

Toward a national ground-water monitoring network

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Assessing Current Surface and
Ground Water Supplies*

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U.S. Department of the Interior
U.S. Geological Survey



Purpose of Presentation

- **ACWI Subcommittee on Ground Water Activities**
 - **Selected Results from Questionnaire on State Networks**
 - **SOGW Status**
- **USGS Ground-Water Watch**

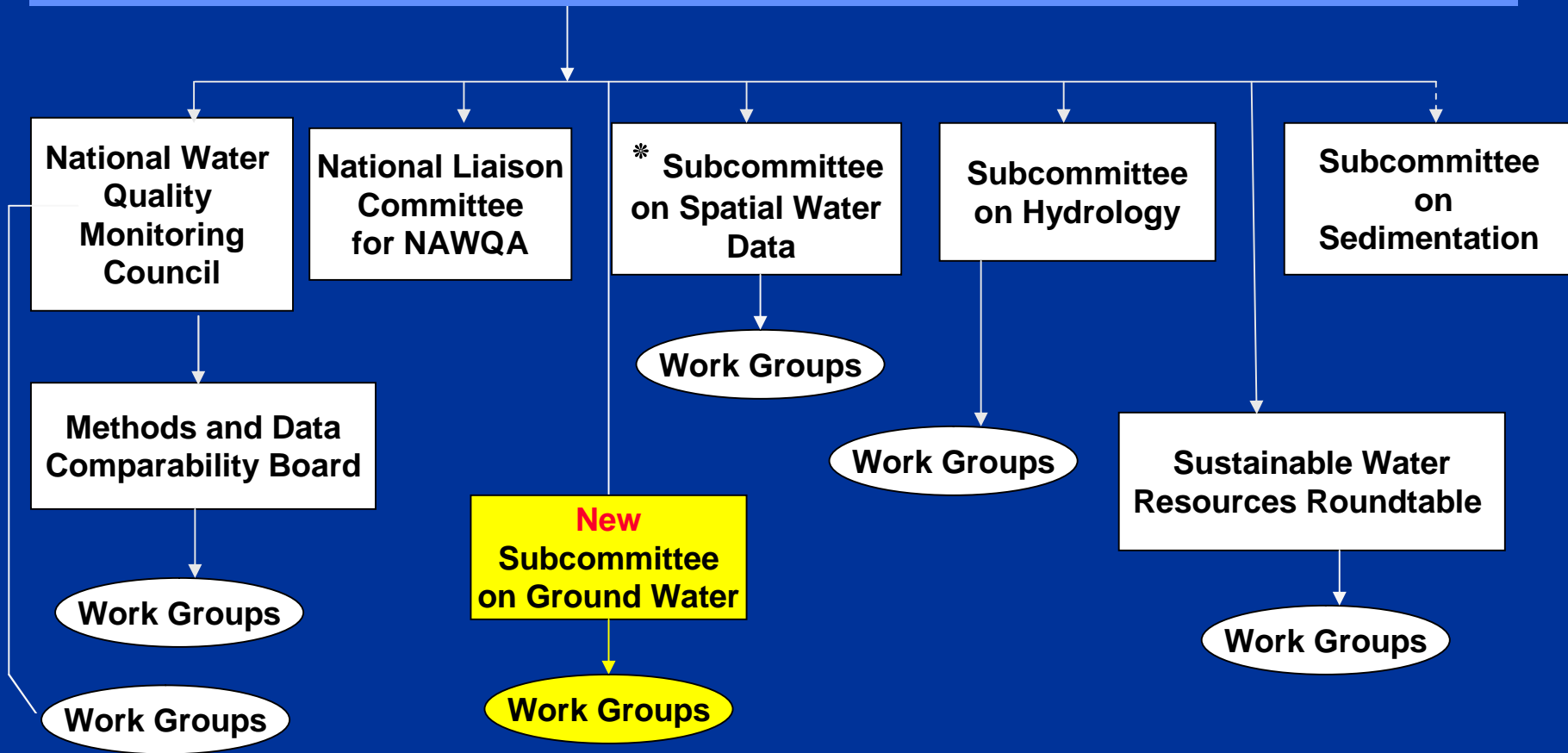
WICP

Water Information Coordination Program

ACWI

Advisory Committee on Water Information

ACWI GROUPS



* Also reports to Federal Geographic Data Committee

SOGW Purpose

The overall goal of the SOGW is to develop and encourage implementation of a nationwide, long-term ground-water quantity and quality monitoring framework that would provide information necessary for the planning, management, and development of ground water supplies to meet current and future water needs, and ecosystem requirements.

