language principles. Include information on:
 - Who discovered or reported the occurrence? Examples might include “an AIS Detector”, “a lakeshore property owner”, “a licensed lake service provider business”, or “a swimmer”. Don’t use names of individuals unless they have granted permission to have their names used in the record.
 - Who visited the site and confirmed the occurrence? For example, you might say, “DNR invasive species and Fisheries staff worked with county AIS staff to search the area and confirmed...” or “DNR invasive species specialist confirmed...”. Use the active voice. Again, for others who are not DNR employees, don’t use individuals’ names unless they have given you permission. Include information about how much of the area was searched and how many people searched for how long, if relevant.
 - What did you find? For example, “DNR staff found two live, adult zebra mussels attached to a dock at a private residence” (see note above regarding precisely identifying locations of records on private property), or “DNR Fisheries staff captured two live red swamp crayfish during survey work”. Be descriptive about the number and type of specimens you confirmed.
 - What did you do? For example, “The live specimens have been removed and DNR fisheries staff are searching the lake to see if there are others”, “DNR staff removed and disposed of the zebra mussels that we found”.
 - What do we plan to do next? For example, “DNR fisheries staff will continue to search the lake for additional red swamp crayfish”, or “DNR staff removed java water dropwort from the small pond and will monitor and contain the remaining plants”. If we are not planning any follow-up actions, it is not necessary to mention anything.

Editing or revisiting your reports

Review [EDDMapS Midwest Training Revisits and Edits](#). In general, you would “Edit” a report if you wanted to correct or add information to a recent report. You would use the “Revisit” function if you went back to a site at a later date to document changes to the infestation or management actions. “Edit” makes changes to the original records, while “Revisit” creates another record that is linked to the original record.

Reporting “negative” data using GLEDN app

Review slides 17-18 of this training PowerPoint: [EDDMapS Midwest Training Smartphone App](#). Starting in June 2017, with the most recent version of the GLEDN app, you will be able to add photos to your negative report.

Verifying reports in EDDMapS

DNR invasive species specialists and several other invasive species staff are “verifiers” for aquatic invasive species either statewide or in a particular region. If you are a verifier, you can select records in your “[Review Records](#)” queue in your “My EDDMapS” interface and you can take the actions below. For releasing reports, see the next section of this guide.

Verifying individual records

To review and verify records, choose the “[Review Records](#)” link from your “My EDDMapS” interface.

On the “Review Records” page, you can: (1) filter records by taxa or negative reports; (2) choose how many records to display at a time; (3) sort many of the columns using the gray arrows; or (4) search for a particular ID, species, reporter name, or county (numbers correspond to numbered arrows in screenshot above).

To view an individual record, select the hyperlinked record number from the “ID” column.

Review the record carefully before verifying. In particular:

- Read the “Locality” and “Comments” fields to ensure that the text there is accurate and that it includes the relevant information (see Entering reports into EDDMapS → Guidelines for creating a new record section above).
- Under “Other”, ensure that there is information including the “Division Of Waters Lake Id”, “Water Body Class”, and “Water Body Name”.
 - If these fields are missing for a record in a lake or pond that was made more than 24 hours ago, it is likely because the reporter placed the point outside the boundaries of the water body according to the DNR Hydrography GIS layer.
 - If the report was made less than 24 hours ago, the EDDMapS system may need additional time to associate the record with the appropriate lake name and DOW number.
- Review the photos and their captions to ensure that they are appropriate and descriptive.
 - You can click once on a photo to enlarge it in a pop-up window, and then will have the option (see lower-left of photo pop-up window) to “View full size image”.
- Review the map to ensure that the location shown there makes sense (e.g., if it’s an aquatic invasive species, it should be within the boundaries of a water body).

