Fen – Wetland Toolkit

Web Application User Guide

Version 1.0

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Fen – Wetland Toolkit

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Background

Fen – HDR's wetland mobile tool allows wetland and field scientists to collect wetland determination data following USACOE regional supplement requirements. Fen is comprised of two components – a web portal and a mobile application. This document outlines how to set up and manage projects using the Fen web portal.

Getting Started

Registering

HDR employees are allowed access the Fen web portal. If you require the ability to create and manage projects, please contact the Fen Support Team at fenapp@hdrinc.com to request appropriate permissions.

Landing Page and Log In

The landing page for Fen contains three links. We recommend using Google Chrome for best performance.

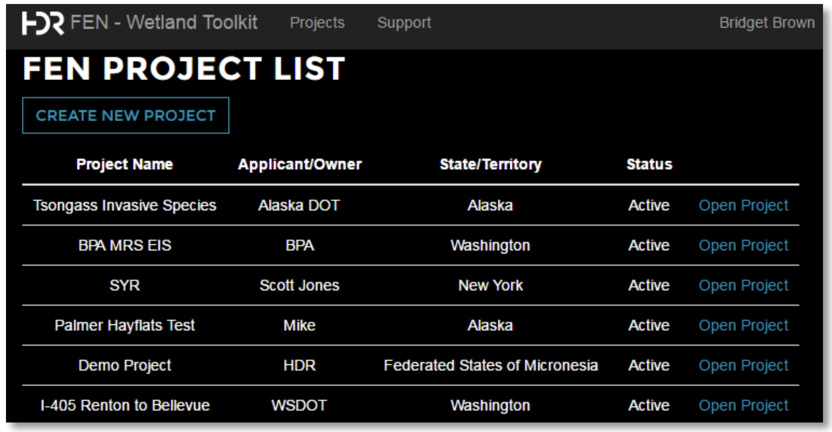
- About – General information about Fen and links to other resources.
- Contact – Contact information for technical and general support.
- Login – If you are connected to the HDR network the application will login in with your HDR account. If you are not connected to the HDR network, log in with your credentials as follows:

USERNAME: intranet\username (e.g. tsmith)
PASSWORD: your HDR password

To log in:

1. Navigate to https://wetland.hdrgateway.com/
2. Click the login link located at the top right.

Once logged in you will be taken to the **Fen Project List**. The FEN Project List is an index of the projects you have access to and provides the tool to create new projects if you have been assigned a “Fen Project Manger” role.



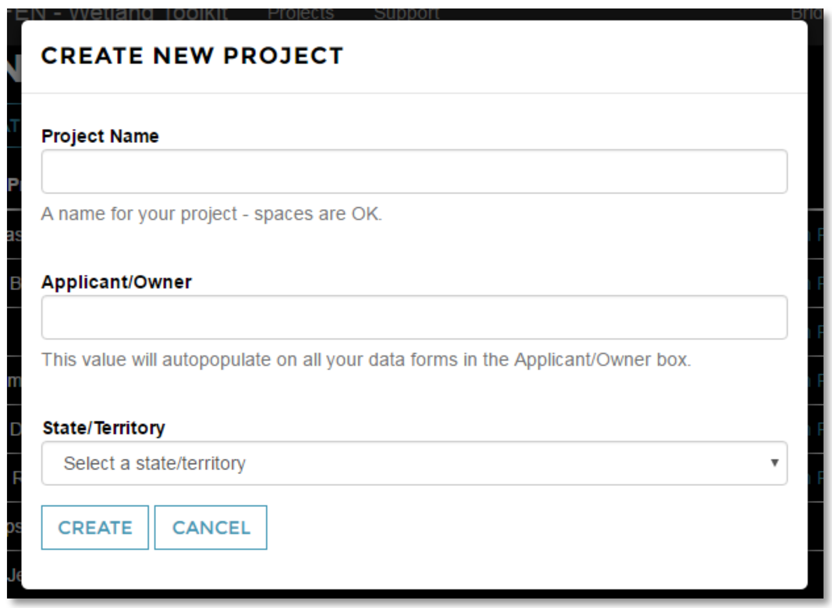
Project Set Up and Management

Creating New Projects

To create a new project:

1. Click the “create new project” button on the home page.

2. The following pop-up will appear:



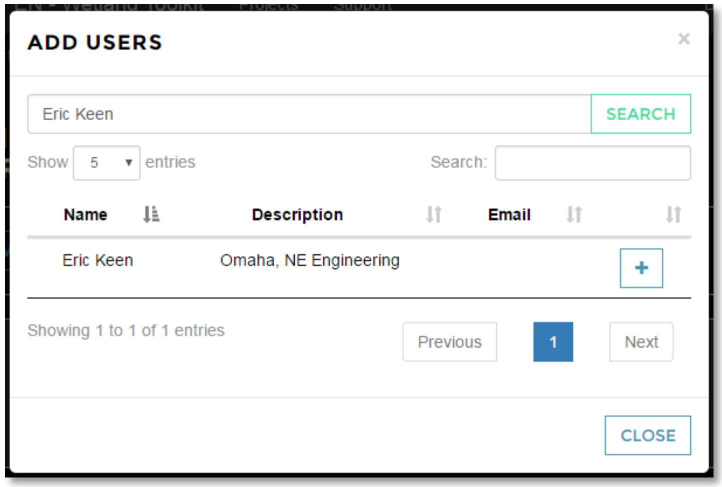
3. Enter the project name, the application/owner name (this will be used to auto populate data forms), and the state/territory where the project is located.
4. Click Create. The application will spin up a new project database on the HDR servers. This action will take several minutes.

Adding Users

From the project summary page Project Admins are able to add and remove users. Note if you are not the Project Admin you will only be able to see other users and their contact information. Once a user is added to the project they will have the ability to view and edit project data as well as download the project data to the Fen Mobile tool. To add a user:

1. Open Add User tool 

2. Enter the name or email of the HDR employee you want to add to your project, hit search. The name of the user will appear in the list below, click the plus button  to add them to your project.



Removing Users 

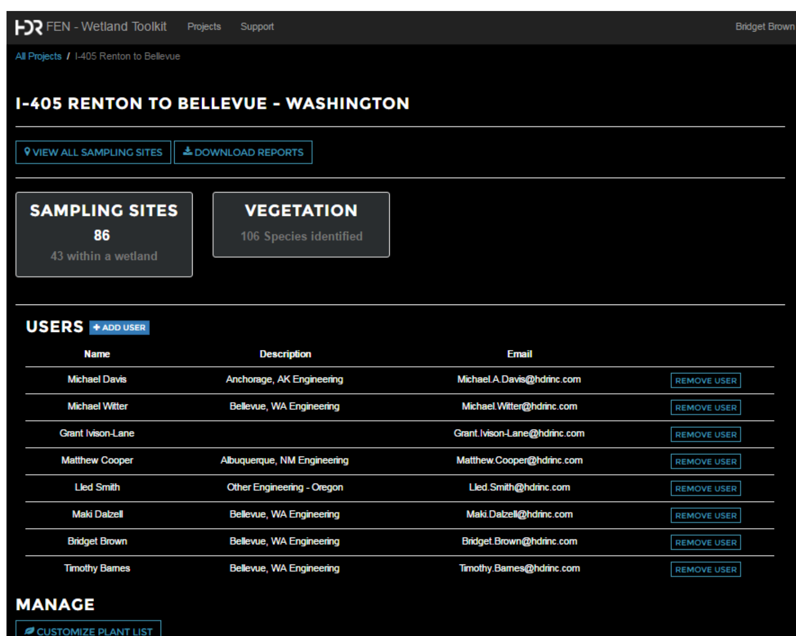
To remove a user from a project, navigate to the project summary page and click on the Remove User button for that individual.

Project Summary

Project Summary Details

The summary page includes the following:

- Lists total sampling sites and total vegetation collected
- Lists users and the ability to add/remove users
- Link to view and manage the project plant list
- Link to view the sampling sites summary table and web map
- Link to download all site forms in PDF report format
- Link to download all data to Esri File Geodatabase format



Download Reports 

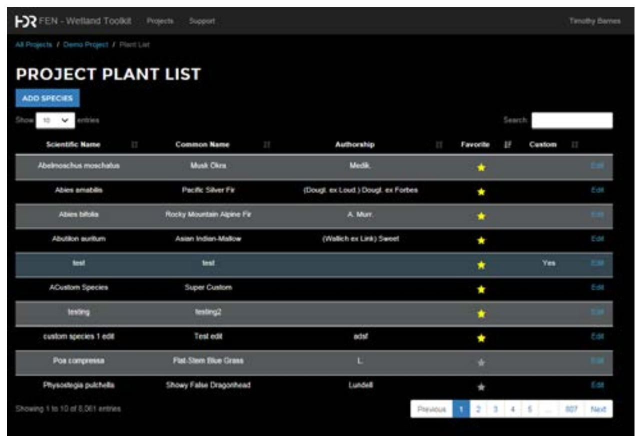
When clicked, the Download Reports button will download a full set of Wetland Determination PDF forms for all sites, including photos, formatted to the regional supplement assigned at project creation. Note you can also export individual site reports using the download link on the site details page.

