

# Chapter 5

## Gathering Data and Creating a Watershed Inventory

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# Initial Research

Not all monitoring stations are listed

Work with local water quality officials to determine if more monitoring stations exist

Use MyWATERS Mapper

The screenshot displays the EPA MyWATERS Mapper web application. The interface includes a top navigation bar with 'Back', 'Home', and 'Forward' buttons. Below this is a search bar with 'Go To:' and a 'Go' button, followed by a dropdown menu for 'Address or Location'. The map area shows a coastal region with labels for 'S. Croatan Hwy', 'Jockey's Ridge State Park', 'Mother Vineyard', and 'Manteo'. A pop-up window titled 'Features at this Location' is open, displaying information for a specific feature: 'Impaired Waters Line: NC30-21e2'. The pop-up includes fields for 'Feature ID: NC30-21e2', 'Subwatershed (HUC 14): 03010205007898', and 'Cycle Year: 2012'. A button labeled 'Get More Details on this Feature' is also present. On the right side, there is a sidebar with several sections: 'Water Program Snapshots', 'Water Impairments', 'Water Monitoring Data', and 'Other EPA Water Data'. The 'Other EPA Water Data' section contains a list of checkboxes for various data types: 'Rivers & Streams (NHD)', 'Watershed Boundaries (WBD)', 'Legacy Watersheds', 'National Wetland Inventory (NWI)', 'Impaired Waters' (checked), 'Assessed Waters', 'Waters with TMDLs', and 'Beaches'. Below this is a section for 'Water Quality Monitoring' with a checkbox for 'STORET Water Monitoring Stations'.

EPA MyWATERS Mapper

Water Program Snapshots

Water Impairments

Water Monitoring Data

Other EPA Water Data

- ☐ Rivers & Streams (NHD)
- ☐ Watershed Boundaries (WBD)
- ☐ Legacy Watersheds
- ☐ National Wetland Inventory (NWI)
- ☒ Impaired Waters
- ☐ Assessed Waters
- ☐ Waters with TMDLs
- ☐ Beaches

Water Quality Monitoring

- ☐ STORET Water Monitoring Stations

Features at this Location

There is 1 feature at this location.

Zoom in Closer

Impaired Waters Line: NC30-21e2

Feature ID: NC30-21e2

Subwatershed (HUC 14): 03010205007898

Cycle Year: 2012

More Details: [Get More Details on this Feature](#)

# By Now the Following Data Will Have Been Collected

- Watershed boundary
- 12-Digit HUC
- State and federal water quality classification
- Impairments
- TMDL information
- NPDES permitted facilities
- Water monitoring stations
- State basin or watershed
- 303(d) and 305(b) Reports

# Data Management

Use an Excel or Access spreadsheet to manage metadata

- Increases efficiency
- Avoids duplication
- Ensures completeness
- Metadata: *information describing data*

## Tabular Datasets

- Topic (monitoring, geographic, etc.)
- Source of data (agency)
- Number of monitoring stations
- Collection start date
- Collection end date
- Number of samples/observations
- Parameters
- Frequency
- Known quality assurance issues with the data
- Special comments/notes
- File name
- File Path

