

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: NOR_04_CMP09 ATTAINS
Name: Chetek Chain of Lakes and Chetek subwatershed LC08- Diurnal D.O., pH, and Toxic Blue-green Algae assessment NOR_
Type: TMDL/303d Projects
Subtype: Refine Load Estimates
Status: FINAL_RPT
Start Date: 07/01/2008
End Date: 06/30/2009
Purpose: Jim Cahow will collect water chemistry samples from all five lakes on the Chetek Chain and the Chetek River in late July and early August to assess toxic blue-green algae presence and abundance.

Objective: Diurnal D.O. and pH will also be monitored in the Chetek River at the same time period using YSI data sonds to assess surface water quality standard violations resulting in clear use impairments to the Chetek River which are the result of outflowing water from the Chetek Chain of Lakes.
 Assess whether or not the Algae blooms on the Chetek Chain of Lakes in late July and early August contain dangerous species of Blue-green algae and if they are present do they produce dangerous enough levels of Blue-green algae toxins such as Microcystin to produce a clear risk to public safety resulting in a dangerous use impairment for swimming and other full body contact recreational activities.

The hypereutrophic conditions on the entire Chetek Chain of Lakes and Chetek River drive excess algae and macrophyte production which pose a serious threat to the recreationally important fishery with elevated pH's and diurnally suppressed D.O. levels which violate surface water standards meriting continued listing on the impaired waters list or 303d list. These surface water quality standard violations are a good indicator of potential future large-scale fish kills.

Comments: This study seeks to document the frequency and severity of Toxic Blue-green algae blooms and diurnal D.O. and pH standard violations assessing status of continued listing on impaired waters list or 303d list.
 Project Category 3: Continuation of FY2007 Special Projects

Outcome: Closed out by Helmuth - 6/09 - data sent in by Joe Cunningham - attached to project. Algae & ChlA Samples will be collected on all five lakes: Prairie Lake, Mud Lake, Pokegama Lake, Chetek Lake, and Tenmile Lake. Samples will also be collected on the Chetek River.

Diurnal D.O. and pH will be monitored using YSI 6000 & YSI 600 xlm data sonds on the Chetek River at 4 1/2 Ave for a 3-4 week period in late July and August.

Lake samples will be collected on 2-3 separate weekly sampling events in late July and early August dependent upon bloom severity

Water chemistry data will be entered into SWIMS by the State Lab of Hygiene as analysis is completed. Sond data will be downloaded into the continuous monitoring database by LTE Nov08 to Feb09.

A status report will be written by Feb 09 recommending additional monitoring needs, continued 303d listing if appropriate, and any future TMDL actions needed.

Study Design:

QA Measures:

People

| Name | Role | Status | Start Date | End Date | Organization | Comments |
|----------------------|-------------|----------|------------|------------|---------------|----------|
| CAHOW, JAMES M | COORDINATOR | INACTIVE | 07/01/2008 | 06/30/2009 | Wisconsin DNR | |
| CUNNINGHAM, JOSEPH L | COORDINATOR | COMPLETE | 11/06/2008 | | Wisconsin DNR | |

Project Statuses

| Date | Reported By | Status | Comments |
|------------|-------------------|----------------------------|---|
| 03/25/2008 | JAMES CAHOW | Proposed | at your discretion |
| 06/01/2012 | JOSEPH CUNNINGHAM | Progress: 75-100% Complete | Jim Cahow is currently writing the final report. Due to Jim's health, I do not know when the report will be complete. |
| 08/06/2012 | JOSEPH CUNNINGHAM | Progress: 75-100% Complete | Jim Cahow is currently working limited duty and limited hours and will have the final report completed when he is back to full time |

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| Date | Reported By | Status | Comments |
|------|-------------|--------|--|
| | | | duty. Tentative completion date of 12/31/12. |

Actions

| Action | Detailed Description | Start | End Date | Status |
|-----------------------------------|--|------------|------------|----------|
| Monitor Water Quality or Sediment | Jim Cahow will collect water chemistry samples from all five lakes on the Chetek Chain and the Chetek River in late July and early August to assess toxic blue-green algae presence and abundance. Diurnal D.O. and pH will also be monitored in the Chetek River at the same time period using YSI data sonds to assess surface water quality standard violations resulting in clear use impairments to the Chetek River which are the result of outflowing water from the Chetek Chain of Lakes. | 07/01/2008 | 06/30/2009 | COMPLETE |

| Details: | Parameter | Value/Amount | Units | Comments |
|----------|------------------------|--------------|-------|----------|
| | Temperature | | | |
| | Total Nitrogen | | | |
| | Total Phosphorus | | | |
| | Total Suspended Solids | | | |

Monitoring Stations

| Station ID | Name | Comments |
|------------|---|----------|
| 483096 | St. Croix River - Kinnickinnic State Park Beach | |

Assessment Units

| WBIC | Segment | Local Name | Official Name |
|---------|---------|-----------------------------------|------------------|
| 2601500 | 1 | St. Croix Lake | Lake Saint Croix |
| 2601500 | 2 | Kinnickinnic SP, Lake Saint Croix | Lake Saint Croix |

Lab Account Codes

| Account Code | Description | Start Date | End Date |
|--------------|--------------------------------|------------|------------|
| WT098 | WATER QUALITY SPECIAL PROJECTS | 07/01/2008 | 06/30/2009 |

Forms

| Form Code | Form Name |
|-----------|-----------|
|-----------|-----------|

Methods

| Method Code | Description |
|-------------|-------------|
|-------------|-------------|

Fieldwork Events

| Start Date | Status | Field ID | Station ID | Station Name |
|------------------|----------|----------|------------|---|
| 08/11/2008 15:57 | COMPLETE | | 483096 | St. Croix River - Kinnickinnic State Park Beach |

Documents

| Title | Description | Author | Published | Comments |
|--|-------------|-----------------|------------|--|
| CHETEK CHAIN SPECIAL PROJECT, 2008 NOR4_09 | | Cunningham, Joe | 06/03/2009 | Dataset was not updated to swims need to do that still |

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| Title | Description | Author | Published | Comments |
|--|------------------------------|----------------|------------|----------|
| Chetek Chain of Lakes and Chetek subwatershed LC08-Diurnal D.O., pH, and Toxic Blue-green Algae assessment | | Cahow, James | 04/11/2011 | |
| MONITORING BUDGET PROPOSAL NOR4_09 | Use this template for budget | Project Author | 01/15/2008 | |
| | | Cahow, Jim | 03/25/2008 | |

Budget

Combined Budgets:

Combined SLOH:

Combined Total:

Funding

| Organization | Source | Type | Amount | Start Date | End Date |
|--------------|--------|------|--------|------------|----------|
|--------------|--------|------|--------|------------|----------|