

ESRI has a series of applications called Story Maps. This particular design is the Map Series. It allows the “storyteller” to create different pages (tabs) for each topic or focus area. Basinwide information will be captured under the tabs titled Overview, Population, Land Cover, and Monitoring Data. There will also be a tab dedicated to the BPB home page for quick and easy access. For the Watauga, we can break the discussion and tabs down to the 12 HUC.

NOTE: This is a DRAFT layout. Tab names may change. Order of tabs may change as well based on feedback from the Department, Division or local stakeholders.

Basinwide Water Resources Report - Watauga River

Overview Population Land Cover Stream Flow Monitoring Data **Interpreting Data** Watauga River Headwaters Dutch Creek Cove Creek Beech Creek Beaverdam Creek Elk River Basin Planning Website


### Interpreting Data

for individual parameters for each site within a five year period. In general, if a standard is exceeded in greater than 10.0% of samples taken for a particular parameter, that stream segment is impaired for that parameter. The standards for fecal coliform bacteria is the exception to the rule.

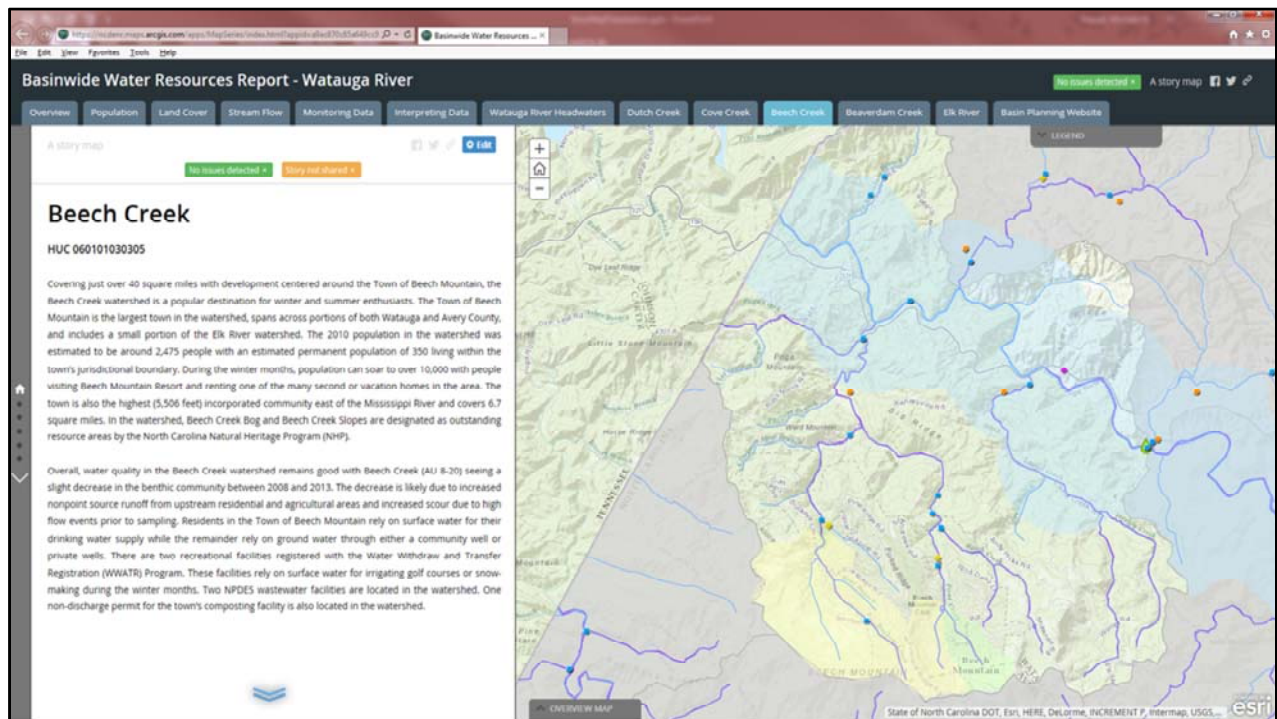
Each biological parameter (benthic and fish community) and each ambient parameter is assigned a Use Support Category based on its rating or percent exceedance. Each monitored stream segment is given an overall category number which reflects the highest individual parameter category. The table below illustrates how the category number is translated into the use support rating.