# Required Data for *Watershed EZ Tool*

## Guidebook Section 5.3

**1. Watershed boundary** (Section 4.4)

**2. Baseline year**

**3. Current and historical aerial photography**

**4. Parcel Data**

**5. Zoning Data\***

**6. Hydrologic Soil Group (HSG) data**

**7. 1-year, 24-hour depth storm model**

\*If the information is not included in the Parcel data

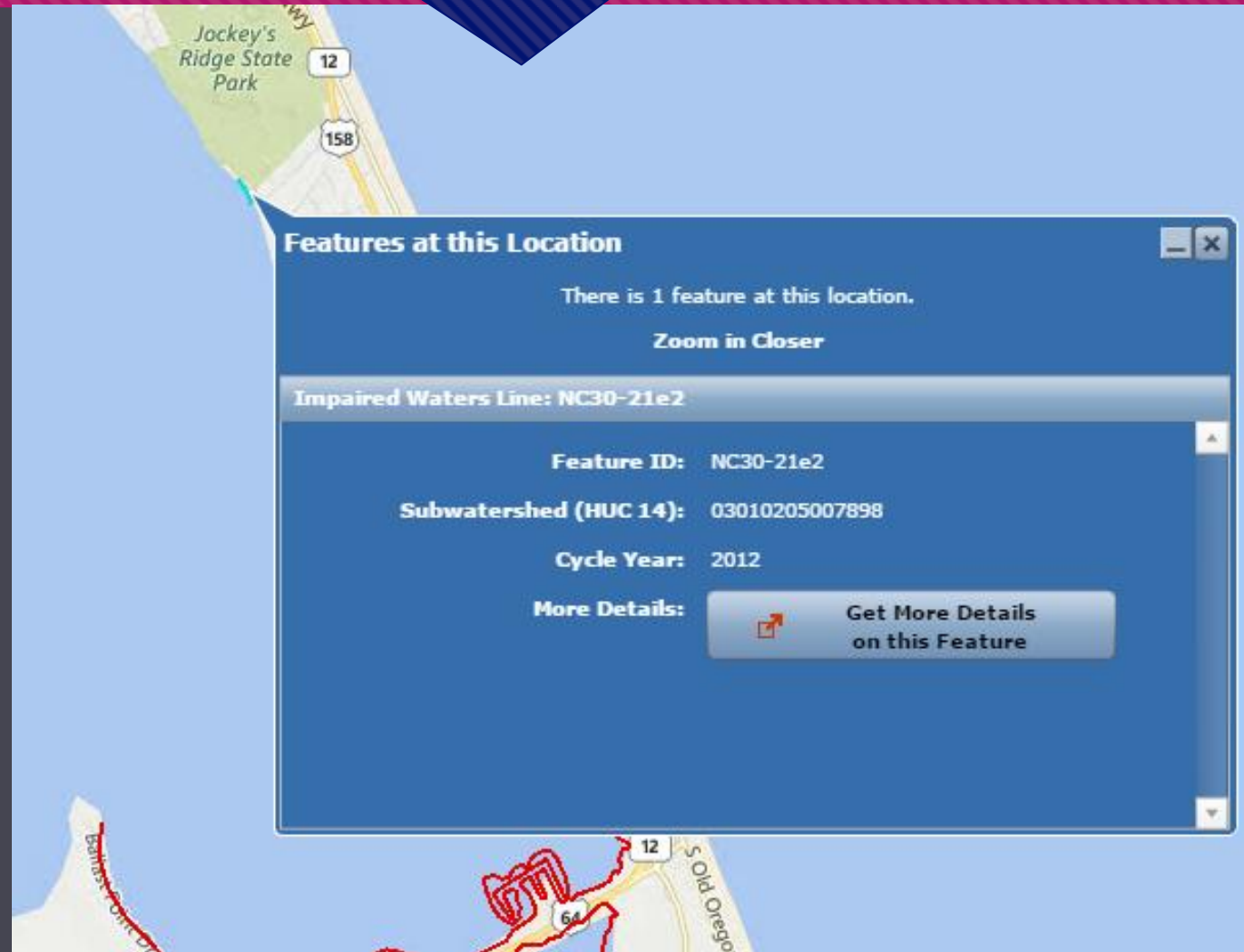
# Baseline Year

- Impaired since 2008 Enterococcus
- Tier 1 Swimming Water
- Open for shellfishing

- Depends on the goal and objectives of the watershed
- Stormwater Runoff Reduction Volume goal will be to mimic conditions during the baseline year

