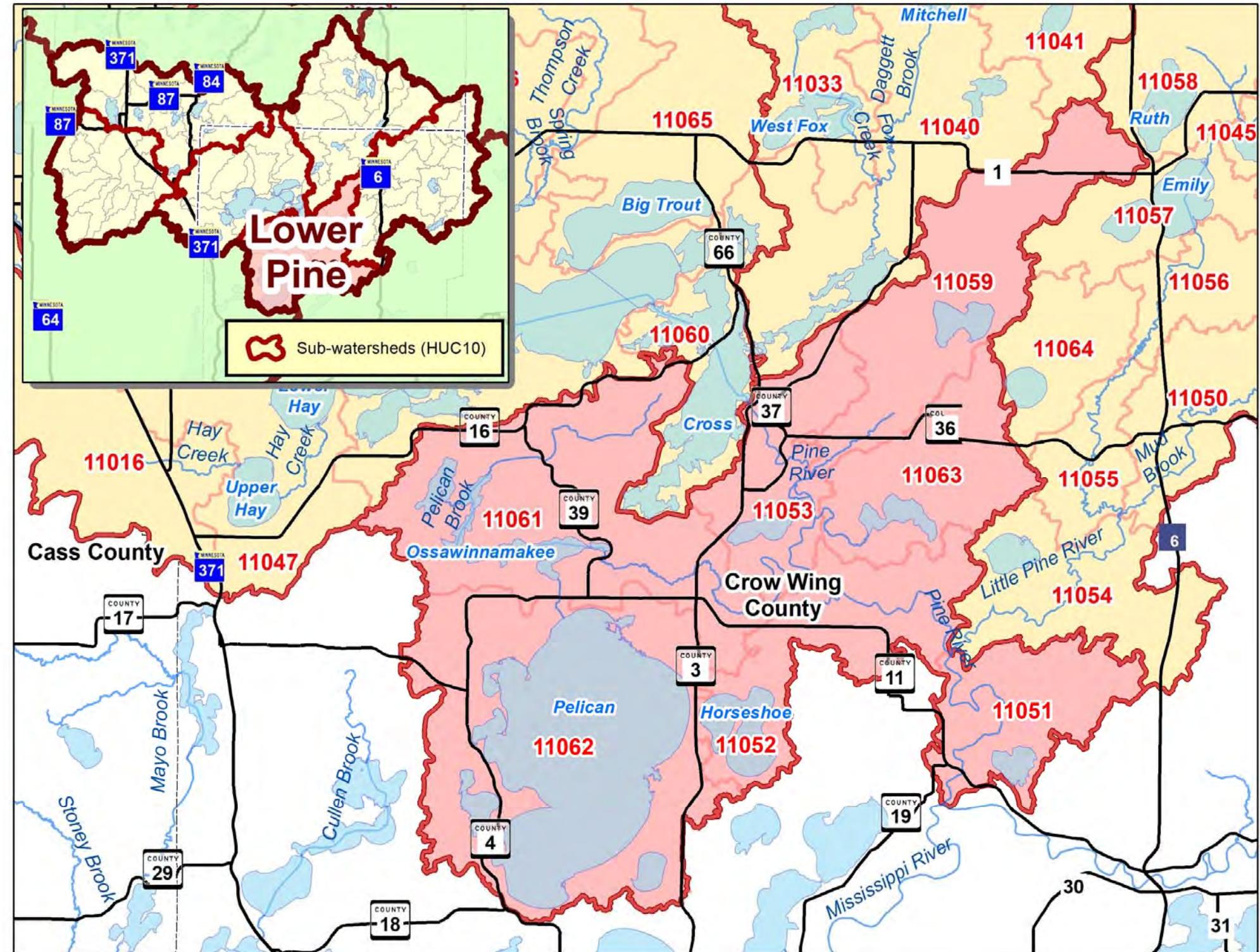


Lower Pine River Sub-watershed

Minor Watershed #	Minor Watershed Name
11051	Pine River / Fool Lake
11052	Pine River / Horseshoe Lake
11053	Pine River / Big Pine Lake
11059	Goodrich / O'Brien Lakes
11061	Lake Ossawinnamakee
11062	Pelican Lake
11063	Greer Lake



Basics			Risk / Disturbed					Outstanding Surface Water Resources	Protection					Forests / Biodiversity / Potential Native Plant Community System							
Minor #	Acres	Sq Miles	Risk Factors	Lake Phosphorus Sensitivity	Average % Slope	% Altered Water-courses	% Land Disturbance		DNR Lake Protection Classification*	% Protected	Land Value / Ac (20+ ac parcels)	Acres Needed for 75%	Potential to Protect (ac)	% Forest Cover	% Forest Stewardship Plans	FFF Composite Mean Score	Terrestrial Biodiversity	% Fire Dependent (FD)	% Mesic Hardwood (MH)	% Wet Meadow (WM)	% Other Systems
11051	4,919	8		High	10.9%	0.0%	14%	Lakes of Biodiversity Significance	Protection	66%	\$1,302	460	1365	52%	8%	73.9	Moderate	22%	44%	8%	21%
11052	6,562	10		Highest	7.1%	0.0%	15%		Protection / Vigilance	78%	\$1,323	Goal Met	1499	42%	4%	76.9	Moderate	60%	12%	9%	4%
11053	5,025	8		High	8.6%	0.0%	20%	Lakes of Biodiversity Significance, Wild Rice	Protection	49%	\$991	1330	866	42%	2%	88.9	Moderate	52%	26%	9%	2%
11059	8,354	13		Higher	8.1%	0.0%	9%	Lakes of Biodiversity Significance, Wild Rice	Protection	54%	\$1,470	1756	2333	51%	16%	89.0	Moderate	46%	27%	9%	4%
11061	12,893	20		Higher and Highest	12.9%	3.2%	13%	Cisco, Lakes of Biodiversity Significance, Trout, Wild Rice	Protection	34%	\$1,556	5298	3780	50%	13%	91.9	Moderate	44%	31%	7%	2%
11062	17,816	28	Feedlots (1)	Higher and Highest	6.0%	68.2%	12%	Lakes of Biodiversity Significance, Wild Rice, Cisco	Protection	63%	\$1,138	2169	1867	22%	7%	86.1	High	29%	14%	3%	1%
11063	5,518	9	Feedlots (1)	Higher	7.5%	0.0%	10%	Lakes of Biodiversity Significance, Wild Rice	Protection / Vigilance	63%	\$1,226	662	1378	46%	9%	87.2	Moderate	53%	10%	10%	10%

Sub-watershed (HUC10): Lower Pine

Geomorphology: Outwash + some moraine till
Primary Land Cover: Mixed Conifer and Mesic-Hardwood Forest
Primary Land Uses: Water-based Tourism, Hunting/Recreation, Forestry
Lake or Stream Based: Lake
Quality: Numerous small to mid-size high quality lakes
Risks: Residential Development
Management Mode(s): Opportunism/Active
Acres Needed for Goal: 11,675 acres
Cost to Achieve Goal: \$11,669,133 **Cost/minor watershed =** \$1,667,019

Minor Watershed Summary			Resource Context / Management Goals								Managing for: High Quality Resources							Managing for: Risk					Managing by: Implementation Focus / Applicable Tool												
Minor Watershed #	Minor Watershed Name	Minor Wshd Acres	Lake or Stream Based	Protection Goal	% Protected	Acres Needed for 75%	Potential To Protect (ac)	Cost	Protection Framework (DNR)		Mgmt Mode	Forest Type (FD/MH)	Forests	Lakes	Streams/ Source-water	Ground-water	Fish Habitat	Wildlife Habitat	Other High Quality Habitat	Avg. RAQ Score	Private Lands: Large Tract	Private Lands: Shoreline (small tract)	Open Land Issues: Grazing, Hay/Pasture	Open Land Issues: Row Crops	Aquatic Threats (Phosphorus, Declining WQ Trend, Impaired)	Other Risk (Noted Below):	Forest Stewardship Plans, Advice	Grants and Cost-share Projects: Near-shore	Grants and Cost-share Projects: Watershed	Private Forest Management	Conveyance Systems	Land Swaps / Trust Land Mgmt (Public Lands)	Incentive Programs (SFIA, 2C, CRP)	Conservation Easements	Fee Title Acquisition
11051	Pine River / Fool Lake	4,919	Lake/ Stream	75%	66%	460	1365	\$450,233	Protection		Active	MH			X	X	?	X	?	High Biodiversity	3.3	X					X	X	X	X	?	X	X	Local Decision	
11052	Pine River / Horseshoe Lake	6,562	Lake/ Stream	75%	78%	Goal Met	1499	\$0	Protection	Vigilance	Opportunism	FD			X	X	X	X	?	?	3.1		X			X	X	X	X	X	X				
11053	Pine River / Big Pine Lake	5,025	Lake/ Stream	75%	49%	1330	866	\$1,177,160	Protection		Active	FD/MH			X	X	X	X	X	High Biodiversity	3.85	X	X				X	X	X	X	X	X	X	Local Decision	
11059	Goodrich / O'Brien Lakes	8,354	Lake	75%	54%	1756	2333	\$1,806,588	Protection		Active: Near-Shore Priority	FD/MH			X	X	X	X	X	High Biodiversity	3.85	X	X			X	X	X	X	X	X	X	Local Decision		
11061	Lake Ossawinnamakee	12,893	Lake/ Stream	75%	34%	5298	3780	\$5,586,940	Protection		Active: Large-Tract PFM Priority	FD/MH			X	X	X	X	X	High Biodiversity	3.25	X	X			X	X	X	X	X	X	X	Local Decision		
11062	Pelican Lake	17,816	Lake	75%	63%	2169	1867	\$2,015,913	Protection		Active: Fisheries Priority	FD		X	X		X	X	X	High Biodiversity	3.65	X	X			X	X	X	X	X	X	X	Local Decision		
11063	Greer Lake	5,518	Lake	75%	63%	662	1378	\$632,299	Protection	Vigilance	Opportunism	FD		X	X	X	X	X	High Biodiversity	3.85	X	X			X	X	X	X	X	X	X	Local Decision			

