

ICPRB/USGS Potomac Basin Long-Term Ground Water Monitoring

BACKGROUND

ICPRB has received Federal Grant Funding to initiate and partner with the USGS to conduct an assessment of the ground water resources of the Potomac Basin



OBJECTIVES

Long-Term Objective: Provide information and tools to assist the management, planning, and wise use of the ground water resources in the basin

Special emphasis: Developing and integrated understanding of the ground water and surface water resources

Design of a Ground Water Monitoring Network – Potomac Basin

Monitor Continuous Water Levels in the Bedrock System for Both Scientific and Management Needs

Initial focus is on the upper portion of the basin - bedrock areas for the first several years

Limited work in the coastal plain, even though we recognize the need for further assessments of Confined Aquifer System for public water supply

Design Criteria

Water-Levels, Streamflow, Springflow

Public Access Real-Time Monitoring

Historical Data is Available for Chosen Sites

DATA TO BE USED FOR:

- Early Assessment of potential ground-water problem areas**
- Basin or sub-basin Assessments**

REAL-TIME GROUND WATER MONITORING

USGS District Offices: Maryland, Virginia, West Virginia, and Pennsylvania are developing and installing equipment to monitor the groundwater resources of the basin.

**19 wells have been instrumented in the 4 Districts
Total of Resources of \$150,000 – \$180,000 per year
Coordination is being done by the GW Specialists**



Why Real-Time Monitoring?

Timeliness

Data Quality

Data Availability

Costs

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Address: http://pa.water.usgs.gov/potomac/

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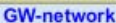


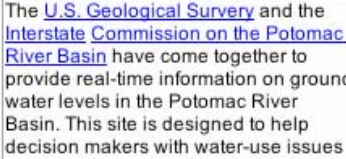
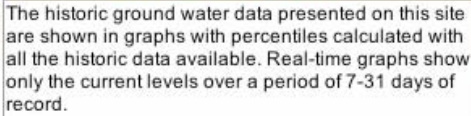
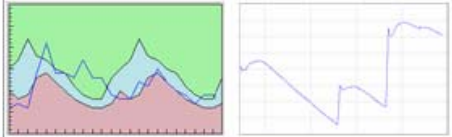
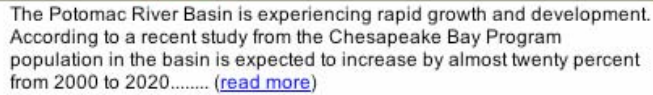

The U.S. Geological Survey and the Interstate Commission on the Potomac River Basin have come together to provide real-time information on ground water levels in the Potomac River Basin. This site is designed to help decision makers with water-use issues

Ground-water network

The historic ground water data presented on this site are shown in graphs with percentiles calculated with all the historic data available. Real-time graphs show only the current levels over a period of 7-31 days of record.

About

The Potomac River Basin is experiencing rapid growth and development. According to a recent study from the Chesapeake Bay Program population in the basin is expected to increase by almost twenty percent from 2000 to 2020..... [read more](#)