*“Turning back the clock”*

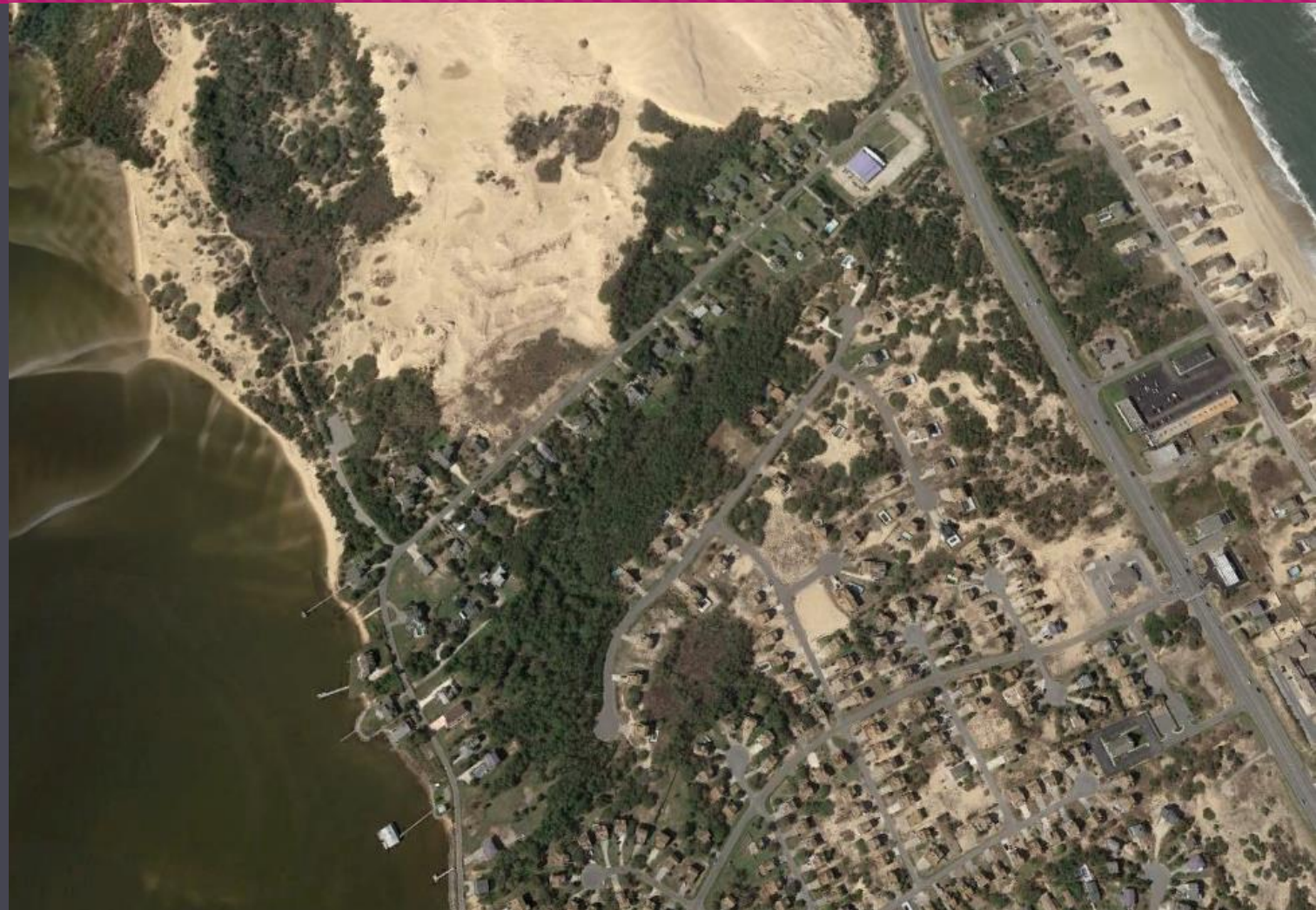
- Can be difficult to devise in areas with limited data





# Aerial Photography

- Before-After land use comparison
- Images
  - Before impairment/Baseline
  - Periods between
  - Present day