Once you have carefully reviewed the entire record, scroll down to the “Record Review” form (see screenshot below) and address each field as follows:

- “Reviewed By” - this field should automatically be populated with the name associated with your profile.
- “Verification Method” - if you are satisfied with the record, choose an option from the “Verification Method” drop-down menu. In most cases, you will choose “Photographs”, “Photographs + Specimens” or “Expertise”, but choose the option that is most appropriate from the list below:
 - Photographs – you reviewed the photographs associated with the record and are satisfied that they show the correct species
 - Photographs + Specimens – you reviewed the photographs associated with the record as well as confirmed specimens at the site or taken from the site
 - Expertise – you don’t have access to photos or specimens, but you have confidence in the expertise and reliability of the reporter
 - Specimens – you confirmed specimens at the site or taken from the site
 - Voucher Specimens – you did not see photos or specimens, but the record indicates that voucher specimens have been kept and (preferably) placed with a herbarium or museum collection
 - Voucher Photographs – avoid using this option
 - Diagnostic Lab Sample – select this option only for pathogens such as VHS
 - Other – avoid using this option
- “Identified By” – this field is optional. If the species was identified by someone other than the reporter, fill in that person’s name and affiliation (for example, the EDDMapS report was created by a DNR invasive species specialist, but the species was actually identified by a consultant or researcher).
- “Identification Date” – this field is optional. If the species was identified by someone other than the reporter, fill in the date that that person made his/her identification, if known (for example, the EDDMapS report was created by a DNR invasive species specialist, but the species was actually identified by a consultant or researcher).
- “Identification Credibility” – this field is required before you complete the verification process. Choose the option that is most appropriate from the list below:
 - **Possible** – you think it's possible that the species is in that location, but there is not enough information in the report to say the report is "Credible" or "Verified" (low certainty). **This designation will** remain on review records on hold for more information.

- **Credible** – you have reason to believe that the report is true, but there may be less information than you would like in order to mark the report "Verified"; the record may include a photo or specimen not confirmed in the water body and reported by an unknown source (Medium/High certainty). This designation will be reported in the distribution maps as a positive report (red).
- **Negative** (new May 2017) – retain in database but the record is actually a “negative” report, in which the reporter searched for this species and it was absent from the site; the record should ideally include information about the extent and duration of the search. This designation will be reported in the distribution maps as a negative report (blue).
- **Verified** – you are as certain as you can be that the report is true - the photo or specimen is almost certainly the species; the reporter is an expert or credible source; and/or DNR has visited the site and confirmed the presence of the species in the water body (Highest certainty). This designation will be reported in the distribution maps as a positive report (red).
- **Change Subject** – you want to change the species name (for example, it was reported as Eurasian watermilfoil, but it is really curlyleaf pondweed). If you choose “Change Subject”, a new field will appear just below this one, called “Correct Subject”, where you can choose the correct species name to associate with the record (start typing the common name to narrow your options from the drop-down menu).
- **Incorrect** – incorrect species identified. Similar to Delete and record will not be released to the public and will be removed from all future queries. If you mark a record as “Incorrect”, you must add additional explanation in the “Reviewer Comments”.
- **Delete** – use for duplicate records or test entries into EDDMaps. The record will be deleted and the original reporter will receive a message notifying them that the record is deleted. This record will not be released to the public. If you choose to delete a record, you must add additional explanation in the “Reviewer Comments” box to explain why you deleted the record; the original reporter will receive that information too. Use this sparingly.
- “Report Source ID” – this field is optional and you may use it to attribute a general affiliation to the reporter. Records submitted by DNR employees should already be associated with a User Group, but you might select “County Government”, “First Detector”, “Private Group” (i.e., consultants), or other affiliations as appropriate.
- “Reviewed/Verified” – if you are ready to verify the record, click the box to the left of “Reviewed/Verified”
 - Do not click the box to the left of “Released (show record in EDDMapS)”
 - Do not click the box to the left of “Private (show record - hide Lat/Long)” – this will display the record at the county level only and not as a point in the public EDDMapS interface. This may be used in rare circumstances if, for example, the species is not in a public water and is located on private property and the owner does not want the exact location to be publicly displayed.

- “Reviewer Comments” – this is an optional field (unless you chose “Incorrect” or “Delete” as the “Identification Credibility”); you may add any relevant comments to the record
- “Submit” – when you are satisfied with your entries in the “Review Record” form, click the “Submit” button

If there are any errors in the record, and you know the reporter (for example, the reporter is another DNR employee), you may choose to contact the reporter directly to resolve any questions about the record before you complete verification. Ask the person who created the report to log into their account and correct it. He/she can find the record by going to “My EDDMapS” → “Reports” → “Edit” next to the report they want to edit. Editing a report may not generate a new email to verifiers, so ask the reporter to let you know when the report has been corrected so you know when it is ready to verify.