SOGW Approach

- **Determine “current picture” of ground-water monitoring**
- **Consensus network design principles**
- **Consensus field methods and data standards**
- **Determine approach for compiling data**
- **Consensus implementation plan**

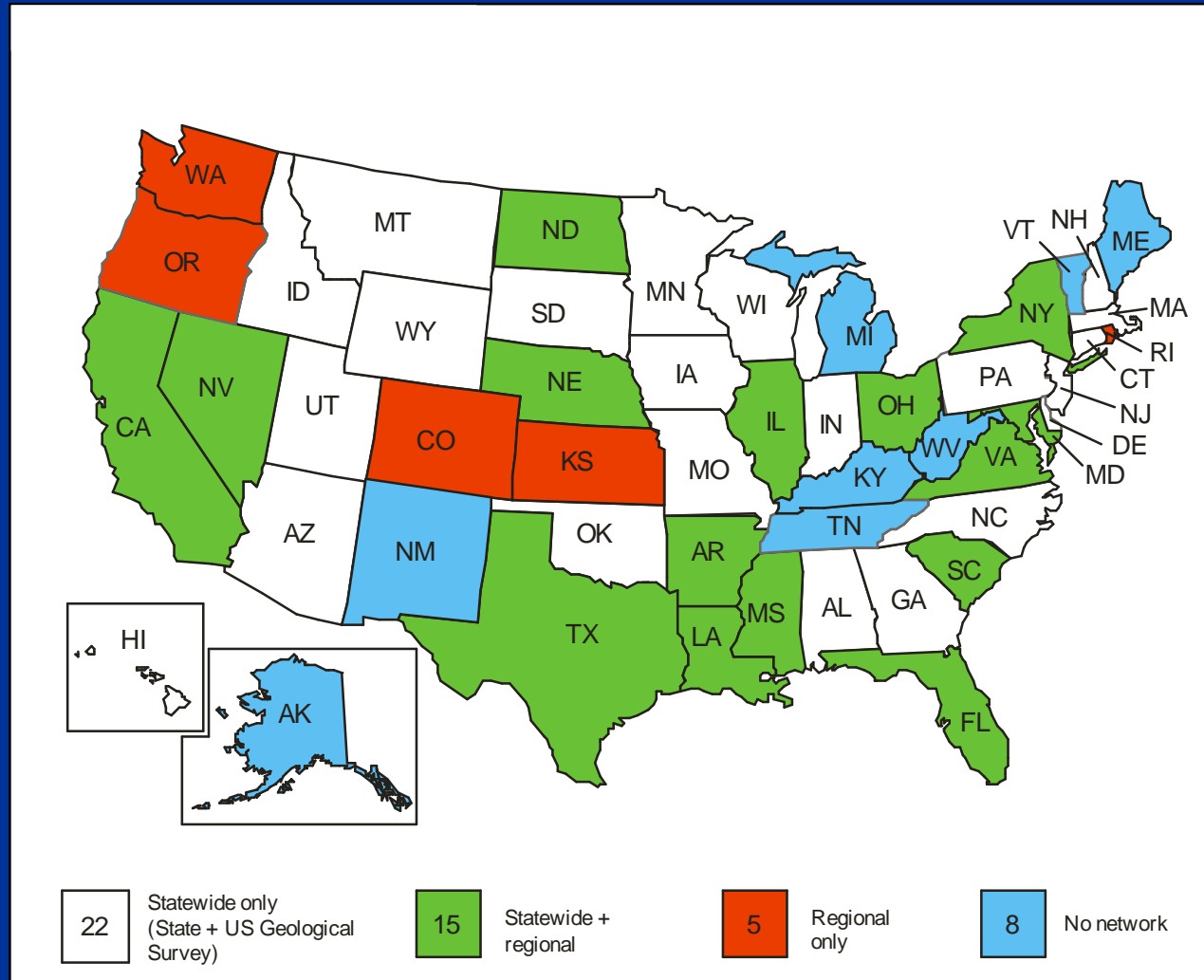
Current Picture - Water Level*

# of States	Type
22	One or more statewide networks
15	One or more statewide and regional networks
5	One or more regional networks
8	No statewide or regional network
50	Total states

**State/Regional Ground Water Monitoring Network Report-2007. Joint project of AASG, GWPC, ICWP and NGWA and information from USGS*



