NUTRIENT ASSESSMENT REDUCTION PLAN

BIG MUDDY/SALINE RIVER WATERSHEDS

April 16, 2025

AGENDA

- Welcome and Introductions
- NARP Planning Process
- Sampling Plan Overview
- Remaining Components
- Discussion

NARP PLAN REQUIREMENTS

1. *Developed and sent to the agency by December 31, 2025. Participation in an existing group or creating a new group. The NARP shall be supported by data and sound scientific rationale.*

SPECIAL CONDITION 19: The Agency has determined that the Permittee's treatment plant effluent is located upstream of a waterbody or stream segment that has been determined to be at risk of eutrophication due to phosphorus levels in the waterbody. This determination was made upon reviewing available information concerning the characteristics of the relevant waterbody/segment and the relevant facility (such as quantity of discharge flow and nutrient load relative to the stream flow).

A waterbody or segment is at risk of eutrophication if there is available information that plant, algal or cyanobacterial growth is causing or will cause violation of a water quality standard.

The Agency recommends the Permittee be a part of a watershed group that forms or group that develops a Nutrient Assessment Reduction Plan (NARP).

reductions of other measures would not be necessary.

5. *Shall include a schedule for implementation of the phosphorus inputs and other measures. Shall be implemented as soon as possible and identify specific timelines.*

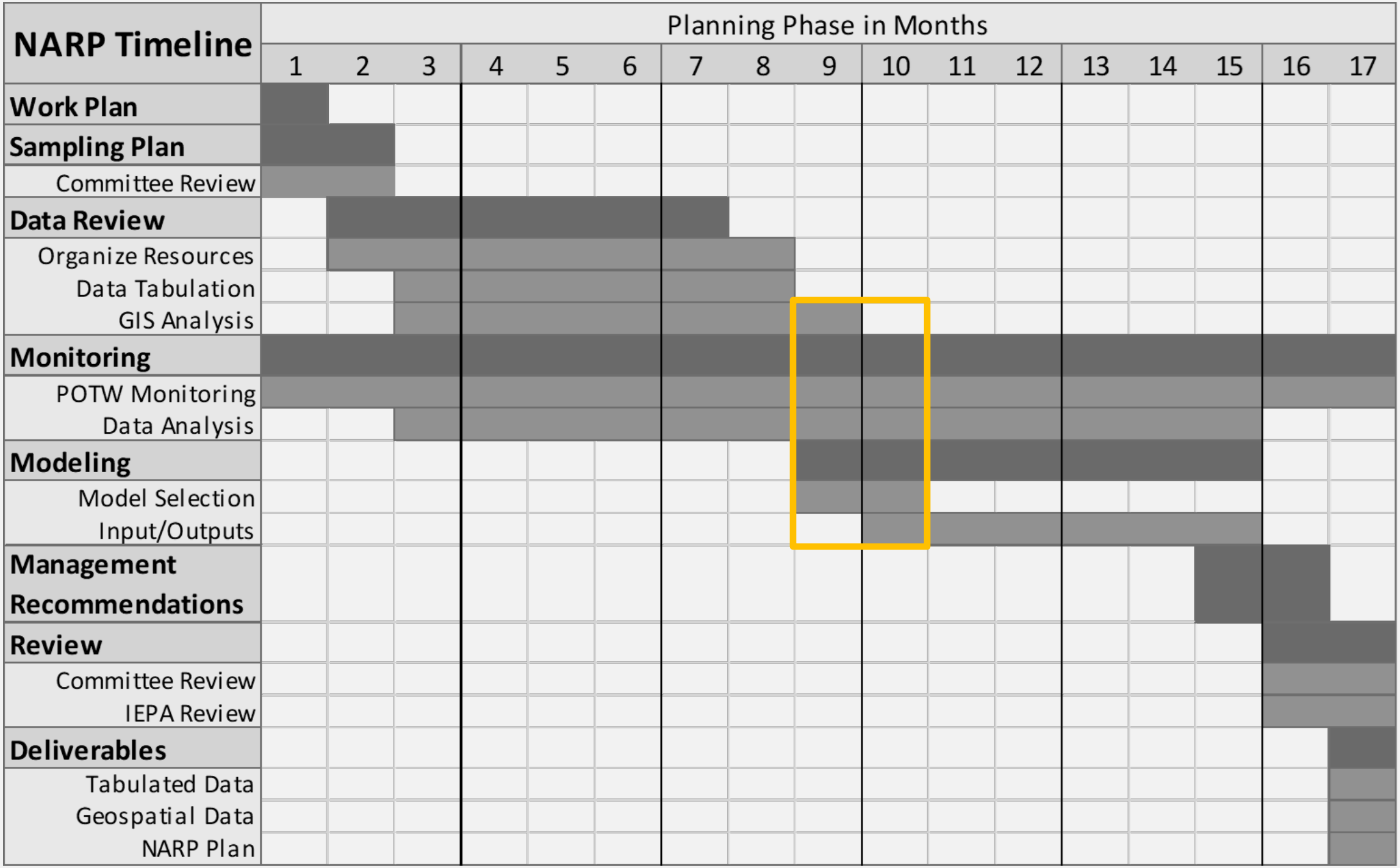
6. *Can provide provisions for water quality trading to address the phosphorus related risk of eutrophication characteristics in the watershed. Phosphorus, Nutrient trading cannot result in violations of water quality standards or applicable antidegredation requirements.*