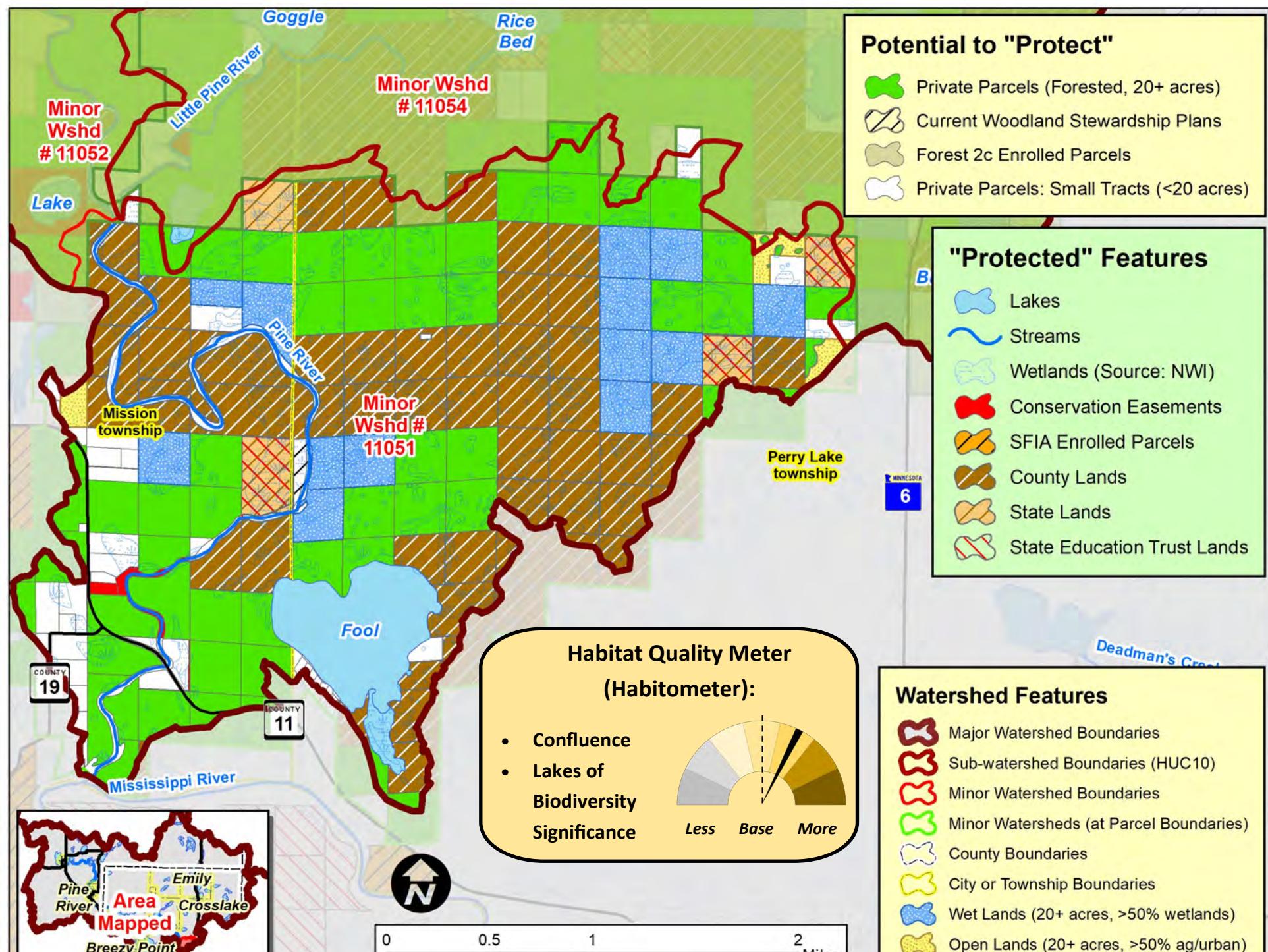
Above is checked if FFF score
 MH = is >94.7 X = if there is
 Mesic (mean for X = if a discernable X =
 Hardwoo Pine R. outstanding outlet to the wellhead
 ds, FD = Watershed watershed protection
 Fire d) or biological, that would X = trout,
 Depende High/Outs wild rice, contribute X = cisco/tulib
 nt, WM tanding cisco, surface
 = Wet Biodiversi trout, etc. water
 Meadow ty downstream
 (MCBS)/Old Growth or HCVF

Score = Average
 Composite of Riparian, Adjacency, Quality
 across the wshd

X = 'Higher' or 'Highest'
 Phos. Sensitivity Score OR Declining trend in water quality
 X = High land use disturbance (>25%) or known grazing/cattle concerns

B = Beaver Issues, C = Downcutting by Culverts, CH = channelization

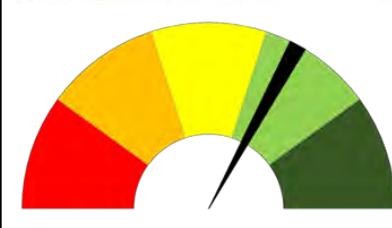
What is the Potential to Protect the Pine River / Fool L. Minor Watershed (Minor 11051)?



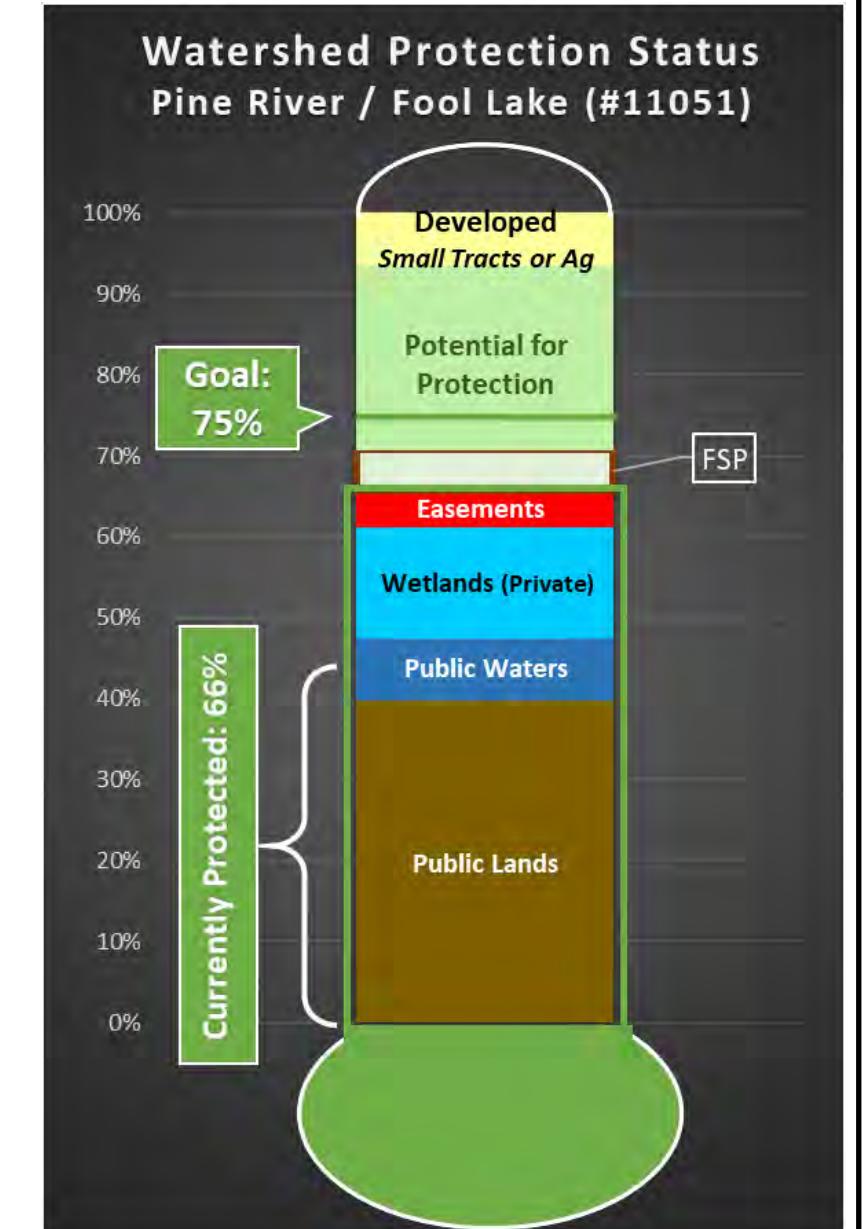
Water Quality Trends / Impairments:

Improving: Fool Lake

Impairments: None



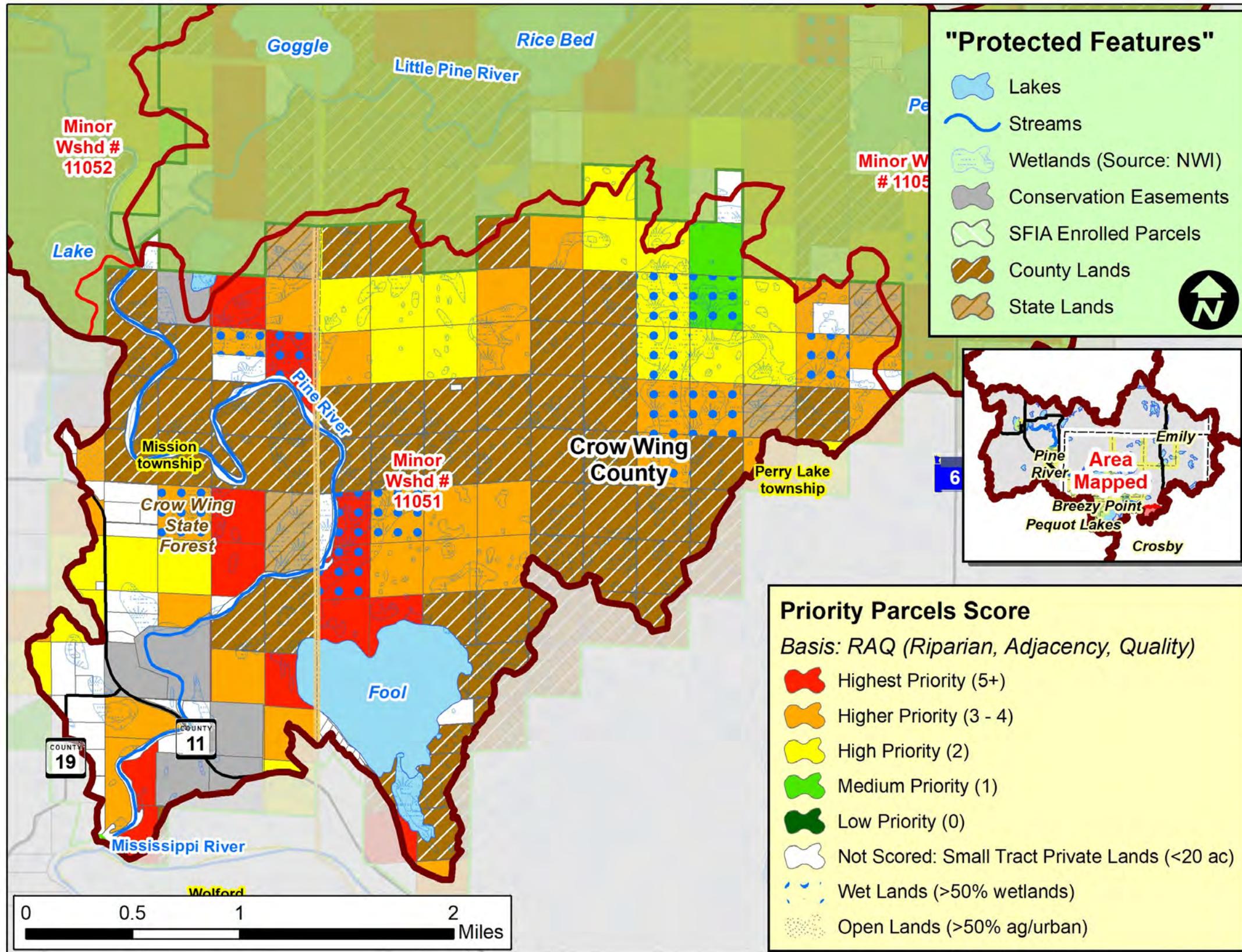
Watershed Protection Status Pine River / Fool Lake (#11051)



Implementation Toolbox



RAQ Scoring for Parcels in the Pine R. / Fool Lake Minor Watershed (Minor #11051)



