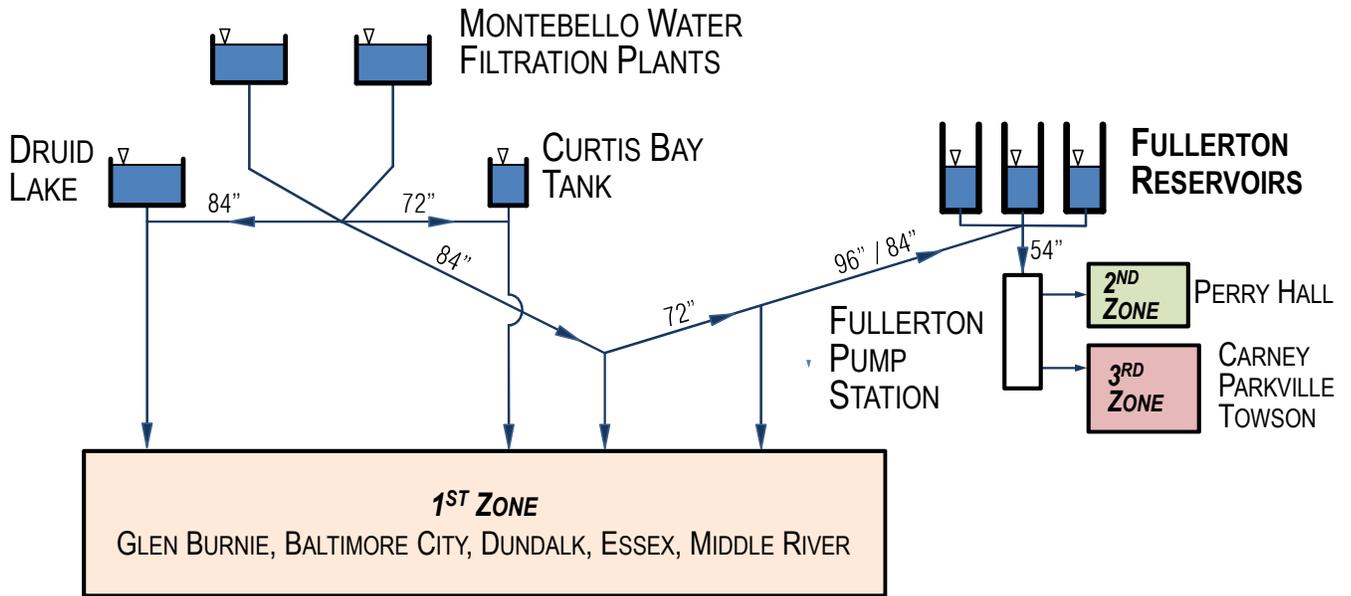


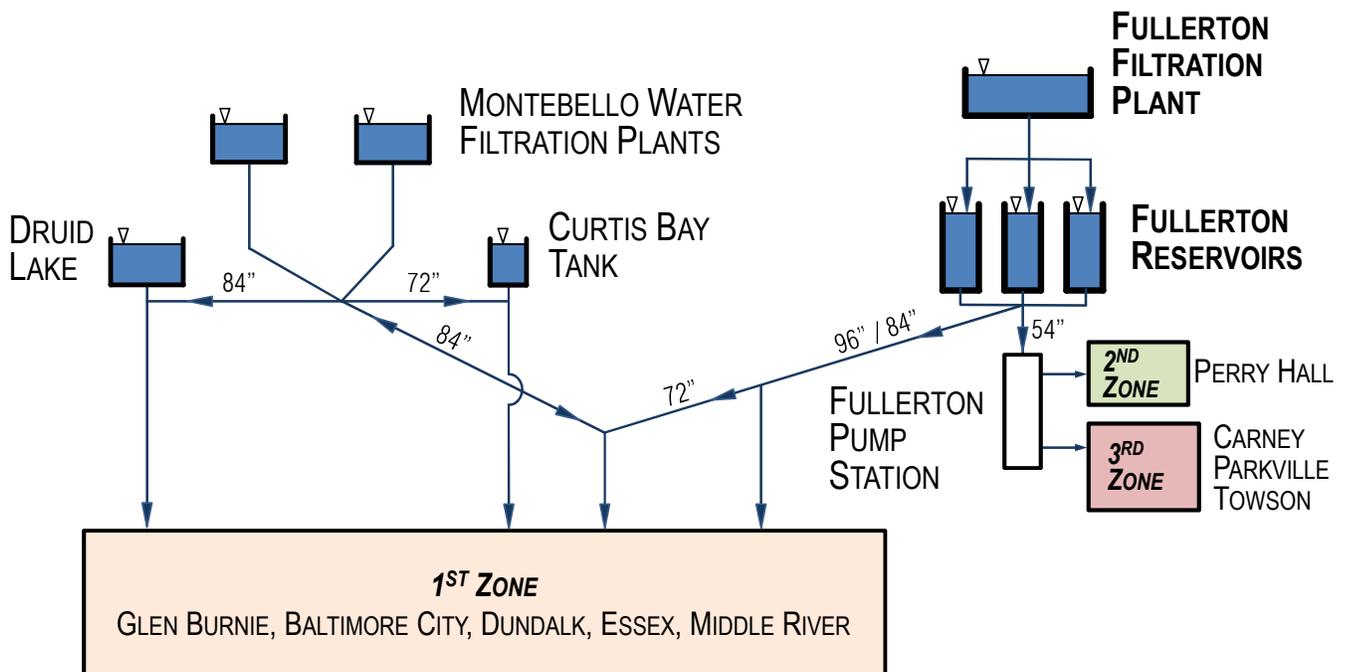


FULLERTON RESERVOIRS

HOW THEY FIT IN THE WATER SYSTEM



INITIAL (BEFORE FULLERTON TREATMENT PLANT)



ULTIMATE (WITH FULLERTON TREATMENT PLANT)



History of the Fullerton Site

- The Fullerton Site was purchased over fifty years ago by Baltimore City and Baltimore County for the purpose of developing the Fullerton Filtration Plant, Finished Water Reservoir, and Transmission Facilities to augment the finished water supply to the Baltimore Water System.
- The Fullerton Site is bounded by Bucks School House Road on the north and Ridge Road on the south. Perry Hall Boulevard passes through the southeast portion of the site. The site includes approximately 247 acres; 29 acres is owned solely by the County.

FULLERTON PROJECTS TIME LINE

- 1953- The Board of Advisory Engineers on Future Water Supply, recommended:
 - Use of Susquehanna River water as an alternate source of supply;
 - Construction of a 108-inch pipeline from the Susquehanna River to the Montebello Filtration Plants.
- 1955- The Geyer-Wolff Report (used as a template for growth of the Baltimore water distribution system) recommended:
 - Immediate purchase of 250 acres of land at Fullerton for: a new filtration plant to treat Susquehanna River water; a finished water reservoir; and transmission facilities consisting of a pumping station and large diameter mains;
 - Downsizing of the Susquehanna raw water pipeline between Fullerton and Montebello to a 96-inch size and inclusion of a connection to the future Fullerton Filtration Plant.
- 1956-1961- Baltimore City purchased the Fullerton Reservoir site and easements for the Susquehanna pipeline.
- March 20, 1996- Community presentation at Essex Community College to discuss all Fullerton projects (transmission main, pumping station, reservoirs, filtration plant, and Bureau of Utilities' wastewater monitoring/repair facilities).
- April/May 1996- First meeting between Fullerton Advisory Committee (focus group) and Baltimore County representatives. Primary focus of meeting was to select access road for construction of Fullerton Transmission Main Section I.