Managing Plant Lists 

By clicking on the Customize Plant List button, a user can add, edit and favorite plants in the project list. “Favorite” plants will show up on the top of the species pick list in the mobile app. Changes to the plant list are reflected in the project data on the mobile app when the data is synced. Plant lists are transferable from one project to another; however this feature is not automated yet. Please contact the Fen Support Team for assistance.

Adding New Plants into Project List 

To add a new plant to the project list, click the Add Species button. Enter the new plant information in the pop up window and hit save.



- Scientific name
- Common name
- Authorship (User)
- Regional Indicator status
- Favorite

Editing Existing Plants in Project List

To edit an existing plant species, click the edit button in the plant list and update the necessary information.

Download GIS Data 

The Download Esri Map Package button will extract all data used in FEN as an Esri Map Package. Map packages can be unpacked using Esri software and will include an Esri File Geodatabase and map document.

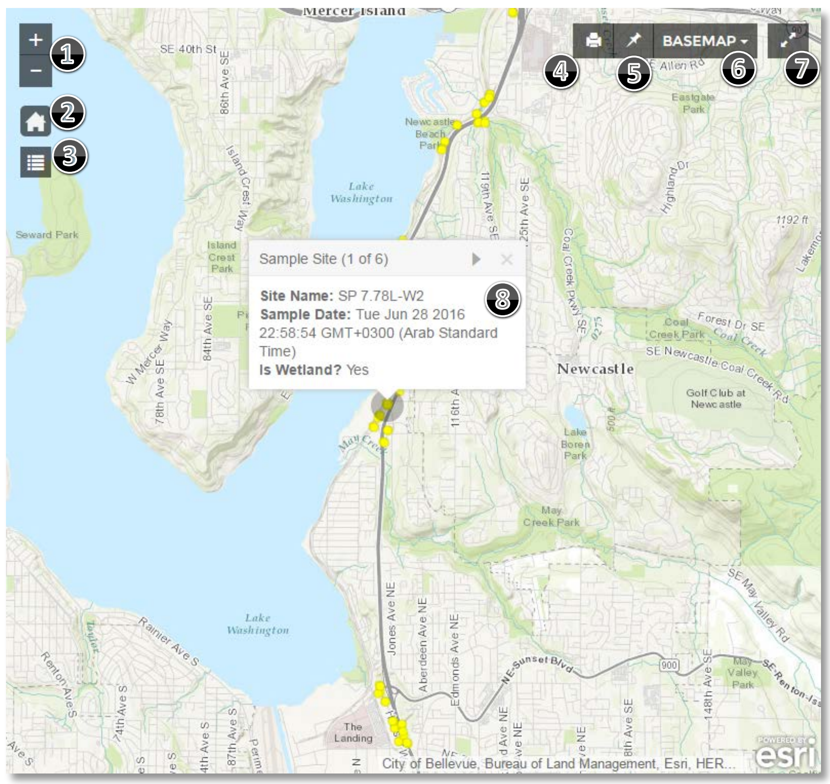
Web Map and Site Summary Table

To access site summary table and the interactive map click on the View All Sample Sites button from the Project Summary page.

Web Map Operation

The interactive web map includes the following functionality:

1. Zoom in / Zoom out
2. Home – This button returns the map to the initial viewing extent
3. Legend – turn layers on/off and adjust transparency
4. Print Map – Exports current map view as PDF
5. Measurement Tool
6. Basemap Toggle – switch between Esri Online Basemaps including Esri Topographic (default), USGS Topographic and Esri World Imagery
7. Expand – Expands map to full screen
8. Identify – click on point feature to open pop up window with site attributes

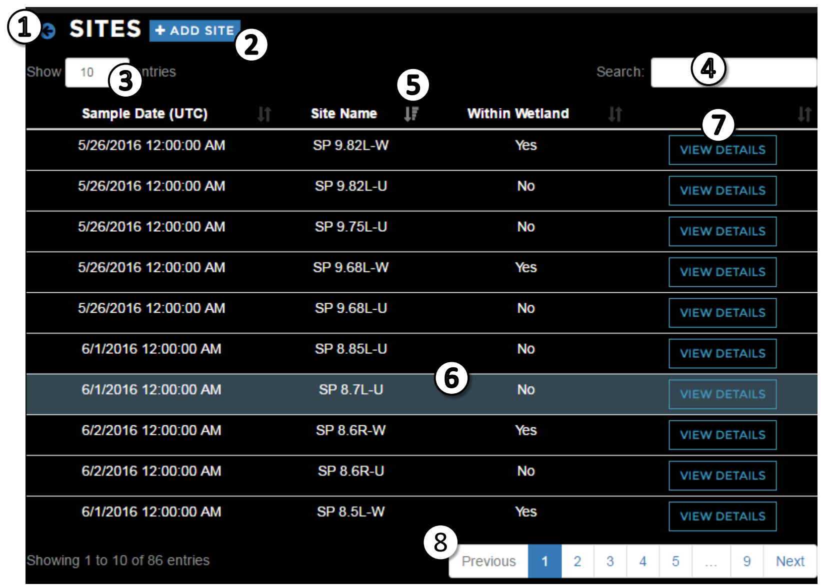


Site Summary Table

This table allows the user to search, sort, and view site details.
When a row in the table is clicked, the map will zoom to the site in question.

