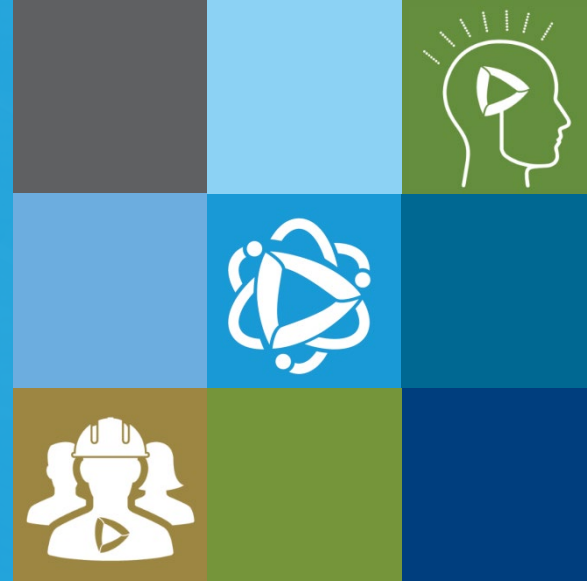




Kickoff Meeting for Des Plaines River
Watershed Workgroup Nutrient Assessment and
Reduction Plan (NARP)

April 15, 2021



THE
CONSERVATION FUND

See the February 18, 2021 general membership
presentation for more information.

