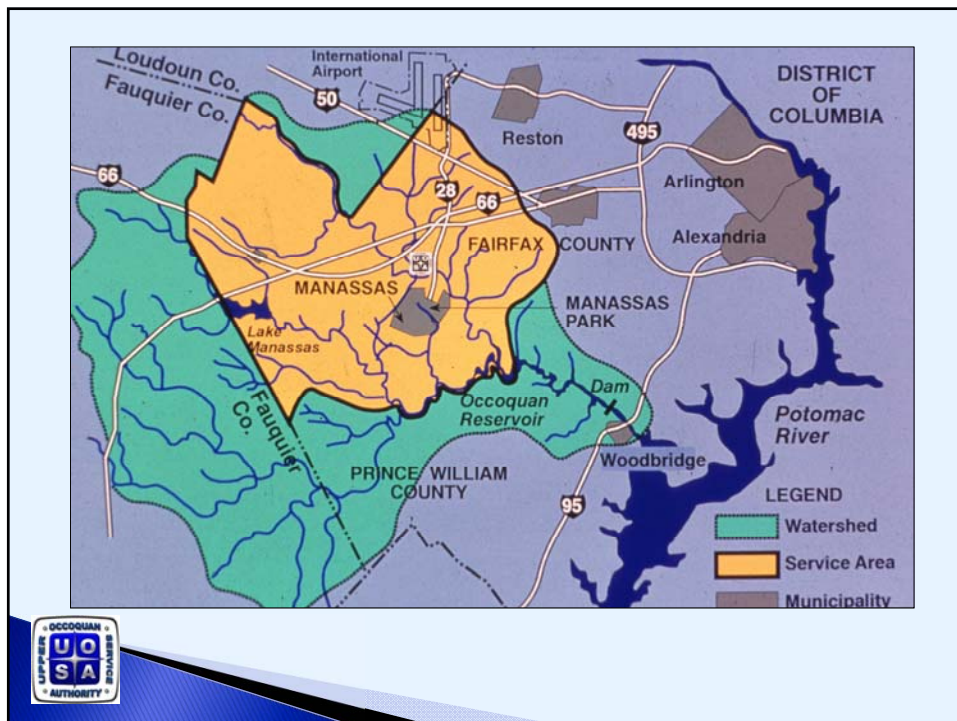
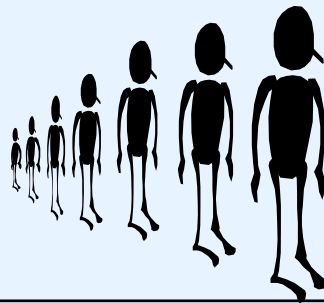


Upper Occoquan Service Authority



Results of Population Increases

- ▶ Rapid deterioration in the water quality of the Occoquan Reservoir
- ▶ State Water Control Board development moratorium
- ▶ Series of water quality studies



Occoquan Reservoir



The Occoquan Reservoir: History and Statistics

- Impounded in 1957 by Alexandria Water Company
- Ownership transferred to Fairfax Water in 1967
- Reservoir Drainage Area: 570 mi²
- Encompasses all or part of six counties and cities
- Original Storage: 9.8×10^9 gallons
- Dam height increased in 1982, and storage raised to 11.2×10^9 gallons
- Major component of water supply for 1,700,000 Northern Virginians

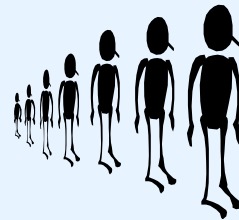


Algal Bloom in Occoquan Reservoir: Summer, 1973



Results of Population Increases (Continued)

- ▶ State Water Control Board employed Metcalf and Eddy (M&E) to perform comprehensive evaluation of Occoquan Reservoir
- ▶ Studies conducted, 1968-69



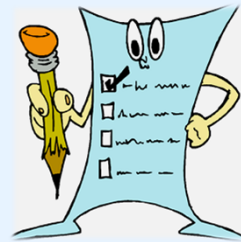
Metcalf & Eddy Study

- ▶ Both point and non-point source pollution contributed to water quality deterioration
- ▶ Principal culprits—discharge from 11 secondary sewage treatment plants



During 1970

- ▶ Extensive review and comments on Metcalf & Eddy findings and recommendations by Public agencies and consultants
- ▶ Many public hearings



SWCB Proposed In-Basin Solution

- ▶ High performance regional water reclamation plant to replace existing plants in the Watershed (UOSA)
- ▶ Independent agency to monitor reservoir water quality (OWML)



State Water Control Board

Adopted

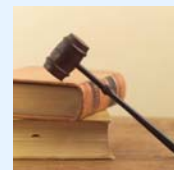
“Policy for Water Treatment and Water Quality Management in the Occoquan Watershed.”