State/Regional Level Networks



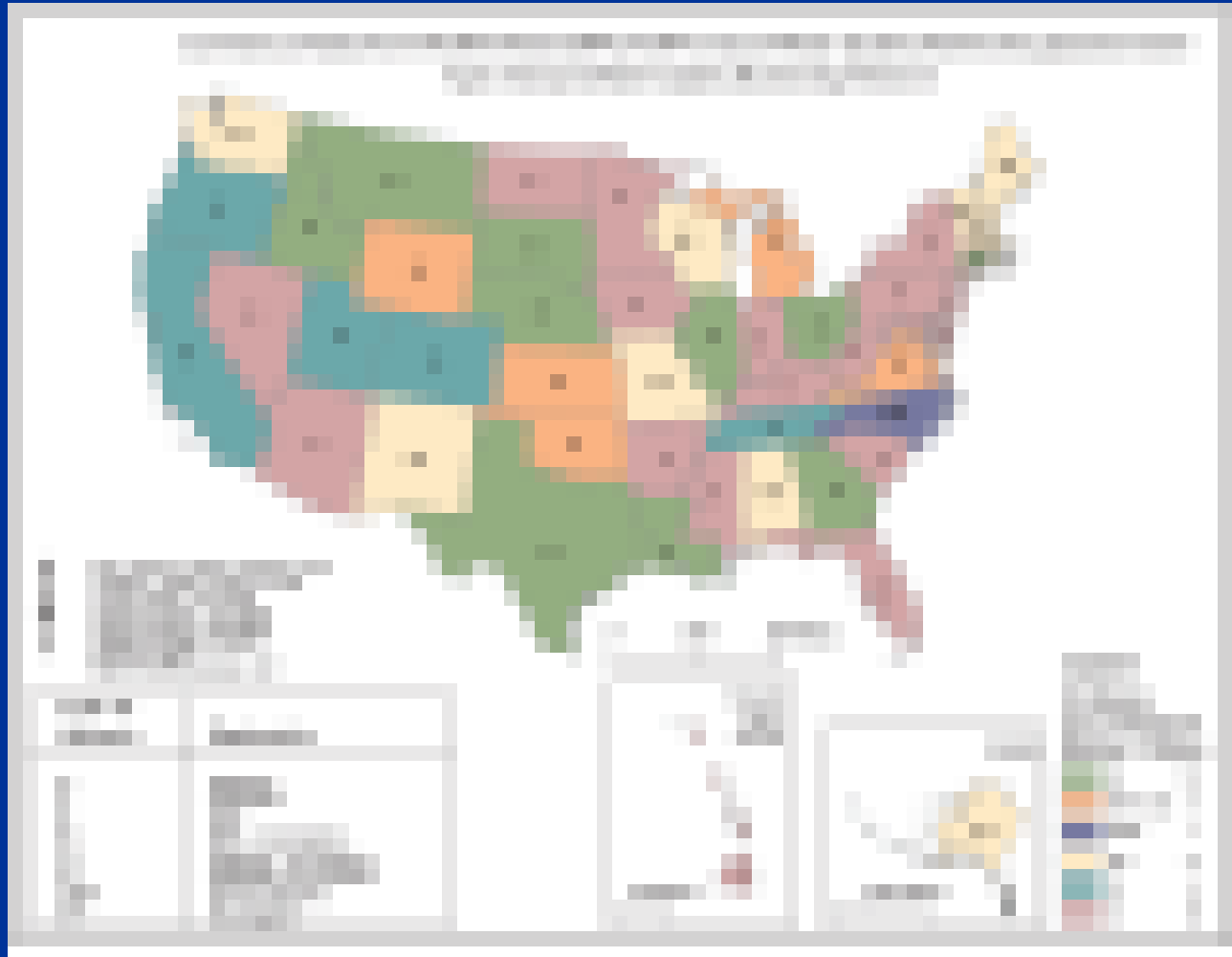
Current Picture – Quality*

# of States	Type Program
18	One or more statewide networks
10	One or more statewide and regional networks
5	One or more regional networks
11	No statewide or regional network
5	Inactive either statewide or regional
1	No response
50	Total states

