



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION III**  
**1650 Arch Street**  
**Philadelphia, Pennsylvania 19103-2029**

**SUBJECT:** EPA Justification not to require a TMDL for Biological Oxygen Demand (BOD) in Kingman Lake

**FROM:** Jonathan D. Essoka,  
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**TO:** Kingman Lake TMDL file                      **DATE:** October 31, 2003

**Thru:** Patricia Gleason, Chief  
Watershed Restoration Branch (3WP12)

**BACKGROUND INFORMATION**

During the 1920's to the 1940's, the Corps of Engineers' massive dredging operations and straightening of the Anacostia River was performed to control flooding. A river bend was truncated such that a pseudo oxbow lake known today as the Kingman Lake was created. The hydraulic connection to the Anacostia River at both ends of the lake was maintained as part of this operation, and consequently, Kingman Lake has the same beneficial designated uses as the Anacostia River as defined in the District of Columbia Water Quality Standards (WQS), Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11. The following table summarizes Kingman Lake these uses:

Water Body	Current Use	Designated Use
Anacostia River	<b>Class B</b> -secondary contact recreation. <b>Class C</b> -protection and propagation of fish, shellfish, and wildlife. <b>Class D</b> -protection of human health related to consumption of fish and shellfish. <b>Class E</b> -navigation.	<b>Class A</b> -primary contact recreation. <b>Class B</b> -secondary contact recreation <b>Class C</b> -protection and propagation of fish, shellfish, and wildlife. <b>Class D</b> -protection of human health related to consumption of fish and shellfish. <b>Class E</b> -navigation.

Kingman Lake is tidal and has roughly a 3 feet tidal amplitude. There are no tributaries to the Kingman Lake. The direct drainage area to it is about 16,000,000 ft<sup>2</sup> and is composed of 50 percent

parkland/golf course, 25 percent residential and 25 percent RFK stadium and parking lot. The only known point source that directly discharges within its watershed consists of four storm sewer outfalls covered by the District Municipal Separate Sewer System (MS4) NPDES Permit No. DC000221.

The following table summarizes the 1998 303 (d) listing for Kingman Lake:

<b>Waterbody</b>	<b>Pollutants of concern</b>	<b>Priority</b>
Kingman Lake	BOD, bacteria, organics, metals, total suspended solids and oil and grease	High

## **ANALYSIS**

DO is the endpoint used to evaluate the Biological Oxygen Demand (BOD) since low DO is a good indicator of high BOD. A DO calculation for Kingman Lake was provided by the District of Columbia Department of Health (DC DOH) in their BOD TMDL analysis (October 2003) using river flow, rainfall, and loading data. Their examination revealed that the 50% BOD load reductions specified in the mainstem Anacostia TMDL are more than adequate to meet WQS in the lake. Furthermore, an independent evaluation conducted by EPA using model outputs from the Anacostia BOD TMDL utilized a simplified daily evaluation with temperature correction factors. EPA's review using these procedures confirmed the District's findings.

## **CONCLUSION**

Based on EPA's technical review, EPA has determined, consistent with 33 U.S.C. § 1313(d) and its implementing regulations, that Kingman Lake no longer requires a TMDL for BOD.