Example verifications and “Reviewer Comments”

For point observations of water bodies that are already listed as infested, even if the record does not include a photo, you may verify the records as “Verified” and add language such as this to the “Reviewer Comments” field: “The Minnesota Department of Natural Resources added Sallie (Becker County; DOW 03-0359) to the infested waters list for flowering rush in 2007; flowering rush is confirmed in the lake”, or “The Minnesota Department of Natural Resources added Cass (Beltrami County; DOW 04-0030) to the infested waters list for zebra mussels in 2014 after confirming zebra mussels there in 2014.”

Some reports from AIS Detectors (trained by the University of Minnesota/Minnesota Aquatic Invasive Species Research Center) may be records of “false reports”; for example, a Detector might follow up on a “suspected” zebra mussel, not find any evidence of zebra mussels at the site where it was reported, and enter the report into EDDMapS. If s/he is using the desktop version of EDDMapS, the record will have “Infestation Status” of “positive”. However, you may verify this record with an “Identification Credibility” of “negative”, which will change the “Infestation Status” to “negative” in the verified record. You may want to include some clarifying comments in the “Reviewer Comments” field, such as “AIS Detector followed up on suspected zebra mussel and found no evidence of zebra mussel at site”. Before you verify, you should follow up with the AIS Detector for additional information if you are not confident that the record really reflects a false report.

“Bulk verifying” records

It is possible to verify many records at once in EDDMapS. “Bulk verification” can be used in cases where you are confident in the reporter’s identification skills for (a) particular species. If you use bulk verification, you can only choose “Possible” or “Credible” as the “Identification Credibility” level.

In general, bulk verification should only be used for species that do not trigger an infested waters listing and for which we are not doing a press release. Only use bulk verification if you are confident that you can also release the records at the same time.

To choose and bulk-verify records, choose the [“Review Records”](#) link from your “My EDDMapS” interface.

You can narrow the records displayed on your “Review Records” page by filtering records by taxa or negative reports or by searching for a species, reporter name, or county. For bulk verification, you may choose to search

for a particular reporter name. You can change the number of records that are displayed on your “Review Records” page.

Select the records that you wish to verify using the checkboxes in the left-most column of the table of records on your “Review Records” page. Note that all of the records that you select will be verified with the same “Identification Credibility” level (either “Possible” or “Credible”).

Once you have selected one or more records using the checkboxes, a new “Bulk Verify” section will appear at the bottom of the “Review Records” page (see screenshot below):

Complete the fields in this form as follows:

- “Identification Credibility” – this field is required before you complete the verification process. Choose the option that is most appropriate from the list below:
 - Possible – you think it's possible that the species is in that location, but there is not enough information in the report to say the report is "Credible" or "Verified" (Medium certainty)
 - Credible – you have reason to believe that the report is true, but there may be less information than you would like in order to mark the report "Verified"; the record may include a photo or specimen not confirmed in the water body and reported by an unknown source (Medium/High certainty)
- “Report Source ID” – this field is optional and you may use it to attribute a general affiliation to the reporter. Do not complete this field when bulk verifying unless you are certain that you are verifying records that are all from the same source.
- “Reviewer Comments” – this is an optional field; you may add any relevant comments to the verification record for all the records that you are bulk verifying
- “Released (show record in EDDMapS)” – do not click the box to the left of “Released (show record in EDDMapS)” unless you are confident that these records may be released (see “Releasing reports in EDDMapS” section in this guide); in general, you should only bulk verify records if they can be released at the same time
- “Private (show record - hide Lat/Long)” – in most cases, do not click the box to the left of “Private (show record - hide Lat/Long)” – this will display the records at the county level only and not as a point in the public EDDMapS interface
- “Submit” – when you are satisfied with your entries in the “Bulk Verify” form, click the “Submit” button

Releasing reports in EDDMapS

Releasing reports in EDDMapS makes the reports available to the public (most verified reports are visible to anyone, even people without an EDDMapS account, in almost real-time once they are released).