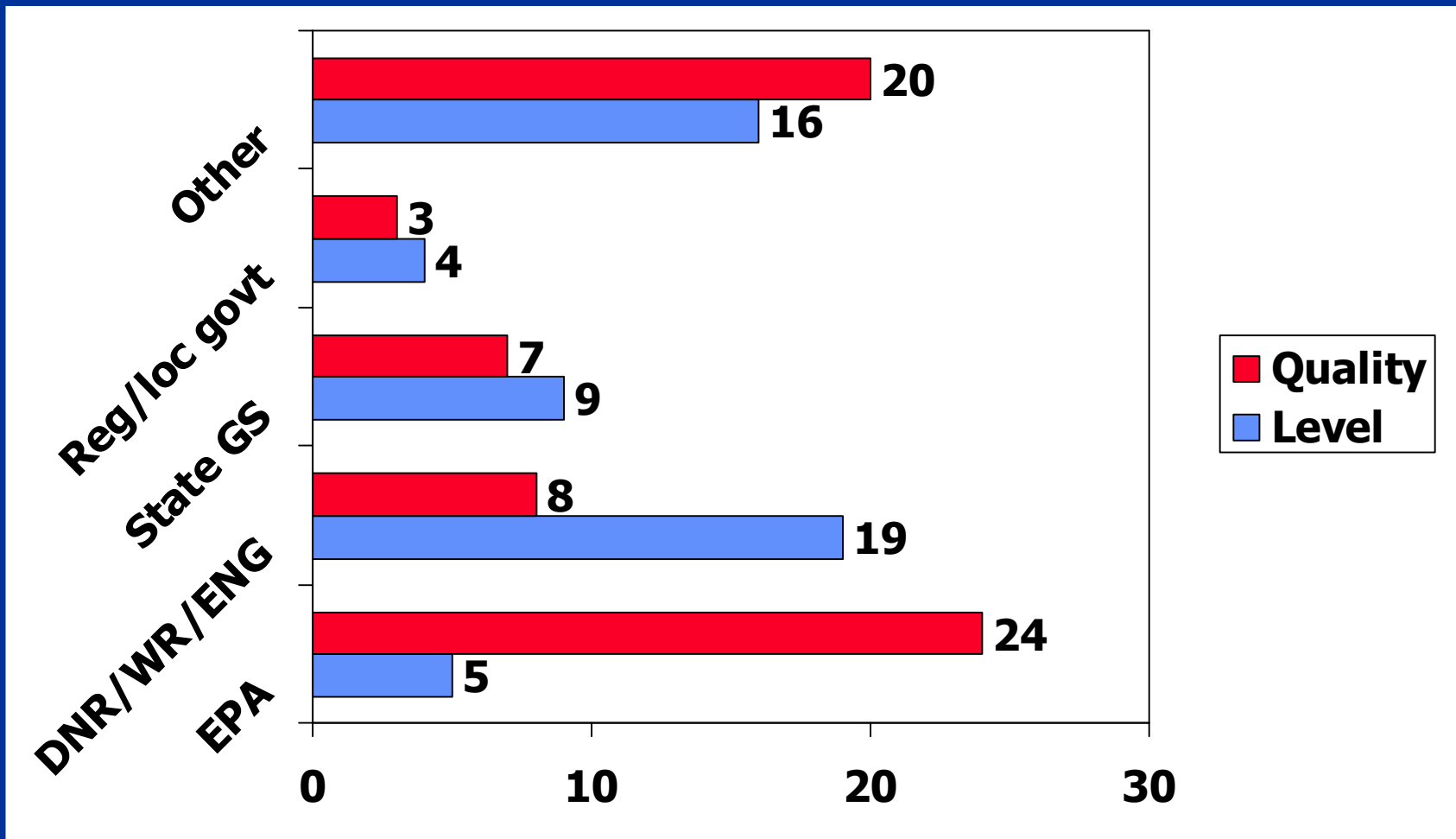
**State/Regional Ground Water Monitoring Network Report-2007. Joint project of AASG, GWPC, ICWP and NGWA*



State/Regional Quality Networks



Who Manages the Network?



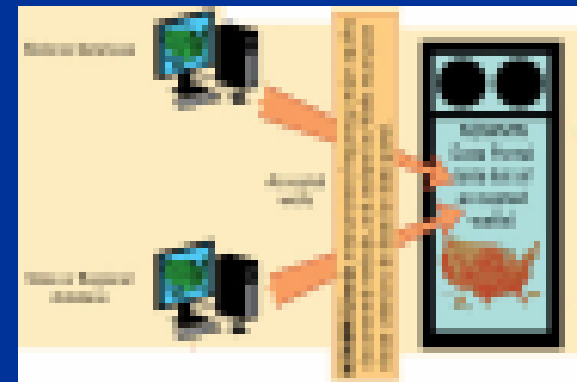
Summary of Existing Monitoring

- Many networks already exist
- Multiple agencies involved, sometimes multiple agencies within a state
- Ambient level network more prevalent than quality networks
- Significant national gaps in both
- Gap analysis work to be done



Working Toward a National Ground-Water Monitoring Network....

- Collaborative approach among Federal, State, and key local monitoring
- Documented methods, but minimal data standards
- Multiple Network Types
- Common Data Portal

