ATTACHMENT D

HOW YOU CAN HELP
the Sheboygan River

- Tell your elected local, state, and federal officials about the need to protect and restore Sheboygan River and its habitats.
- Volunteer your time to assist with water quality and habitat restoration projects.
- Allow ecologists to conduct baseline surveys on your property.
- Sign up to find out if your property is eligible for restoration projects.
- Fill out the attached postcard to learn more about how you can help the Sheboygan River.
- Become a supporting member of the Sheboygan River Basin Partnership.
- Promote development that protects water resources.
- Volunteer to serve on the AOC Citizens Advisory Committee.

THANK YOU

Thank you for taking the time to learn more about the Sheboygan River and our effort to make it a great place to live, learn, and enjoy.

Sincerely,

The Sheboygan River Basin Partnership

Sheboygan River Basin PARTNERSHIP

WISCONSIN DEPT. OF NATURAL RESOURCES

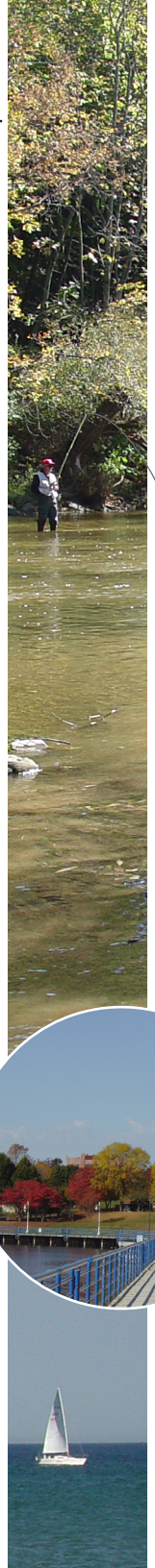
U.S. FISH & WILDLIFE SERVICE — DEPARTMENT OF THE INTERIOR

UW Extension

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

For more information contact:
Jon Gumtow
SRBP AOC Chairperson
(920) 980-2800
Jon.Gumtow@stantec.com

Brochure prepared by Stantec Consulting with funding and support from USEPA, WDNR, and UWEX.



Restore the SHEBOYGAN River

HISTORY
of the Sheboygan River

Stretching from the dam in Sheboygan Falls to the mouth of Lake Michigan, the lower 14 miles of the Sheboygan River has been a center of growth and prosperity for 200 years.

1695: Jean Nicolet becomes first European settler to visit the Sheboygan River

1795: William Farnsworth establishes trading post at the mouth of the Sheboygan River

1834: William Payne builds the first sawmill in Sheboygan Falls

1865: First chair manufacturer opens for business on the Sheboygan River, Sheboygan is later nicknamed "Chair City"

1899: Kohler Company moves foundry from Sheboygan to the current Kohler plant

1986: River and harbor listed as a Superfund site due to high levels of PCBs in sediment

1990: Contaminated sediment and soil remediation completed in Sheboygan Falls

2007: Contaminated sediment dredged between Sheboygan Falls and Kohler

2010: Plans to dredge sediment from Taylor Drive to the harbor and restore habitat complete

CONTAMINATION
of the Sheboygan River

The Sheboygan River, like many waterways, is threatened by past industrial practices, stormwater, and habitat loss.

The Sheboygan River collects stormwater runoff from three large watersheds, each heavily influenced by agriculture and development.

Stormwater picks up pollutants such as road salt, auto fluid drippings, chemical weed killers, soil, and litter as it flows into the River.

The pollution levels in the Sheboygan River have directly caused algae blooms, fish consumption advisories, and degraded fish habitat.

Shoreline development has degraded and reduced fish and wildlife habitats.

Increased pollution and habitat loss resulted in the U.S. EPA designating the lower 14 miles of the Sheboygan River as an Area of Concern (AOC), one of 43 in the Great Lakes.

The decrease in water quality and wildlife habitats adversely affects those living on, playing in, and depending on the Sheboygan River.

RESTORATION
of the Sheboygan River

Since the listing of the Sheboygan River as an Area of Concern, numerous organizations have worked together to start restoring the quality of the River and surrounding habitat.

