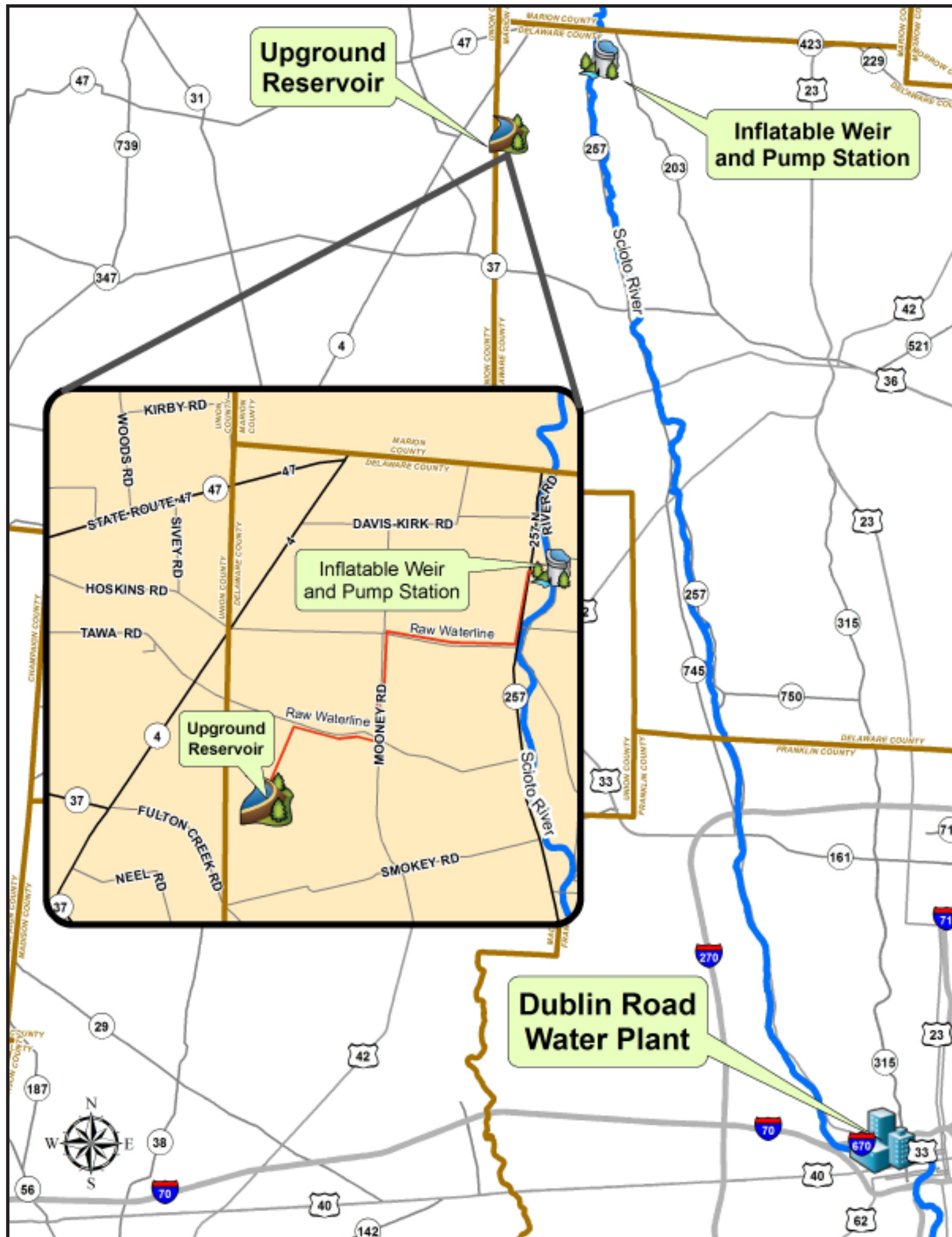


# Water Beyond 2000

## Upground Reservoir Project



*The decision to build upground reservoirs to meet the water supply needs of the central Ohio area resulted from the recommendations of the City of Columbus Water Beyond 2000 Feasibility Study.*

*The Columbus Department of Public Utilities is committed to providing the necessary water supplies to meet the long-range needs for the various communities served to ensure the continued sustainability and economic health of the central Ohio region.*

THE CITY OF  
**COLUMBUS**  
 MICHAEL B. COLEMAN, MAYOR

DEPARTMENT OF  
 PUBLIC UTILITIES

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## Meeting Current and Future Water Needs

Central Ohio residents and businesses depend on a adequate supply of water. The Columbus Department of Public Utilities provides water to Columbus and over 20 contracting communities. More water supplies had to be secured to meet the demand of a region still growing. For example, although the Columbus water system has a rated safe water yield of 150 million gallons per day (MGD), 151 MGD was used in 2007. The Dublin Road Water Treatment Plant draws water from the Scioto River. This plant serves downtown Columbus, the west side and several western Franklin County suburban communities.



The Water Beyond 2000 Study recommended three upground reservoirs near the Scioto River in northwest Delaware County to supplement the water supplies used by the Dublin Road plant downstream in Franklin County. The City of Columbus opted to construct the largest of the three reservoirs to provide an additional 29 MGD.