Please refer to the “process” tab of the “infested waters process flowchart” Excel document for more detail on which records you may release.

Releasing a record at the same time you verify

For most DNR verifiers, you might be releasing a record at the same time you are verifying the record for a “Medium-priority AIS” (see the “priority AIS” tab of the “infested waters process flowchart” Excel document for more detail). In that case, follow the instructions above for “Verifying individual records” or “Bulk verifying records” and click the box to the left of “Released (show record in EDDMapS)” if you are confident that the record(s) may be released. If you are verifying and releasing a record for a species that triggers a new infested waters listing, ensure that the Central Office staff responsible for updating the infested waters list (Kelly Pennington, or Adam Doll) is aware that the new record is being verified and released.

Releasing a record that is already verified

Certain aquatic invasive species should be released by a Central Office verifier if we may need to coordinate the release of the record in EDDMapS with a news release (see the “Primary releaser” column on the “priority AIS” tab of the “infested waters process flowchart” Excel document for more detail).

If you are ready to release a record that has already been verified, the record will not appear in your “Review Records” queue anymore. To find such a record, you may use the unique “Record ID” number assigned by EDDMapS. We recommend that people who may be responsible for releasing High-priority AIS records keep note of the individual Record ID numbers in order to retrieve these records. You will receive an email when a new record is submitted to EDDMapS and these email notifications do contain the individual Record ID numbers. You can use this Record ID number to retrieve a particular record that has been verified by adding the Record ID number to the end of this URL <https://www.eddmaps.org/review/point.cfm?id=> (for example, <https://www.eddmaps.org/review/point.cfm?id=4846573>) to retrieve the record.

Once you have retrieved the correct record, review the content of the record and the verification information. If you are satisfied that the record is ready for release and consistent with news releases, if applicable, click the box to the left of “Released (show record in EDDMapS)”.

Viewing reports in EDDMapS

To view reports that you have submitted, in the “My EDDMapS” interface click on the “Reports” link on the left-hand side of the page. This will generate a “Manage Reports” table. You can sort many of the columns using the gray arrows at the top of certain columns and you can search for a particular ID, species, reporter name, or county using the “Search” box to the upper right of the table.

For more information about viewing reports, review [EDDMapS Midwest Advanced Training](#), which describes how to view distribution maps for a particular species and how to use EDDMapS's Advanced Query Tools.

Uploading bulk data into EDDMapS

If you have a number of records that you've collected in a spreadsheet or another format, you can upload those records to EDDMapS all at once using their bulk data upload process. Review the guidance below and other resources on the "Bulk Data Resources" section of the Tools and Training website:

<http://www.eddmaps.org/midwest/tools/>.

At the minimum, each record must include the following information:

- Reporter (can be a person or a group/agency/program) with a valid email address so that EDDMapS can contact that person if they have questions about the data
- Location (Lat/Long is best but state and county will do if there are privacy concerns)
- Date of observation
- Species (scientific name preferred)

You can download the [Bulk Data Entry Template](#) (an Excel file) from the EDDMapS website to ensure that the field names you are using are consistent with EDDMapS's.

The procedure for uploading bulk data is outlined in detail here: [Bulk Data Upload Procedure](#). You can view the progress of the data formatting and upload from My Uploads → View Uploads.

EDDMapS can accept data in the following file types: shapefiles, Excel, csv, Access, and kml. With any files, please include any available metadata, including collection or data entry protocols, if there is any code or shorthand used, assumed data units, or other relevant information.

Managing infested waters in EDDMapS

A few DNR users also have the capability to manage infested waters using the EDDMapS Midwest interface. If you have access to this feature, you will see a link for "Manage Infested Waters" on the left-hand side of your "[My EDDMapS](#)" page.

Add a new infested water using EDDMapS

You can use the EDDMapS interface to easily add a new infested water for most lakes and major rivers. If you need to add an infested water that is a small stream segment, or a water body that you cannot find using the EDDMapS interface, see the instructions for "Add a new infested water using GIS", later in this guide.

