Tracking and Forecasting the Nation’s Water Quality
Priorities and Strategies for 2013-2023

Bill Wilber
National Water-Quality Assessment Program
Products — Stream Water Quality

Annual Reporting of Water-Quality Conditions

New regional and national models for new constituents with new capabilities and additional Pesticide Mappers

Trends – Past, Current and Future
Monitoring: Stream Water Quality

Science Plan

- 330 sites
- Small Watershed Sites: 36 ag sites; 31 urban sites
- Most with real-time water quality monitoring
- 58 reference sites
- Expanded contaminant coverage

Streams Monitored In FY 2014

- 102 sites
- Small Watershed sites: 10 ag sites; 10 urban sites
- <10% of sites with real-time water quality monitoring
- 19 reference sites
- 229 Pesticides, including one of the most heavily used neonicotinoids, imidacloprid

USGS
Cycle 3 – Stream Monitoring – **Inactive**

**All Inactive Stream Sites**

**Inactive Urban Streams**

**Inactive Ag Streams**
Products — Groundwater Quality

Water Quality Summaries by Principle Aquifer and well type

Pesticides, pharmaceuticals, hormones, trace elements, Microbial indicators, and other constituents of human health concern
Products—Groundwater Quality

Decadal Trends in Water Quality

Vulnerability Maps
Contaminants Present in Groundwater at Concentrations of Significance to Human Health

Groundwater age distributions and contaminant contributions to selected streams
Science Plan

- 24 Principal Aquifers (2,880 public supply wells)
- 2,820 Domestic and Shallow ag/urban monitoring wells
- Expanded contaminant coverage

Current Plan

- 20 Principal Aquifers (1,440 public supply wells)
- 2,580 Domestic and Shallow ag/urban monitoring wells
- Targeted contaminant coverage pesticides, hormones, pharmaceutical, and radioisotopes
  (many of which are unregulated)
Active Groundwater-Quality Monitoring
Domestic and Monitoring Wells
Cycle 3 – Domestic and Monitoring Wells – **Inactive**
Cycle 3 – Public Supply Well Sampling – Inactive Areas
Groundwater Quality Forecasting

- Central Valley PA: 2013-2018
- Northern Atlantic Coastal Plain PA: 2015-2020
- Mississippi Embayment PA: 2016-2020
How long will it take for a contaminant to reach a well? Or stream?
Recent Accomplishments

Sediment Data Portal
http://cida.usgs.gov/sediment/

Nutrients to Estuaries
http://water.usgs.gov/nawqa/sparrow/estuary/

Pesticides in Streams / National Use Maps
http://water.usgs.gov/nawqa/pnsp/pubs/pest-streams/
For Additional Information

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