The summary table includes the following functionality:

1. Return to Project Summary
2. Add Site – see "Add Site" section below for details
3. Adjust records shown – default is 10 records
4. Search – all fields shown in summary table are searched by default, table will be filtered to results matching search
5. Sort by – all fields can be sorted ascending or descending (sort will honor search filter if applied)
6. Zoom to location – hover and click to highlight record
7. View Details – click to open and view/edit site details
8. Page navigation buttons

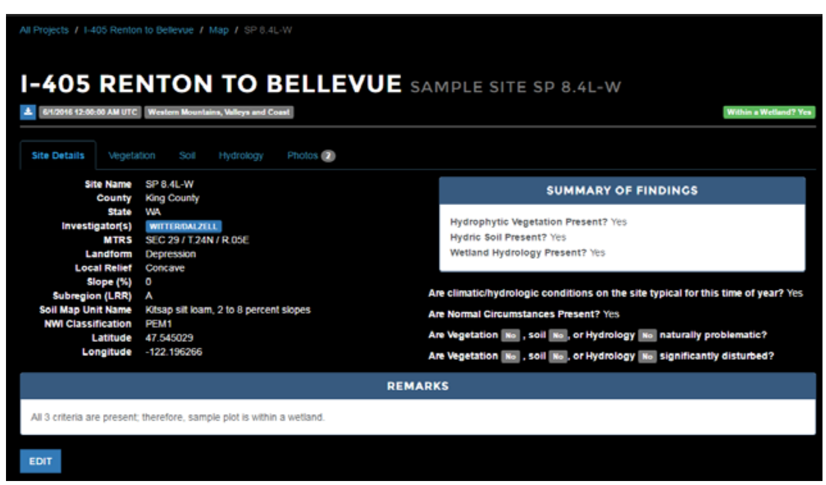


Sample Site Details

The Site Details page allows users to view and or edit all site form information. There are four tabs: Site Details, Vegetation, Soil, Hydrology and Photos.

Site Details

The Site Details tab contains the general site details, remarks and a summary of findings which is auto generated by the application. Click the edit button to edit site details information.



Download Report 

Users can export a wetland form just for this site by clicking on the blue generate report button.

Vegetation

The vegetation tab lists all vegetation stratums for the site with the ability to add or edit existing vegetation. Indicator statuses are auto populated based on regional or customized plant lists. Total percent cover, dominance, prevalence index and vegetation indicators are also auto generated by the tool. Indicators are calculated automatically depending on the absolute cover entered and the registered wetland indicator for each plant.

Edit Vegetation Summary

To edit or update vegetation summary information click on the edit 

button at the bottom of the page. Press the save button to save your edits.

Edit/Add/Delete Vegetation

To edit an existing vegetation click on the edit button for a particular species. Press the save button to save your edits.

To add vegetation to a sites, click on the 

add vegetation button at the top of the vegetation tab. This button opens the page to input species, stratum and absolute cover. Click save to save your edits.

To delete a species record click on the trash can button. 

Soil

The Soil tab contains soil information associated with the site. This includes soils layer information (depth, matrix, redox features) and soil summary data.

Edit Soil Summary

To edit or add soil summary information click on the edit 

button at the bottom of the page. Press the save button to save your edits.

Edit/Add/Delete Soil Layer

To edit an existing soil layer click on the edit 

button for a particular layer. Press the save button to save your edits.

To add a soil layer, click on the 

add soil layer button at the top of the soil tab. This button opens the page to input soil layer data, matrix data, and redox data as well as input remarks. Click save to save your edits.

To delete a soil layer click on the trash can icon. 

Hydrology

The Hydrology Page displays the following wetland hydrology variables:

- Primary and Secondary Hydrology indicators
- Surface Water Present
- Water Table Present
- Saturation Present

Edit Hydrology Summary

To **edit** or update soil summary information click on the edit 

button at the bottom of the page. Press the save button to save your edits.

Photos

Photos taken with the iPad in the field for a particular site will be available on the photos tab. Click on a photo to view larger image and slider to scroll through photos. The current version of Fen does not allow photo editing (renaming, deleting etc.) via the web tool.