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

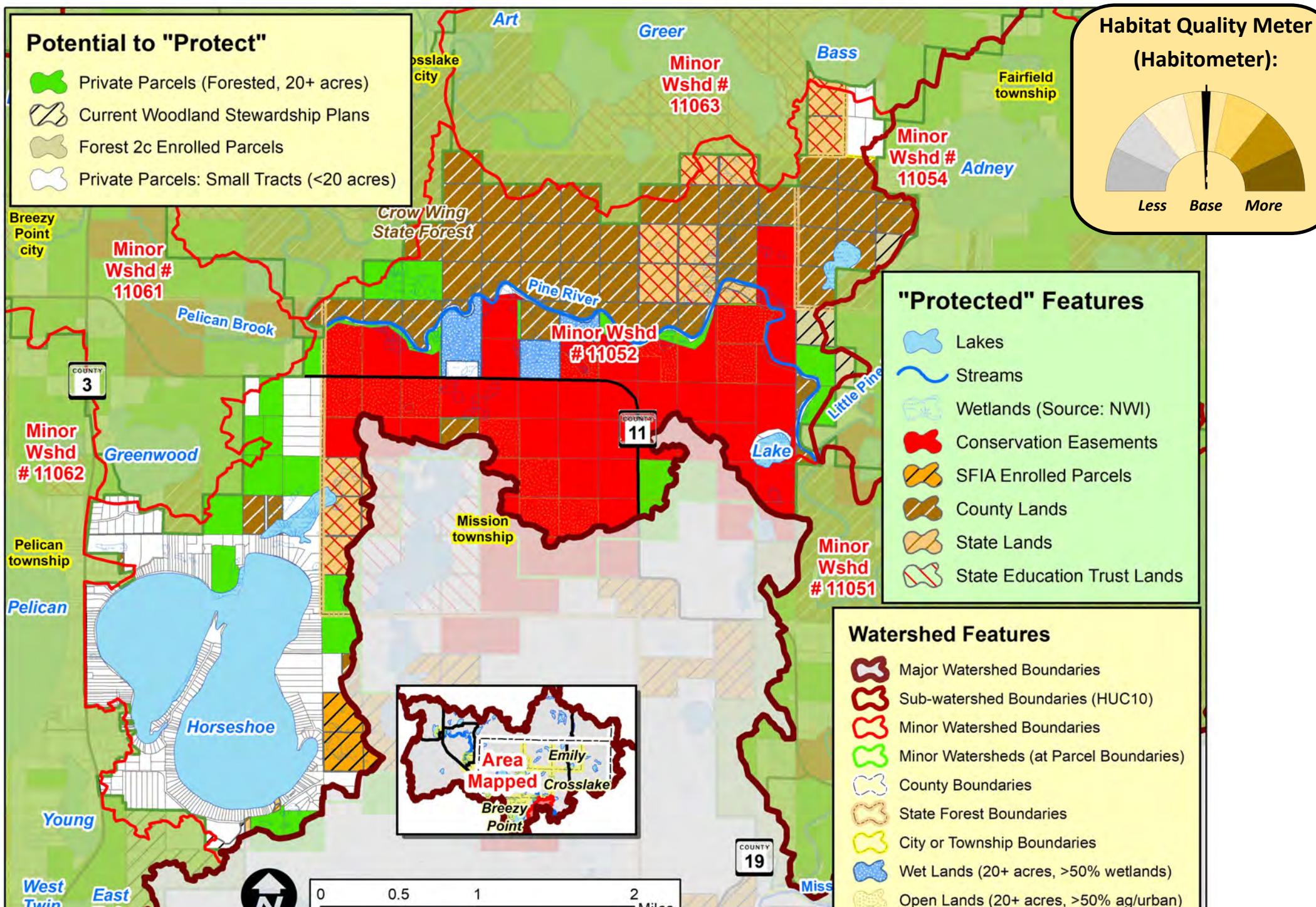
- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

Implementation Toolbox

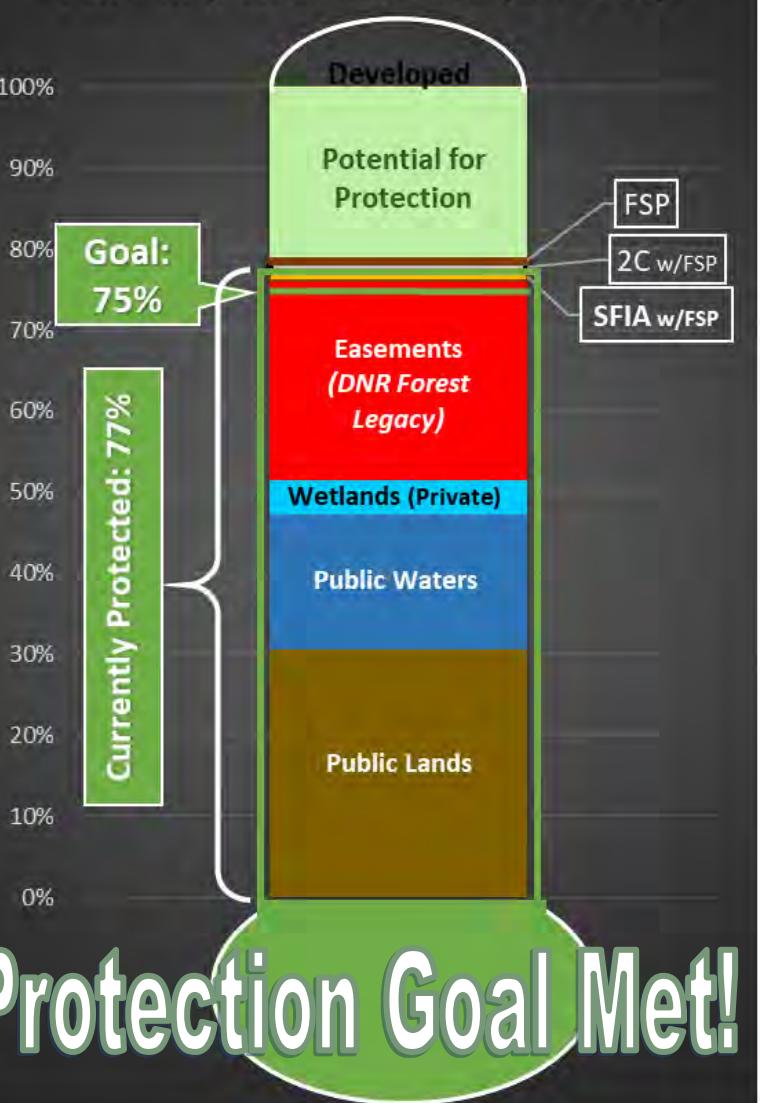
Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance • Factsheets • Poster / Mailers • Workshops • Website / Social Media	Specific Advice & Assistance • Site Visits • Plans: - Landscape - Timber Stand - Forest - Stewardship - Projects	Grants & Cost-share Projects Forest Management • Tree Planting • Bud Capping • Timber Sales • High Priority Areas - Forest - Habitat Fund	Incentive Programs to Enroll Land Local Land Use • Riparian Buffers • 2C Forest • CRP • Voluntary - Site Level - Guidelines • Zoning & Official - Controls
• Site Visits • Plans: - Landscape - Timber Stand - Forest - Stewardship - Projects	Forest Management • Tree Planting • Bud Capping • Timber Sales • High Priority Areas - Forest - Habitat Fund	Local Land Use • Riparian Buffers • 2C Forest • CRP • Voluntary - Site Level - Guidelines • Zoning & Official - Controls	Incentive Programs to Enroll Land Local Land Use • Riparian Buffers • 2C Forest • CRP • Voluntary - Site Level - Guidelines • Zoning & Official - Controls

← Lower Costs, Less Permanent → Higher Costs, More Permanent

What is the Potential to Protect the Pine R. / Horseshoe L. Minor Watershed (Minor 11052)?



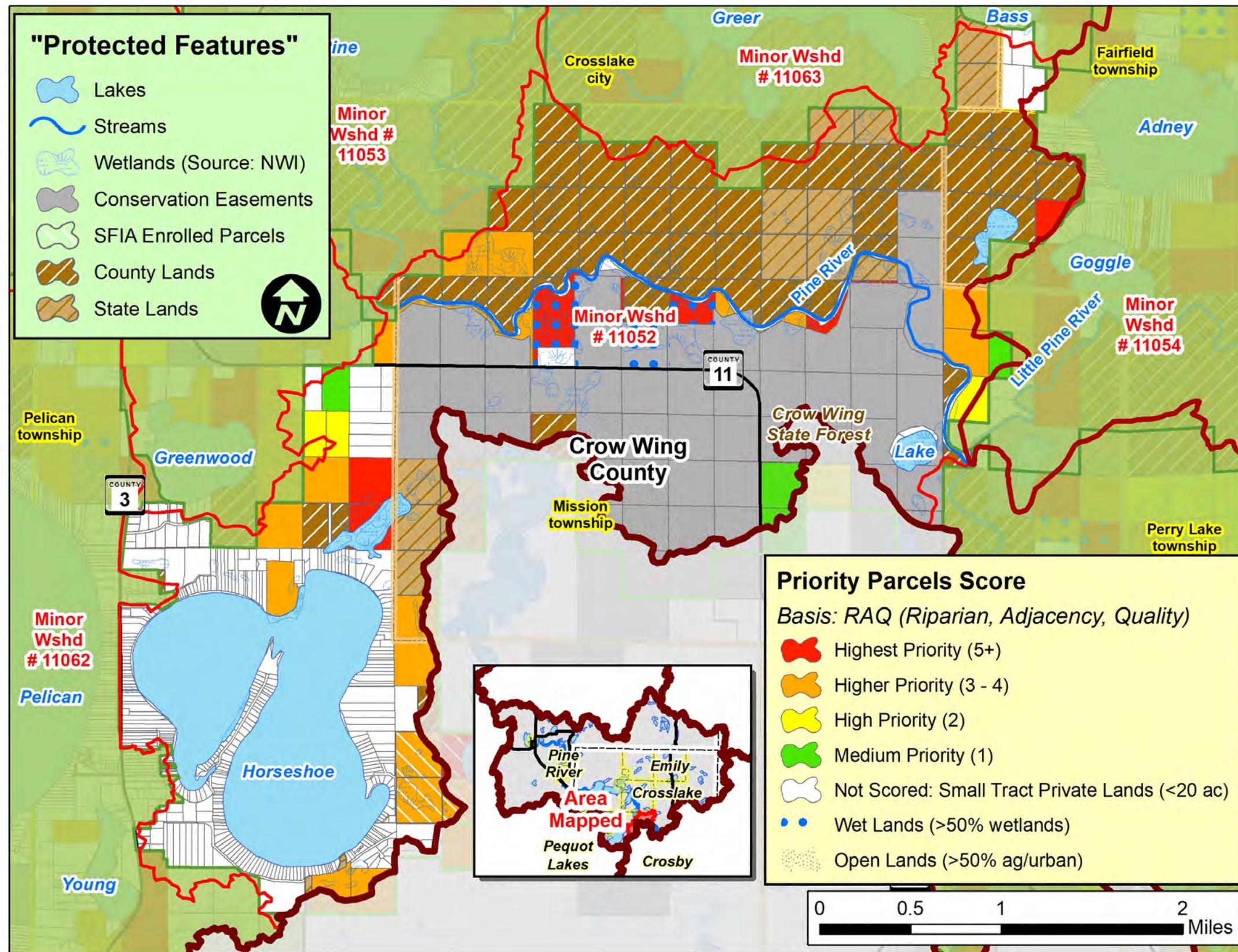
Watershed Protection Status Pine R. / Horseshoe L. (#11052)



Implementation Toolbox

Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance <ul style="list-style-type: none"> Factsheets Poster / Mailers Workshops Website / Social Media 	Specific Advice & Assistance <ul style="list-style-type: none"> Site Visits Plans: <ul style="list-style-type: none"> Landscape Stewardship Forest Stewardship Projects 	Grants & Cost-share Projects <ul style="list-style-type: none"> Tree Planting Bud Capping Timber Sales Voluntary Site Level Guidelines Zoning & Official Controls 	Incentive Programs to Enroll Land <ul style="list-style-type: none"> SFIA 2C Forest CRP Clean Water/ Habitat Fund
Options <p>Lower Costs, Less Permanent</p>			<p>Higher Costs, More Permanent</p>

RAQ Scoring for Parcels in the Pine R. / Horseshoe Lake Minor Watershed (Minor #11052)