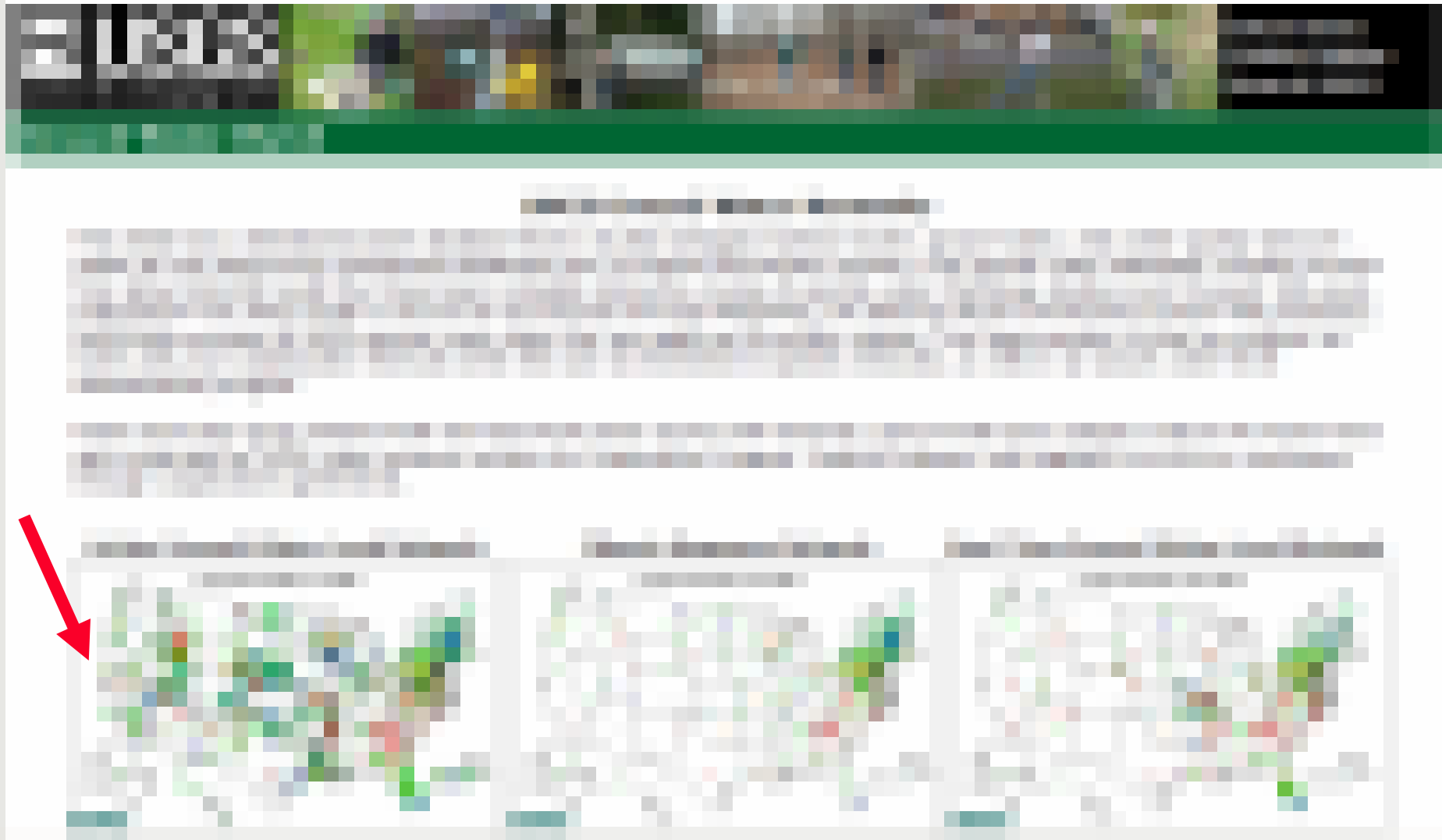


Implementation Steps

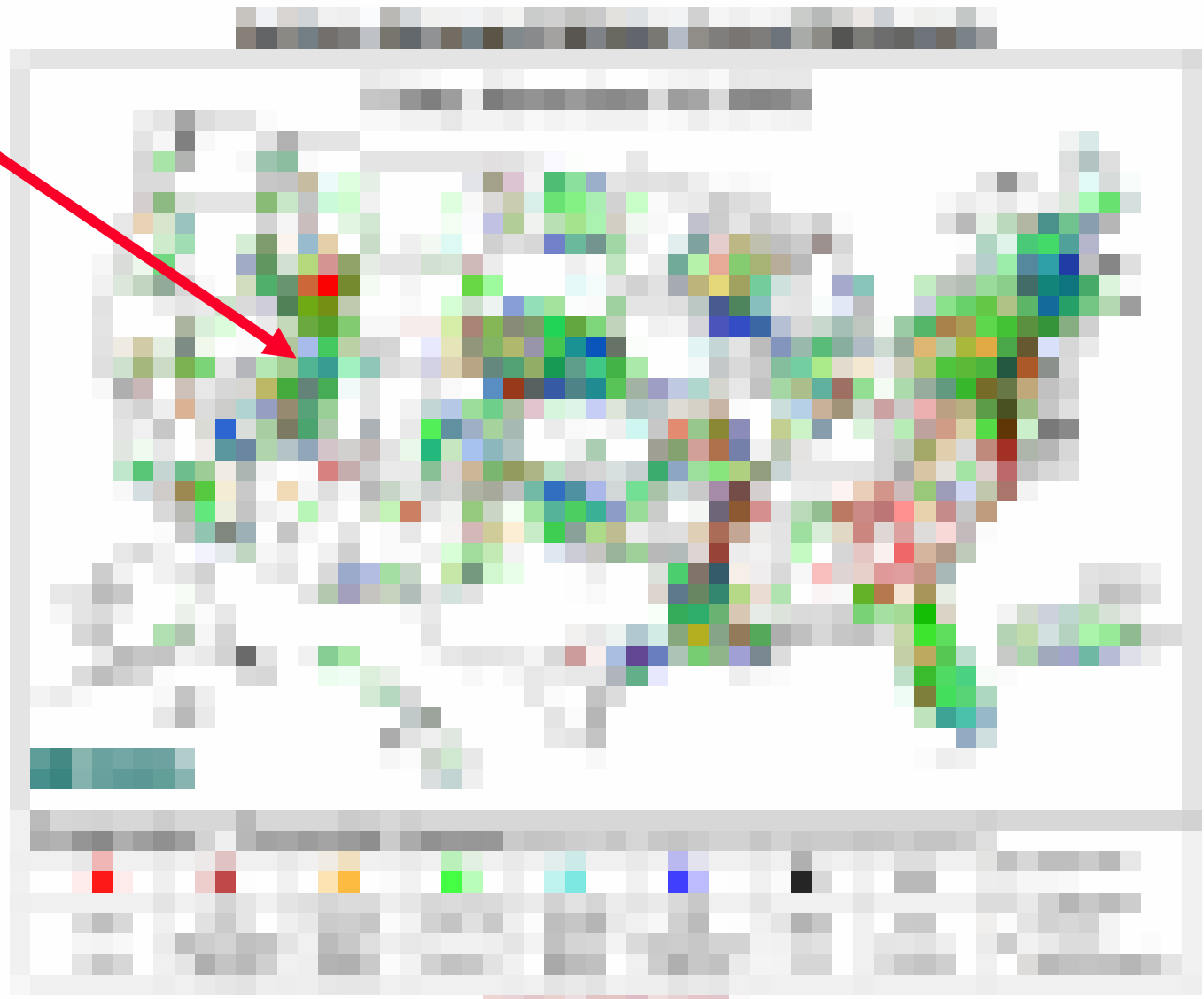
(draft recommendations)

