

GUIDE: How to Create Plant Reports through Bulk Upload

Introduction

The Vernal Pool & Rare Species (VPRS) Reporting System offers a mechanism designed for bulk importing of tabular observation data via a spreadsheet. This option applies to the Plant, Animal and Vernal Pool reporting forms. There is also an option to submit GIS shapefiles to the NHESP for import to the system which allows you to validate the location of the geometry prior to submitting the report.

Purpose of this guide

The purpose of this Guide is to explain the steps required to fill out the Excel Spreadsheet that will contain your observation information. It is important that all mandatory fields are completed correctly in order for your reports to be generated.

Tabular Spreadsheet import

A “Bulk Import From Spreadsheet” button is provided on each of the main Plant, Animal, and Vernal Pool pages to upload a spreadsheet that can contain data for multiple observations. Templates have been developed for each report type and are available on the NHESP website and by following the “pre-defined spreadsheet template” link on the respective home pages within VPRS.

Due to the structure of the observation forms within VPRS, these spreadsheets require “flat” data structures and it needs to be recognized that the data for reports are highly nested. For a given report, many rows of data may be needed in the spreadsheet to fully accommodate that report. This will result in rows that duplicate all values except for the one value that row is intending to update.

Some general requirements include:

- The spreadsheet **must** be either a Microsoft Excel .xls or .xlsx format document
- Data in all spreadsheet cells **MUST** be simple text or the Excel General Format type.
- Column formatting and structure must match the template provided
- All data must be on the first worksheet (tab). No data can be on other tabs/worksheets.
- The first two rows contain the header elements. They cannot be deleted or modified from the provided template.
- Bulk Uploading is for **creating** forms only. Once the reports are created within VPRS, individual reports can be edited and/or submitted.

Mandatory fields include:

- **Report Id** - Each report submitted must have a unique identifier that groups the multiple rows in the spreadsheet. Report Id must be a number. For example, all rows that are part of the same report “1” must repeat the value “1” for every row with information that pertains to that report.
- **Species** – A spreadsheet of species is provided at www.mass.gov/dfw/nhesp/vprs. If you are using a species on this list you must enter the Scientific Name. If the species is not on the list, it is not within the VPRS system and any species name can be typed in (common or scientific).
- **Taxonomic Group** – Please reference the Species list spreadsheet for the appropriate taxonomic group for the species reported. If the species is not on the list, please use the taxonomic group that best fits the species.
- **Town** – This must be a town VPRS has listed as one of the 351 towns in Massachusetts (i.e. use Barnstable, not Hyannis or Centerville). A spreadsheet is provided of the official town list at www.mass.gov/dfw/nhesp/vprs.

- **Site Name** – Provides an identifier to the report as a whole (e.g. Chauncy Lake).
- **Site Directions** – Provide directions to the Observation location
- **Location Name** – Provide a name for each observation location mapped (must have at least one), could be a specific name or simply “Location #1”.
- **Location Latitude/ Location longitude** (separate fields) - Point locations must be provided in geographic Longitude and Latitude in decimal degrees. Tools such as Google earth or ArcMap can be used to obtain these coordinates. Lines and polygons are not supported; see the “Submitting GIS Shapefiles” section of this document for more information. NOTE: Location names MUST be unique per Report Id (observation report).
- **Coordinate source** – Please specify where the coordinates were obtained: GPS, Google Earth, Other; if other, please specify.
- **GPS Accuracy** – If coordinates were obtained by using a GPS, please indicate the accuracy of GPS unit at the time the coordinates were taken.

Due to the hierarchical relationship with locations and locations visit dates, multiple dates or locations require an additional row in the spreadsheet for the same observation. Please see the example spreadsheet created for each upload type as an example of the formatting requirements.

Information about the additional fields and associated metadata can be located on our website (www.mass.gov/dfw/nhosp/vprs).

Please note that no file upload is supported (photo, document, audio, etc.) through this mechanism. All attachments must be uploaded through the Photos/Documents tab once the report has been created.

Uploading the spreadsheet:

- Log in to VPRS
- Click the Plant home page icon
- Click the “Bulk Upload from Spreadsheet” button
- Click the “Upload Excel File” button at the top left of the grid
- Browse to spreadsheet
- If the spreadsheet is uploaded successfully, a message will appear and the data in the spreadsheet will be displayed in a tabular display on the screen.
- Basic validation of the spreadsheet data is performed when the spreadsheet is uploaded. The validations that are performed are as follows:
 - a. Data type (number vs. text), valid dates
 - b. Columns with dropdown list in the report form will be validated for those values against the look up values in the database. For example Species Name, Town, etc. (see www.mass.gov/dfw/nhosp/vprs for additional help documents outlining proper answers for each column of the spreadsheet)
 - c. GIS points will be validated against the bounding rectangle of the State of Massachusetts
 - d. Missing data detection
 - e. Logical consistency between visit dates

f. Logical consistency between location names and coordinates

- If the system did not find any errors, click “Save Bulk Upload”.
- If the system does find errors, they must be corrected in your original spreadsheet then the spreadsheet must be uploaded again using the above steps.
- The Report Id is copied into the database when a new observation is created associated with each unique Observation Number. The Report Id is not displayed in the external user interface and is used only for reports that have GIS data supplied externally (see below.)
- The reports are created and can be found in the list of observations on the Plant home page
- These reports are not yet submitted. Each report should be opened and checked for accuracy, any photos or other documents should be attached.
- Locations provided in bulk upload do not generate official map images. These are required for submittal and therefore must be manually generated for each location within your Observation Reports before it can be submitted. This can be accomplished by clicking on the Location name in the left panel and then clicking the “Update map” button that appears below the map.
- Once the report is complete, click Submit and it will be sent to the NHESP for processing.

Submitting GIS Shapefiles

If polygon and line files are available and portray the most accurate observation location, there is an option to supply GIS data to the NHESP. This information can be linked directly to the report by NHESP for verification prior to submittal. The submittal of shapefiles can be by mail or emailed to ContactVPRSAdmin@state.ma.us. At time of spreadsheet upload, indicate a GIS file is coming using this email address. Please include “VPRS GIS upload” in your subject line.

General GIS Formatting:

You must provide GIS features that NHESP staff can match to reports created through the bulk upload process. All geometry (point, line, or polygon) representing observation locations must have Report Id, Species Name and Location Name as attributes.

Although the points are obtained through the Latitude and Longitude fields of the spreadsheet, it is recommended a point file be submitted along with any lines and polygons so that all observations in the bulk upload are accounted for.

Once the shapes have been saved to the reports by NHESP a message will be sent to you, so you can then open the reports, verify the locations is correct, create a formal snapshot using the “Update Map” button, make edits as necessary, and submit the report.