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

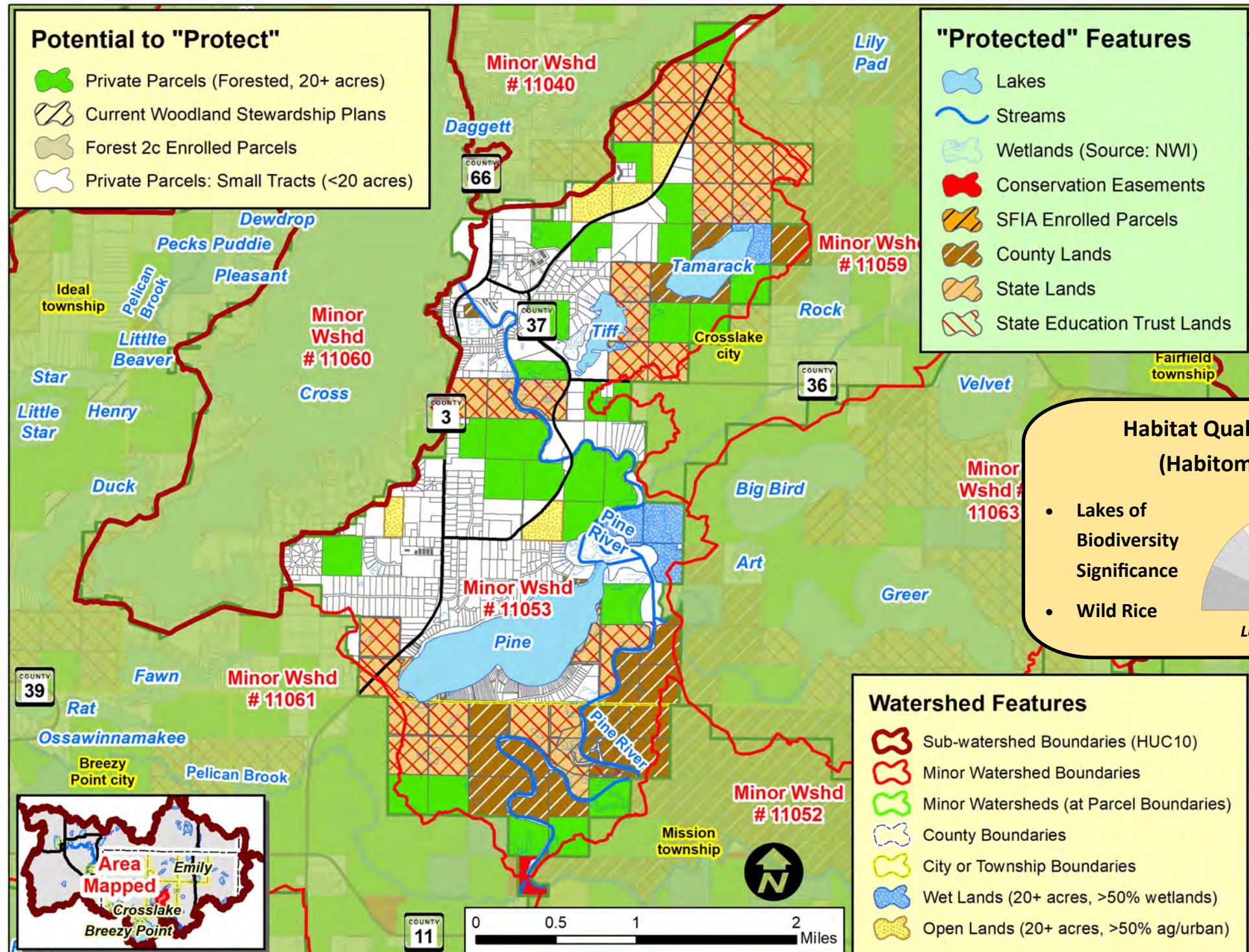
- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

Implementation Toolbox

Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance • Factsheets • Poster / Mailers • Workshops • Website / Social Media	Specific Advice & Assistance • Site Visits • Plans: - Landscape - Timber Stand - Forest - Stewardship - Projects	Grants & Cost-share Projects Forest Management • Tree Planting • Bud Capping • Timber Sales • High Priority Areas - Forest - Habitat Fund	Local Land Use Incentive Programs to Enroll Land • Riparian Buffers • SFIA • 2C Forest • CRP • Voluntary - Site Level - Guidelines • Zoning & - Official - Controls
• Site Visits • Plans: - Landscape - Timber Stand - Forest - Stewardship - Projects	Forest Management • Tree Planting • Bud Capping • Timber Sales • High Priority Areas - Forest - Habitat Fund	Forest Management • Timber Sales • High Priority Areas - Forest - Habitat Fund	Fee Title Conservation Easements • Donated • Purchased Public Land Acquisition • Federal • State • County

Lower Costs, Less Permanent Options Higher Costs, More Permanent

What is the Potential to Protect the Pine R. / Pine L. Minor Watershed (Minor 11053)?

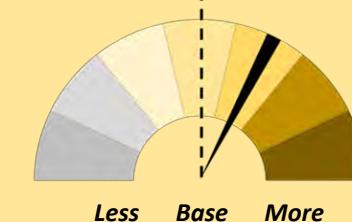


"Protected" Features

- Lakes
- Streams
- Wetlands (Source: NWI)
- Conservation Easements
- SFIA Enrolled Parcels
- County Lands
- State Lands
- State Education Trust Lands

Habitat Quality Meter (Habitometer):

- Lakes of Biodiversity Significance
- Wild Rice



Watershed Features

- Sub-watershed Boundaries (HUC10)
- Minor Watershed Boundaries
- Minor Watersheds (at Parcel Boundaries)
- County Boundaries
- City or Township Boundaries
- Wet Lands (20+ acres, >50% wetlands)
- Open Lands (20+ acres, >50% ag/urban)

Water Quality Trends / Impairments:

Improving: Holeshoe L. (E)

Declining: None

Impaired: None

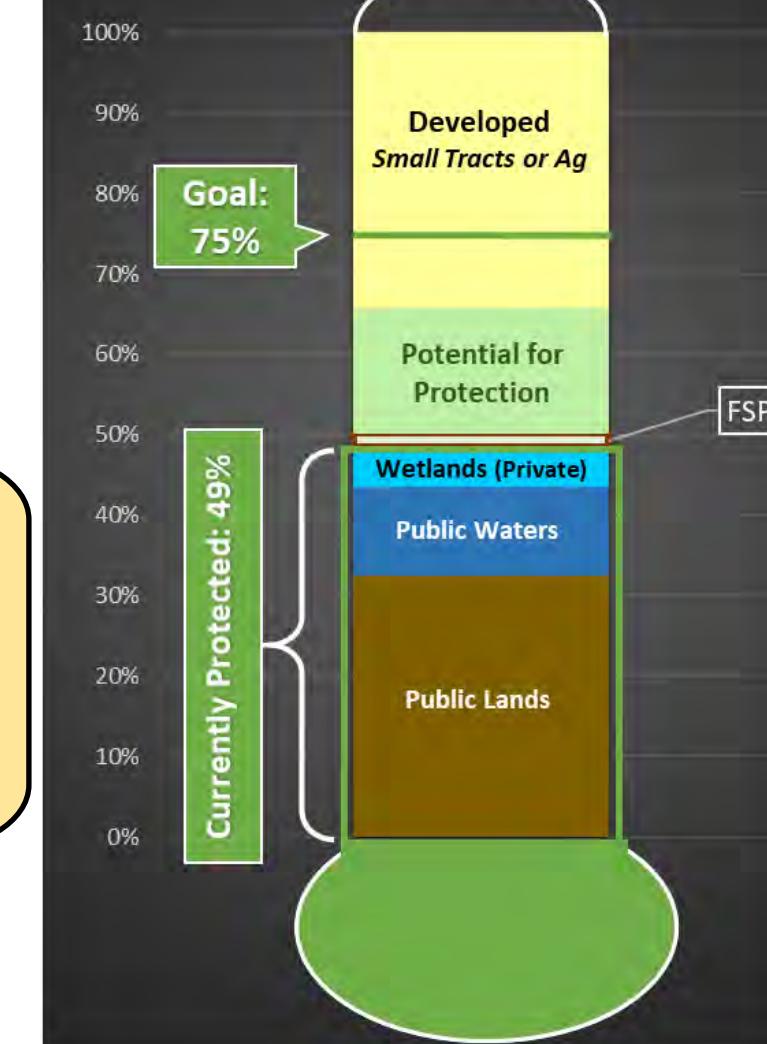
Stable (No Trend): Holeshoe L. (W)



Forests for the Future Score: 89 (out of 175)

Watershed Protection Status

Pine River / Pine Lake (#11053)



Implementation Toolbox

Plan It!

General Advice & Assistance

- Factsheets
- Poster / Mailers
- Workshops
- Website / Social Media
- Site Visits
- Plans:
- Landscape Stewardship
- Forest Stewardship
- Projects

Improve It!

Specific Advice & Assistance

- Grants & Cost-share Projects
- Tree Planting
- Bud Capping
- Timber Stand Improvement
- Plans:
- Riparian Buffers
- High Priority Areas
- Site Level Guidelines
- Forest Management
- Timber Sales
- 2C Forest CRP
- Zoning & Official Controls

Manage It!

Incentive Programs to Enroll Land

- Local Land Use
- Donated
- Purchased
- Programs to Enroll Land
- SFIA
- 2C Forest CRP
- Voluntary Site Level Guidelines
- Timber Sales
- Zoning & Official Controls

Buy It!

Fee Title Conservation Easements

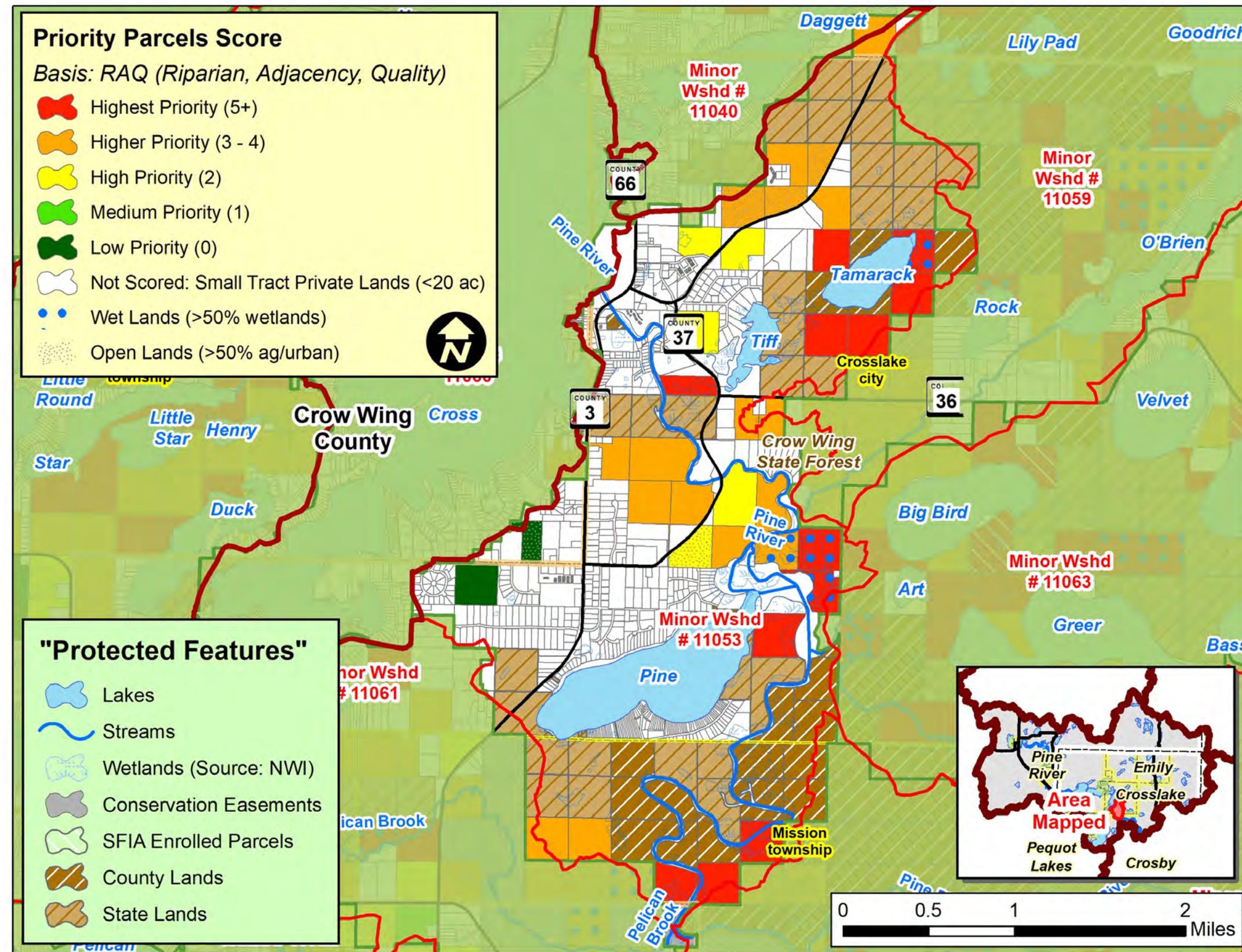
- Public Land Acquisition
- Federal
- State
- County

← Options →

Lower Costs, Less Permanent

Higher Costs, More Permanent

RAQ Scoring for Parcels in the Pine R. / Pine Lake Minor Watershed (Minor #11053)