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//pa.water.usgs.gov/potomac





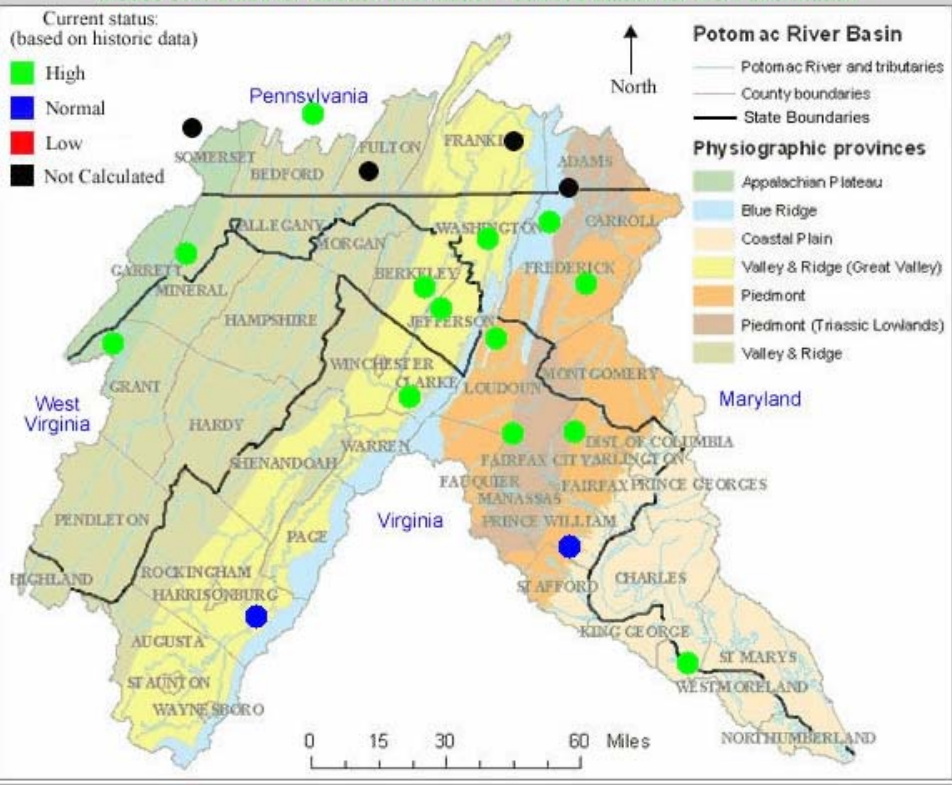
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Ground-water network

Potomac River Basin

mouse over a well for location information - select a station for more information



Current Network
Current Condition



Individual Well Location

Well Characteristics

Water Levels

Statistical Comparison

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Address: http://pa.water.usgs.gov/potomac/levels/show_site.php?site_id=393402077434201

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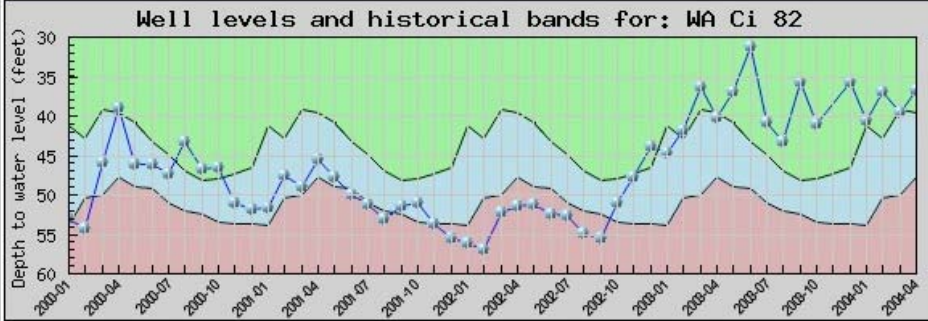
Ground-water network (back to map) > WA Ci 82

Location and Real-Time information: WA Ci 82

location map:	station information
	<p>location State: Maryland County: Washington Lat: 39.56732178. Long: -77.72805023, Hydrologic Unit: 2070004 Aquifer Code: 371CCCG Surface Datum: 500 Click on the map for a larger image. Real-time data is available for this site</p> <p>well characteristic Well Depth: 84.00 Hole Depth: 84.00 Date Started: 1978-02-24</p>

4 year graph with bands shown

Well levels and historical bands for: WA Ci 82



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Real-time Information



Real-time data for USGS 393402077434201 WA Ci...

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Address: http://waterdata.usgs.gov/nwis/uv/?site_no=393402077434201&PARAMeter_cod=72019,72020

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USGS
District Access
Water Resources

