

## DIRECTIONS FOR RUNNING THE CENSUS OF AGRICULTURE (COA) OVERLAP TOOL

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### REQUIRED FILES



- Entire contents of folder:
    - Input files folder
    - Input Template Examples folder
    - Tk\_assets folder
    - checkboxtreeview.py
    - esa\_overlap.py
    - esa\_overlap\_gui.py
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- (1) Unzip the file folders
- (2) Open the Python editor from the start menu (e.g., Spyder). In the Python editor, open the esa\_overlap\_gui.py file from the Overlap Tool folder.
- (3) In the Python editor, right click the esa\_overlap\_gui.py tab and select "Set Console to Working Directory".
- (4) Click the green triangle "Play" button and the GUI will open. It may open in the background and need to be selected from the bottom of the screen (a white icon next to the Spyder icon in the task bar).
- (5) Once the GUI is open, click "Select Location" to set the output file name and location for the output file to be saved. Since Range datasets will be run first, name the file "ChemicalName\_R" and click save (see Figure 1 for an example). When you run the CH next, make sure to change the input file name to "ChemicalName\_CH". This is the indicator for the type of run you have done so it is important to include in the label.

**Figure 1. Overlap Analysis Tool GUI General tab**

- (6) Type in the chemical name in the box provided (this is the label for your outputs)
- (7) Select the radio button for Range to do this analysis first.
- (8) Next, define all of the Use Sites to be assessed. To select use sites individually, click the tab labeled **Individual Use-Sites** and select all uses being assessed. For selecting entire crop groups, click the **Grouped Use-Sites** and select the crop group.

**NOTE**



The tool will use data from both tabs but will not run the same crop twice if it is accidentally specified in both tabs.

- (9) If the chemical does not have any geographic restrictions, the tool is ready to run. If there are states that are disallowed across the entire chemical (e.g., do not apply in CA for the whole label), click the **Geo Restrictions** tab and select the state(s) where the chemical is not allowed.
- (10) More complex geographical restrictions, either use-specific (see **Figure 2** for example) or down to county levels, the restrictions need to be specified in an external template.

In the directory where the tool is located, open the folder **Input Template Examples** and open the file "Geo\_Exclusion\_template.xlsx." Fill out the template according to the ReadMe tab and save the template with a name unique to the chemical being assessed. Once the selections are made for the state and or county in the template, click **Select Location** on the **Geo Restrictions** tab and open that file.

STATE	EXCLUDED USE-SITE 1	EXCLUDED USE-SITE 2	EXCLUDED USE-SITE 3	EXCLUDED USE-SITE 4
California	PEANUTS	SOYBEANS	SUGARBEETS	WHEAT

**Figure 2. Example of using template to assign crop specific Geo Restrictions** (e.g., Don't apply in CA for peanuts, soybeans, sugarbeets, and wheat)

- (11) The tool is now parameterized to run for Range. On the **General** tab, click Submit. The program will start and there is a blue spinner to show it started. When the analysis is complete, the file will be saved to the location selected.
- (12) Next, the critical habitat can be run. Click Select Location on the **General** tab again and save the file as (e.g., "ChemicalName\_CH") for critical habitat.
- (13) Select the radiolabel Critical Habitat on the **General** tab. No other changes need to be made in other tabs. Click Submit.
- (14) Open up the output files from the specified folder. See below for a description of the output tabs.  
Note: Both files (Range and CH) are formatted to be used directly as inputs in the MagTool. For all other uses, select the output tab that fits your assessment Tier (many New Ais will be starting with **Tab 5 outputs**).

## USING THE OUTPUTS

**Tab 1: Overlap by Use- Direct:** This tab is Direct overlap by each use when considered collectively and adjusted for potential redundancy. There is a scaling factor applied to these outputs (so uses do not go over 100%), so in some cases these outputs will differ from the outputs on Tab 5.

**Tab 2: This is a duplicate of Tab 1:** It is for users who may want to make alternative adjustments and scale results (e.g., apply a 50% reduction factor to account for usage).

**Tab 3: Action Area Overlap** (all uses together). The output on this sheet presents the total direct overlap of all use sites with the Range or CH (column label denoted as "Chemical name\_AA\_0" and the overlap at 30 m increments (e.g., "Chemical name\_AA\_90"). There are also intervals of total drift for ground ("\_305"), aerial ("\_792"), and the 1500m for wetland ("\_1500") which are located in the last 3 columns to the right. Drift overlap percentages do not include direct overlap. If you want AA plus Drift, take the AA\_0 and sum the 30 m overlap increments to the drift distance of interest.

**Tab 4: Overlap by State and buffer-** This sheet is formatted as an input for the Magtool. Also provides state locations for the species and other state specific data.

**Tab 5: Overlap by Use Buffer Sum** (Direct and buffered overlap for each independent Use). Includes all intervals 30m to 810 plus a few default buffers (30 m, 305 m (maximum ground drift distance), 792 m (maximum aerial drift distance) and 1500 m wetland buffer) to offer flexibility. The values include direct plus drift (no summation needed).

**Tab 6. Overlap by Use buffer (Incremental)**

This tab is the overlap by use but is specific to each interval (not summed).