Biological Ratings (Bioclassifications)	Water Quality Assessment North Carolina Standards (EPA Categories)	Ambient Monitoring Data
Excellent	Meeting Criteria (Categories 1 and 2)	Numerical standard exceeded in a 10% of the samples collected
Good		
Good Fair	Data Inconclusive (Category 3)	Less than 10 samples were collected
Not Impaired		
Not Rated	Exceeding Criteria (Categories 4 and 5)	Numerical standard exceeded in a 10% of the samples collected
Poor		
Poor		

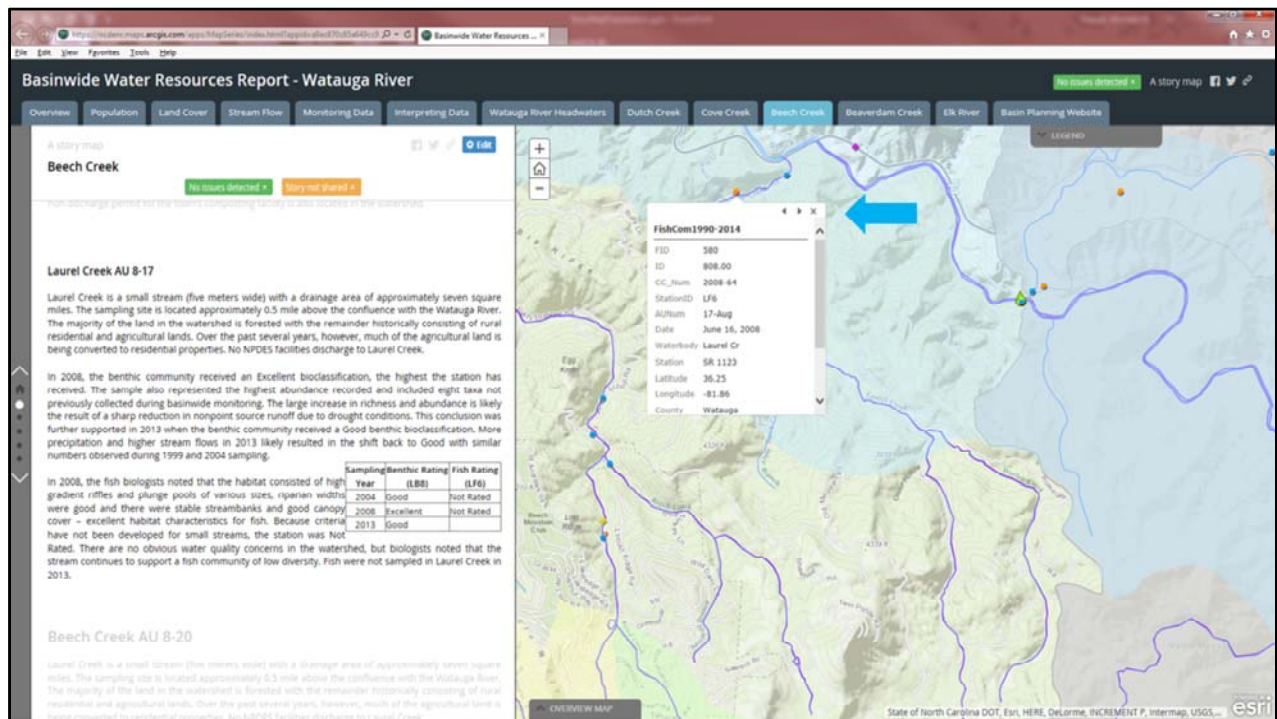
Biological Monitoring