Key Project Team Members

Geosyntec
consultants



Rishab Mahajan
Project Manager



Adrienne Nemura
Project Director

KIESER & ASSOCIATES
ENVIRONMENTAL SCIENCE & ENGINEERING



Mark Kieser
QA/QC Manager

THE
CONSERVATION FUND

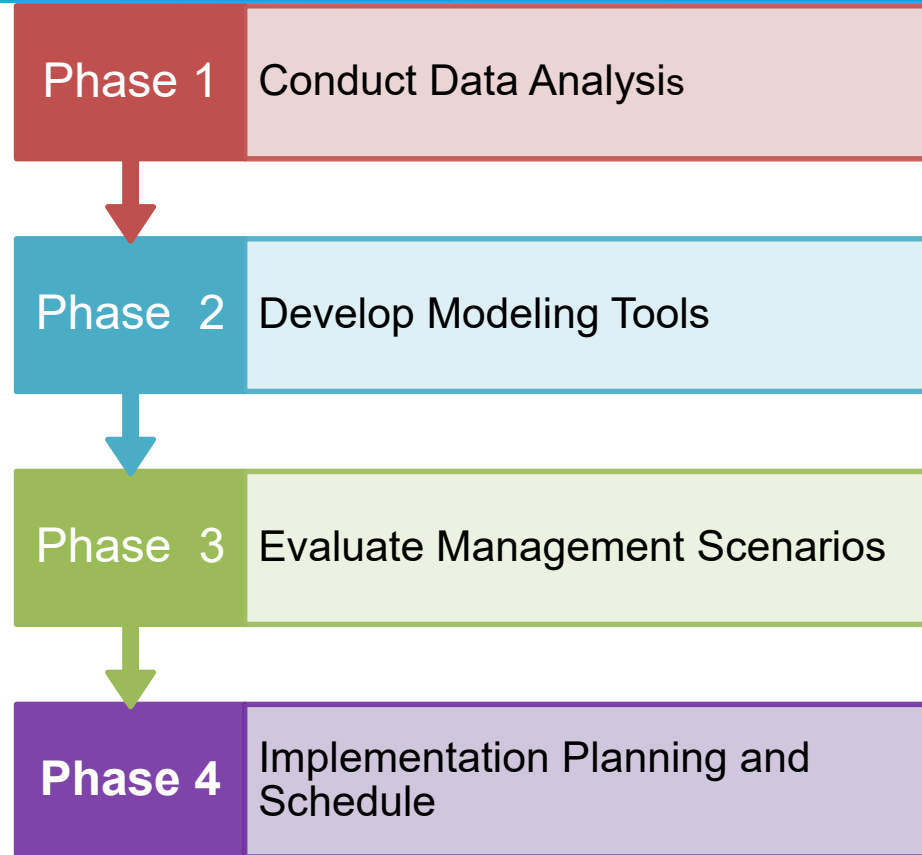


Emy Brawley
Implementation
Planning and
Schedule Support

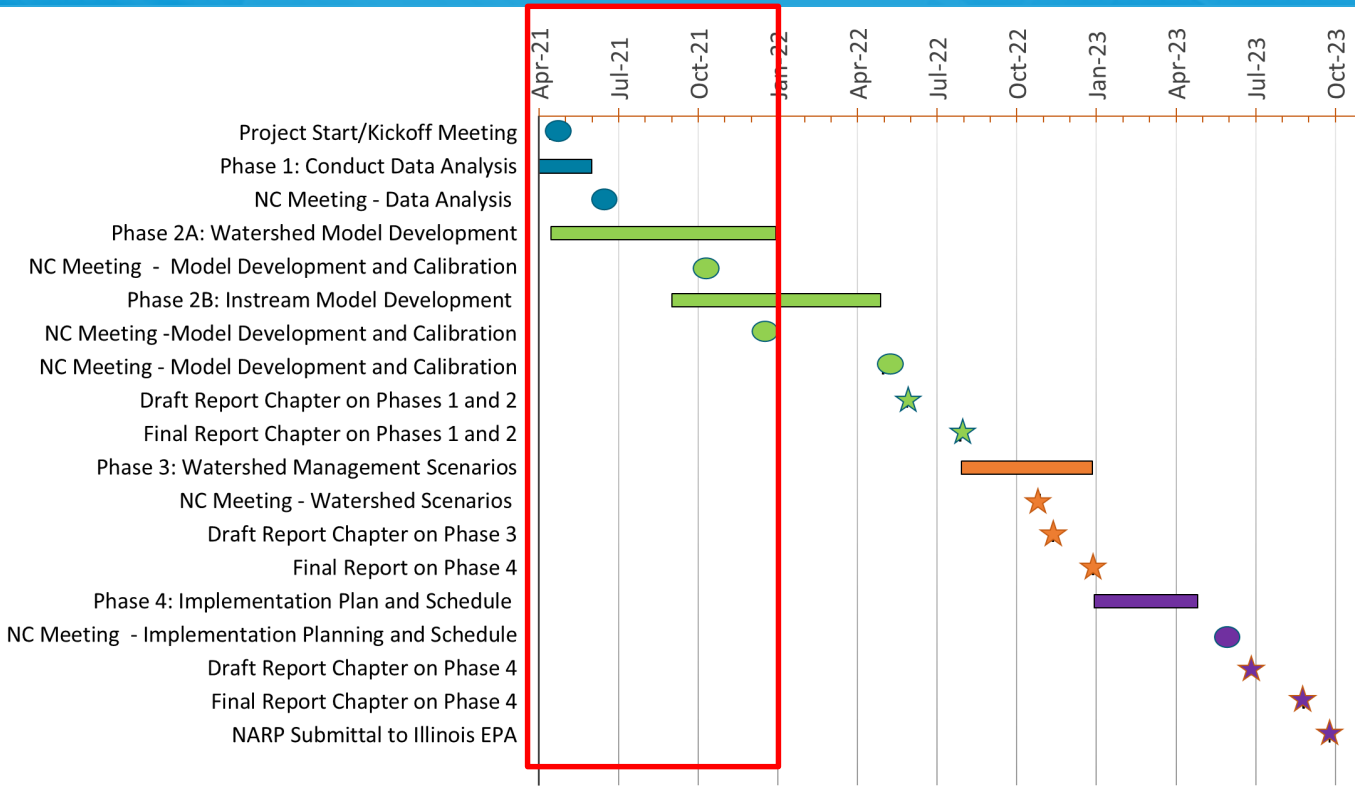
Project Approach

Project Approach

- Phased approach
- Each phase will be a NARP chapter



Project Schedule



● NARP Committee Meeting Tentative Date

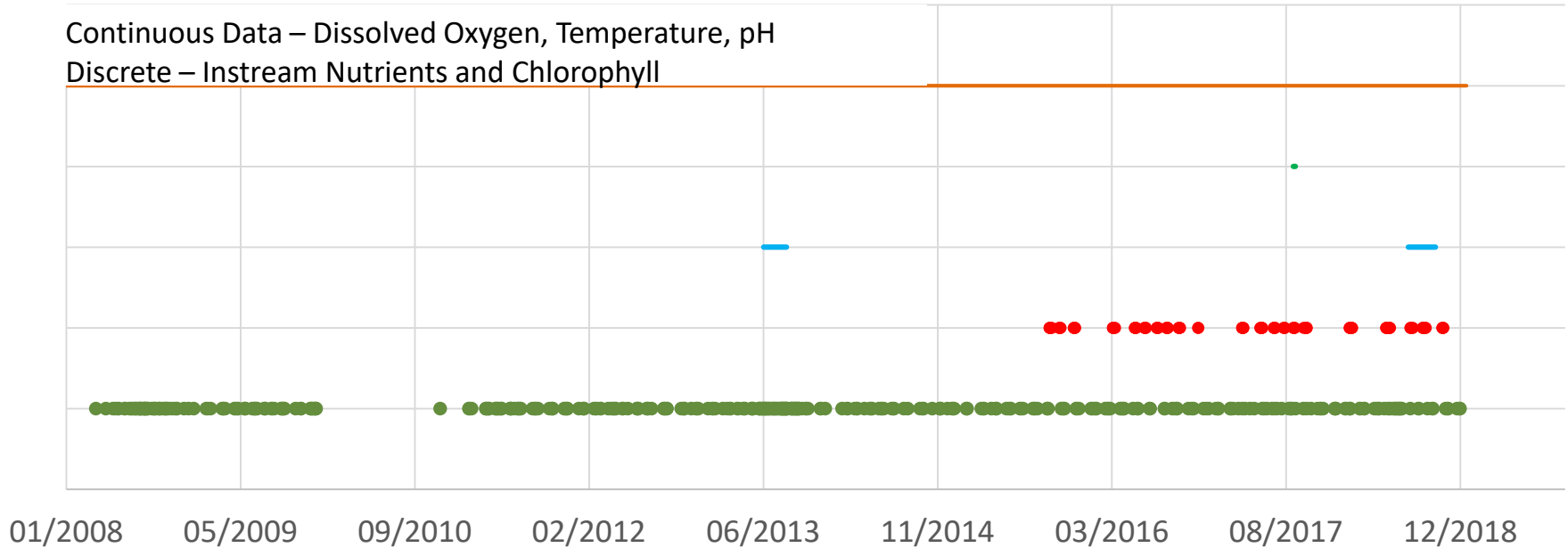
★ Major Project Milestone

Phase 1: Conduct Data Analysis

- Data from 2008 to 2018 was previously analyzed
- Review recent data to ensure no quality issues, and update the analysis, as needed
 - Use the Biological & Water Quality Study (2018-2019) to ascertain P-related and non-P-related impacts
- Develop understanding of potential relationships between phosphorus, algae, and dissolved oxygen
 - Leverage Geosyntec's work from the NARP Workplan development*
- Conduct meeting to discuss data analysis

DRWW Data Temporal Coverage (till 2018)

Continuous Data – Dissolved Oxygen, Temperature, pH
Discrete – Instream Nutrients and Chlorophyll



