

Project Summary

Who: Applicant

Loudoun Water provides water and wastewater service to approximately 180,000 customers of the unincorporated areas of Loudoun County. The Loudoun County Sanitation Authority, doing business as Loudoun Water, is a state-chartered authority, formed in 1959 by resolution of the Loudoun County Board of Supervisors under the Virginia Water and Waste Authorities Act.

What: Project Scope and Purpose

Loudoun Water is in the process of submitting a Standard Joint Permit Application for construction and operation of a new 40 Million Gallon per Day (MGD) drinking water supply, transmission system, storage, and treatment facility which will withdraw water from the Potomac River. The drinking water produced will meet the projected demand in Loudoun County. Unique to this project is the concept of Water Banking; the conveyance of the raw water to existing rock quarries where the water will be stored and pumped to the drinking water treatment plant under Potomac River low flow or adverse water quality conditions. The additional raw water storage capability will help ensure an adequate supply of drinking water in times of drought or adverse water quality conditions, and will provide an advantage to the region and the ecosystem by not withdrawing water from the Potomac River during these conditions.

Why: Project Need

Planned growth in Loudoun County will require 90 MGD water supply by 2040. Loudoun Water currently purchases all of its water supply from two other utilities, and can obtain up to 50 MGD (contractually) from Fairfax Water and 3 MGD (reliably) from the City of Fairfax. Loudoun Water plans to replace the City of Fairfax supply with their own treated water supply due to reliability and water quality issues. The projected water demands, developed from Loudoun County population projections in conjunction with the Metropolitan Washington Council of Governments, indicate that demand will exceed supply in 2016.

Loudoun Water reviewed many alternatives, and determined that the Potomac River Water Supply Option with water storage in retired diabase (dense hard rock) quarries is the most cost-effective and environmentally responsible option. The first quarry available for use by Loudoun Water has one billion gallon (BG) capacity. The quarry will be an integral and important part of the water supply operations plan, and will serve as a valuable resource to Loudoun Water and the region when water from the quarry is used in lieu of withdrawing water from the Potomac River during times of drought or adverse water quality conditions.

Where: Project Location

Loudoun County is located along the Potomac River in Northern Virginia, approximately 30 miles west of Washington D.C. Attachment 1 is a vicinity map and Attachment 2 is a project location map, showing the major features of the Central Water Supply Plan.

- Intake site - located at approximately 39°06'52" latitude and 77°30'6" longitude
- Raw Water Transmission Main – approximately 35,000 ft from Potomac River pumping station to the water treatment facility, including mains transmitting water to and from storage in hard rock quarry
- Raw Water Storage – hard rock quarry, located east of Goose Creek and north of the W&O.D. trail at 39°03'59" latitude and 77°29'57" longitude

- Water Treatment Facility – located at 39°02'51" latitude and 77°32'02" longitude
- Finished Water Transmission Main – approximately 5,000 ft from the water treatment facility to existing finished water main on the east side of Goose Creek.

When: Project Schedule

The project will be implemented in two phases. The first phase secures 20 MGD by 2016 and the second phase secures the remaining 20 MGD when needed in the future, currently projected by 2025. Loudoun Water plans to submit the JPA by early 2010 and strives for all permits to be approved no later than second quarter 2011. The project schedule anticipates that all major components of the project for 20 MGD water supply capacity will be constructed and operational by June 2016, with the exception of the 1-BG quarry which is projected to be available between 2017 and 2020. Loudoun Water's operational plan will address system operations prior to the raw water storage quarry being available.

