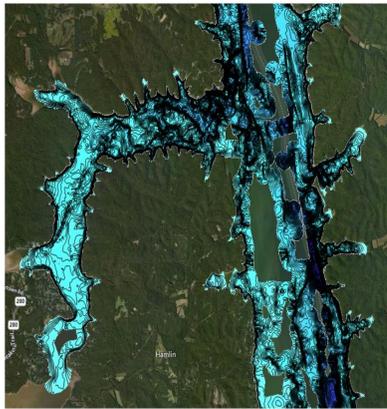


# Fishing With Geographic Information Systems Applications

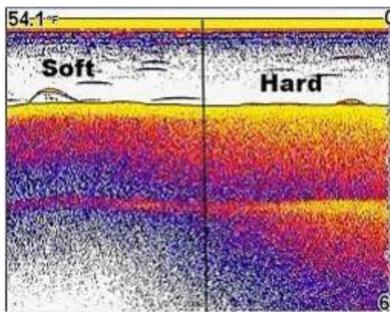
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Lowrance Insight Genesis map



Example of bottom composition via sonar



Google Earth image from Paris Landing area showing old standing bridge



The Lowrance units to Collect Insight data



Before and after graphing a small watershed with Insight Genesis



## Abstract:

People all over the world use fishing for both enjoyment and a way of life. Fish (bass for this project) are very pattern oriented, especially larger concentrations of them relate to one another. Rather the fish are shallow, deep, relating to wood or rock or some sort of other vegetation. All of these factors can be taken into account from Geographic Information Systems (GIS) applications. Which will in turn help you be more efficient with your time on the water, fishing more productive water that are more apt to suit the way you want to fish.

## Technology Used:

- Lowrance
- Insight Genesis
- Lakemaster
- Humminbird
- Navionics
- Aerial Photos
- Google Earth
- ARCmap/Esri

## What Are We Looking for:

Using topo maps to delineate what kind of water we are looking for, finding the most ideal conditions using overlays such as older areal photographs, bottom hardness checked by sonar, and multiple other means of data. To figure out what areas could hold more fish.

## Lowrance/Insight

These two technologies go hand in hand together. The insight genesis technologies go hand in hand together. The insight genesis technology is gathered from a Lowrance HDS unit. What this does is takes sonar data from the Lowrance and stores it on a SD card to be uploaded to create new topographical maps that include depths, bottom hardness, and vegetation. Being able to utilize this information on the water is critical. It requires hours spent on the water collecting and logging data. To acquire the most accurate data you need to be under 10MPH for sonar to get a good reading. So with this data you will be able to find the right bottom composition in areas with the right depth right at your fingers on the water.

## ArcGIS/ESRI:

Kentucky Department of Fish and Wildlife Resources offers many different GIS applications from lake access sites to population numbers for bait, such as crayfish, helping the fisherman have a better understanding of what are better areas to access the places they want to fish and what is the primary forage.

[Conservation Areas for crayfish based on 8 digit hydrologic units - 2010 \(HUC8\\_Crayfish\)](#)

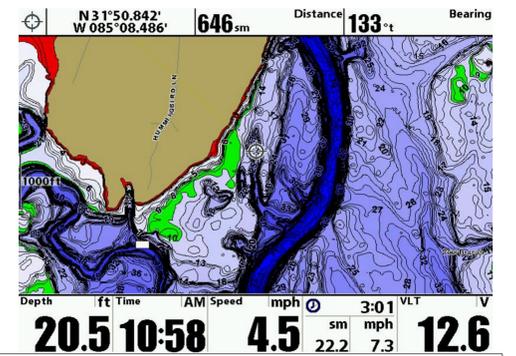
[Fishing Access Sites](#)

[Kentucky's Hunting and Fishing Access Sites](#)



## Logic Behind The Study:

Fishing has always been a pastime of human nature. Especially here in this part of Kentucky right beside Kentucky Lake and Lake Barkley. So utilizing multiple applications and software systems to make the fisherman's time on the water as efficient as possible. Hybridization of these technologies allow the angler to eliminate water and be in more productive areas.



## Humminbird/Lakemaster:

What these units have allowed a fisherman to do with this chip is pinpoint the exact depth conditions that the fisherman want to be in. In the image below one can see the green is what the fisherman is looking for (9ft-10ft) and the red is danger (2ft and less). What this allows is very helpful overlays of what all I have found earlier. If the most productive areas are in the bays in 10ft, like this time, it keeps all of the productive areas highlighted and easy to access.

## Favorable Conitions:

Rocky bottom/mussel shell bed on this pallet show up bright red on a neon green background (Figure 1), Grass will show up like this on side scan showing it as a wall of vegetation so you can set up where you can follow the edge of the grass. (Figure 2).

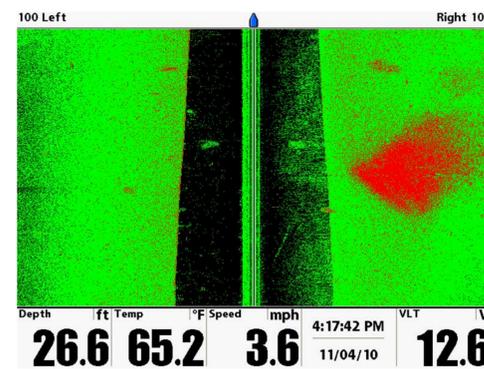


Figure 1

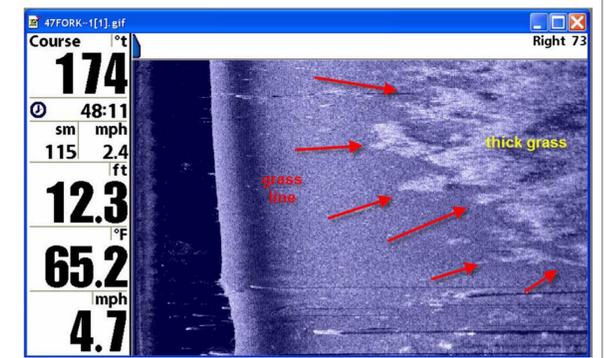


Figure 2

## Aerial Photographs:

One can clearly see how the creek ran then versus now that the land has been flooded, which typically will have stumps and more current and bait through those areas. It is also noticeable that the bridge has been moved to the east. (Photo by: Historicials.com)

