

10. Implementation Plans

This section contains the implementation plans for each of the six organizations involved in management issues for Crooked Lake.

10.1 Anoka Conservation District (ACD)

The Anoka Conservation District will be involved with the following issues:

- Invasive Species
- Muck
- Nonpoint Source Pollution
- Water Clarity
- Water Levels

Goals

The Anoka Conservation District will pursue the following goals:

1. Identify strategies to restore or enhance lakeshore habitat
2. To reduce siltation to, and the pollution of Crooked Lake
3. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil and Curly leaf pondweed
4. Increase abundance of native submersed aquatic plants
5. Assist in the development of a 3-D map of lake substrate

Role	Activity	2009	2010	2011	2012	2013
Lead	Water Quality Monitoring	X	X		X	X
Tech Assist	Annual Plant Survey		X	X	X	X
<i>Tech Assist</i>	<i>Annual Plant Survey Map</i>		X	X	X	X
Tech Assist	Buffer Strips	X	X	X	X	X
Tech Assist	Curb Cut Rain Gardens	X	X	X		
Tech Assist	Ground Water Monitoring	X	X	X	X	X
Tech Assist	Lake Level Monitoring	X	X	X	X	X
Tech Assist	Plant Restoration	X	X	X	X	X

10.2 Crooked Lake Area Association

The Crooked Lake Area Association will be involved with the following issues:

- Invasive Species
- Muck
- Nonpoint Source Pollution
- Trash

Goals

The Crooked Lake Area Association will pursue the following goals:

1. Assist in developing a 3-D map of lake substrate
2. Identify strategies to restore or enhance lakeshore habitat
3. Increase abundance of native submersed aquatic plants
4. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil and curly leaf pondweed
5. Reduce siltation to and the pollution of Crooked Lake
6. Keep Crooked Lake Clean

Role	Activity	2009	2010	2011	2012	2013	
Finance	Plant Restoration	X	X	X	X	X	
Lead	Buffer Strips	X	X	X	X	X	
Lead	Lake Core Samples	X	X	X	X	X	
Lead	Annual Chemical Treatment	X	X				
Lead	Boat Inspection	X	X	X	X	X	
Lead	Stenciling Catch Basins	X					
Lead	Apply For Treatment of 20% of Littoral Zone			X	X	X	
Lead	Dredge Boat Channel				X		
Assist	Enforcement blitz/campaign	X	X				
Assist	Increased frequency of garbage pick up	X	X	X			
Costs							
Activity	Unit Cost	2009	2010	2011	2012	2013	Total
Plant Restoration		1,500	1,000	5,000	7,500	10,000	25,000

10.3 Coon Creek Watershed District

The Coon Creek Watershed District will be involved with the following issues:

- Stormwater Management/ Nonpoint Source Pollution
- Muck
- Water Levels
- Water Clarity/Water Quality

Goals

The Coon Creek Watershed District will pursue the following goals:

1. Identify strategies to restore or enhance lakeshore habitat
2. To reduce siltation to, and the pollution of Crooked Lake
3. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil and Curly leaf pondweed
4. Increase abundance of native submersed aquatic plants
5. Assist in the development of a 3-D map of lake substrate

Roles

Role	Activity	2009	2010	2011	2012	2013
Financial Assist	Curb Cut Rain Gardens	X	X	X		
Finance	Lake Water Quality Monitoring	X	X		X	X
Finance	Lake Core Samples	X	X	X	X	X
Finance	Stenciling Catch Basins	X				
Finance & Lead	Dam Inspection	X				
Finance & Lead	Ground Water Monitoring	X	X	X	X	X
Finance & Lead	Lake Level Monitoring	X	X	X	X	X
Tech Assist	Plant Restoration	X	X	X	X	X
Tech Assist	Pond Inspection	X				

10.3 Coon Creek Watershed District

Costs							
Activity	Unit Cost	2009	2010	2011	2012	2013	Total
Curb Cut Rain Gardens	\$5,000	5,000	5,000	5,000			15,000
Lake Water Quality Monitoring	\$587	587	605		641	660	2,493
Lake Core Samples							-
Stenciling Catch Basins	\$400	400					400
Dam Inspection	\$250	250					250
Ground Water Monitoring	\$525	1,575	1,575	1,575	1,575	1,575	7,875
Lake Level Monitoring	\$120	120	124	127	131	135	637
Plant Restoration	\$10,000	10,000	10,000	10,000	10,000	10,000	50,000
Pond Inspection	\$500	500					500
		18,432	17,303	16,702	12,347	12,370	77,155

10.4 City of Andover

The City of Andover will be involved with the following issues:

- Invasive Species (Eurasian water milfoil & curly leaf pondweed)
- Trash
- Water Clarity/Water Quality
- Nonpoint Source Pollution/Stormwater Management

Goals

The City of Andover will pursue the following goals:

1. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil (EWM) and curly leaf pondweed
2. Keep Crooked Lake Clean
3. To reduce siltation to and the pollution of Crooked Lake

Roles

Role	Activity	Unit Cost	2009	2010	2011	2012	2013
Finance	Annual Chemical Treatment	\$4,500	X	X			
Finance	Apply For Treatment of 20% of Littoral Zone	\$6,365			X	X	X
Finance & Lead	Curb Cut Rain Gardens	\$5,000	X	X	X		
Finance & Lead	Dredge Boat Channel	\$7,500				X	
Finance & Lead	Enforcement blitz/campaign	?	X	X			
Finance & Lead	Increased frequency of garbage pick up	?	X	X	X		
Finance & Lead	Install garbage cans and signage						
Finance & Lead	Pond Inspection	\$500	X				
Finance & Lead	O&M-Meadow Creek Pond	?					

10.4 City of Andover

Costs

Activity	Unit Cost	2009	2010	2011	2012	2013	Total
Annual Chemical Treatment	\$4,500	2,318	2,387				4,705
Apply For Treatment of 20% of Littoral Zone	\$6,365			6,365	6,556	6,753	19,674
Curb Cut Rain Gardens	\$5,000	5,000	5,000	5,000			15,000
Dredge Boat Channel	\$7,500				10,000		10,000
Enforcement blitz/campaign	?	5,000	5,000				10,000
Increased frequency of garbage pick up	?	1,500	1,500	1,000			4,000
Install garbage cans and signage		200					200
O&M Meadow Creek Pond	?						-
Pond Inspection	\$500	500					500
Total		16,835	16,274	12,365	16,556	6,753	68,783

Summary

Plan Assumes that the city of Andover will:

1. Continue to contribute money to the annual treatment of EWM in the lake, including a proposed increase to 20% of the lake in 2011
2. Will fund a "Blitz" campaign of enforcement and garbage pick up in 2009, 2010, & 2011
3. Inspect Meadow Creek Pond & the Aqueduct & Maintain to specs (NURP Stds.)
4. Pursue neighborhood rain garden effort in NW portion of the lake (Demonstration project)
5. Dredge the boat channel from the public access to the lake

10.5 City of Coon Rapids

The City of Coon Rapids will be involved with the following issues:

- Invasive Species (Eurasian water milfoil & curly leaf pondweed)
- Trash
- Nonpoint Source Pollution/Stormwater Management

Goals

The City of Andover will pursue the following goals:

1. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil (EWM) and curly leaf pondweed
2. Keep Crooked Lake Clean
3. To reduce siltation to and the pollution of Crooked Lake

Roles

Role	Activity	Unit Cost	2009	2010	2011	2012	2013
Finance	Annual Chemical Treatment	\$4,500	X	X			
Finance	Apply For Treatment of 20% of Littoral Zone	\$6,365			X	X	X
Finance & Lead	Enforcement blitz/campaign	?	X	X			
Finance & Lead	Increased frequency of garbage pick up	?	X	X	X		
Finance & Lead	Install garbage cans and signage						

10.5 City of Coon Rapids

Costs

Activity	Unit Cost	2009	2010	2011	2012	2013	Total
Annual Chemical Treatment	\$4,500	2,318	2,387				4,705
Apply For Treatment of 20% of Littoral Zone	\$6,365			6,365	6,556	6,753	19,674
Enforcement blitz/campaign	?	5,000	5,000				10,000
Increased frequency of garbage pick up	?	1,500	1,500	1,000			4,000
Install garbage cans and signage		200					200

Summary

Plan Assumes that the city of Coon Rapids will:

1. Continue to contribute money to the annual treatment of EWM in the lake, including a proposed increase to 20% of the lake in 2011
2. Will fund a “Blitz” campaign of enforcement and garbage pick up in 2009, 2010, & 2011

10.6 Minnesota Department of Natural Resources

The Minnesota Department of Natural Resources (MDNR) will be involved with the following issues:

- Invasive Species
- Muck
- Water Levels

Goals

The DNR will pursue the following goals:

1. Reduce interference with recreational use of Crooked Lake caused by Eurasian water milfoil (EWM) and curly leaf pondweed
2. Increase abundance of native submersed aquatic plants
3. Oversee the merit of potential removal of muck or sedimentation from the lake

Roles

Role	Activity	Unit Cost	2009	2010	2011	2012	2013
Finance	Plant Restoration	\$10,000	10,000	10,000	10,000	10,000	10,000
Finance & Lead	Annual Plant Survey	\$ 8,000		8,000	8,240	8,487	8,742
Regulatory Oversight	Annual Chemical Treatment	\$4,500	4,635	4,774			
Regulatory Oversight	Apply For Treatment of 20% of Littoral Zone	\$6,365			6,365	6,556	6,753
Regulatory Oversight	Dredge Boat Channel	\$7,500				10,000	
Tech Assist	Dam Inspection	\$ 250	250				
Tech Assist	Boat Inspection	-					