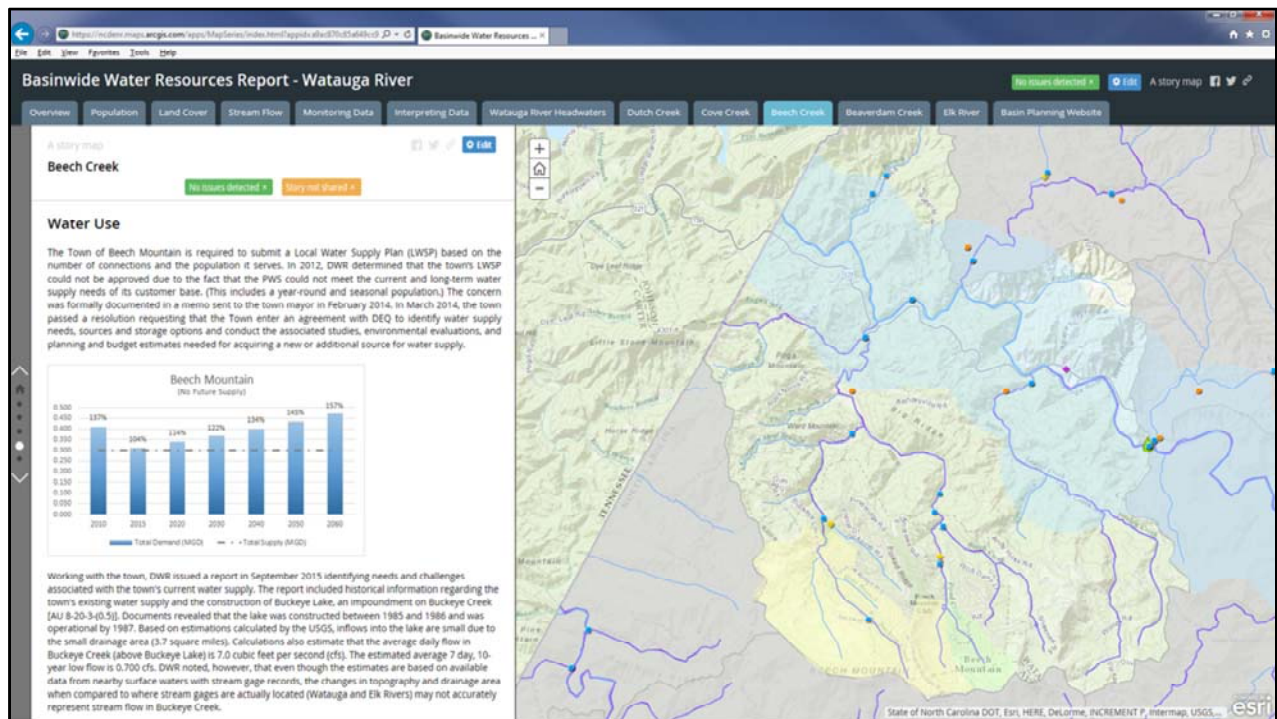
Within the Map Series, we can embed different storytelling types. To discuss and review data, the Map Journal template is a good fit. Along the left hand side of the page, you'll notice the "home" and an arrow pointing down. Each of the dots indicates a new topic or area of focus. Each topic (or dot) will have a main page and a side panel. The side panel will include discussions, graphs, etc. The main page can be changed to a photo, map, graph, etc. All the graphics are stored as a URL.