Update

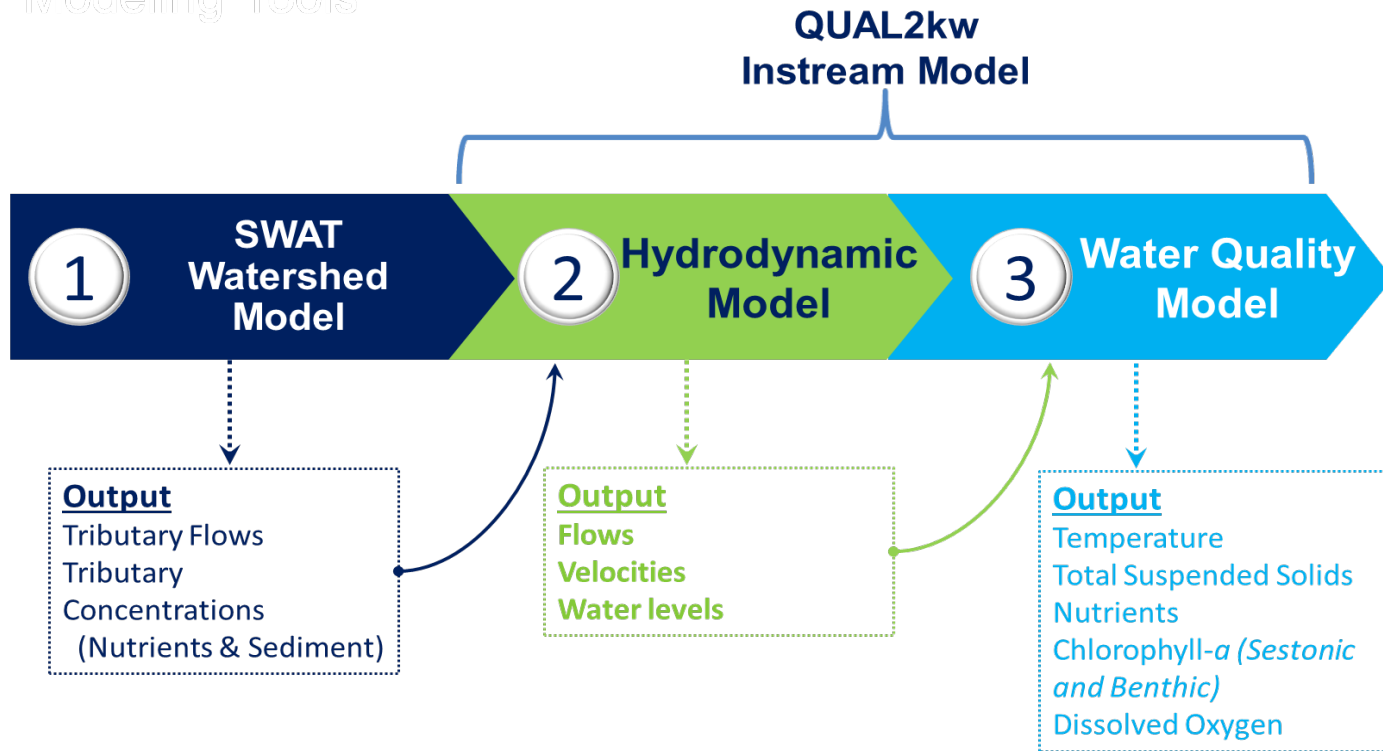
● Discrete IEPA Data

● Discrete DRWW Data

Phase 2: Develop Modeling Tools

Define the linkage between the phosphorus inputs and related impairments

Modeling Tools



Phase 2A: SWAT Watershed Model

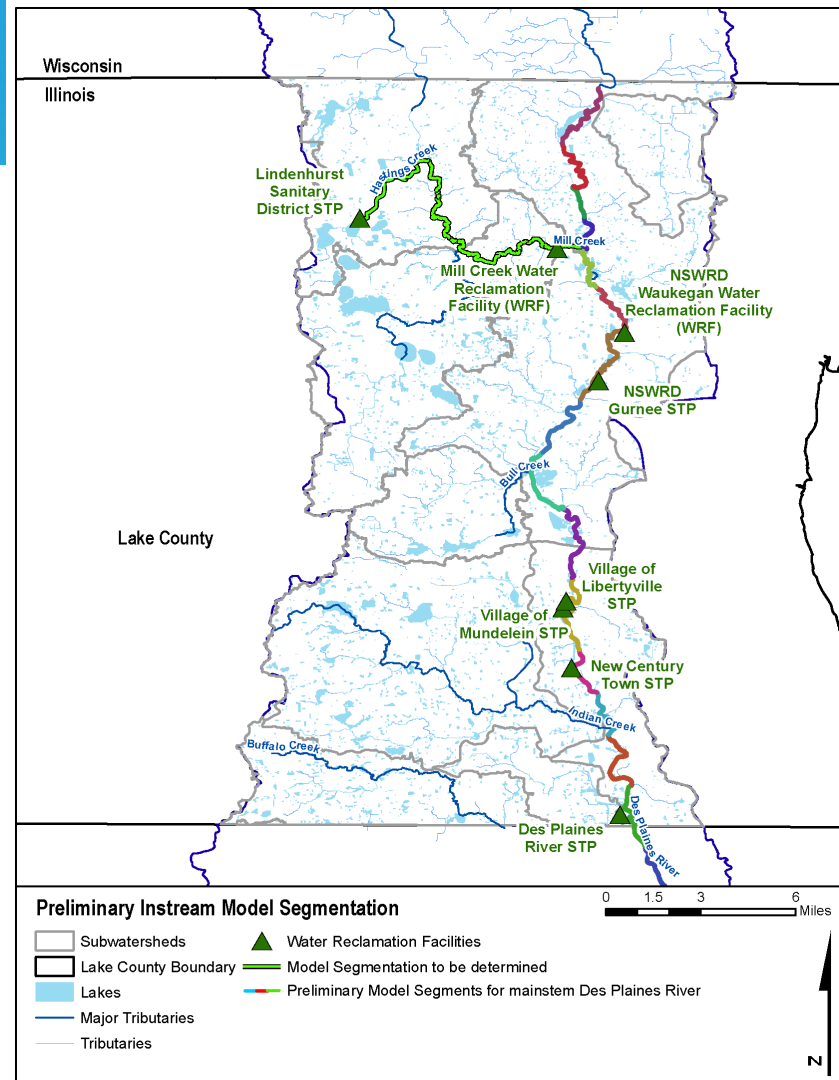
- Utilize the datasets compiled in NARP Workplan
- Delineate subwatersheds and develop model
 - Include specific lakes of interest
- Ensure model predictions are representative of measured data in tributaries
- Calculate flows and loads to the mainstem river and tributaries