Click the link for "Manage Infested Waters" on the left-hand side of your "[My EDDMapS](#)" page; that will bring you to the "Manage Infested Waters" form (see screenshot below):

Fill out the fields in this form as follows:

- “Water body name” – begin typing the name of the water body (without the word “Lake”), and the drop-down menu will populate with a list of options. Select the correct water body from this menu.
 - You can also click on the “map pin” to the right of “Water body name”, which will pop-up a Google map interface. You can move the pin around on that map to select a water body. Ensure that the correct water body name is in the field “Current Water Bodies” above the map. If the pin is not matching the location of a water body, the “Current Water Bodies” field will read “No Match”.
- “Species” – select the species from the drop-down menu, or begin typing the common or scientific name to reduce the length of the drop-down menu. This drop-down menu is populated only with species for which we list a water body as infested.
 - If a new species needs to be added, [contact](#) the Aquatic Invasive Species Prevention Consultant to have the species added to the list.
- “Counties” – this is a free-text field; type in the name of the county or counties in which the water body is located. Take care to spell the county correctly.
- “DOWLKNumber” – enter the eight-digit DOW number for the water body here. If the water body has multiple eight-digit DOW numbers, use the most generic DOW number (usually the last two digits will be “00”).
- “Date designated” – enter four digits for the current year (i.e., the year that the water body was listed as infested)
- “Date confirmed” – enter four digits for the year in which the DNR confirmed the presence of the species in that water body; if the water body is being listed as a connected water and we have not confirmed the species there, leave this field blank but fill in the “Connected Note” field
- “Notes” – leave this field blank
- “Connected Note” – if the water body is being listed as a connected water and we have not confirmed the species there, provide some information about the water body to which it is connected, for example, “connected to Cass (04-0030)”

Once you are satisfied with your entries in the “Manage Infested Waters” form, click the button “Edit InfestedWater” or “Add InfestedWater” to add the new infested water to the [infested waters list](#) immediately. To reset the form, click the “Reset” button.

It may take about 24 hours for the new infested water to appear on the infested waters map on the EDDMapS Midwest website. The DNR’s GDRS/QuickLayers and the Minnesota Geospatial Commons should be updated with the new spatial information within 3-4 days.

Edit an existing infested water in EDDMapS

You can edit and/or delete an infested water using the “Manage Infested Waters” interface in EDDMapS. Click the link for “Manage Infested Waters” on the left-hand side of your “[My EDDMapS](#)” page; that will bring you to the “Manage Infested Waters” form. Scroll down to the table of “Current Infested Waters”.

To delete an infested water from EDDMapS, click the “Delete” button in the left-most column of the “Current Infested Waters” table. A pop-up warning will appear as in the screenshot below, warning you that if you click “OK”, you cannot undo the choice to delete an infested water:

To make changes to an infested water, click on the row of the “Current Infested Waters” table corresponding to the infested water that you want to edit. The page will automatically reload and display the “Manage Infested Waters” form with the existing contents of the record (see the example for editing Muskrat in the screenshot below). Make any edits necessary to the record, then click the button “Edit InfestedWater” at the bottom of the form. If necessary, make the same edits to the infested waters spreadsheet on the I-drive and on the website (see “Update Excel spreadsheet”) section of this document.

Add a new infested water using GIS

[coming soon; process still being refined w/ EDDMapS]

Other infested waters update processes

Update Excel spreadsheet

As we continue to work out the process for uploading connected waters segments and other GIS issues with EDDMapS, we will continue to keep the Excel spreadsheet of infested waters updated.

The most recent version of the infested waters spreadsheet for DNR use is located here: I:\EWR\Invasive Species\Infested Waters Data & Lists\2017 infested waters spreadsheets. If you make updates to that spreadsheet, save a new version with the date (YYYY-MM-DD) and your initials at the end of the file name. The second tab of this spreadsheet is called “pending”; you can use this tab to keep track of new infested waters that are not yet verified or for which the news release hasn’t yet been made public.