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

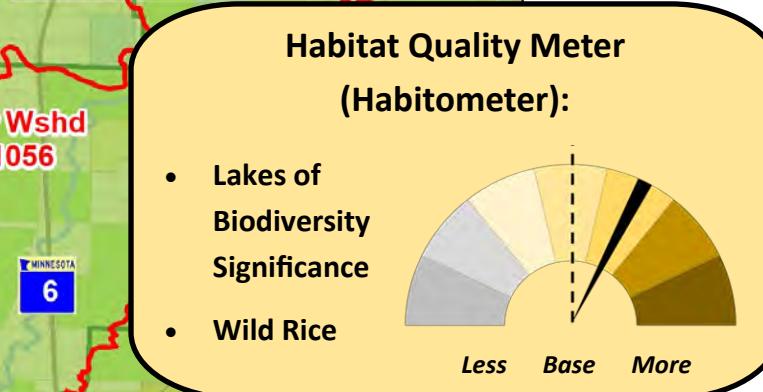
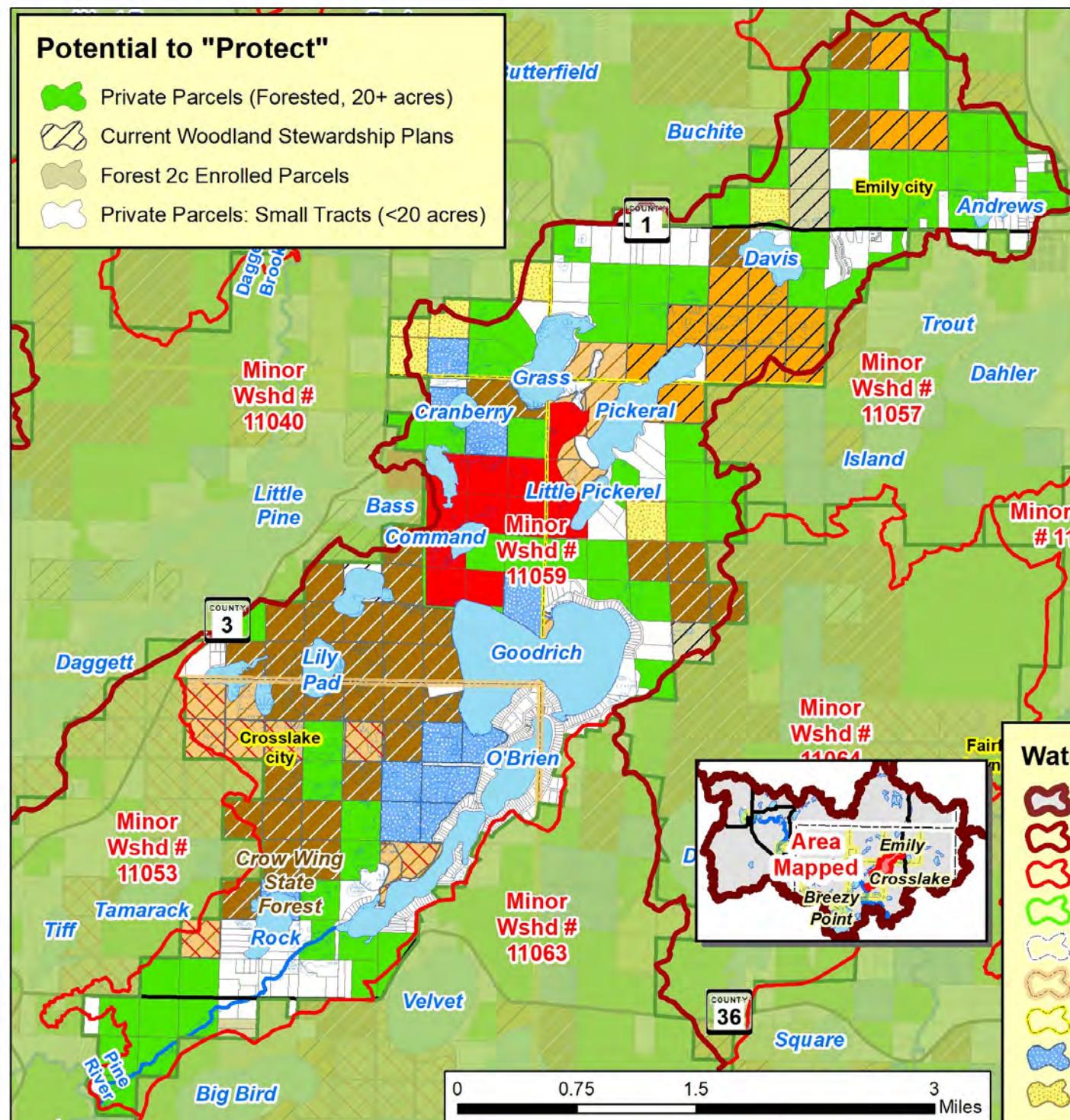
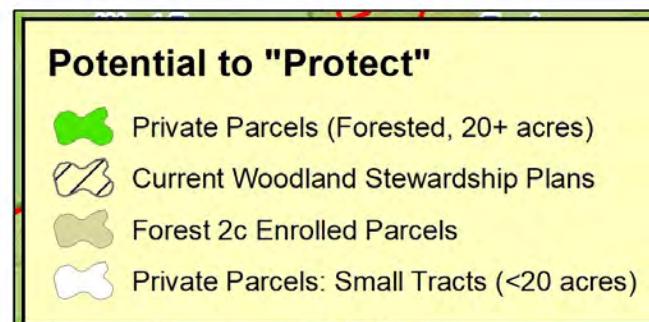
* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

Implementation Toolbox

Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance • Factsheets • Poster / Mailers • Workshops • Website / Social Media	Specific Advice & Assistance • Site Visits • Bud Capping • Timber Sales • Timber Stand Improvement (Thinning) • Landscape Stewardship Projects	Grants & Cost-share Projects Forest Management • Tree Planting • Bud Capping • Timber Sales • High Priority Areas • Forest Stewardship Projects • Landscape Stewardship Projects • Forest Management • Forest Habitat Fund	Local Land Use Incentive Programs to Enroll Land • SFIA • 2C Forest • CRP • Voluntary Site Level Guidelines • Zoning & Official Controls
Options Lower Costs, Less Permanent			Higher Costs, More Permanent Fee Title Conservation Easements • Donated • Purchased Fee Title Public Land Acquisition • Federal • State • County

What is the Potential to Protect the Goodrich / O'Brien L. Minor Watershed (Minor 11059)?

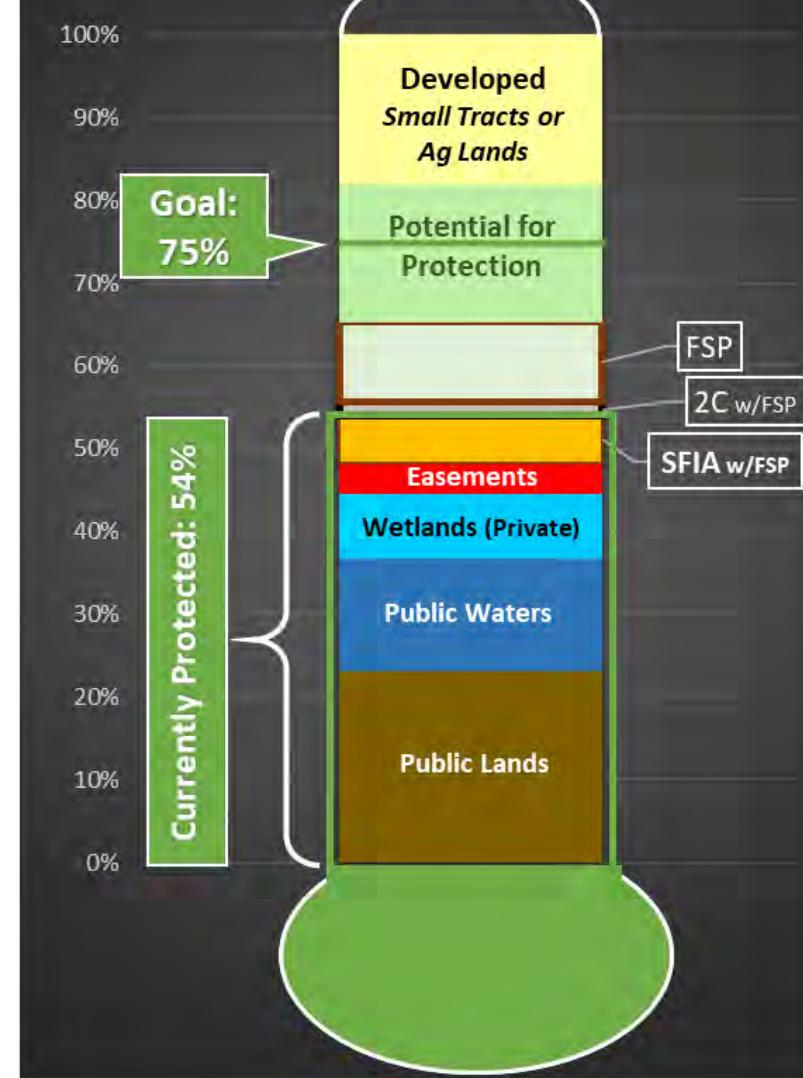


Water Quality Trends / Impairments:

Improving: Goodrich L., O'Brien L.
Declining: None
Impaired: None
Stable (No Trend): None



Watershed Protection Status Goodrich / O'Brien L. (#11059)



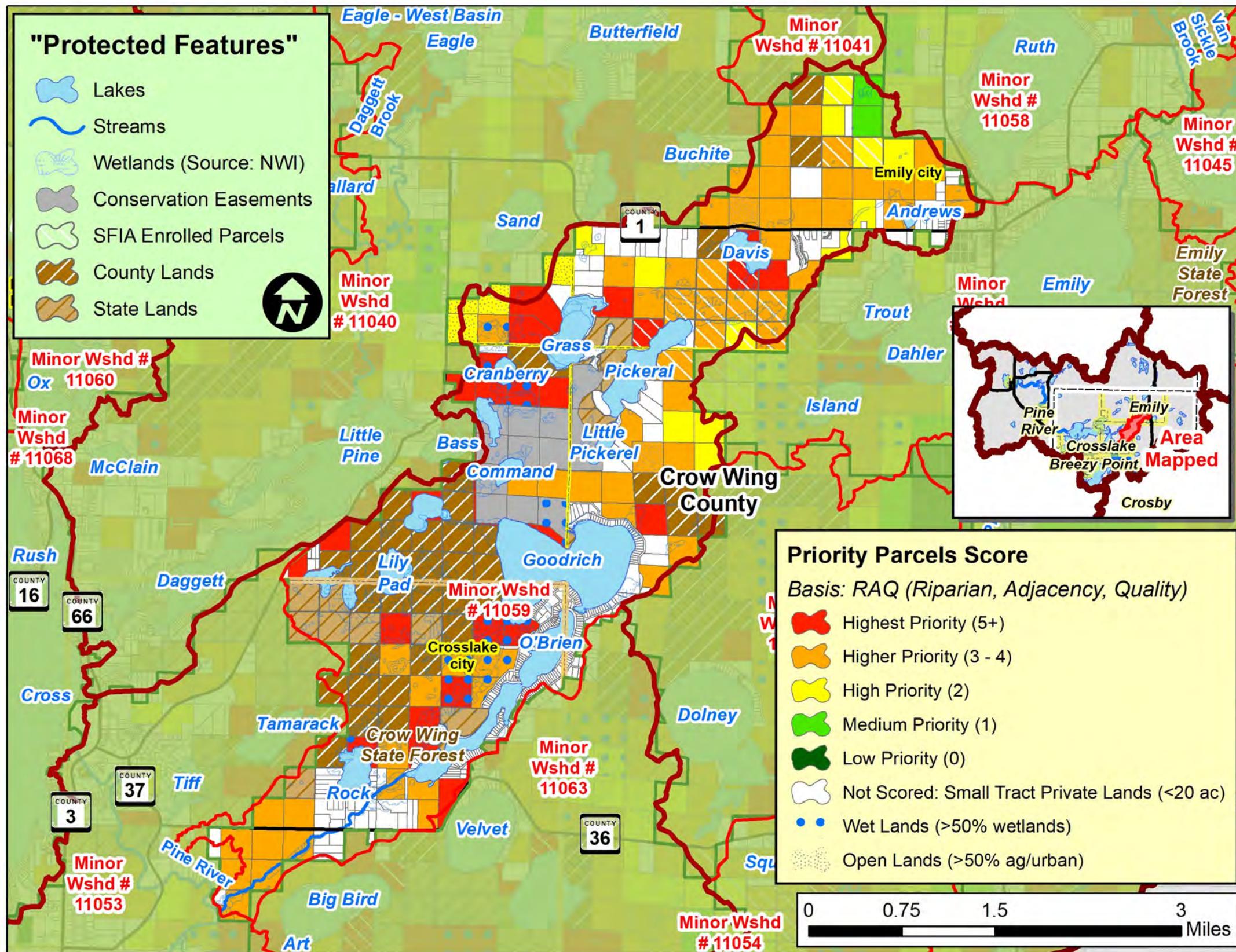
Implementation Toolbox

Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance <ul style="list-style-type: none"> Factsheets Poster / Mailers Workshops Website / Social Media 	Specific Advice & Assistance <ul style="list-style-type: none"> Site Visits Plans: - Landscape Stewardship - Forest Stewardship - Projects 	Grants & Cost-share Projects <ul style="list-style-type: none"> Tree Planting Bud Capping Timber Stand Improvement (Thinning) 	Incentive Programs to Enroll Land <ul style="list-style-type: none"> Riparian Buffers Voluntary Site Level Guidelines Zoning & Official Controls
Local Land Use <ul style="list-style-type: none"> Donated Purchased 	Forest Management <ul style="list-style-type: none"> SFIA 2C Forest CRP Site Level Guidelines 	Public Land Acquisition <ul style="list-style-type: none"> Federal State County 	