Image Courtesy : Lake County

Phase 2B: QUAL2kw Model

- Develop hydraulic portion of instream model in 2021
 - Mainstem Des Plaines River
 - Tributaries downstream of Lindenhurst STP (highlighted in green)



Communication Strategy

- **Communication goals**
 - Keep key people informed of project status
 - Provide clear insight on decisions needed
 - Provide opportunities for input (in addition to project meetings)
- **Frequency and Format**
 - Monthly verbal updates at DRWW Executive Committee meeting
 - Planned project meeting

Data and File Sharing

- One Drive Location
- Used for sharing data and deliverables

Thank You!

NARP Special Conditions

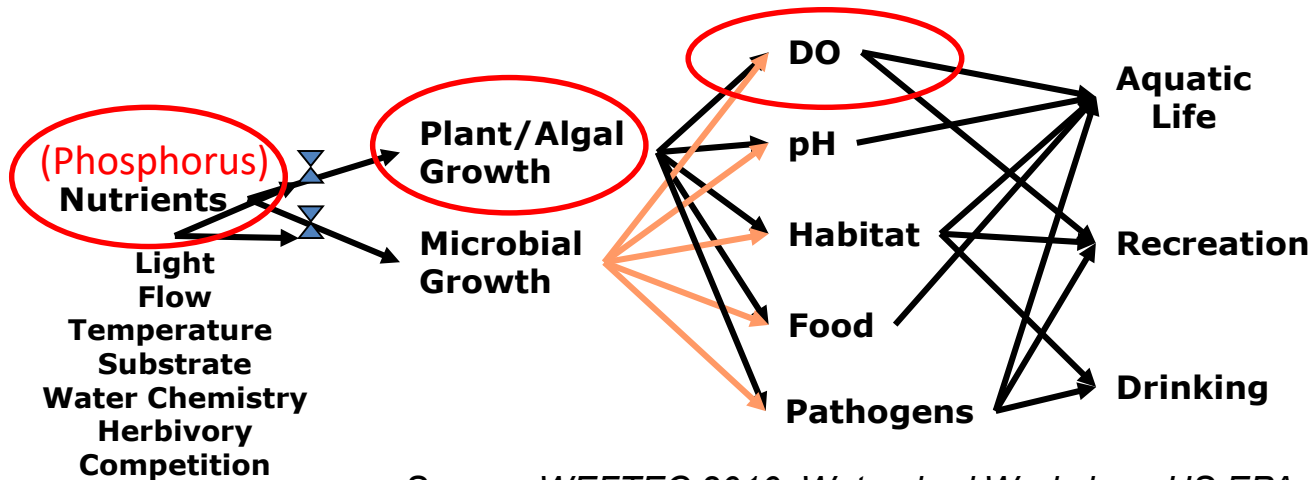
“A phosphorus related impairment means that the downstream waterbody or segment is **listed** by the Agency as impaired due to **dissolved oxygen and/or offensive condition (algae and/or aquatic plant growth)** impairments that is **related to excessive phosphorus levels.**”

NARP Special Conditions

“In determining the **target levels of various parameters necessary to address the phosphorus related impairment**, the NARP shall either utilize the recommendations by the Nutrient Science Advisory Committee or develop its own watershed-specific target levels.”

Nutrient Criteria: Challenges

- Nutrient criteria must protect designated uses, but it is not a linear relationship



Source: WEFTEC 2010, Watershed Workshop. US EPA.