**Purpose**

These instructions are to help users calculate percent control of invasive species after compliance inspections using data exported from Avenza Maps and put into the Avenza invasives tool provided by FNAI. The tool is set up as a read-only Excel file to prevent any unwanted modifications. You will have to save a local copy to be able to use the tool.

**What’s in the Excel?**

First, let’s talk about what is in this tool. There are 7 sheets. The first sheet (“Original\_data”) is where you will paste your data from a .csv or .dbf file. The first sheet can be edited as needed. The second sheet (“Output\_table”) converts some of the original data into formats that can be used to make calculations. You typically will not make any edits to this sheet. The third sheet (“All\_summary”) gives percent control with a 95% confidence interval and the number of points. The fourth sheet (“Summary\_species”) summarizes percent control for each species and net acreages of invasives before and after treatment. The last three sheets are marked in red and not intended to be edited. The first sheet marked in red is “Lookup\_Tables”. This should not be edited because the formulas in the tool draw from these tables as well as providing reference material for the user to understand the calculations. The second sheet marked in red is “Avenza\_Schema\_Ref”. This sheet is purely for reference to see all possible values in the Avenza schema that is named “FWC\_Invasive\_Inspection.kml”. The third sheet marked in red is “Example\_CSV\_Export”. These are example data that can be used to test the tool.

**Using the Tool**

Step 1:

Open the tool and save a local copy.

Step 2:

If this is your first time using the tool, let’s test it first. Open the last red sheet, named “Example\_CSV\_Export”. Copy rows 2-26. If it’s not your first time, you can continue with copying and pasting your own data instead. Return to the first sheet, named “Original\_data”. Paste into cell A2. You should have data in rows 2-26.

Step 3:

In the “Original\_data” sheet, if your species column (H) has any entries that say “\*Other (type in Description field)”, manually edit this to be the species you typed in the Description field (column G). If you would like to edit other data collected in the field, edit those data in the “Original\_data” sheet.

Step 4:

Copy the species names from Column H in “Original\_data”, excluding the header (H2-H26 for example data). Paste them into cell F3 on the “Summary\_species” sheet.

Step 5:

Click Data>Remove Duplicates (looks like this in Microsoft 365 ).

Click ‘Continue with this selection’ on the first pop-up window before hitting ‘Remove duplicates…’. Un-click the box ‘My data has headers’ on the second pop-up window before hitting OK.

The “Summary\_species” sheet should look like this:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Acreages for Project** | **Totals** |  |  | **25** | **All Target Species** | 1.1910 | 0.1746 | 85.3% |
| Gross Infested Ac | 2.39 |  |  | **Total** | **Species** | **Net Ac B4** | **Net Ac Aft** | **% Control** |
| Net Infested Ac Before Treatment | 1.19101 |  |  | 1 | Air-potato (Dioscorea bulbifera) | 0.0975 | 0.0975 | 0.0% |
| Net Infested Ac After Treatment | 0.17459 |  |  | 7 | Cogon Grass (Imperata cylindrica) | 0.7456 | 0.0457 | 93.9% |
|  |  |  |  | 3 | Brazilian Pepper (Schinus terebinthifolia) | 0.0109 | 0.0002 | 98.6% |
|  |  |  |  | 11 | Old World Climbing Fern (Lygodium microphyllum) | 0.2737 | 0.0162 | 94.1% |
|  |  |  |  | 1 | Melaleuca (Melaleuca quinquenervia) | 0.0009 | 0.0000 | 99.4% |
|  |  |  |  | 1 | Earleaf Acacia (Acacia auriculiformis) | 0.0625 | 0.0150 | 76.0% |
|  |  |  |  | 1 | Egger’s nutrush | 0.0000 | 0.0000 | 83.3% |

Step 6:

Click on the “All\_summary” sheet. The “All\_summary” sheet should look like this:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Percent Control** | **Number of Waypoints** | **Standard Deviation of Percent Control** | **95% Confidence Interval** | **Percent Control Low Estimate** | **Percent Control High Estimate** |
| 85.3% | 25 | 0.2251 | 8.8% | 76.5% | 94.2% |

\* Notice that the percent control in “All\_summary” and “Summary\_species” match at 85.3%.

\*\* The percent control is 85.3% with a 95% confidence interval of 76.5% to 94.2%. In this example, the project would not be considered a pass because it failed to achieve 95% control. If the Project Percent Control does not reach 95% but the confidence interval does, you will have to use your judgment. \*\*