7. *Permittee shall require modification of their permit within 90 days after the NARP has been competed to include necessary phosphorus input reductions identified within the NARP.*

8. *If the Permittee does not develop or assist in developing the NARP and such a NARP is developed for the watershed, the Permittee will become subject to effluent limitations necessary to address the risk of eutrophication.*

NARP PLANNING PROCESS

- **Phase I - Data Review**
  - Previous locations of water samples
  - Data review of IEPA data
  - Notice to IEPA
- **Phase II - Monitoring**
  - Create Sampling Schedule
  - Submit to IEPA for Approval
- **Phase III – Modeling**
  - Choose model ((SWAT, HFVS, instream, etc.)
- **Developing the Planning Document**
  - Current sample data and analysis
  - Historic data (if available)
  - Narrative


NARP Timeline
Planning Phase in Months
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Work Plan
Sampling Plan
Committee Review
Data Review
Organize Resources
Data Tabulation
GIS Analysis
Monitoring
POTW Monitoring
Data Analysis
Modeling
Model Selection
Input/Outputs
Management Recommendations
Review
Committee Review
IEPA Review
Deliverables
Tabulated Data
Geospatial Data
NARP Plan

NARP PLAN DOCUMENT

1. Introduction
2. Watershed Geography and Climate
3. Water Quality and Sampling Plan
4. Best Management Practices
5. Technical and Financial Assistance
6. Outreach and Education
7. Implementation and Milestones
8. Evaluation and Monitoring

SAMPLING PLAN - 2025

- 1st and 3rd Tuesday, 10:00 AM
- CHL-A
- Special Conditions
  - Weather, flooding, etc.
- Location Review
  - Murph Up/Carb Down Location