Short Title: “Occoquan Policy”

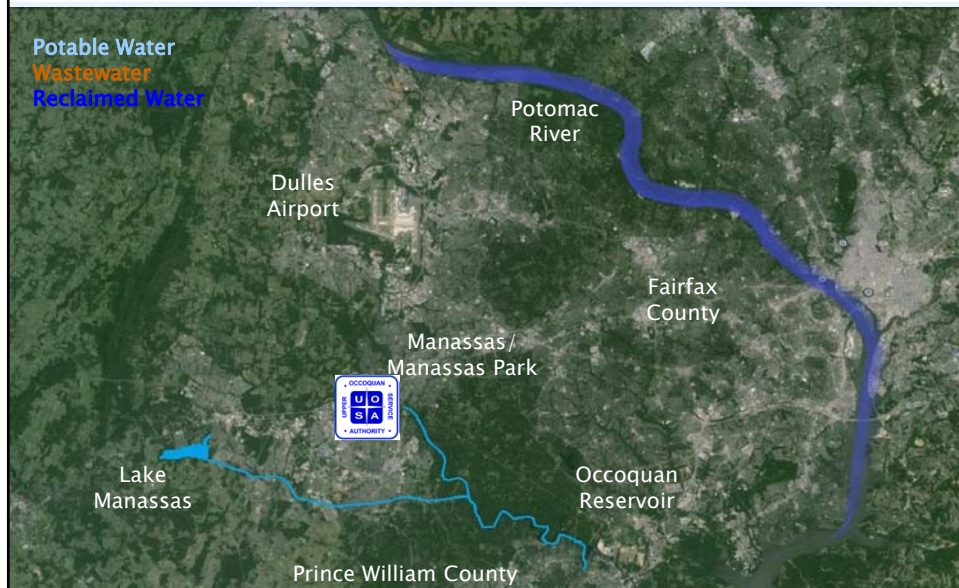


Upper Occoquan Service Authority

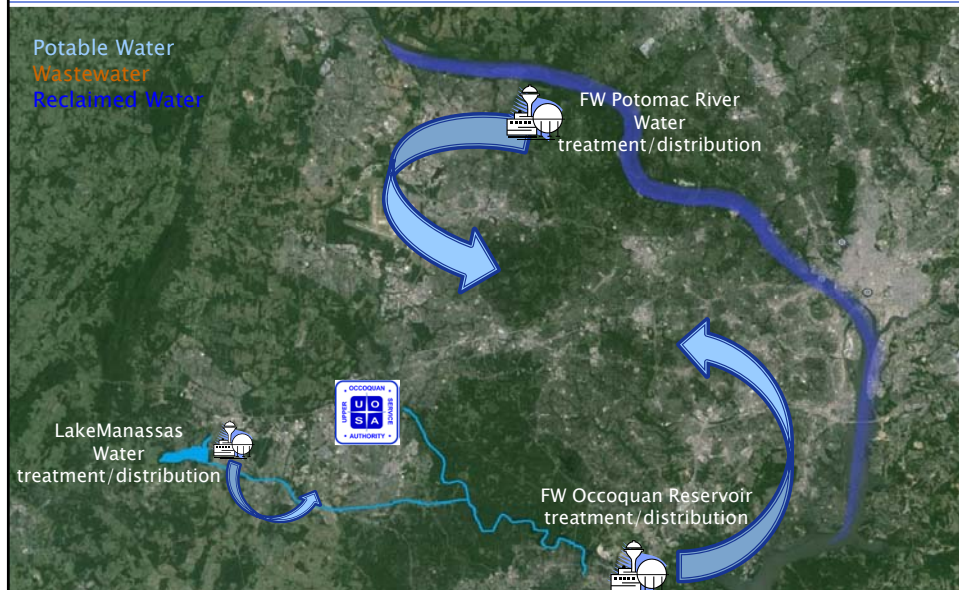
- ▶ Established in 1971 by concurrent resolution of Fairfax and Prince William Counties and the Towns (now cities) of Manassas and Manassas Park.
- ▶ Forms of Government: Authority
Public Body Politic and Corporate of the Commonwealth of Virginia
- ▶ Operation began in 1978