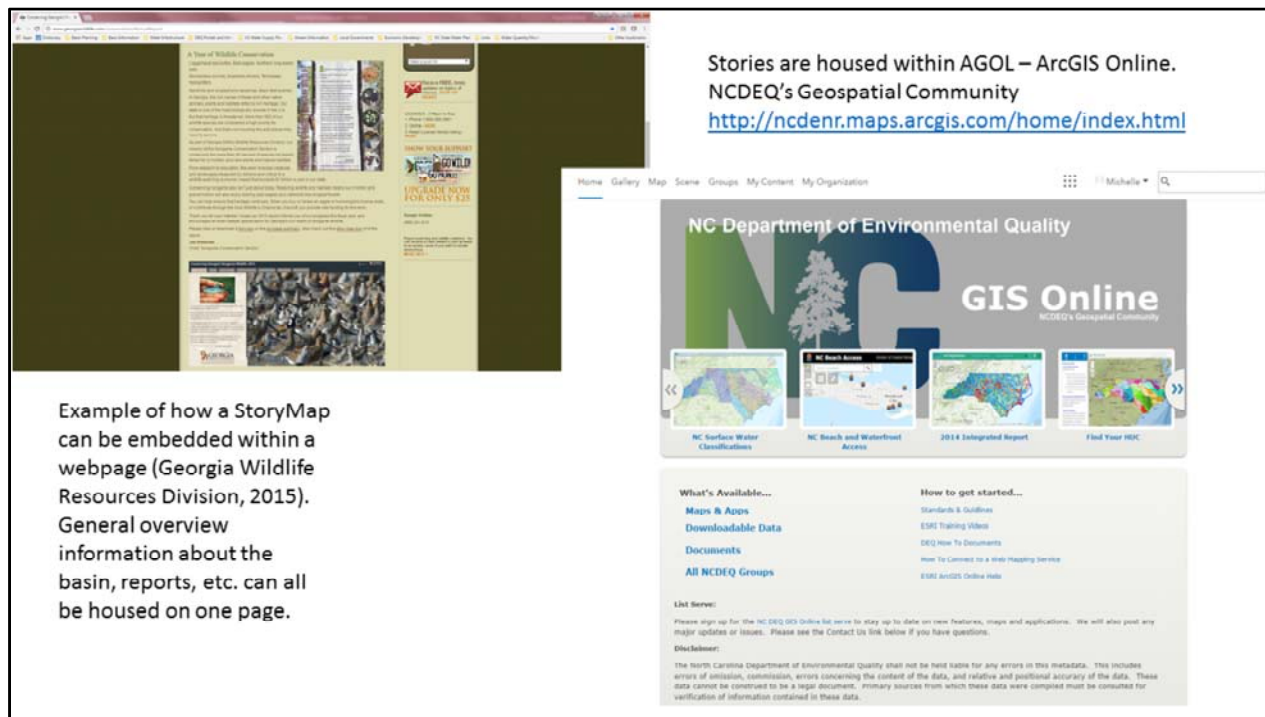
Each 12 HUC in the Watauga basin will have its own tab on the top of the page. Each will begin with an overview of the HUC and move into individual stream discussions.



A legend is located in the upper right corner of the main panel. Clicking on this will drop down a legend that shows you what the symbols represent on the map. Click on a symbol and you will get “tiles” that have information related to that symbol or that point on the map. Scrolling through the tiles with the arrows located on the top bar of the tile will show you the information that is stored for that particular point. Biological samples will display the stream name, the date the sample was collected, whether it was a basin sample or part of a special study (benthic only), the EPT scores, and bioclassification or rating. Information will also be displayed about the stream classification, AU number and description, HUC name and area (acres).



Each HUC will include a discussion about the biological monitoring, stream restoration projects or initiatives, water use (demand), and any management strategies that may be in place. For example, portions of Beech Creek and two of its tributaries are classified as water supply (WS) watersheds. Streams classified WS-II through WS-IV require that local governments adopt and implement land use ordinances to protect the water supply. In addition, several waters in the basin have the supplemental classification of Trout (Tr), and the entire length of the Watauga River has the supplemental classification of High Quality Waters (HWQ). Both of these supplemental classifications have special management strategies associated with them to protect water quality.



The Story Map will be embedded within a web page dedicated to the Watauga River basin. Links will be provided to reports, watershed discussions, basin specific issues, etc. This is an example of how the Georgia Wildlife Resources Division used a Story Map to highlight measures to protect nongame wildlife as presented in their 2015 report. The user can download or view the full report, a summary of the report, and/or the Story Map (<http://www.georgiawildlife.com/conservation/AnnualReport>).

The stories are housed within AGOL – ArcGIS Online. Several maps and applications are currently available to the public. These include surface water classifications, the 2014 integrated report, beach and waterfront access, your ecological address (Office of Environmental Education & Public Affairs), and fish kill reports. You can access NCDEQ's Geospatial Community by going to <http://ncdenr.maps.arcgis.com/home/index.html>.