

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: Mead_Lake_TMDL
Name: Mead Lake TMDL
Type: TMDL/303d Projects
Subtype: Implement TMDL
Status: ACTIVE
Start Date: 07/01/2006
End Date: 06/30/2007
Purpose: Mead Lake is a shallow, eutrophic impoundment of the South Fork Eau Claire River (Hydrologic Unit Code 07050006, Wisconsin Waterbody Identification Code 2137000). The Mead Lake watershed drains 248 km² (61,282 acres) of west central Wisconsin. Approximately 99 percent of the watershed is within Clark County, with the remaining one percent in Taylor County. The South Fork Eau Claire River is the primary source of surface water inflow to Mead Lake. The lake was placed on the Wisconsin 303(d) impaired waters list in 1998 due to sediment and phosphorus. In 2008, the 303(d) list was updated to reflect that the pollutants of sediment and phosphorus are leading to impairments of degraded habitat, pH criteria exceedances, and excess algal growth in summer which result in limited body contact recreational use. The goal of this TMDL is to reduce phosphorus and sediment loadings to Mead Lake to address, pH criteria exceedances, decrease algal blooms in summer, and address degraded habitat so Mead Lake can be improved for recreational purposes.

Objective: Mead Lake is highly eutrophic and exhibits excessive concentrations of phosphorus and chlorophyll (a measure of algal densities) in its surface waters during the summer months (USACE 2005). Sediment and phosphorus enters the lake via the South Fork Eau Claire River, from nonpoint sources of pollution. Phosphorus is bound to the sediment particles, and once in the system, sediment has the capacity to transfer phosphorus to the lake bottom. The lake's shallow depth, phosphorus-laden sediments and excessive water column phosphorus levels, cause the lake to experience severe algal blooms during the "growing" season (May-October). These eutrophic conditions have significantly impaired body contact recreational activities.

In addition, algal blooms in Mead Lake are often accompanied by exceedances of the Wisconsin water quality criterion for pH. The elevated lake pH levels are due to removal of carbon dioxide from water during photosynthesis (by algae). The reduction in carbon dioxide levels during daylight causes an increase in pH. A reduction in sediment loading would reduce phosphorus levels and the corresponding reduction in phosphorus levels would result in a decrease in chlorophyll levels (a measure of productivity) and a reduction in maximum pH levels.

Comments:
Outcome:
Study Design:
QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
HAZUGA, MARK J	COORDINATOR	COMPLETE	07/01/2006	06/30/2007	Wisconsin DNR	
SCHREIBER, KENNETH W	COORDINATOR	ACTIVE	11/18/2006			
Sorge, Patrick W	COORDINATOR	ACTIVE	07/01/2006	06/30/2007	Wisconsin DNR	

Project Statuses

Date	Reported By	Status	Comments
07/15/2014	Lisa Helmuth	Progress: 75-100% Complete	TMDL is approved but not yet implemented.

Actions

Action	Detailed Description	Start	End Date	Status
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Action	Detailed Description	Start	End Date	Status
TMDL Development	TMDL Development for Mead Lake in Clark County, WI. Mead Lake is highly eutrophic and exhibits excessive concentrations of phosphorus and chlorophyll (a measure of algal densities) in its surface waters during the summer months (USACE 2005). Sediment and phosphorus enters the lake via the South Fork Eau Claire River, from nonpoint sources of pollution.	07/01/2006	06/30/2007	COMPLETE
ATTAINS TMDL	TMDL Development for Mead Lake in Clark County, WI. Mead Lake is highly eutrophic and exhibits excessive concentrations of phosphorus and chlorophyll (a measure of algal densities) in its surface waters during the summer months (USACE 2005). Sediment and phosphorus enters the lake via the South Fork Eau Claire River, from nonpoint sources of pollution.	07/01/2007	12/31/2099	IN_PROGRESS
Details:	Parameter	Value/Amount	Units	Comments
	Total Phosphorus		Y/N	The South Fork Eau Claire River is the primary source of surface water inflow to Mead Lake. The lake was placed on the Wisconsin 303(d) impaired waters list in 1998 due to sediment and phosphorus.
	Total Suspended Solids		Y/N	The South Fork Eau Claire River is the primary source of surface water inflow to Mead Lake. The lake was placed on the Wisconsin 303(d) impaired waters list in 1998 due to sediment and phosphorus.
TMDL Implementation	TMDL Implementation for Mead Lake in Clark County, WI. The South Fork Eau Claire River is the primary source of surface water inflow to Mead Lake. The lake was placed on the Wisconsin 303(d) impaired waters list in 1998 due to sediment and phosphorus. In 2008, the 303(d) list was updated to reflect that the pollutants of sediment and phosphorus are leading to impairments of degraded habitat, pH criteria exceedances, and excess algal growth in summer which result in limited body contact recreational use. The goal of this TMDL is to reduce phosphorus and sediment loadings to Mead Lake to address, pH criteria exceedances, decrease algal blooms in summer, and address degraded habitat so Mead Lake can be improved for recreational purposes.	10/02/2008		IN_PROGRESS

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Action	Detailed Description	Start	End Date	Status
TMDL (USEPA) Approved	TMDL Development for Mead Lake in Clark County, WI. The South Fork Eau Claire River is the primary source of surface water inflow to Mead Lake. The lake was placed on the Wisconsin 303(d) impaired waters list in 1998 due to sediment and phosphorus. In 2008, the 303(d) list was updated to reflect that the pollutants of sediment and phosphorus are leading to impairments of degraded habitat, pH criteria exceedances, and excess algal growth in summer which result in limited body contact recreational use. The goal of this TMDL is to reduce phosphorus and sediment loadings to Mead Lake to address, pH criteria exceedances, decrease algal blooms in summer, and address degraded habitat so Mead Lake can be improved for recreational purposes.	10/02/2008	10/02/2008	COMPLETE

Monitoring Stations

Station ID	Name	Comments
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Assessment Units

WBIC	Segment	Local Name	Official Name
2143900	1	Mead Lake	Mead Lake

Lab Account Codes

Account Code	Description	Start Date	End Date
WT086	TMDL MONITORING	10/01/2006	09/30/2007

Forms

Form Code	Form Name
CONTINUOUS	Continuous Data Upload
INORGANIC	Inorganic Lab - Field Data

Methods

Method Code	Description
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Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
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Documents

Title	Description	Author	Published	Comments
2143900_Microsoft Word - Mead Lake Final Decision Document		WDNR WES	10/02/2008	
Lake Mead	Lake Mead		07/15/2014	
MEAD LAKE SANITARY SURVEY Mead Lake	Lakes Planning Report	Grant Recipient	12/30/1998	
		Diane Glodoski	02/08/2012	

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Title	Description	Author	Published	Comments
Mead Lake		Diane Glodoski	02/08/2012	
Mead Lake		Diane Glodoski	02/08/2012	
Mead Lake 2143900 Approved TMDL Table	Table 1 from the USEPA Decision Document for the Approval of the Mead Lake TMDL 2143900	WDNR WES		
Mead Lake 2143900 Impaired Waters Listing Documentation 2002	Data Documentation Mead Lake Impaired Waters Delisting Documentation, Clark County	Oldenburg, Pat	03/25/2002	
Mead Lake Phosphorus and Sediment TMDL	Final TMDL Report	WDNR WES	09/25/2008	
USEPA Decision Document for the Approval of the Mead Lake TMDL 2143900	The approval letter and decision document written by the EPA	USEPA	10/02/2008	

Budget

Combined Budgets:

Combined SLOH:

Combined Total:

Funding

Organization	Source	Type	Amount	Start Date	End Date
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