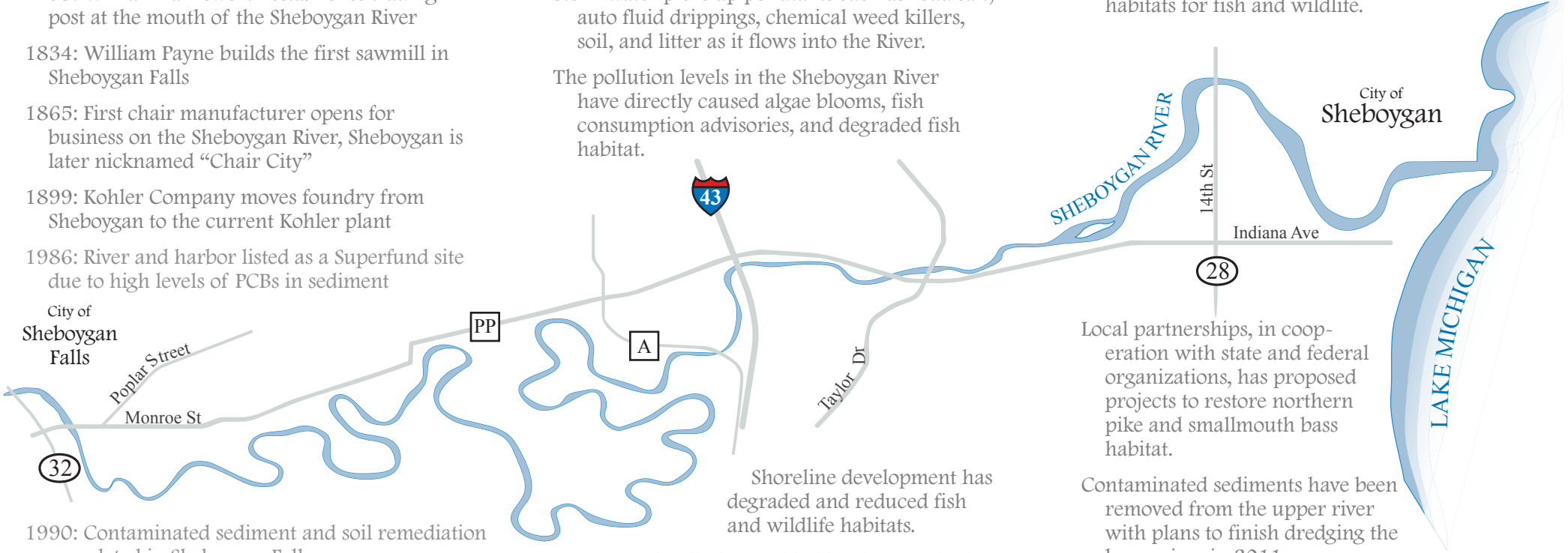
Future restoration work will improve navigation and water quality, reduce shoreline erosion and invasive species, and create high-quality habitats for fish and wildlife.

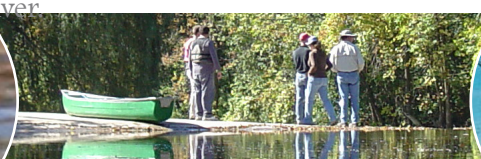
Local partnerships, in cooperation with state and federal organizations, has proposed projects to restore northern pike and smallmouth bass habitat.

Contaminated sediments have been removed from the upper river with plans to finish dredging the lower river in 2011.

Funding from the EPA and local governments will improve navigation in the lower river.

Shoreline restoration is proposed for Kiwanis Park and Wildwood Island.





TELL ME MORE

about the Sheboygan River

I'm interested in learning more about:

- ☐ Water Quality Monitoring
- ☐ Baseline Surveys on my Property
- ☐ Shoreline Stabilization Projects
- ☐ Habitat Restoration Projects
- ☐ Becoming a Member of the Sheboygan River Basin Partnership
- ☐ Volunteer as a Member of the AOC Citizens Advisory Committee

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

TELEPHONE # _____ EMAIL _____

PLACE
STAMP
HERE

Sheboygan River Basin Partnership (SRBP)
Jon Gumtow, SRBP AOC Chairperson
PO Box 3
Sheboygan Falls, WI 53085

ELL ME MORE

about the Sheboygan River

nterested in learning more about:

- [ ] Water Quality Monitoring
- [x] Baseline Surveys on my Property
- [ ] Shoreline Stabilization Projects
- [ ] Habitat Restoration Projects
- [ ] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

