

September 2018

## ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY STORY MAP/STORYBOARD OUTLINE

### 1. FORMAT

The purpose of this story map is to help guide users of all experience and knowledge levels with additional interpretive information and context beyond what the GLTG or IL NLRS portals currently provide. The format for this story map/storyboard should be accessible online to all users, and have components that can be adapted for offline presentations.

#### A. Story Map

- i. A story map is a “web application that lets authors combine beautiful maps with narrative text, striking images, and multimedia, including video.” (<https://storymaps.arcgis.com/en/faq/#question1>)
- ii. Goal: Develop a story map template either similar to those developed through ESRI Story Maps (<https://storymaps.arcgis.com/en/how-to/>) or Adobe Spark (<https://spark.adobe.com/>).

#### B. Traditional Presentation (i.e. Powerpoint, PDF)

- i. Powerpoint and more “static” or traditional presentation formats
- ii. Goal: Consider collecting and formatting content such that it can be reorganized into a traditional presentation format.

#### C. Interactive Presentation (i.e. Prezi)

- i. Interactive presentations such as the ones created through Prezi allow for a more dynamic format than Powerpoint and also can be distributed offline (<https://prezi.com/the-science/>)
- ii. Goal: Develop an offline interactive presentation version of the story map

### 2. CONTENT

The contents of this story map will provide an overview of the Illinois Nutrient Loss Reduction Strategy by providing users with a background context for

the water quality and ecological issues the strategy addresses. The story map will also identify and highlight current priorities and data in specific watersheds targeted by the IL NLRS implementation. Although this content could be arranged as a linear story, it has been suggested that a nonlinear format might be more successful.

#### A. Water Quality and Nutrient Pollution

An overview of what it means when we talk about water quality and nutrient pollution issues in the Mississippi River Watershed; including Gulf Hypoxia.

- i. *Nutrient Pollution in the Mississippi River Watershed* – “Excess nutrients in rivers and streams have negative human and aquatic health impacts, and economic implications... Poor water quality also costs millions of dollars each year in lost tourism revenue, smaller commercial fishing harvests, depressed property values, and increased drinking-water treatment costs.”  
(<https://geoplatform.maps.arcgis.com/apps/Cascade/index.html?appid=3b88aa4466dc4cb5844ba9ffd394e709>)
- ii. *Gulf Hypoxia* – 2008 Gulf Hypoxia Action Plan “describes a national strategy to reduce, mitigate, and control hypoxia in the Northern Gulf of Mexico and improve water quality in the Mississippi River Basin” (<https://www.epa.gov/ms-htf/gulf-hypoxia-action-plan-2008>); Overview of Hypoxia Task Force (HTF) which includes federal agencies, tribes and 12 state agency partners (<https://www.epa.gov/ms-htf>)
- iii. *Maps, Images and Charts* – Hypoxic zone satellite photos since 2008; link to USGS Nutrient Pollution Story Map; Map of MS River Watershed

#### B. State Nutrient Reduction Strategies

A closer look at the responses by states, for this story map specifically Illinois, to the 2008 Hypoxia Task Force Action Plan that calls for “comprehensive nitrogen and phosphorus reduction strategies” as outlined by the EPA. (<https://www.epa.gov/nutrient-policy-data/working-partnership-states-address-phosphorus-and-nitrogen-pollution-through>)

- i. *IL State Nutrient Loss Reduction Strategy* – Include walkthrough of IL NLRS; identify key strategy components as outlined here: (<https://www2.illinois.gov/epa/Documents/iepa/water-quality/watershed-management/nlrs/nutrient-factsheet-final%207-20-15.pdf>);

- ii. Other States – Brief links to other State Nutrient Reduction Strategies
- iii. *Maps, Images and Charts* – Map identifying 12 states tasked with developing Nutrient Action Plans; Chart identifying states that have completed plan; IL State Nutrient Priority Watershed Map

#### C. Great Lakes to Gulf/IL NLRS Data Portal

An overview of the Illinois Nutrient Loss Reduction Strategy Data Portal and the Great Lakes to Gulf (GLTG) application.

- i. *GLTG* – A closer look at the mission and history of the Great Lakes to Gulf application.
- ii. *IL NLRS Data Portal* – A brief summary of how GLTG came to support the IL NLRS Data Portal.
- iii. *Maps, Images and Charts* – Screenshots and links to both portals (<https://ilnlrs.ncsa.illinois.edu/>) (<https://www.greatlaketogulf.org>)

#### D. Collaboration and Partnerships

The goals outlined by the HTF and IL NLRS call for significant reductions of nutrients in the Mississippi River watershed that can only be accomplished through collaborative efforts of all stakeholders including both point and nonpoint source contributors. “The IL NLRS lays out a comprehensive suite of best management practices for reducing nutrient loads from wastewater treatment plants and urban and agricultural runoff and also calls for more collaboration between state and federal agencies, cities, non-profits, and technical experts on issues such as water quality monitoring, funding, and outreach.”

- i. *Data Collection* – Identify and provide an overview of the methods of nutrient data collection from all sources including: Urban stormwater runoff, Point Sources (Water Treatment), and Agricultural Nonpoint sources. Identify organizations, agencies and groups conducting data monitoring as identified by IL NLRS; Brief overview of GLTG portal capacity to store, manage and visualize data for all levels of users.
- ii. *Collaboration* – Include actions being taken by different partners to fulfill their contributions to the IL NLRS. Include a closer look at efforts of all partners to implement IL NLRS including IL EPA, IL Department of Agriculture and the IL NLRS Policy Working Group. Include a look at collaborative efforts involved in development of GLTG data portal.

- iii. *Maps, Images and Charts* – IL NLRS Monitoring Maps (<https://www2.illinois.gov/epa/Documents/iepa/water-quality/watershed-management/excess-nutrients/NLRS-Biennial-Report/AppendixD.pdf>); Perhaps equivalent visualizations from GLTG portal that correspond to sources on Monitoring maps (GREON, USGS Superstations)

#### E. Priority Watersheds

The HTF tasked each state with identifying priority watersheds as part of their nutrient reduction strategies. This section will provide specific links to GLTG/IL NLRS data portal visualizations for each priority watershed identified in the IL strategy.

- i. *Priority Watershed Selection (HTF)* – Each state has identified and designated priority watersheds as part of their nutrient reduction strategies. (<https://www.epa.gov/ms-htf/priority-watershed-selection-processes-hypoxia-task-force-states>)
- ii. *IL NLRS Priority Watersheds* – Take a closer look at priority watersheds in IL NLRS including different HUC levels (8, 10, 12) and links to data acquired through monitoring and collection within these areas.
- iii. *Maps, Images and Charts* – Links to specific, bookmarked data monitoring stations within Illinois Priority Watersheds; Map of Priority Watersheds of the Hypoxia Task Force States ([https://www.epa.gov/sites/production/files/styles/medium/public/2016-04/priority\\_watersheds2016update.jpg](https://www.epa.gov/sites/production/files/styles/medium/public/2016-04/priority_watersheds2016update.jpg));

## PENDING QUESTIONS AND ADDITIONAL CONTENT

1) Do we want to incorporate a look at specific actions being taken through the IL NLRS such as agricultural Best Management Practices (BMP) or urban stormwater planning?

2) How much of the overall GLTG story should be included within this presentation?

3) Is the focus going to skew towards IL NLRs or GLTG; or are we going to do something where there are additional components that can be swapped in or out for applications beyond the online story map?