Options

Lower Costs, Less Permanent Higher Costs, More Permanent

RAQ Scoring for Parcels in the Goodrich / O'Brien L. Minor Watershed (Minor #11059)



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

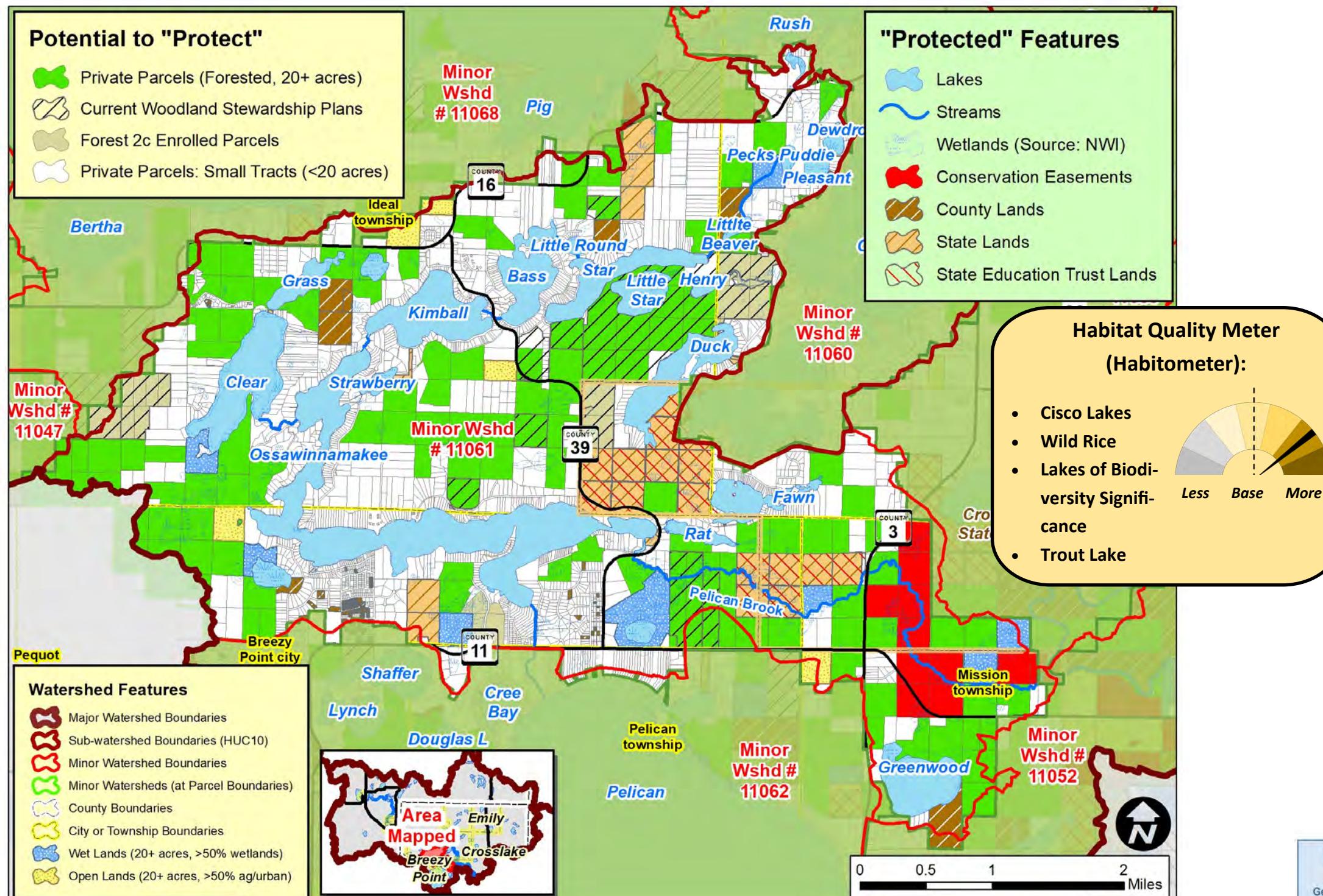
* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

Implementation Toolbox



What is the Potential to Protect the Lake Ossawinnamakee Minor Watershed (Minor 11061) ?



Water Quality Trends / Impairments:

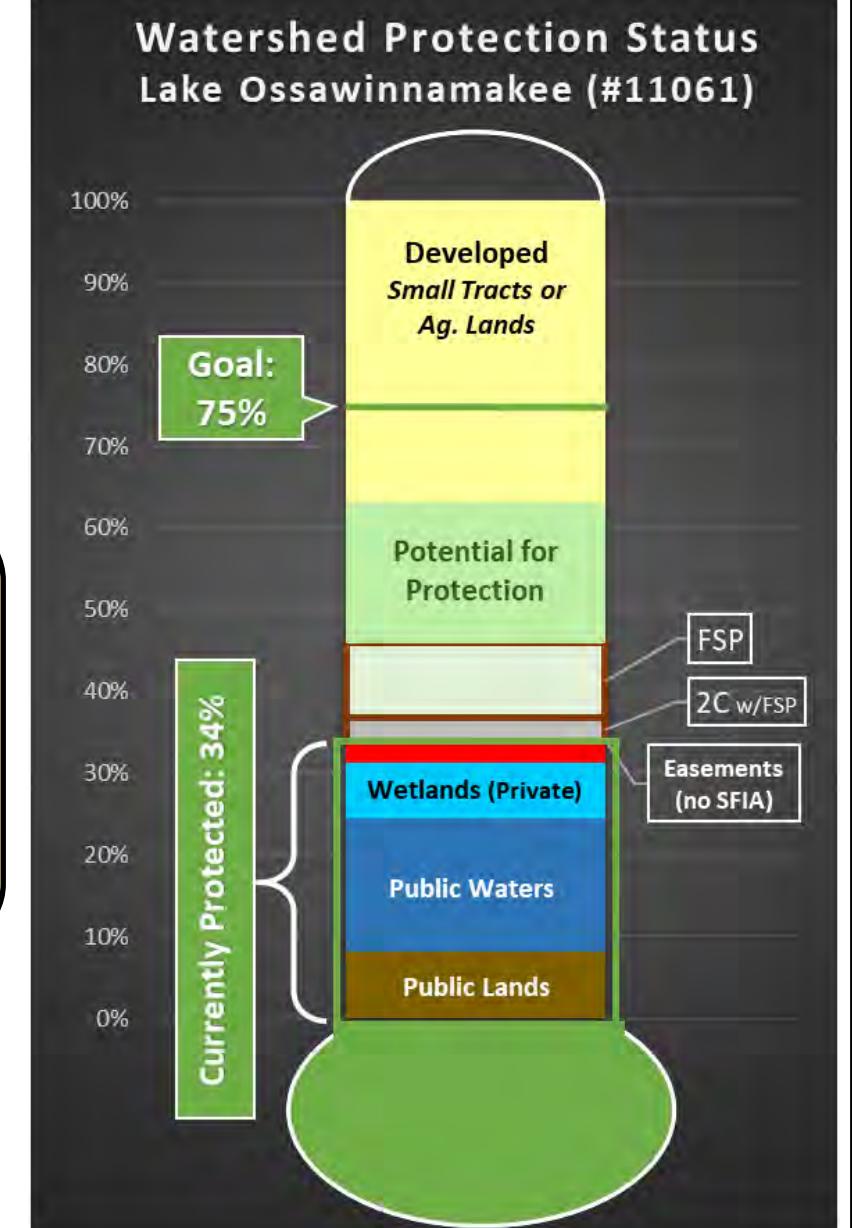
Improving: Clear, Ossi, Star, Little Star

Declining: None, Impaired: None

Stable (No Trend): Kimball, Bass



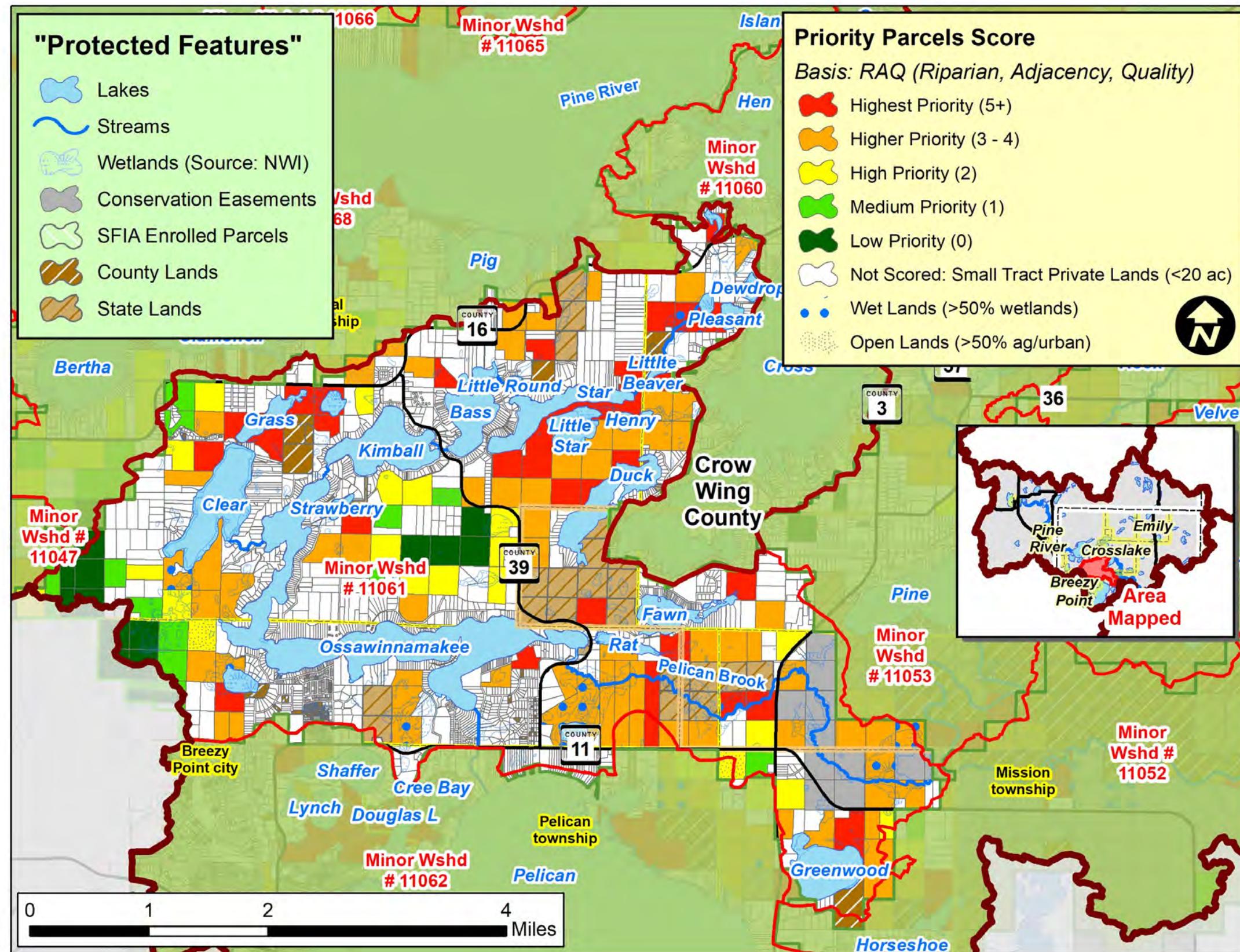
Watershed Protection Status Lake Ossawinnamakee (#11061)