Update Excel spreadsheet for web

When new infested waters are ready to be made public on the website, copy columns D-I (“water body name” through “DOW number”) of the spreadsheet “Infested_waters_YYYY-MM-DD_initials.xlsx” into the most recent spreadsheet located in the folder I:\EWR\Invasive Species\Infested Waters Data & Lists\infested waters communications\Infested Waters List for Web\2017. Resave that file with the date it was last updated (YYYY-MM-DD). If there are only a few new infested waters, it may be easiest just to copy those new rows into the web spreadsheet. The last visible (not hidden) row of the spreadsheet should contain the text “End of

worksheet” in the first column cell. As long as you only copy and paste into this spreadsheet, the file should remain accessible (but it’s a good idea to run the accessibility checker to make sure). Email the new spreadsheet for the web to ewr.cap.dnr@state.mn.us with a request to update the spreadsheet on the website <http://www.dnr.state.mn.us/invasives/ais/infested.html> along with the last updated date.

Update Excel spreadsheet for LakeFinder

Filter the spreadsheet for the web by DOW number and remove all non-numeric entries (“none”, “NA”) by deleting those cells. Save the spreadsheet by a new name (e.g., “infested_waters_YYYY-MM-DD_for_LakeFinder.xlsx”) in the same folder (I:\EWR\Invasive Species\Infested Waters Data & Lists\infested waters communications\Infested Waters List for Web\2017). Send that spreadsheet to Steve Lime (Steve.Lime@state.mn.us) and request that LakeFinder be updated with the new infested waters data.

Announce new infested waters using govdelivery

If you are an administrator of the “AIS-infested waters in Minnesota” govdelivery list, you may send occasional updates to that list to announce new infested waters. The govdelivery announcement should come after any news releases for new infestations, if applicable. Typically, we have sent govdelivery announcements about every two weeks during the open water season as long as there is something to report.

Copies of the content of govdelivery messages are available on the I-drive at I:\EWR\Invasive Species\Infested Waters Data & Lists\infested waters communications\Govdelivery bulletins\2017.

To send a new bulletin announcing infested waters, login to govdelivery at <https://admin.govdelivery.com>. Select “Bulletins” from the left-hand menu, and click the button to “+ CREATE BULLETIN”. On the create bulletin page, first select the group to receive the bulletin by clicking on the arrow next to “To”, expanding the category “Invasives”, and selecting the group “AIS-infested waters in Minnesota” as in the screenshot below.

Scroll further down on that page, and you can add a Subject line and add a message to the Body of the email. You can copy and paste content from a Word file into the govdelivery bulletin message. You may need to reformat some of the headings levels for accessibility and readability. When the bulletin message is complete, you should first use the button at the bottom of the page to “SEND TEST” to send yourself a test message. Once you have received and reviewed the test message, make any necessary corrections in the govdelivery bulletin editor and resend another test message if necessary. When you are satisfied that the message is ready for distribution to the entire govdelivery list, use the button at the bottom right of the page to “SEND NOW”. The system will tell you that the message will be sent to a number of subscribers and ask you to confirm that you want to send the message.

Definitions

[coming soon - are these necessary?]

AIS Detector
record

release
report
verifier
verify

Questions

If you have questions that are not addressed below, please [contact](#) the DNR Aquatic Invasive Species Prevention Consultant or Aquatic Invasive Species Management Coordinator. (Note: if Prevention Consultant and Management Coordinator are not available, you may contact the Watercraft Inspection Program Coordinator. For questions about terrestrial species, [contact](#) the Terrestrial Invasive Species Coordinator.)

Can I use the GLEDN app on a non-state mobile device?

The DNR does not recommended that you use personal devices for state work.

Can I use the same password for EDDMapS that I use for Outlook or to log on to my computer?

The DNR recommends that you use a different password for EDDMapS than other state email address passwords in case the non-state system user files are compromised.

Where can I learn more about EDDMapS?

EDDMapS has additional training tools and resources on their website see “Training Power Points” on the home page <http://www.eddmaps.org/midwest/> and other resources here <http://www.eddmaps.org/midwest/tools/>.

Should I enter a record in EDDMapS for a species that’s never been found in the state?

Yes, please enter any nonnative species into EDDMapS. In the case of a species that’s not been found in the state and that is not listed as an invasive species in rule, take special care to describe in the comments the status of the find, who verified species, and what the DNR is doing about it. For example, see [this 2016 record for java waterdropwort](#).

How “up to date” is EDDMapS? Do we need to look elsewhere for the newest infestation report before answering questions to the public?