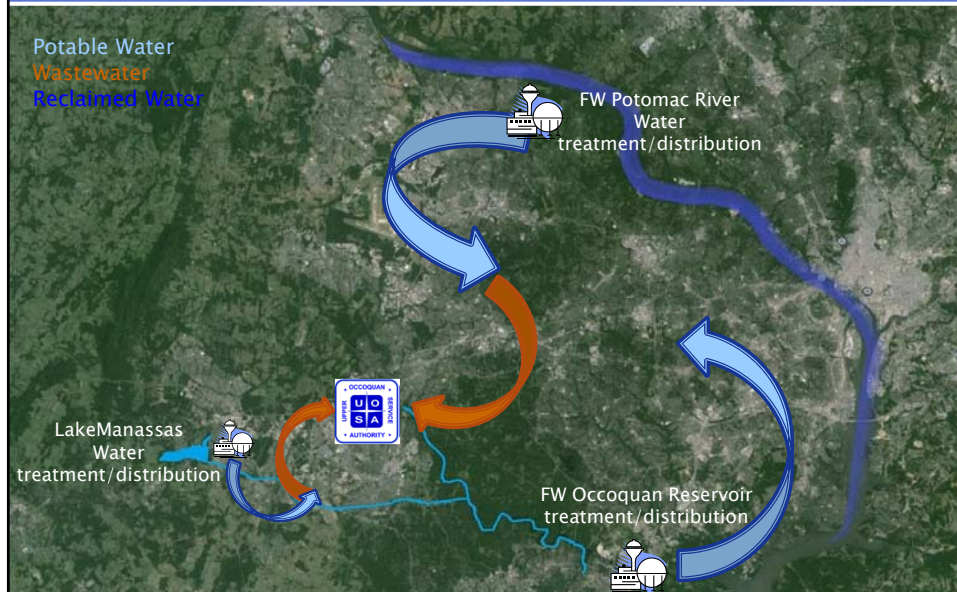
Indirect Potable Reuse in Northern Virginia



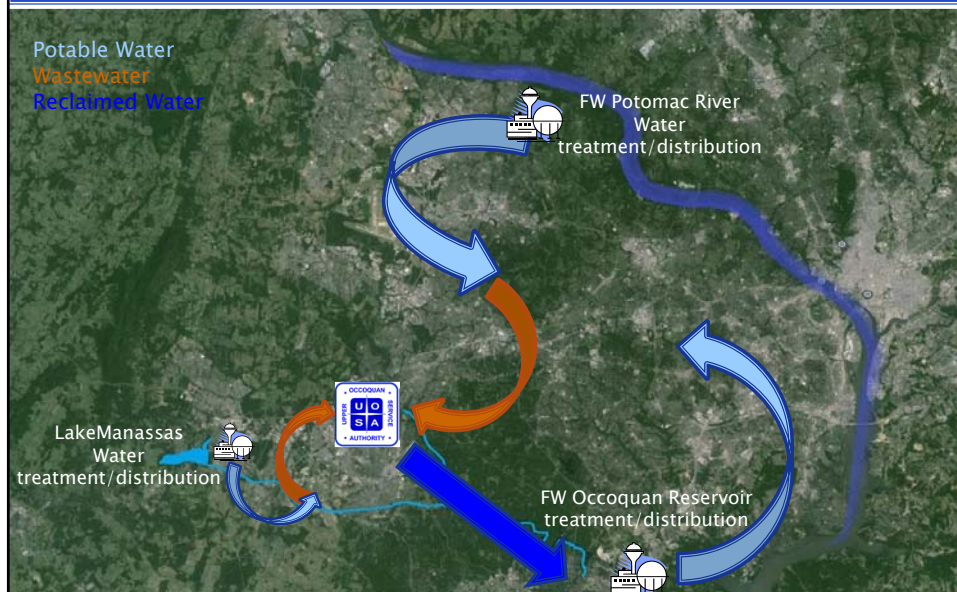
Indirect Potable Reuse in Northern Virginia



Indirect Potable Reuse in Northern Virginia



Indirect Potable Reuse in Northern Virginia



UOSA International Visitors

Argentina	Ethiopia	Italy	Norway	Tajikistan
Armenia	Finland	Jamaica	Pakistan	Trinidad
Australia	France	Japan	Peru	Thailand
Austria	Georgia	Jordan	Poland	Turkmenistan
Azerbaijan	Germany	Kazakhstan	Portugal	Turkey
Bangladesh	Ghana	Korea	Romania	Uganda
Belarus	Guiana	Kuwait	Russia	Ukraine
Bolivia	Hong Kong	Kyrgyzstan	Saudi Arabia	United Arab Emirates
Brazil	Hungary	Latvia	Singapore	United Kingdom
Canada	India	Lebanon	South Africa	Uzbekistan
Chile	Indonesia	Mexico	Spain	Venezuela
China	Iran	Moldova	Sri Lanka	Vietnam
Denmark	Iraq	Netherlands	Sweden	Zaire
Egypt	Ireland	New Zealand	Switzerland	Zimbabwe
Estonia	Israel	Nigeria	Taiwan	



Reclaimed water
flows into the
Final Effluent
Reservoir for
maturation and
dilution, over the
spillway to Bull
Run, then
supplements the
inflow to the
Occoquan
Reservoir