Implementation Toolbox



RAQ Scoring for Parcels in the Lake Ossawinnamakee Minor Watershed (Minor #11061)

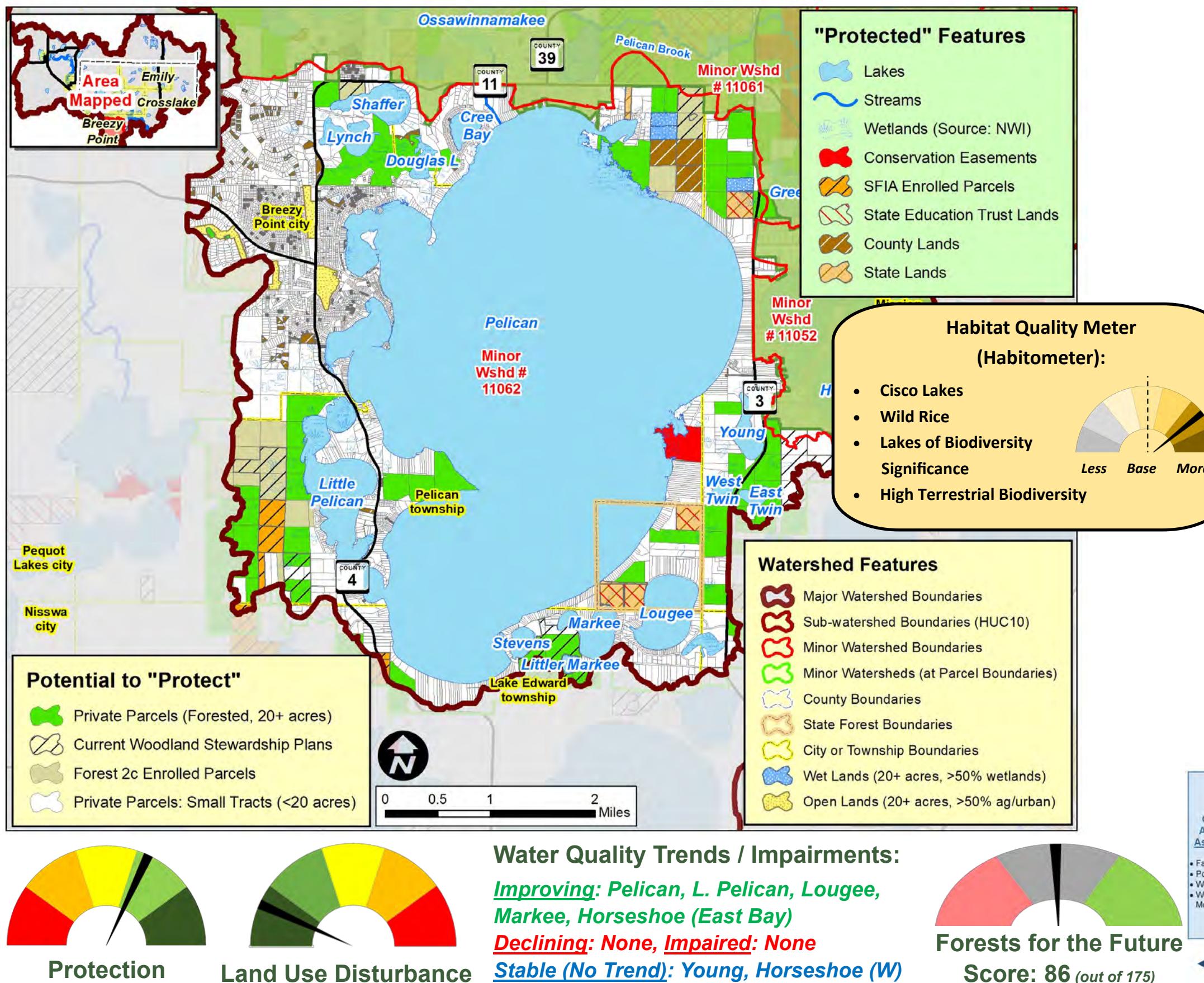


Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

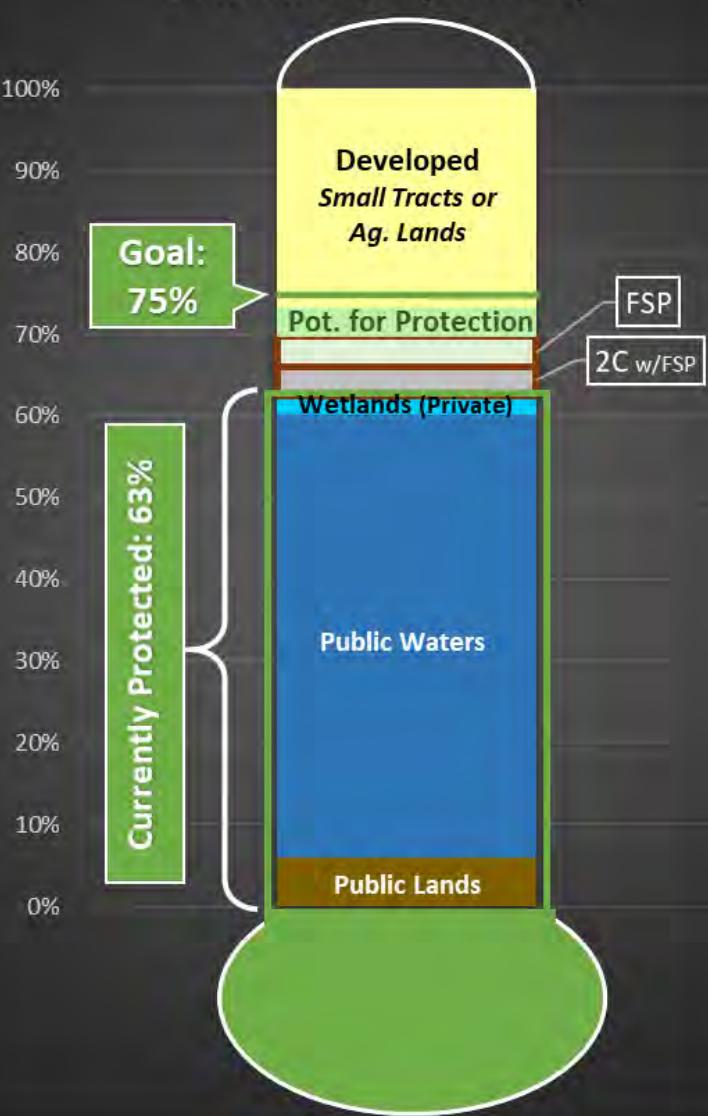
* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

What is the Potential to Protect the Pelican Lake Minor Watershed (Minor 11062) ?



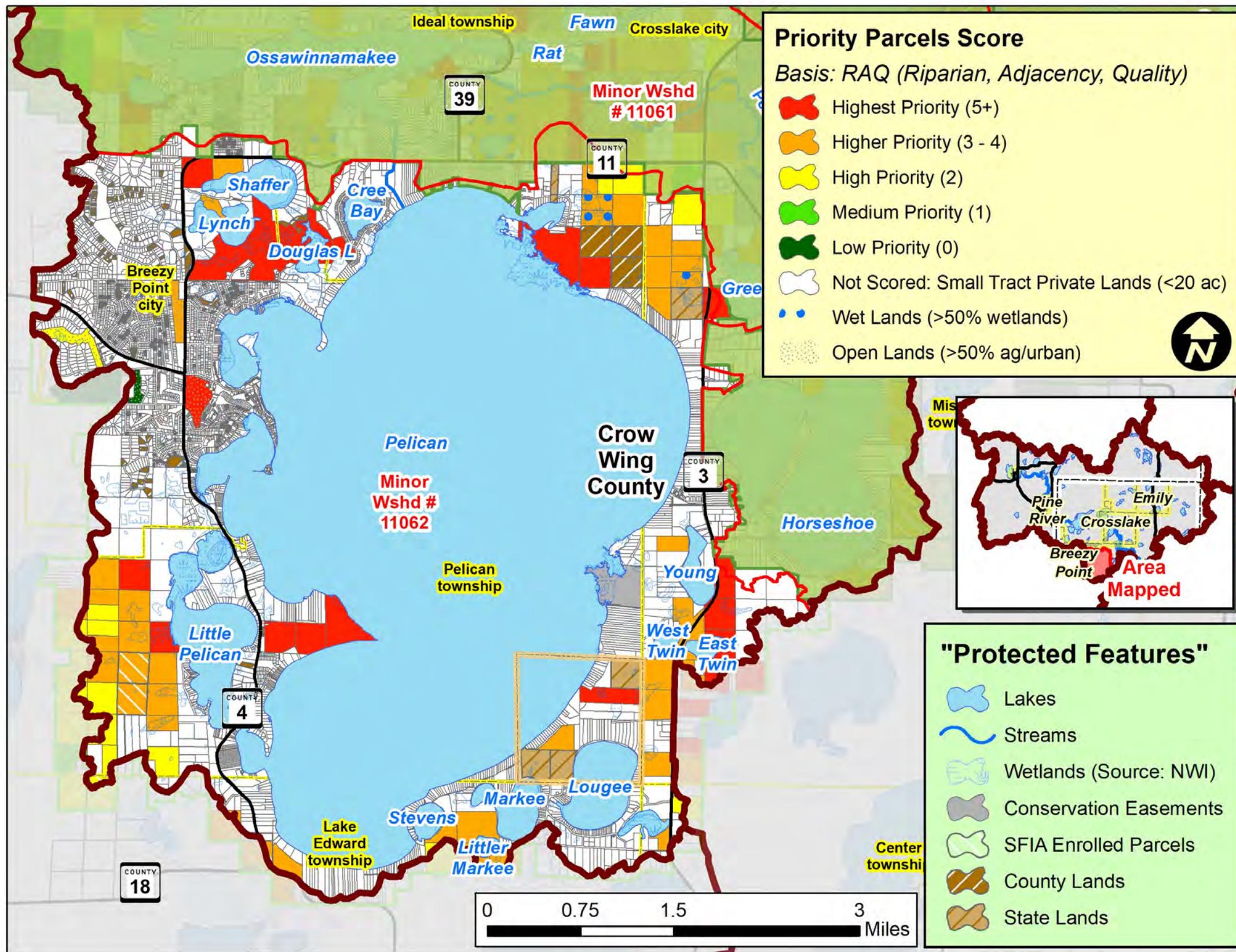
Watershed Protection Status Pelican Lake (#11062)



Implementation Toolbox



RAQ Scoring for Parcels in the Pelican Lake Minor Watershed (Minor #11062)

