# Raster-based methods:

1. Line (Kernel) Density in the Spatial Analyst toolbox
   1. Using search radius and output cell size to generate a resulting raster layer of "density"
   2. Line Density is done using the catch attribute you are trying to map/represent as the population field input
2. Then use the tool Line (Point) Statistics
   1. Use the vessel identifier as the Field input (has to be numeric?)
   2. Use Variety as the statistics type
   3. Use the same search radius and output cell size as the Line Density
   4. Snap to Line Density for the results.
3. Use Extract by Attributes to select for just those raster cells with a unique vessel count of >=3 to produce new raster
4. Use the resulting raster of those >=3 vessel cells to then Extract by Mask on your Line Density raster results from the catch data attribute to basically select the non-confidential cells.

We use towlines in raster-based calculations, such as Line Density in the Spatial Analyst toolbox (using search radius and output cell size) to generate a resulting raster layer of "density". Line Density is done using the catch attribute you are trying to map/represent as the population field input.

Then use the tool Line Statistics using the vessel identifier as the Field input and use Variety as the statistics type, also with the same search radius and output cell size as the Line Density you just ran (you can even snap to it for the results). Then select for just those raster cells with a unique vessel count of >=3 using Extract by Attributes to produce new raster, and use the resulting raster of those >=3 vessel cells to then Extract by Mask on your Line Density raster results from the catch data attribute to basically select the non-confidential cells.