To meet demand at the Parsons Avenue Water Plant in southern Franklin County, the well field was expanded to provide an additional 15 MGD.

## How Does An Upground Reservoir Work?

An upground reservoir is a man-made water basin separate, or *off-stream*, from its water source. When stream flows are adequate, water will be pumped from the river and diverted to Columbus' upground reservoir, to be stored for future use. When needed, water will be released back into the river and flow by gravity to the Dublin Road Water Treatment Plant.

Griggs, O'Shaughnessy and Hoover Reservoirs are examples of *on-stream* reservoirs where water is stored behind a dam to form a reservoir.

## The Columbus Upground Reservoir

The Columbus upground reservoir was completed in the fall of 2013, and by spring 2014 was full with water through rainfall, snow melt and pumping from the Scioto River. It is located on 843 acres of city-owned land in Thompson Township in northwest Delaware County and a small portion is in Union County (see map on the back page). A pump station

was built near the reservoir site and an inflatable weir was installed in the Scioto River. The weir will be inflated only during periods when adequate stream flow exists for pumping water to the reservoirs, and will remain deflated when pumps are not in use. A network of pipelines and control valves were also built. The raw water pump station to fill the reservoir will also return water to the Scioto River during drought periods.

Following an extensive design phase, construction of the reservoir began in spring 2011, followed by pump station and raw water pipeline work.

The capacity of the reservoir is nine billion gallons.

Longer range, the recommended two additional upground reservoirs would provide an additional 23 MGD. The need for those reservoirs will be determined in future years; no construction dates have been set.

## Project Costs

Upground Reservoir	84,300,000
Raw Water Pump Station	23,485,000
Raw Water Pipeline	14,974,000
<b>Total</b>	<b>\$122,759,000</b>

## How Was the Project Funded?

The project was financed through City of Columbus customer water billing revenue and voted bond packages.

The Del-Co Water Company committed to sharing in the cost of the project in exchange for rights to use a portion of the water when needed.

## Why Not Just Conserve Water?

In order to maintain responsible water use in the Columbus water service area, conservation will continue to be encouraged. Water conservation tips are available at [utilities.columbus.gov](http://utilities.columbus.gov), and are featured in customer newsletters and other publications. Studies indicated that conservation measures alone would not have been enough to ensure a safe yield of water for the needs of central Ohio.

## Environmental and Other Agency Coordination

The City of Columbus coordinated with several agencies for permitting and approval of various parts of the project including: the Ohio EPA, the U.S. Army Corps of Engineers and the Ohio Department of Natural Resources (ODNR). The projects were designed to minimize environmental impacts as much as possible. Various regulatory agencies recommended removal of the Prospect Dam as part of the mitigation package for the project. The following studies of potential environmental effects were performed:

### Cultural Resource Surveys

An archeological feature potentially eligible for the National Register of Historic Places was discovered on the northern perimeter of the reservoir site and was avoided during construction. A second site that may have been eligible was discovered within the pipeline corridor. Additional surveys were performed to locate and recover any artifacts within the construction area and disturbance during construction was avoided.

### Endangered Species/Terrestrial Habitats

Provisions were made for minimizing disturbance to a Bald Eagle's nest in the project area and to minimize any impact to trees that could serve as habitat for the endangered Indiana Bat.

### Wetlands

Regulators approved a plan to mitigate impacts to nearly eight acres of Category 2 wetlands on the reservoir site through the use of existing wetland in the upper Scioto watershed and a new mitigation site in western Franklin County.

### Aquatic Habitats

Studies found that no mussels or other endangered species were present within the Scioto River area near the raw water intake and inflatable weir.



### Hazardous Materials

No parcels associated with the pump station or pipeline were identified to have hazardous material concerns.

## Recreational Opportunities

Numerous recreational options were considered on the reservoir site, following public input. Boating on the reservoir was ruled out to protect the synthetic liner at the bottom that was necessary due to the soil conditions in the area. A small recreational park concept was developed in partnership with Preservation Parks of Delaware County and the Delaware County Commissioners for the northeast portion outside the security fence of the reservoir. However, due to directional changes for parks in the area and other factors, construction of that facility is no longer planned. The city is in discussions with Preservation Parks to possibly develop alternative plans within the Delaware County Scioto River watershed area, with a focus on providing water quality benefits.

The Scioto River in this area is considered a navigable river. ODNR required access be provided around the proposed inflatable weir. Signage and safe portage for boaters was provided for periods when the weir is in operation. When the weir is deflated and lying flat on the river bottom, it does not interfere with the navigation of the river by recreational boaters. The agency also requested a new access point for canoes be provided downstream of the weir. Columbus owns land near the confluence of Ottawa Creek and the Scioto River east of State Route 257, which serves this purpose.

Mitigation of aquatic life and unimpeded navigation by recreational canoeists was expanded north to Green Camp by removing the Prospect Dam. At the request of area stakeholders, a 1.5 mile segment of the Scioto River between the Prospect Dam and the Village of Prospect boundary was cleaned up, which included removal of fallen trees and debris.

## Public Input and Participation

In addition to stakeholder briefings, three open-house style public meetings were held during the design phase, providing information and the opportunity for questions and public input. Other opportunities included Columbus City Council and the Columbus Sewer and Water Advisory Board meetings. A pre-construction public meeting was held in April 2011.