- June 12, 1996- Construction of Fullerton Pumping Station begins.
- June 25, 1996- Construction of Fullerton Transmission Main Section I begins.
- October 7, 1998- Gannett Fleming, Inc. hired by Baltimore County to begin study of Fullerton Reservoirs.
- January/February 2000- Three (3) signs were posted around Fullerton Reservoir property notifying residents of reservoir project; two (2) signs were posted along Bucks Schoolhouse Road and one (1) sign posted along Ridge Road. Two (2) signs were defaced and removed; one sign remains in place.
- March 30, 2001- Fullerton Transmission Main Section I officially completed.
- May 31, 2001- Fullerton Pumping Station officially completed.
- April 7, 2003- Community meeting held in Councilman Bartenfelder's Office to discuss Fullerton Reservoir project.
- March 3, 2005- Baltimore City chooses engineering team to begin study of Fullerton Filtration Plant.
- March 27, 2007- Meeting held with Fullerton Advisory Committee to discuss Fullerton Filtration Plant project.
- October 24, 2007- Community meeting held to discuss Fullerton Filtration Plant project.
- Fall 2015-Summer/Fall 2018- Construction of Fullerton Reservoirs.



Fullerton Reservoirs - Purpose and Need

- The reservoirs are necessary to provide additional finished water storage for approximately 145,000 residents in eastern Baltimore County. Additionally, the reservoirs will complement existing storage (Druid Lake and Curtis Bay Tank) serving approximately 170,000 residents in Baltimore City.
- Initially, the reservoirs will provide finished water storage for equalization (consumers do not use water at a steady rate), fire protection, and emergency use; and the reservoirs will serve as a steady pressure supply to the Fullerton Pumping Station. After the future Fullerton Filtration Plant is placed into service, the reservoirs also will work in unison with the filtration plant to provide needed contact time for disinfection purposes.

