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GEOG 489

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**Project Proposal: Automated JD Form**

**Background**   
At my current job we are consultants for a wide range of clients seeking natural and cultural resource solutions and management. One of the services we offer is wetland and stream delineations, which is crucial for obtaining Clean Water Act and state wetland permits. A jurisdictional determination (JD) form must be completed after all delineations and is the final approval on whether the wetlands in question fall under federal jurisdiction. The JD form has many spatial components that can be solved in GIS. My goal for this project is to use ArcObjects to allow the user to input a site and wetlands shapefile and solve multiple spatial questions.  
  
**Objectives**

* Determine state, county, city of project site.
* Calculate lat/long and UTM coordinates for site center point.
* Retrieve name of nearest waterbody and nearest traditionally navigable waterbody (TNW).
* Retrieve distance to nearest waterbody and nearest traditionally navigable waterbody (TNW).
* Determine which 10 digit HUC boundary the site falls within.

**Result**  
Using the C# Interop Assemblies, I will be able to add the fields listed above to a Microsoft Word Form.