EDDMapS will be kept as up-to-date as possible. In some cases, reports need additional verification or coordination before releasing them to the public. If you have concerns about a specific report or infested water that is not showing up in EDDMapS, please [contact](#) the DNR Aquatic Invasive Species Prevention Consultant or Aquatic Invasive Species Management Coordinator.

How can I look up reports? Is there a way to search reports by using the unique identification number?

When a report is submitted to EDDMapS, it is assigned a unique “Record ID” number. In the “[Review Records](#)” interface of My EDDMapS, you can enter a Record ID in the search box to find a particular record. Once a record has been verified and released, you cannot find the record by searching for the Record ID in the search box of the [Distribution Maps](#) interface. You can, however, type a Record ID number into the URL in order to retrieve a particular record that has been verified and released. Add the Record ID number to the end of this URL <http://www.eddmaps.org/distribution/point.cfm?id=> (for example, <http://www.eddmaps.org/midwest/distribution/point.cfm?id=4830885>) to retrieve the record.

You can also use the [Advanced Query Tools](#) to filter records, for example by county, User Group, or species. The [Advanced Query Tools](#) can be found under “Database Tools” on the [Tools and Training](#) website.

How can I share the information in a report with partners such as other governments or lake associations?

You can share the URL for a particular report with partners and they can view the record online. Each report also has an option to “Download Record” (look to the upper right of a record on the web interface) which will produce a PDF of the web report that you can save and share. Currently, these PDF reports may not be formatted exactly as DNR reports have been in the past, so if you prefer a different format you can also use the online record to copy and paste into a different format.

Can I drag-and-drop images into EDDMapS when I am creating a report?

Currently you cannot drag-and-drop images into EDDMapS.

I am a verifier – do I have to get an email for every new report submitted to EDDMapS that ends up in my verification queue?

No, you can navigate to the “My EDDMapS” interface and choose “Edit Profile” from the left-hand menu. Scroll down to nearly the bottom of the Edit Profile Form, and you will see options for “Email Preference”. Select the radio button to the left of “Digest” if you want to receive email notifications in a digest of up to 120 records; select the radio button to the left of “Instant” if you prefer to receive a separate email notification for each record submitted to EDDMapS. If you are signed up for the Digest, EDDMapS will send an email approximately every four hours including any new records that were submitted during that time. With either Email Preference choice, you will only receive emails if new records are submitted to EDDMapS.

Can I edit a report that I already submitted?

Yes. If you anticipate making changes to a report before it is ready to be verified and/or released, clearly note that in the “Comments” field of the record. For example, begin the comments with text such as “REPORT NOT COMPLETE – DO NOT VERIFY OR RELEASE AT THIS TIME”.

To edit a report that you submitted, click on the “Reports” link on the left side of your “My EDDMapS” page. In the “Manage Reports” table, click on the link to “Edit” the appropriate report in the right-most column, “Manage”.

Note that if you choose to edit a report, and make changes to the report, when you click “Submit” EDDMapS will not generate a new email to the verifier(s) for this report. Therefore, if you make edits to finalize a record and you are not the person who is responsible for verifying and/or releasing that report, please notify the person who is responsible for verifying or releasing and include the Record ID number so that person can retrieve the record.

The species that I want to report is not on the drop-down menu. How do I create a new record?

You can create a new record even if the species is not on the drop-down menu for Minnesota. If you do not know the identity of the species, then in the [Report an Invasive Plant Occurrence](#) page, under “Species” and “Pest (?)” search for “unknown” and select “unknown plant ()” from the drop-down menu. (You can report unknown [insects](#), [diseases](#), and [animals](#) in the same way on their respective reporting webpages.) If you do know the identity of the species, but it isn’t in the drop down menu, then in the [Report an Invasive Plant Occurrence](#) page, under “Species” and “Pest (?)” search for “unlisted” and select “unlisted plant ()” from the drop-down menu. (You can report unlisted [insects](#), [diseases](#), and [animals](#) in the same way on their respective reporting webpages.) Include information about what the species identification is, and how it was confirmed, in the “Comments” field (under “Additional Information”). When the report is verified, the verifier can use the “Change Subject” function to attribute the record to the correct species.