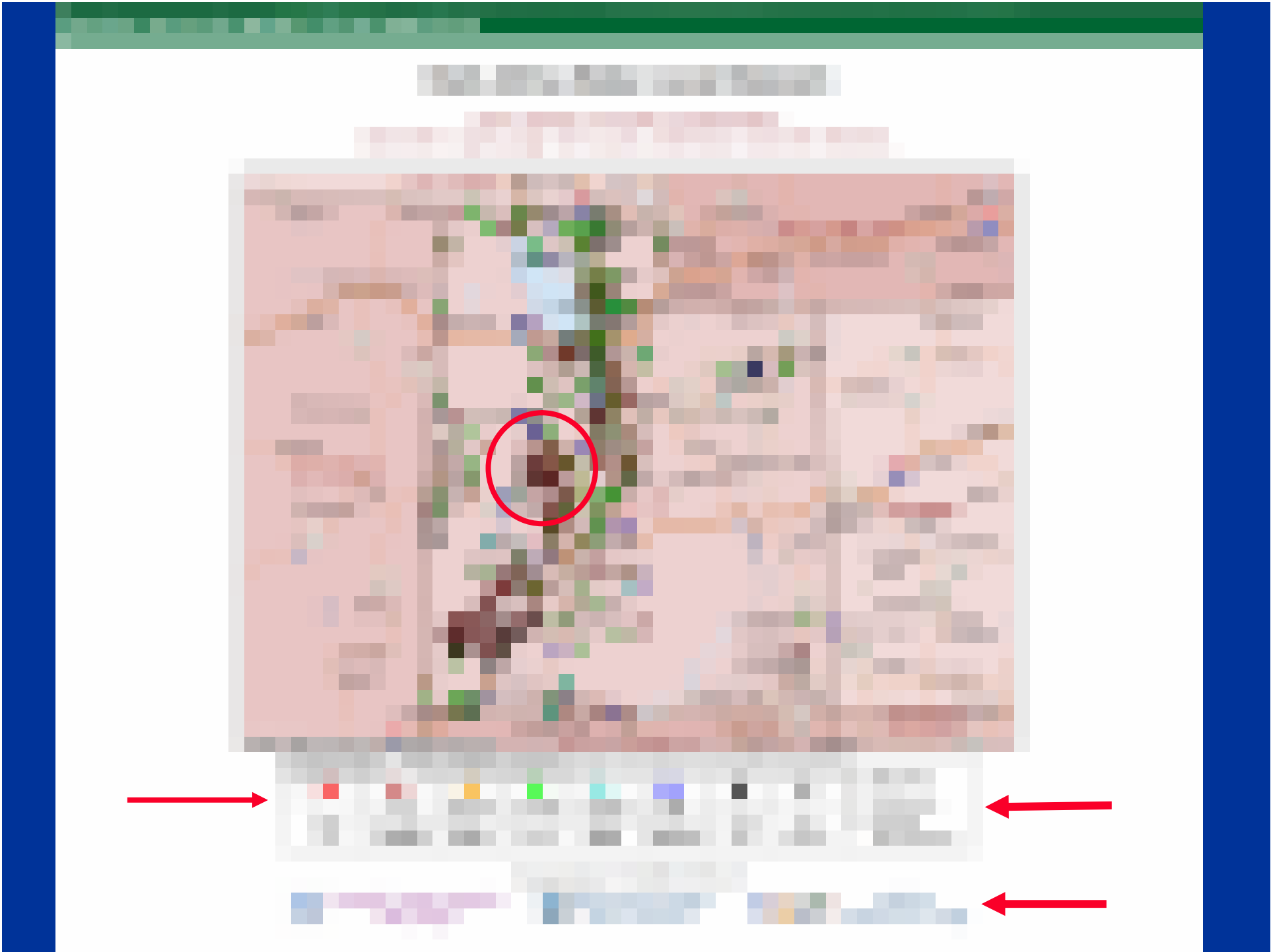
1. Develop portal system
2. Establish:
 - Advisory panel/stakeholder groups
 - Management and operations group
3. Pilot tests
4. Federal funding needed to facilitate participation by states