Data Category: Real-time Geographic Area: United States go

USGS 393402077434201 WA Ci 82

PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site Real-time GO



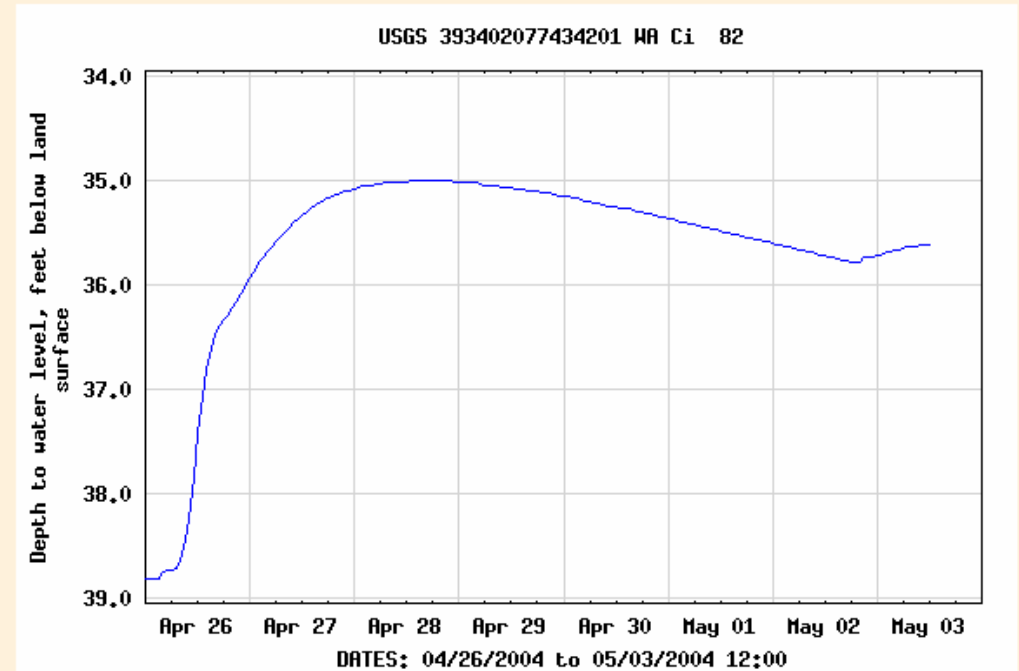
WELL NUMBER.--WA Ci 82. SITE ID.--393402077434201. PERMIT NUMBER.--WA-73-2101.
LOCATION.--Lat 39°34'02", long 77°43'42", Hydrologic Unit 02070004, at Maryland Correction Institution, nr Lappans.
Owner: U.S. Geological Survey.
AQUIFER.--Conococheague Limestone (middle member) of Upper Cambrian age. Aquifer code: 371CCCG.
WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 84 ft; casing diameter 6 in., to 32 ft; open hole.
INSTRUMENTATION.--Equipped with digital water-level recorder--60-minute recorder interval from April 25, 1978 to June 19, 1981, and July 30, 2003 to present. Monthly water level measurements with electronic tape by U.S. Geological Survey personnel.
DATUM.--Elevation of land surface is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map.
Measuring point: Top of recorder platform, 2.30 ft above land surface.
REMARKS.--Maryland Ground-Water-Level Monitoring Network observation well.
U.S. Geological Survey water-level telemeter at well.

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Available Parameters All 1 parameters available at this site 72019 WaterLevel, BelowLSD (DD 01)	Output format Graph	Days 7 (1-31)	<input type="button" value="get data"/>
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Depth to water level, feet below land surface

Most recent value: 35.62 05-03-2004 12:00



Download a [presentation-quality graph](#) Parameter Code 72019; DD 01

Questions about data h2oteam@usgs.gov [Top](#)
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 Real-time Data for USA
<http://waterdata.usgs.gov/nwis/uv?>





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About This Web Site

The Potomac River Basin is experiencing rapid growth and development. According to a recent study from the Chesapeake Bay Program population in the basin is expected to increase by almost twenty percent from 2000 to 2020. Some areas of the basin, especially those within commuting distance of Washington, DC, are projected to grow much faster. A study conducted in 2000 by the Interstate Commission on the Potomac River Basin (ICPRB) for the Maryland Department of the Environment forecast that by 2030, consumptive water use in two sub-basins (Monocacy and Middle Potomac Catoctin) could exceed available supply in the event of a recurrence of historical low-flow conditions.

ICPRB has received funding via a grant from the U.S. Geological Survey (USGS), to initiate an assessment of ground-water resources in the Potomac River Basin. The purpose of the assessment is to provide information and tools to assist local governments to better understand, manage, and plan ground-water and surface-water resources in the Potomac River Basin. As part of the initial focus, the ICPRB, in partnership with the USGS, has begun an assessment of the Potomac Basin's ground water. This assessment includes the installation by USGS of real-time ground-water monitoring equipment at 15 - 20 observation wells in the basin and the creation of interactive web-page with links to real-time data.



Land Use in the Potomac basin
[\(larger map\)](#)

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Website related questions/comments

- [James Ulrich](#)

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