Fact Sheets for Category 5 Waters

RIVER BASIN:	Potomac River & Shenandoah River Basins		
CITY/COUNTY:	Fairfax, Prince Willian	m	
STREAM NAME:	Occoquan Reservoir		
HYDROLOGIC UNIT:	02070010		
TMDL ID:	VAN-A24L-01		
ASSESSMENT CATEGORY:	5C		
SEGMENT SIZE:	1700 - Acres		
INITIAL LISTING:	2002	TMDL SCHED	ULE: 2010
UPSTREAM LIMIT:			
DESCRIPTION:	Start of inundated waters on Bull Run and Occoquan River		
RIVER MILE:	20.14		
LATITUDE:	38.69444	LONGITUDE:	-77.27667
DOWNSTREAM LIMIT:			
DESCRIPTION:	Lower end of reservoir.		
RIVER MILE:	7.14		
LATITUDE:	38.71667	LONGITUDE:	-77.40056

Segment includes all of the Occoquan Reservoir extending from rivermile 20.14 on the Occoquan River, and rivermile 5.18 on Bull Run, downstream to the dam located at rivermile 7.14 on the Occoquan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002)

The assessment for the Occoquan Reservoir is based on monitoring data collected by the Occoquan Watershed Monitoring Laboratory (OWML). Data were available for four monitoring stations during the 2004 water quality assessment period. Station RE02 is located 0.3 miles above the Occoquan dam. Station RE15 is located 6.1 miles above the dam. Station RE30 is located on the Bull Run arm of the reservoir at the Bull Run Marina 10.5 miles above the dam. Station RE35 is located on the Occoquan River arm of the reservoir at the Ravenwood Bridge 11.2 miles above the dam.

The data reveals that the Occoquan Reservoir fully supports the public water supply use, and is not impaired as a drinking water source. Excursions from the water quality criteria and screening values discussed below pertain to the aquatic life use of the reservoir, and not the public water supply use.

The assessment results are summarized as follows:

1) The aquatic life use is impaired due to low dissolved oxygen in the bottom waters of the reservoir. All four stations report excursions of the minimum dissolved oxygen criterion for Class III nontidal waters of 4.0 mg/L. Greater than 10% of samples exceed the criterion in both the surface and bottom waters at RE02, and in the bottom waters only at RE15, RE30 and RE35. It is believed that the aeration process performed by the county water authority near station RE02 is the cause of the low dissolved oxygen values observed in the surface waters.

A Trophic State Index (TSI) value was calculated for total phosphorus and secchi depth at all stations using surface data (0.3 m depth) collected during the summer months (June through September). Chlorophyll a TSI values were not calculated at any stations because the reservoir was treated with algaecide. The calculated TSI values are summarized below:

Station	Secchi, avg (m)	Secchi, TSI	TP, avg (ug/L)	TP TSI
RE02	1.40	55.19	36.22	55.94
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