Fullerton Reservoirs - Description of the Project

- Baltimore County will construct three (3) reservoirs on the Fullerton site with a combined volume of 62 MG (million gallons). The reservoirs will be constructed of concrete with wall panels containing a steel diaphragm; will be circular in shape; and will have flat roofs that will be supported by columns.
- Together with the actual reservoir construction, the project also will include construction of an access road within the property; construction of a disinfection building; and construction of numerous underground vaults and pipelines. Soil will be excavated for construction of the reservoirs and will be stockpiled on the western portion of the site. After the reservoirs are tested and in service, much (but not all) of the stockpiled soil will be used to backfill around the reservoirs.
- Two (2) stormwater management ponds will be constructed; landscaping will be performed; and a security fence will be installed around the facilities.



Fullerton Reservoirs – Construction and Costs

- Construction is expected to begin Fall 2015 and is expected to be completed in the Fall of 2018.
- Normal work days will be Monday through Friday. Normal work hours will be limited to 7:00 AM to 5:00 PM except that major concrete pours will occur throughout the night. Initial estimates are there will be six (6) major concrete pours. (For major concrete pours, such as each floor slab, concrete must be delivered, cast, and finished continuously until the pour is complete.)
- The General Contractor will be one of the nationally established firms specializing in the construction of circular concrete reservoirs. Local contractors likely will be utilized for earthwork, pipeline construction, construction of underground vaults, pipelines and the chlorination building.
- Estimated construction costs are \$65,000,000; with additional funding required for contingencies, engineering, and inspection.
- Baltimore County, Baltimore City, Howard County, and Anne Arundel County will participate in the cost of Fullerton Reservoirs.

Fullerton Reservoirs – Project Design Team

Baltimore County Dept. of Public Works, Water Design Section

- Michael Mazurek, Chief
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- Gerald McHenry, Project Engineer
Phone: 410-887-3783; e-mail: gmchenry@baltimorecountymd.gov
- Dale Walker, Water Analyzer Office
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Gannett Fleming, Inc., Design Engineers

- Steve Gerlach, Vice President
Phone: 443-348-2017; e-mail: sgerlach@gfnet.com
- Dennis Funk, Project Engineer
Phone: 443-348-2017; e-mail: dfunk@gfnet.com



Future Fullerton Water Filtration Plant

- The Fullerton Water Filtration Plant project will be managed by Baltimore City, **not** by Baltimore County.
- What we (County) do know:
 - Filtration Plant will be located on the site north of the Fullerton Reservoirs
 - After constructed, access for work staff and equipment/chemical deliveries will be from Perry Hall Blvd
 - Filtration plant must be a secure facility (fenced)
- What we (County) do not know:
 - When it will be built
 - How large it will be
 - What it will look like
 - What the staffing requirements will be
 - Frequency and types of deliveries
 - How much it will cost
 - Construction limitations (work hours, work days, etc.)

Bureau of Utilities' Fullerton Complex Expansion

- **Not** a part of the Fullerton Reservoirs project!
- **Not** a part of the future Fullerton Filtration Plant project!
- Baltimore County made the decision to consolidate all of the Bureau of Utilities' operations at the Fullerton complex located off of Bucks Schoolhouse Road. If you have any questions or require additional information regarding this project, please contact the Director's Office, Department of Public Works, at 410-887-3306.



Frequently Asked Questions – 1

Question I live adjacent to the reservoir property. What kind of disturbance can I expect during construction and after construction?

Answer As we have indicated, normal construction hours will be 7:00 AM to 5:00 PM except during major concrete pours. For major concrete pours, the work will continue through the night until the respective pour is complete. We estimate the normal work crew to be about 8-15 workers. During work such as concrete floor pours, there likely will be about 45 workers on site. Our contract will include noise restrictions borrowed from old State of Maryland regulations: 65 decibels at the property line from 7:00 AM to 10:00 PM and 55 decibels at the property line from 10:00 PM to 7:00 AM.

For major concrete pours, estimated to be 6 in number, there will be a steady flow of concrete trucks to and from the site until the pour is complete. Trucks will line up along the access road inside of the property; if this becomes a problem during construction, we will have some of the trucks line up along the Fullerton Pumping Station driveway. It will be a contract requirement for all major concrete pours that the concrete trucks must enter and leave the site by way of Perry Hall Boulevard and the eastern portion of Bucks Schoolhouse Road.

After the reservoirs are constructed and in service, we anticipate the site will be visited by one (1) or two (2) Baltimore City maintenance crews daily. Additionally, there will be approximately one (1) chemical delivery (sodium hypochlorite for disinfection) a month. The details of security lighting are still under design but you can expect some minimal lighting around the reservoirs, the disinfection building, and at the entrance.

Question Will the reservoirs have any effect on the taste of my drinking water?