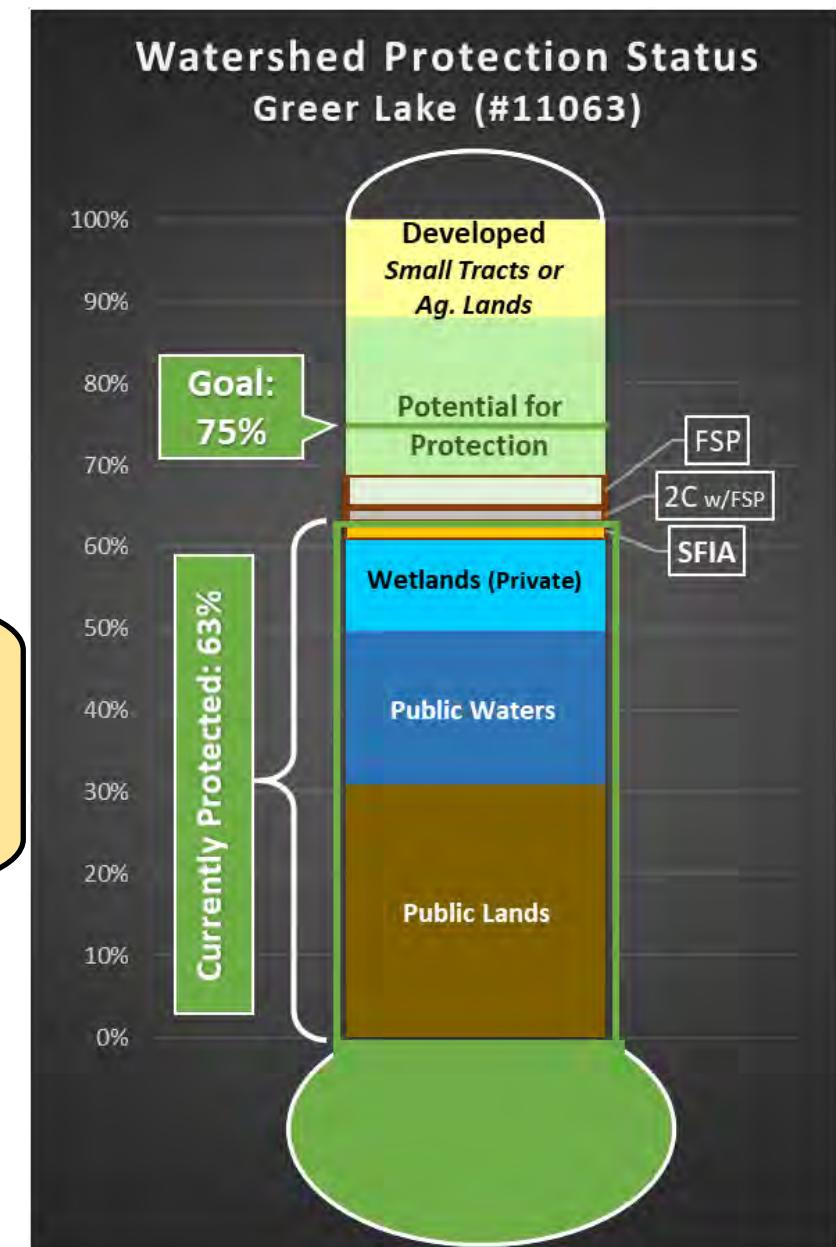
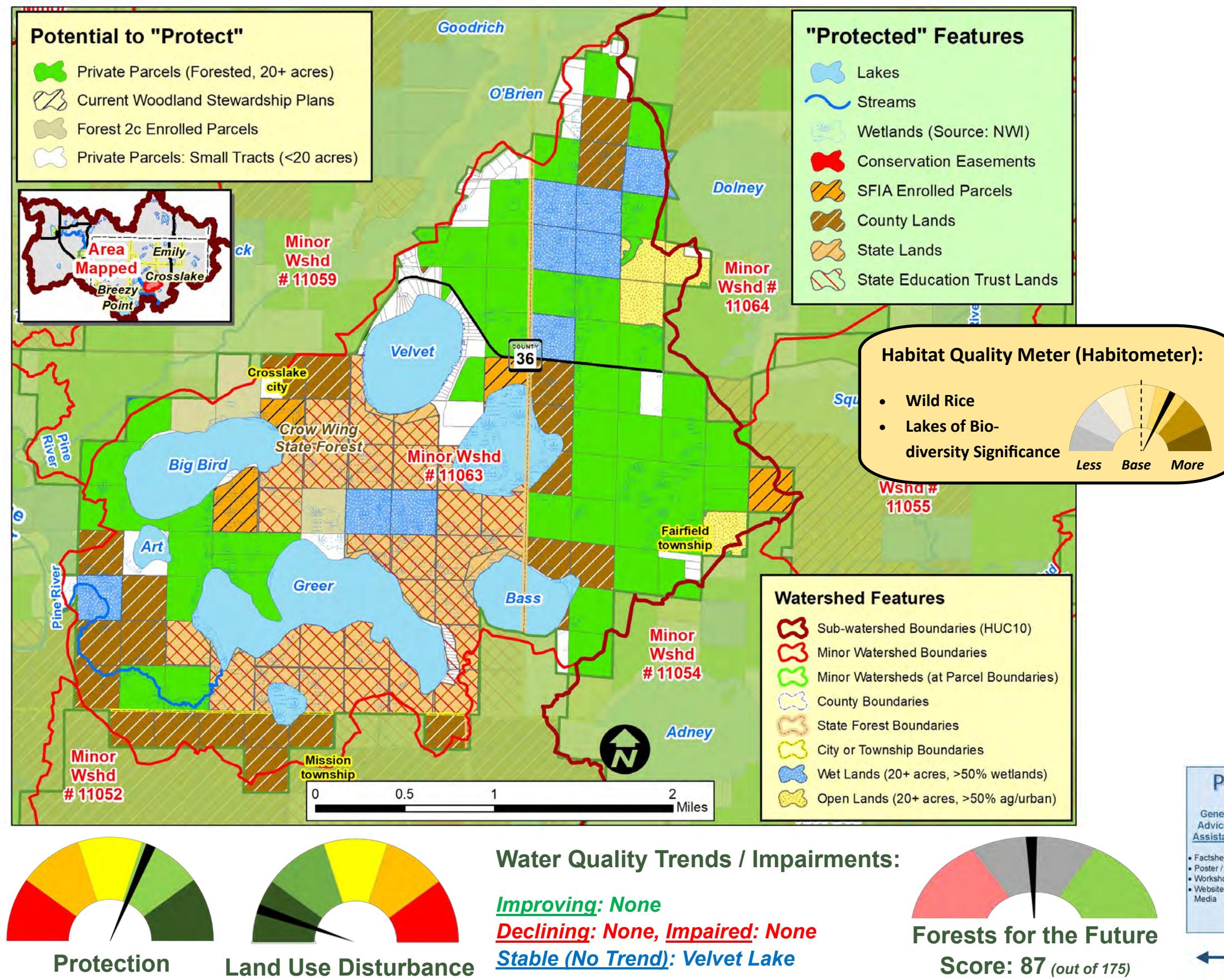


Scoring Criteria:	
Riparian	3 Riparian
	2 Non-riparian: Shoreland (1 parcel back)
	1 2 parcels back
Adjacency	3 2 sides touching public land
	2 1 side touching public land
	1 One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3 1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2
	1

* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

What is the Potential to Protect the Greer Lake Minor Watershed (Minor 11063)?

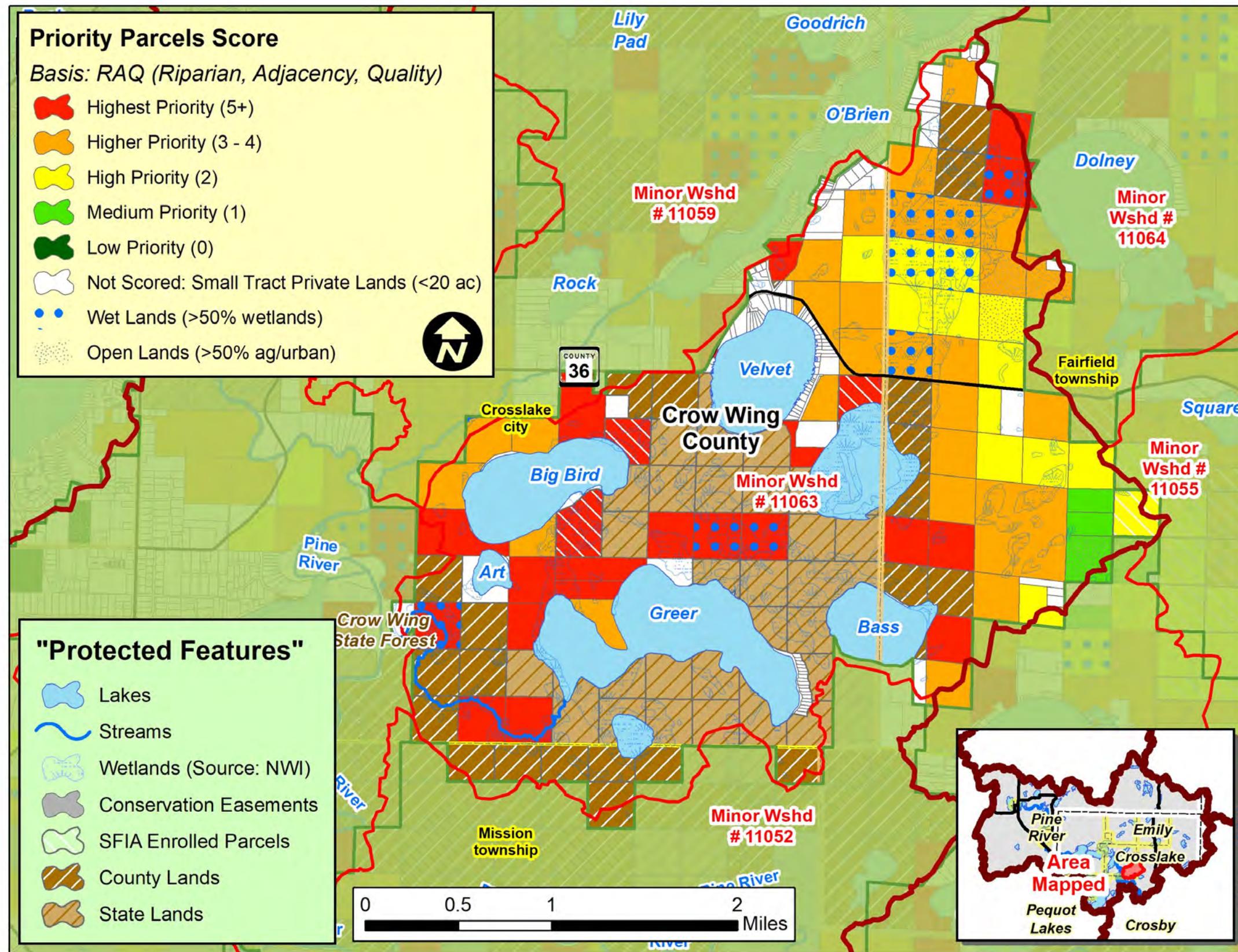


Implementation Toolbox

Plan It!	Improve It!	Manage It!	Buy It!
General Advice & Assistance • Factsheets • Poster / Mailers • Workshops • Website / Social Media	Specific Advice & Assistance • Site Visits • Plans: - Landscape - Forest - Stewardship - Forest - Stewardship - Projects	Grants & Cost-share Projects • Tree Planting • Bud Capping • Timber Stand Improvement (Thinning)	Incentive Programs to Enroll Land • Riparian Buffers • Voluntary • Timber Sales • High Priority Areas: - Clean Water/ - Habitat Fund
Local Land Use • Zoning & Official Controls	Forest Management • SFIA • 2C Forest • CRP • Site Level Guidelines	Public Land Acquisition • Federal • State • County	Fee Title • Donated • Purchased

Options ← Lower Costs, Less Permanent → Higher Costs, More Permanent

RAQ Scoring for Parcels in the Greer Lake Minor Watershed (Minor #11063)



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, etc.
	2	
	1	

* Quality is locally determined and can include other features, including groundwater resources. For this project, quality also included:

- Outstanding Resource Value Resources (MPCA)
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- High or Outstanding Wildlife Action Network Score (DNR)

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• Riparian Buffers • 2C Forest • CRP • Donated • Purchased	• Timber Sales • High Priority Areas • Forest Habitat Fund	• SFIA • 2C Forest • CRP • Voluntary • Site Level • Guidelines • Zoning & Official • Controls	Fee Title Conservation Easements • Federal • State • County

Lower Costs, Less Permanent Options Higher Costs, More Permanent