NARP Sampling Map

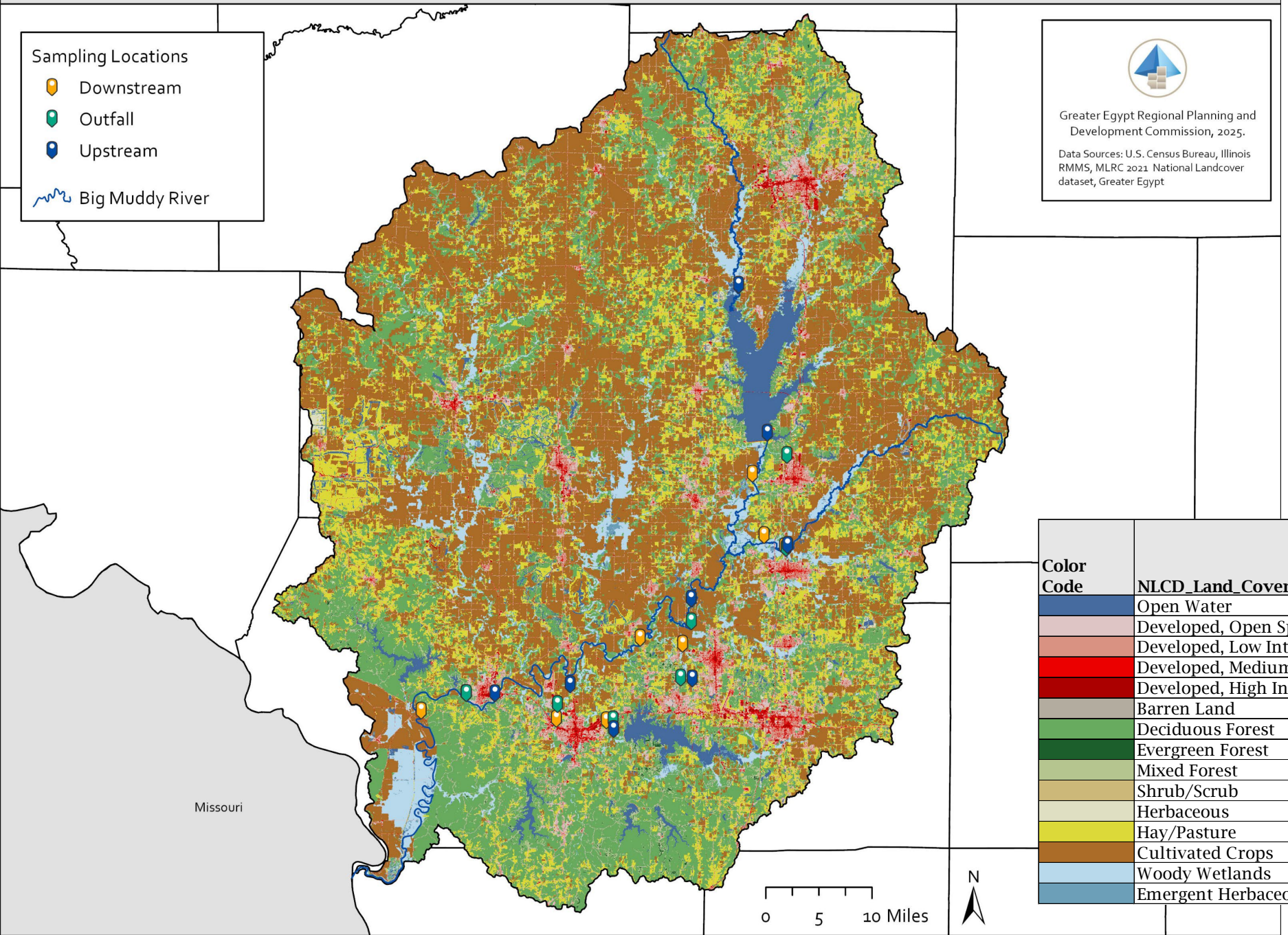
Sampling Components

- Temp
- pH
- P
- D.O
- Visual Report

RESULTS SUBMISSIONS

- planning@greateregypt.org
- 2023-present Sample Data

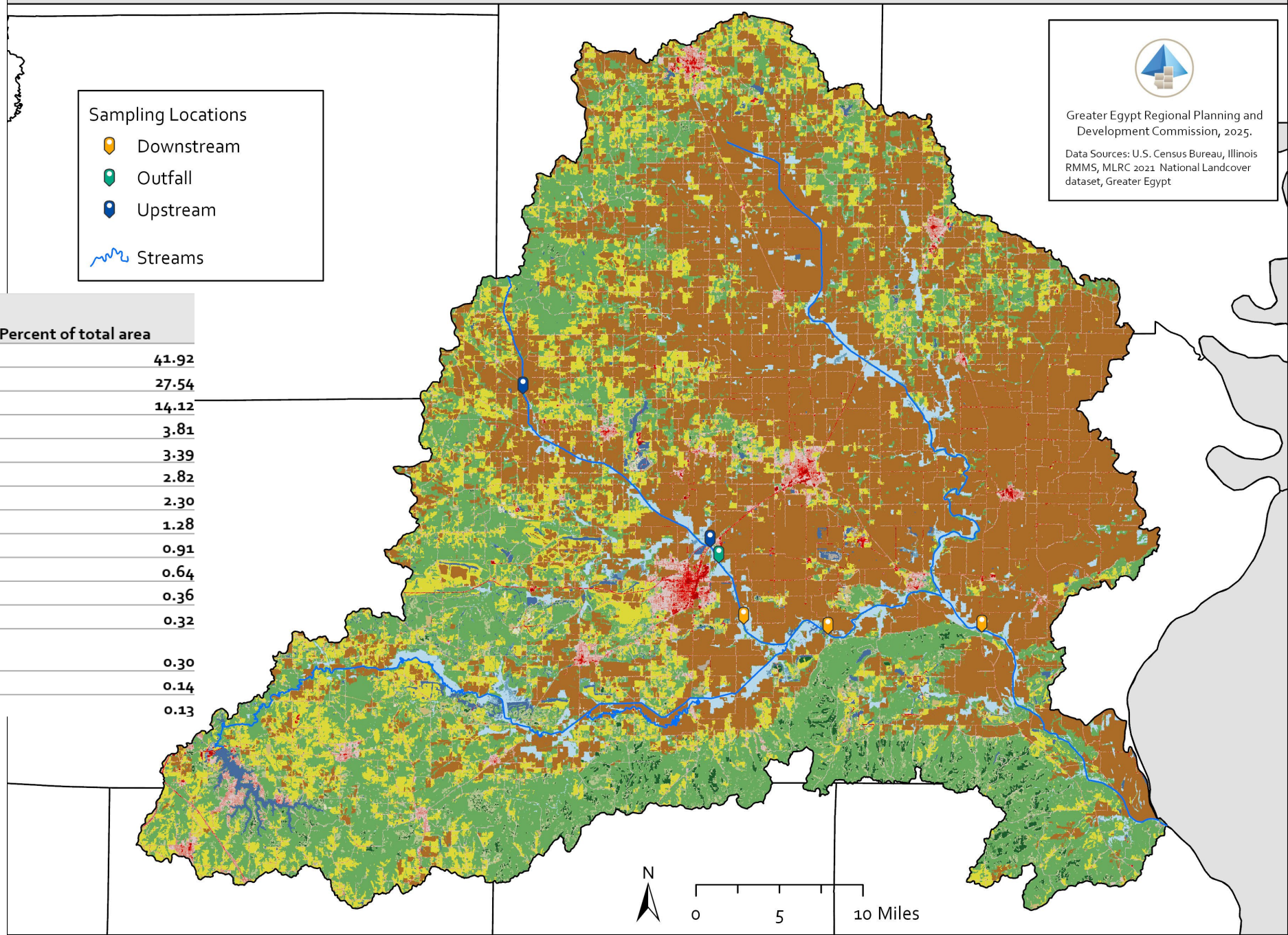
Big Muddy Watershed Nutrient Assessment Reduction Plan: Landcover



Color Code	NLCD_Land_Cover_Class	Area (sq miles)	Percent of total area
	Open Water	88.4	3.71
	Developed, Open Space	102.1	4.28
	Developed, Low Intensity	86.4	3.62
	Developed, Medium Intensity	29.0	1.21
	Developed, High Intensity	7.4	0.31
	Barren Land	3.0	0.12
	Deciduous Forest	612.9	25.69
	Evergreen Forest	3.2	0.13
	Mixed Forest	43.8	1.83
	Shrub/Scrub	4.7	0.20
	Herbaceous	15.7	0.66
	Hay/Pasture	373.7	15.66
	Cultivated Crops	890.1	37.31
	Woody Wetlands	113.8	4.77
	Emergent Herbaceous Wetlands	11.4	0.48

Saline Watershed Nutrient Assessment Reduction Plan: Landcover

Color Code	NLCD Land Cover Class	Area (sq miles)	Percent of total area
	Cultivated Crops	493.6	41.92
	Deciduous Forest	324.3	27.54
	Hay/Pasture	166.3	14.12
	Developed, Open Space	44.8	3.81
	Woody Wetlands	39.9	3.39
	Mixed Forest	33.3	2.82
	Developed, Low Intensity	27.1	2.30
	Open Water	15.1	1.28
	Evergreen Forest	10.7	0.91
	Developed, Medium Intensity	7.5	0.64
	Shrub/Scrub	4.2	0.36
	Herbaceous	3.8	0.32
	Emergent Herbaceous Wetlands	3.5	0.30
	Developed, High Intensity	1.7	0.14
	Barren Land	1.6	0.13



DISCUSSION