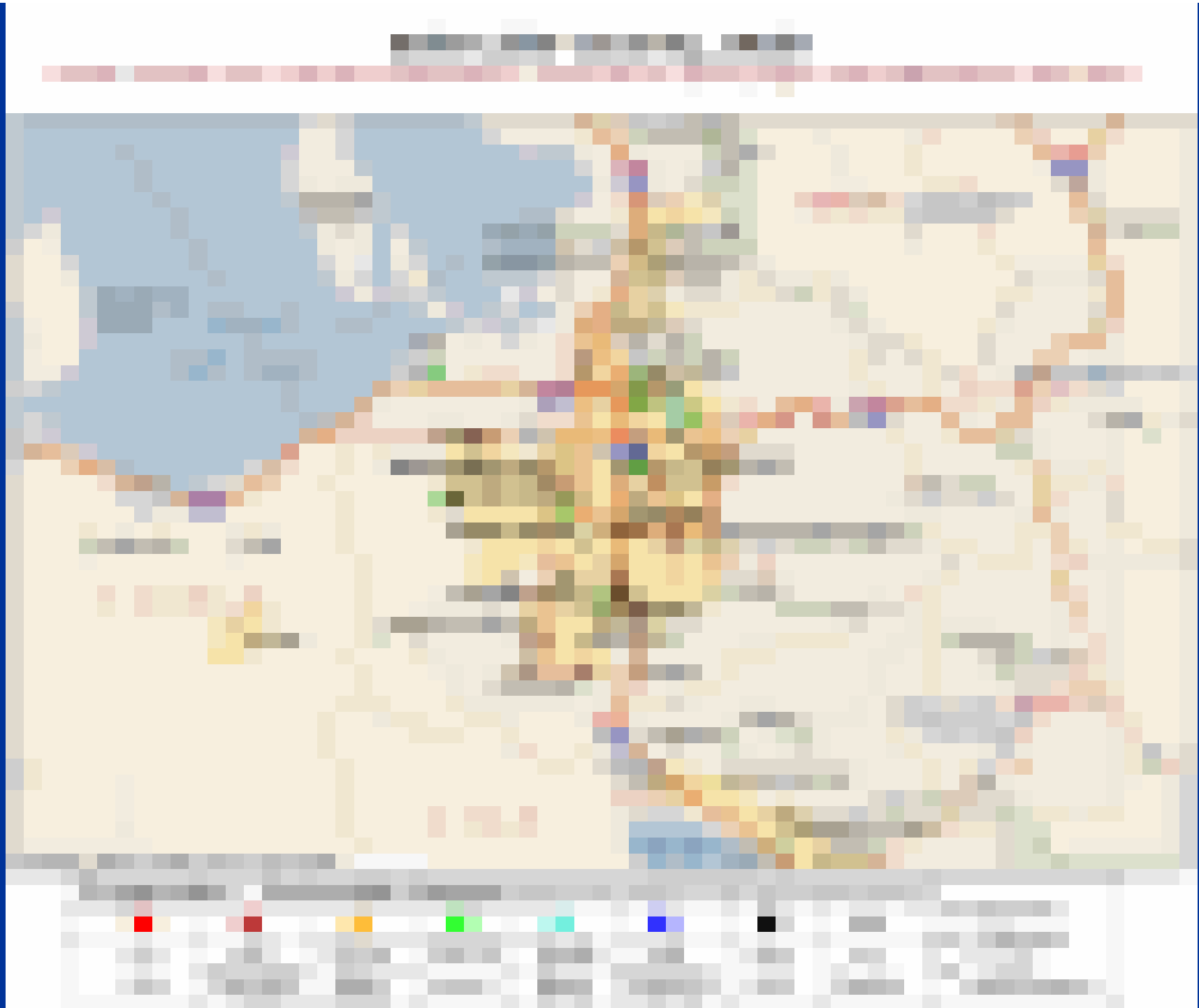
USGS Ground-Water Watch



<http://groundwaterwatch.usgs.gov>







Site Information



Legend
Blue square
Purple square

Site Description
This site is located in the northern part of the study area, near the intersection of the main road and the secondary road. The site is characterized by its proximity to the road network and its potential for future development. The site is currently used for agricultural purposes and is surrounded by residential areas.