# Parcel Data

Not all Parcel data will include zoning information

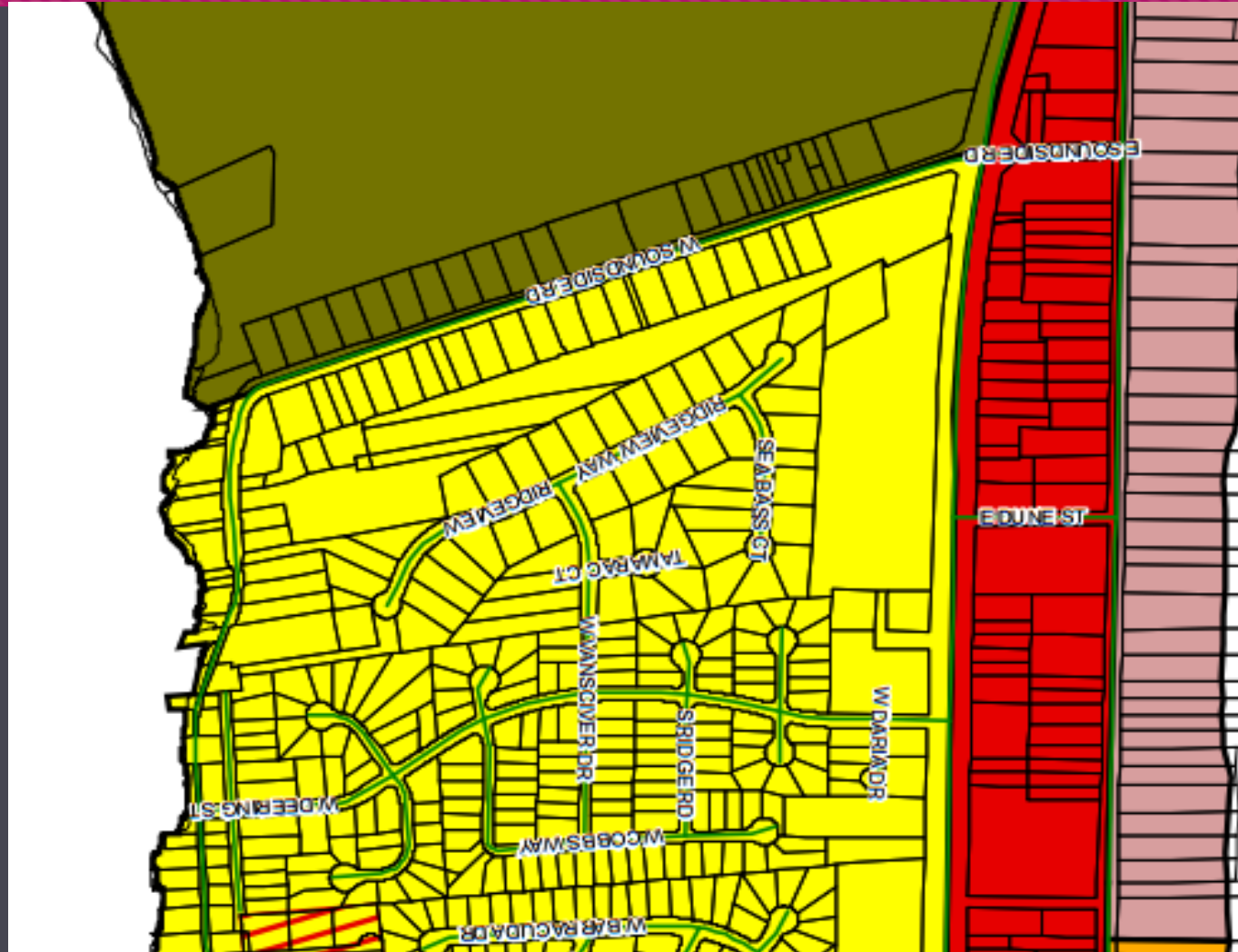
- Show property boundaries and accompanying information
- Used to
  - Right-of-Ways
  - Impervious Coverage
  - Zoning





# Zoning Data

- Used to determine land use designations of a parcel
- Understand development patterns
- Commercial vs Residential
  - Can utilize more complex land use designations in *Watershed EZ*





# Storm Model Depth

- Represents the depth of precipitation in a storm
- Used to quantify the amount of rain that will inundate the watershed
- Two storm model depths required
  - 2-year, 24-hour storm model depth
  - 1-year, 24-hour storm model depth

[NOAA Precipitation Frequency Data Server](#)



# Source Analysis Data

- [EPA EnviroFacts](#)
- [Shellfish Sanitation](#) reports found at the [North Carolina Digital Collections](#)

- Information regarding potential sources of pollution
  - Point sources
  - Non-point sources
  - Past and present land use management practices





# Additional Data

- Determine what additional information is necessary to address the goal and objectives
- GIS efficient way to quickly visualize and find information

## *ADDITIONAL INFORMATION TO RESEARCH BASED ON THE GOALS OF THE WATERSHED*

- Biology
- Demographics
- Geomorphology
- Habitat
- Hydrology
- Land Use and Land Cover
- Physical and Natural Properties
- Source Water Assessments
- Topography
- Water Quality Standards
- Waterbody Conditions
- Waterbody Monitoring Data
- Watershed boundaries
- Wildlife



Questions?