

## GIS Tips for Mapping CREP Easement Polygons

Following the below steps to the best of your ability will save time by avoiding back & forth discussions on the CREP easement boundary with BWSR, FSA, and the SWCD.

- Step 1.** Make sure the CREP shapefile you are creating does not overlap with existing RIM easements or other easements known on adjacent property (USFWS, MN Land Trust, Prairie Bank, etc.). Download the latest RIM easement shapefile here: <https://gisdata.mn.gov/dataset/bdry-bwsr-rim-cons-easements>
- Step 2.** Draw out ¼ ¼ section lines around the area in which the CREP easement will be located using the directions below. This will result in a more accurate legal description because the PLS layer alone is inaccurate in many locations. Section lines should be drawn based on a combination of the PLS layer, road centerlines, County parcel lines, and land use lines. If the easement is located in or near a government lot, reference the original plat map (<http://www.mngeo.state.mn.us/glo/index.html>). When applicable, the CREP polygon should snap to the section line so there are no gaps or overlaps.
- A. Refer to the PLS layer to determine the general location of the section, ¼ section, and ¼ ¼ section lines.  
**Note:** *These lines often match up with roads. A county plat book may be very useful through this process.*
  - B. Find the closest roads located south and east of the CREP easement and compare to the PLS layer. If there are no straight roads in that section, try to find a clear land use/property line that appears to match up with the PLS layer. **Note:** *When the PLS was created, they started at the southeast section corner and worked in a northwest direction. Therefore, the grid becomes less reliable as you move north and west.*
  - C. Use a line shapefile (create a new shapefile if needed) to draw a section line down the center of the nearest south and east roads or land use lines. **Note:** *Each section line should be a straight line that consists of one point at each end (delete any extra vertices to ensure the line remains straight).*
  - D. Use the “Copy Parallel” tool to offset the lines created in Step C, moving north and west to create a grid that encompasses the CREP easement area.

### **Instructions for Copy Parallel tool:**

- a. Start editing the section line layer
- b. Select the line you wish to copy, go to the editor toolbar, and select “Copy Parallel”
- c. Under “Template,” choose the section line layer
- d. Type “1,320 ft” in the *Distance* box (this is the standard distance between ¼ ¼ section lines)
- e. Choose the side you want the line copied to (based on direction of the arrows) and click OK
- f. After the base grid is created, you may need to slightly adjust the location of each line as needed to match up with road centerlines and visible land use lines (keep them straight with only 2 points/line).

- Step 3.** Draw out the road right-of-way line(s). This is necessary because the CREP easement cannot go into the right-of-way, and when applicable, it should snap to that line (no gaps or overlaps).
- A. Draw a construction line down the center of each road adjacent to the easement
  - B. Use the *Copy Parallel* tool to offset the centerline the appropriate known ROW distance, or as follows:

Township Road (street, lane, road, ave, blvd, etc)	33 feet	C.S.A.H.	66 feet
County Road	50 feet	State & Interstate Highways	75 feet
		Typical Railroad	25 feet

**Note:** *The ROW distance is listed for each side of the centerline.*

- Step 4.** Create or adjust the CREP shapefile as needed to ensure the easement boundary stays within the deeded legal description and out of the ROW. As you are drawing, keep the following points in mind:
- A. Avoid excess vertices. If the easement boundary is meant to directly abut a road ROW or section line, the edge of that polygon should snap to the road ROW or section line. When following a section line, easement boundaries must be straight with only 1 vertex at each end.
  - B. If the property deed includes an exception that affects the easement boundary, reference the County parcel layer. If that seems off, you may need to map out the excepted area according to the deed.