If you are frequently reporting a species that is not on the drop-down menu for Minnesota, [contact](#) the DNR Aquatic Invasive Species Prevention Consultant or Aquatic Invasive Species Management Coordinator and the species can be added to the drop-down menu.

Should I fill out the “Review Status” field in the Review Records interface?

The “Review Status” drop-down on your [Review Records](#) page is used primarily for communicating between multiple verifiers for particular species and/or to delegate reports to different verifiers. Currently, we are not using this field for DNR AIS reporting so you can ignore it.

I seem to be missing some records in my Review Records page – where did they go?

Note that if you have been searching for records (for example, by species or Record ID) on your [Review Records](#) page, that search result may be preserved even if you navigate away from that page and revisit it later while you are still logged in. Check the Search box to ensure it is empty.

If the problem persists, [contact](#) the DNR Aquatic Invasive Species Prevention Consultant or Aquatic Invasive Species Management Coordinator.

Who is verifying European common reed (*Phragmites australis ssp. australis*)?

You may ignore European common reed records for now. We are partnering with Dr. Dan Larkin at the University of Minnesota to develop protocols on how to deal with the *Phragmites* reports in EDDMapS. Note

that if you wish to see only one species or species group at a time on your [Review Records](#) page, you can sort by species groups using the check boxes at the top of the page or by searching for a species name in the Search box.

Are rusty crayfish, curly-leaf pondweed and mystery snail data updated in EDDMapS?

We are working on reformatting DNR Excel files containing rusty crayfish and mystery snail data so that they can be uploaded to EDDMapS as bulk data. Some non-DNR partners have uploaded data for rusty crayfish to EDDMapS already.

How can I view all the new reports in my area for a particular year?

You can use the [Advanced Query Tools](#) to filter records, for example by county, User Group, or species. The [Advanced Query Tools](#) can be found under “Database Tools” on the [Tools and Training](#) website.

What if I notice or suspect an error in an EDDMapS record?

Please [contact](#) the DNR Aquatic Invasive Species Prevention Consultant or Aquatic Invasive Species Management Coordinator. Note the Record ID number and/or copy the URL of the record, and clearly note what you think is an error (e.g., “the location says it is in the Mississippi River but the point is located in Cook County”).

How can I access records that I’ve recently reviewed?

If you are a verifier, from the My EDDMapS interface, choose the option to “[Review Records](#)”. On the upper right part of that window, you should see a link to “[View Recently Reviewed records](#)”. Note that there is a field at the top of the Recently Reviewed page where you can enter the date range for which you want to view records that you’ve reviewed. From this page, you can select a record and change review information as necessary.

How can I view only negative reports in my verification queue?

If you are a verifier, from the My EDDMapS interface, choose the option to “[Review Records](#)”. In the upper part of that window, there are a number of boxes that you can check or un-check in order to view particular taxa or results. One of these options is “Show Negative Records.” If you check only this box, negative reports will be the only ones displayed in your Review Records queue.

How can I edit a report that’s already been entered into EDDMapS?

If it’s your own record, you can edit it by clicking the “Edit” link under the “Manage” column when you are in my EDDMapS:

If it’s someone else’s record, you can contact the original reporter to ask that they edit their record.

Questions that need clearer answers

[This section is under discussion/development]

Are we supposed to enter multiple reports for different occurrences? Do we enter a new report for the same water body? If we newly confirm an IS in a waterbody that was previously reported but not confirmed, should we mark it as “revisited”?

- i.e. Vermillion River and Rusty Crayfish
- Options for discussion:
 - Use the polygon feature for river segments or for expansion of AIS distributions
 - Use points only to represent presence/absence in most water bodies (and therefore we do not need to submit multiple reports once a water body is infested)
 - Use revisit feature

How do I submit and/or verify a negative report?

In general, negative reports are submitted and verified using the same process as “positive” reports. Currently, negative reports can only be submitted using the GLEDN app, not using the EDDMapS web interface; however, EDDMapS is working to add the capability to the web interface as well as to add a way for verifiers to transform a positive report into a negative report. This answer may also evolve as MN AIS Detectors start to use the EDDMapS system.