

HOW TO SPOT WETLANDS FROM 100s OF MILES AWAY IN 3 EASY STEPS



SO YOUR TASK IS TO FIND A SITE OR MANY OF THEM ACROSS A BROAD GEOGRAPHIC AREA.

You want to stay clear of wetlands and waters that will result in infeasibility or drastically increase project costs before you spend thousands on other portions of your due diligence and design. The steps below will take about 15 minutes and yield reasonably accurate results.

Before you start, you will need Google Earth loaded on your computer. You will also need to search for the following layers/ file names. You must load the layers by downloading and then executing the files:

- National Wetlands Inventory (Wetlands-Data.kml)
- USGS 7.5 Minute Topographic Quadrangle Maps (usgs-topographic-maps.kml)
- NRCS Soils – (SoilWeb.kmz)

Once loaded, you must activate the layer you wish to view by checking (turning on) the layer. It is best to work with just one layer at a time.

STEP 1

CHECK THE US FISH AND WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY (NWI) MAP LAYER

Once the project area is visible in Google Earth, turn on the National Wetlands Inventory (NWI) layer. It is typically called FWS Wetlands & Riparian in the Google Earth legend. If the area is mapped as wetland, it will be shaded. If not, you're home free, right? Well, not so fast. Many of the nation's wetlands are not mapped by the NWI and some mapped wetland areas contain uplands. Make note as to whether there are mapped wetlands in the area.

STEP 2

CHECK THE USGS TOPOGRAPHIC, 7.5 MINUTE QUADRANGLE MAP

Turn on the layer USGS Topographic Quadrangle Maps. Here, look for blue lines (either solid or broken lines) or blue overlay that looks like little blue grass clumps anywhere in or near the project area. Also look for broad areas with few or no brown topographic lines, particularly such areas adjacent to or near any blue (solid or broken) lines or the blue wetland 'grass' clumps. These areas are typically broad floodplains, stream terraces, and bottomlands that can be wetland. Areas with tightly spaced brown lines are typically hill slopes. Wetlands are typically more common on broad areas with little topographic relief. It should be noted that crossing or otherwise impacting any surface water (mapped by USGS or not) that is connected by overland flow to federal or state waters typically requires a state and/or federal permit. In some locations, buffers where development is restricted or conditioned are mandatory.

STEP 3

CHECK THE US NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY

Turn on the SoilWeb layer. Soil coverage polygons will appear. A soil name abbreviation code will appear within each polygon. There will be a dot next to the letter designation. Click the dot. A data bank will open. Click on the soil name. Scan down to the field that is identified as "drainage class" and note the drainage class of the dominant and wettest components (if multiple components are listed). If any component is listed as somewhat poorly drained, poorly drained, or very poorly drained, this may not be good, because poorly drained soils are conducive to the formation of wetlands.

If any of the above 3 steps indicate the possible presence of wetlands or waters, the services of a qualified wetland scientist/consultant will likely be needed to conduct a formal, on-site, wetlands/waters determination and ultimately determine whether a project will impact wetlands or waters.

ECA is an environmental, cultural resources, and geotechnical consulting and engineering firm with a 24-year track record of excellent service to clients. ECA attributes its success to providing timely and innovative services and solutions with a persistent focus on the objectives of clients.

ECA has completed thousands of wetland determinations and delineations. ECA has also successfully permitted many projects within wetland areas. If you have questions regarding wetlands identification or permitting, please contact Ben Salter: ben.salter@eca-usa.com, (828) 505-0755, or Marvin Webster: marvin.webster@eca-usa.com, (770) 667-2040 x101.

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