How: Project Planning

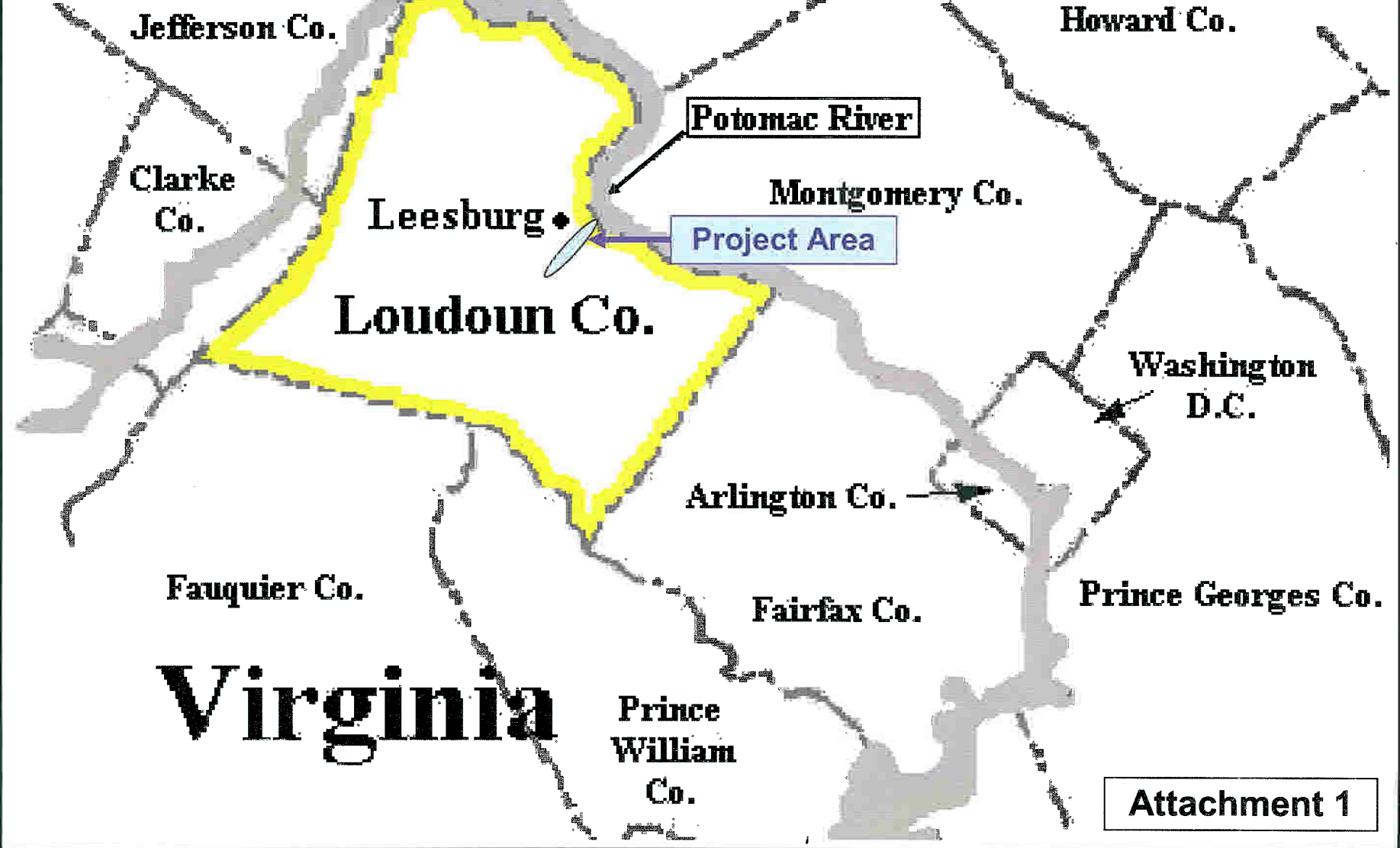
Loudoun Water has spent the last 20 years evaluating options for future water supply for its Central Water Supply Service Area. Loudoun Water purchased property along the Potomac River in 1993. In 2008, Black & Veatch conducted an independent evaluation of Loudoun Water's past planning efforts and performed an objective review of supply options. The Potomac River Water Supply and Raw Water Storage Option was determined to be the most cost-effective and environmentally responsible plan. Loudoun Water is currently pursuing land use entitlements for the affected properties to assure the availability and permissible use of properties.

Loudoun Water has provided input and presented their water treatment and water banking plan to the Department of Environmental Quality (DEQ) and Northern Virginia Regional Commission (NVRC) in response to the "Regulation for Local and Regional Water Supply Planning." Loudoun Water has coordinated with the Interstate Commission on the Potomac River Basin (ICPRB) by making presentations to staff, providing information on proposed treatment and quarry storage operations for their Potomac River and Reservoir Simulation Model, and coordinating endorsement of the project from ICPRB to include as part of the JPA. Loudoun Water has conducted extensive stakeholder outreach about the project via mailings to customers, presentations to Loudoun County Board of Supervisors and Planning Commission, many newspaper articles, information on their website, discussions with neighboring water utilities, Virginia Department of Health, and other interested stakeholders.