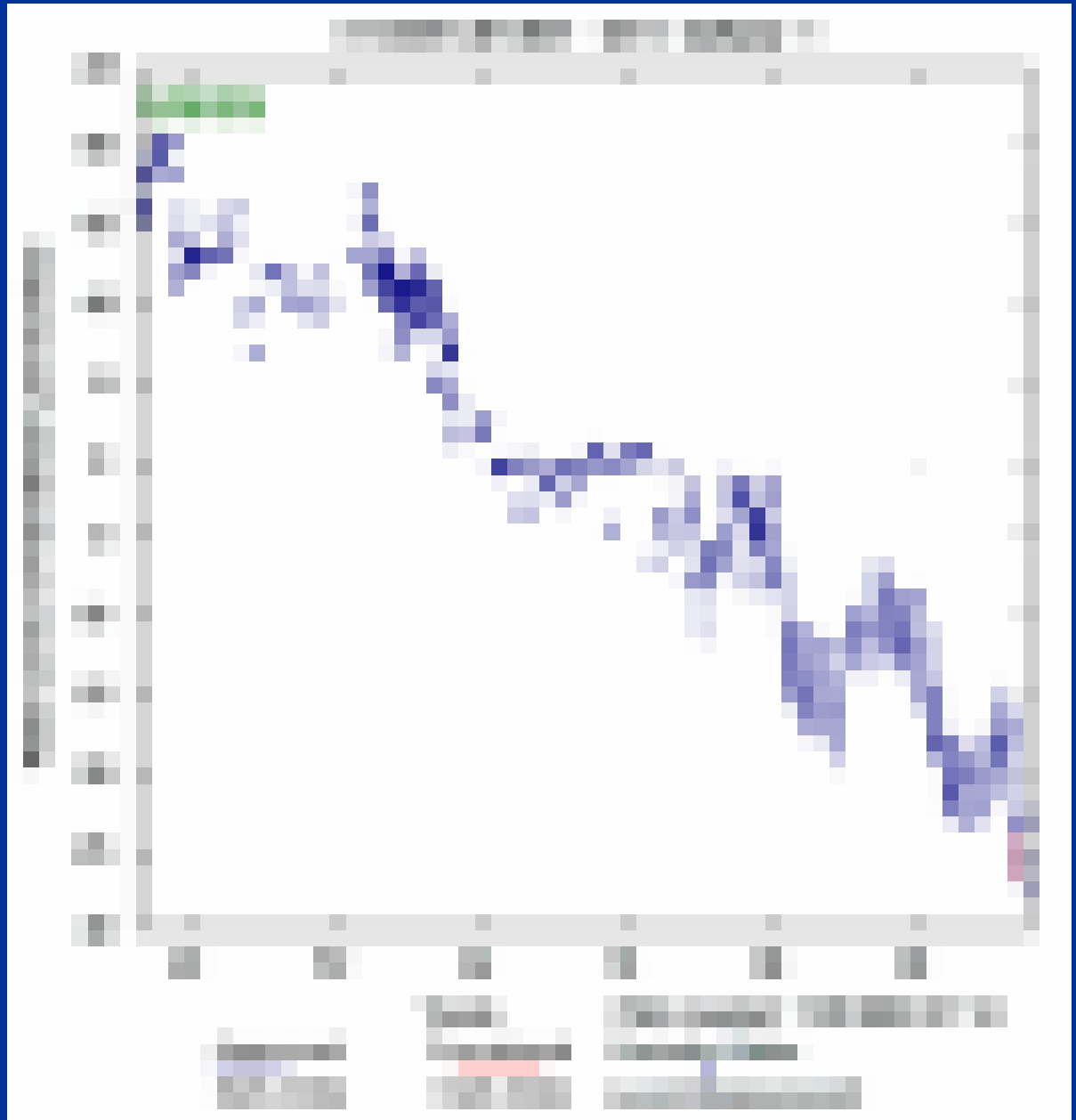
Site History
The site has a long history of agricultural use, dating back to the early 20th century. It was previously used as a farmstead and later as a small-scale agricultural operation. The site was abandoned in the late 1950s and has since been used for various purposes, including as a storage area for agricultural equipment and as a site for small-scale commercial activities.

Site Characteristics
The site is located on a relatively flat, sandy soil. It is surrounded by a mix of residential and commercial buildings. The site is accessible via a paved road and is situated near a public utility line. The site is currently used for agricultural purposes and is surrounded by residential areas.

Site Potential
The site has a high potential for future development, particularly in the residential and commercial sectors. Its proximity to the road network and its potential for future development make it a valuable asset for the community. The site is currently used for agricultural purposes and is surrounded by residential areas.

Example Hydrograph

- 2-year daily
- POR each type
- Combined data



Latest GWW Product

Value of LT Data

- Climate Change
- GW Modeling
- GW Management

