

2014 Impaired Waters Documentation Sheet

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Waterbody Name: Big Green Lake

Segment:

WADRS ID:

WBIC: 146100

Use [i-SWDV](#) (CTRL + Click) to find ID numbers

Choose from the following to indicate what you are recommending:

☐

Proposed new **impaired water** listing

☒

Proposed change to **DRAFT list**

☐

Proposed new **watch water** listing

☐

Proposed changes for water already on 303(d) list (check type of change below) → TMDL ID #: _____

☐

Proposed change to existing list (new pollutants, impairments, mileages, etc.)

☐

Proposed for de-listing

☐

General 303(d) documentation for water already on list

Description of waterbody segment

Start Mile:

End Mile:

Total miles:

Lake Acres:

Detail (describe segment using road crossings, convergence with other waterbodies, etc.):

Use Designation Categories

List use designation & data source for each category.

Current (Existing) Fish & Aquatic Life Use:

Attainable (Potential) Fish & Aquatic Life Use:

Designated (Codified) Fish & Aquatic Life Use:

Is it supporting its FAL Attainable Use?

☐

Fully Supporting

☒

Not Supporting

☐

Not Assessed

Is it supporting its Recreational Use?

☐

Fully Supporting

☒

Not Supporting

☐

Not Assessed

Does a *Specific* Fish Consumption Advisory Exist?

☒

Yes

☐

No

☐

Don't know

If so, what is the specific advisory:

Pollutants & Impairments

Pollutants: (Place an X next to all pollutants that you are recommending for listing or de-listing, or "watch water" monitoring needs.)

☒

Phosphorus

☐

Sediment

☐

Bacteria

☐

PAHs

☐

PCBs

☐

NH₃ (Ammonia)

☐

Thermal

☐

Hg

☐

Creosote

☐

Metals

☐

Unknown

Other Pollutants:

Impairments: (Place an X next to all impairments that you are recommending for listing, de-listing, or "watch water" monitoring needs.)

☐ Degraded Habitat	☐ Eutrophication	☐ Temperature
☐ Contaminated Fish Tissue	☐ Chronic Toxicity	☐ Aquatic Toxicity
☐ Unknown	☐ Degraded Biological Community	

Specific causes of impairment: (Describe to the best of your ability what you think is contributing to the impairment.)

Phosphorus loading which increases algal abundance. Excessive algae settles out at the thermocline due to higher density water. The result is an oxygen impairment from BOD using most of the available oxygen.

Information is based on:

Monitoring data collected on/after January 1, 2003? ☒ YES ☐ NO

If 'NO' then provide justification for using data from the long term record:

Monitoring & Listing Data

Monitoring Study, Date, Results. List water quality exceedances indicating magnitude, duration and frequency (attach additional sheets, if needed).

Monitoring Studies: Long Term Trend Lake

Exceedances: TP and DO

Stations:

Parameters:

Database where data is stored (Fish Database, SWIMS, FishSED, Personal PC): SWIMS and USGS

Narrative on why you are proposing this waterbody to be listed or de-listed?

The metalimnetic oxygen levels on Big Green Lake, during summer months, are commonly lower than 1ppm. Historic data from the early 1900's show that DO levels at the thermocline did not fall below 3ppm and ranged from 3-7ppm. The cause of this DO impairment is thought to be from excessive algae setting out at the thermocline and the resulting BOD depletes oxygen levels. High concentrations of algae are a result of excessive levels of total phosphorus.

List and attach any additional reports, updated watershed tables, analyses etc. including use designation survey.

1. Data is attached to this form.
- 2.
- 3.
- 4.

Big Green Lake Metalimnion - Dissolved Oxygen Impairment

The cause of this impairment is likely from excessive algae and other organics settling out just below the thermocline (higher density water). High amounts of algae are a direct result of excessive total phosphorus levels.

The left profiles (2012) can be reproduced for many years. It is recommended that the impairment category be 5C instead of 5P.

Has the dissolved oxygen concentrations in the lake changed?