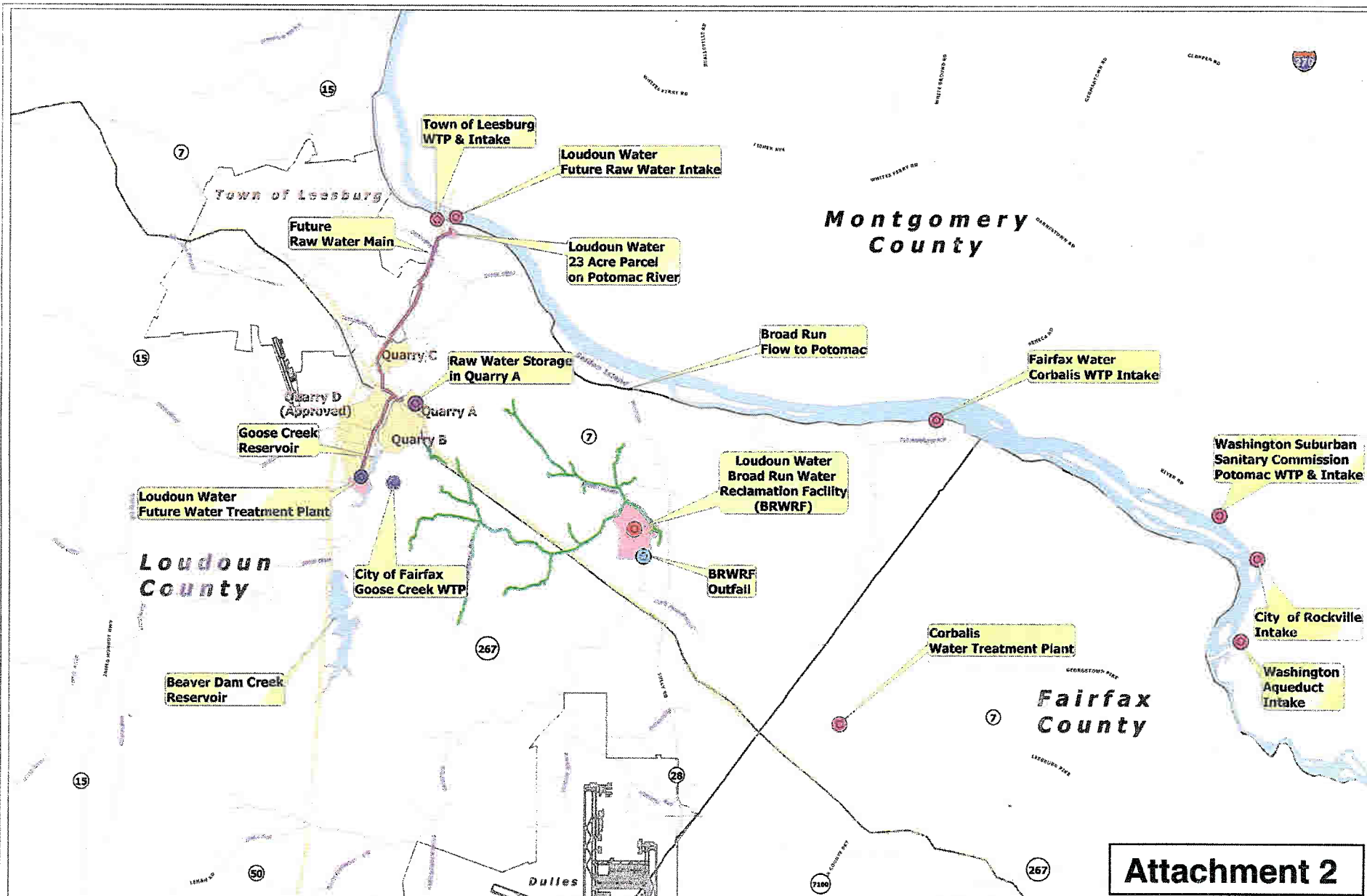
This project recognizes the increased demand for water resources in eastern Loudoun County and addresses the need for ensuring a sustainable, dependable water supply for future customers. Demand Management is also an integral part of Loudoun Water's culture. These are core project values that are embedded in the "Policy for Integrated Water Resources Planning" that Loudoun Water has prepared and adopted.

**West
Virginia**

Maryland



Attachment 1



Attachment 2

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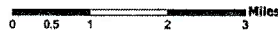
Map Date: 8/1/09

Legend

- Major Road
- Major Water Body
- Major Water Way
- Airport Runway
- Towns
- County Line
- Major Sewer Main
- Loudoun Water Property
- Selected Parcels
- Major Powerline Easement
- W & OD Trial



1 inch = 3,000 feet



LOUDOUN WATER
Potomac River Water Supply

August 2009