Chapter 5
Gathering Data and Creating a Watershed Inventory

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Initial Research

Use *MyWATERS Mapper*

Not all monitoring stations are listed

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

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

Baseline Year

- Depends on the goal and objectives of the watershed

- Stormwater Runoff Reduction Volume goal will be to mimic conditions during the baseline year

- Can be difficult to devise in areas with limited data

- Swimming advisories increase in mid-2000s
- Impaired on 2014 and 2012 305(d) Report
- Closed for shellfishing since first sampling in 1947 wastewater treatment plant (no longer there)
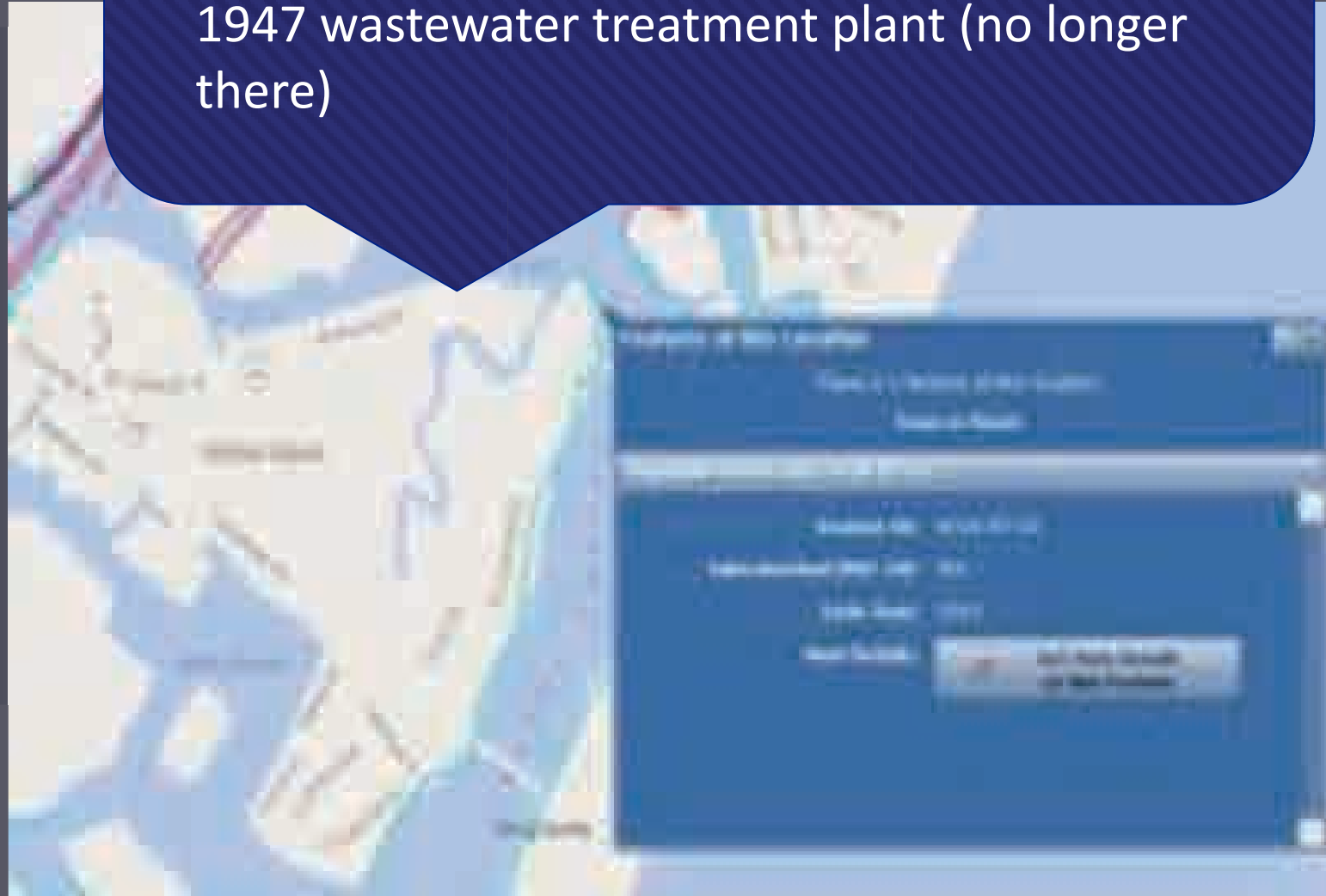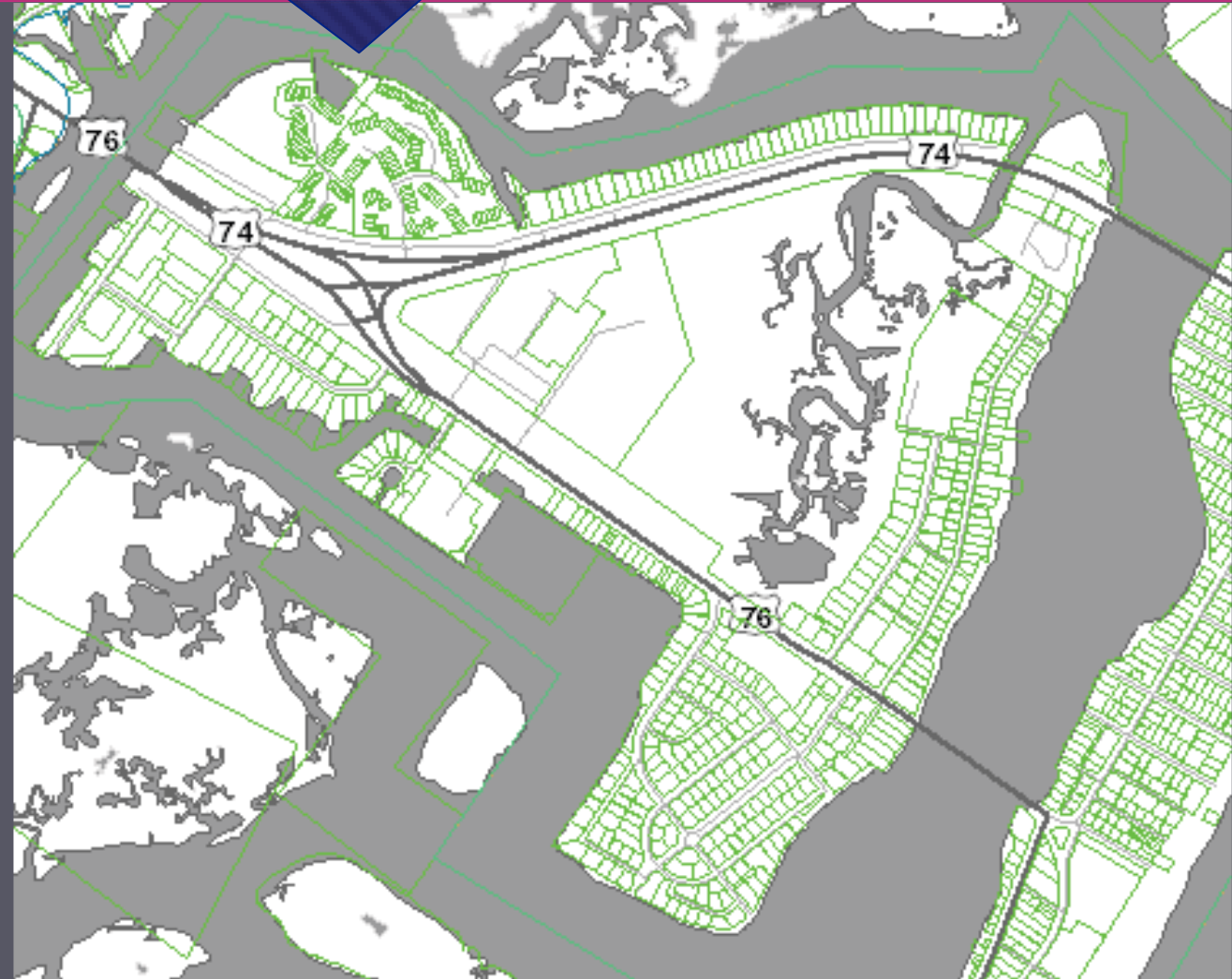
Aerial Photography

- Before-After land use change 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 zoning designations for Watershed EZ

Soils

- Hydrologic Soil Groups (HSG) (Group A, B, C & D)

- HSG represent water infiltration rates

High   Low

A   B   C   D

INFILTRATION POTENTIAL

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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

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

Image: University of Wisconsin, Environmental Resource Center

Additional Data

- Consider the watershed's history
- Determine what additional information is necessary for the plan
  - 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 INCLUDE

- 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?

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