Answer We do not anticipate any change in the taste of your water. However, with the new disinfection building there may be a slight increase in the chlorine residual. Today the residual is about 0.80 ppm (parts per million) and with the new disinfection building in service, the residual should be closer to our system-wide goal of 1.00 ppm.

Question Are there any plans to turn the open area of the Fullerton Reservoir site into a park?

Answer No; the reservoir facilities will be secured by fencing and the remainder of the property will be reserved for use by the future Fullerton Filtration Plant project, which also must be secured once constructed. Please note that the reservoir project will require removing trees; however, we will attempt to preserve as many trees as possible. Additionally, we will be planting some smaller trees as part of our landscaping plan, which is still under development.

Question Are there any plans to work on the pumping station?

Answer The reservoir project will obtain high pressure water for supply and fire protection from the pumping station and also will obtain electrical power and telecommunications from the station. Other than that, there are no plans to perform work at the pumping station.

Question Now that the Goddard Farm Road development has straightened out the alignment of Bucks Schoolhouse Road, are there any plans to make the (now) seldom-used portion of the road a 'One Way' road?

Answer We have not done it yet but we will confer with our Traffic Engineering personnel to see if it would be safer to make the seldom-used, sharp curved portion of Bucks Schoolhouse Road a one-way road. Another option may be to block off one end of the low volume road just prior to its junction with the straight-through portion. Either option could improve traffic safety, particularly when a major concrete pour is underway.



Frequently Asked Questions – 2

Question Can the reservoirs be buried?

Answer The reservoirs could be buried but there is no reason to do so once it is understood that they cannot be lowered into the ground. The reason they cannot be lowered into the ground is simple: their overflow elevations (the elevation above sea level) have to be compatible with the overflow elevations of Druid Lake and Curtis Bay Tank. Fullerton Reservoirs will be partially buried but to completely bury the reservoirs would add \$15M to \$25M to the cost, would increase the construction duration by four (4) to six (6) months, and would require hundreds of dump trucks entering and leaving the site. Unless we have an issue with poor quality soils on site, we hope to use the native soils for the construction and avoid importing any soils. Completely burying the reservoirs also complicates accessing the reservoirs for maintenance purposes.

Question I attended one of the community meetings years ago and remember that two (2) reservoirs were proposed instead of three (3). Why the increase to three (3) reservoirs?

Answer In June of 2012, the person in Baltimore City responsible for operating all of the water filtration plants (Montebello and Ashburton) indicated that the future Fullerton Filtration Plant must be capable of operating at or near capacity with one of the Fullerton Reservoirs out of service for routine cleaning. However, with one reservoir out of service, pipeline and valve restrictions make it impossible to pass all of the treatment plant flow through a single remaining reservoir. In other words, two (2) reservoirs have to be in service at all times to handle the treatment plant flow and a third reservoir is required for necessary operational flexibility.

Question This project has been around for many years. Why has the design taken so long?

Answer The project has been delayed twice for multi-year intervals each time. The first delay occurred when the project was put on hold so that the Fullerton Filtration Plant study could be performed. Baltimore City and Baltimore County agreed there was a possibility the reservoirs could negatively impact the future filtration plant and the prudent course of action was to study the filtration plant before proceeding any further with design of the reservoirs.

After the filtration plant study was completed, a second delay occurred when the County could not get the other jurisdictions to agree on the cost share participation. With a construction cost estimate of \$65M, Baltimore County was not willing to proceed any further without a cost share agreement in place. The necessary cost sharing was agreed upon in July 2013.

While not a delay specifically, the change from two (2) reservoirs to three (3) reservoirs, as described in the question above, has lengthened the design and permitting process for the reservoir project.

Question Once construction begins, is there any way the community can obtain regular updates of the project?

Answer A large construction project was completed just last year in the residential part of Towson and for that project the community set up an e-mail address just for the project. The Baltimore County project engineer forwarded updates of the project monthly to the e-mail address and copied the local Councilman's Office. That system worked really well and a similar system could work for the Fullerton Reservoirs project. The updates for the Towson project also included a running tabulation of questions/concerns from the surrounding community and something similar could be included in updates for Fullerton. Finally, while the Towson e-mail process did not include advance notification of major activities, such as major concrete pours, the e-mail process for Fullerton could be utilized for advance notification provided everyone understands that changes may occur with little notice (24 hours) due to changing weather conditions such as impending rain or snow.

Question I received notification back in June of this year about the project and I was wondering if the contact information is still the same.

Answer The contact information should stay the same for the duration of the design. However, once construction begins, questions and/or comments should be directed to our Construction Contracts Administration Division at 410-887-3531.



Thank You !

for attending tonight's meeting.

- If you have not already done so, please sign the attendance sheet so we can keep you informed of future meetings and website postings.