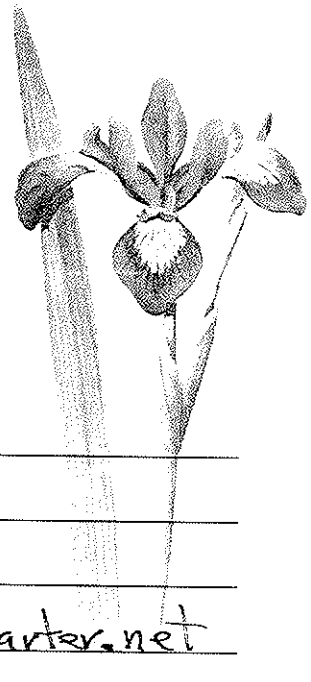
Douglas G.S. Cook
526 South Water St.
Sheboygan, WI 53081

AME

DRESS

Y/STATE/ZIP

EPHONE # 458-7437 EMAIL dgsc99@charter.net
917-8580



ELL ME MORE

about the Sheboygan River

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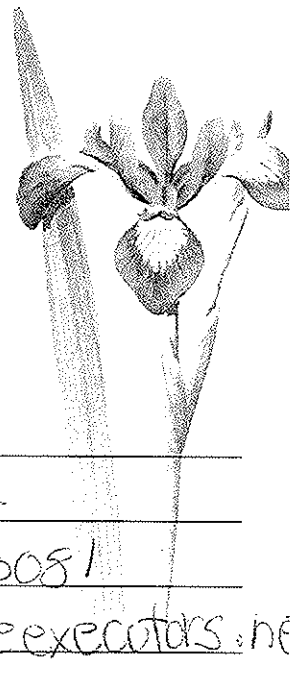
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

AME CHAD SPIELVOGEL

DDRESS 702 S. WATER ST.

TY/STATE/ZIP SHEBOYGAN WI 53081

LEPHONE # 920 208-7266 EMAIL chad@estateexecutors.ne



TELL ME MORE

about the Sheboygan River

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- [ ] Water Quality Monitoring
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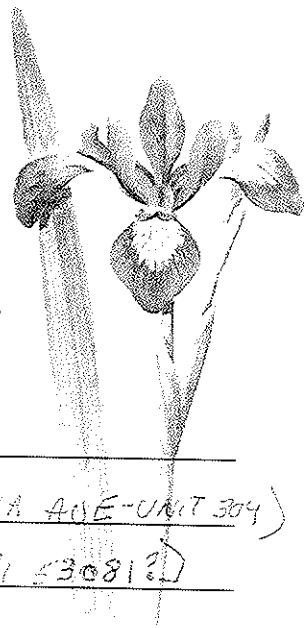
- [ ] Habitat Restoration Projects
- [x] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

NAME JOHN WAGGONER

ADDRESS 4424 MANITOU WAY (303 PENNSYLVANIA AVE-UNIT 304)

CITY/STATE/ZIP MADISON WI 53711 (SHEBOYGAN WI 53081?)

TELEPHONE #608-238-6819 EMAIL



ELL ME MORE

about the Sheboygan River

interested in learning more about:

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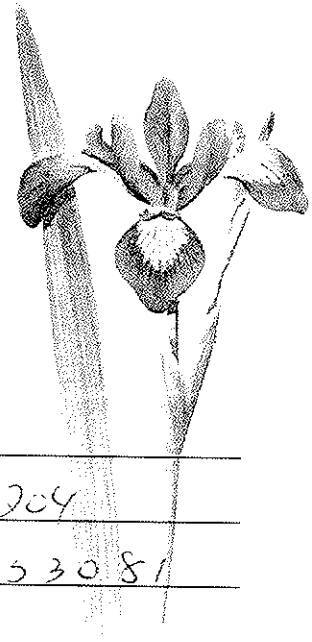
- [x] Shoreline Stabilization Projects
- [x] Habitat Restoration Projects
- [ ] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

ME Holm

DRESS 303 Pennsylvania Ave #304

Y/STATE/ZIP Sheboygan WI 53081

EPHONE # EMAIL



ELL ME MORE

about the Sheboygan River

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- [x] Water Quality Monitoring
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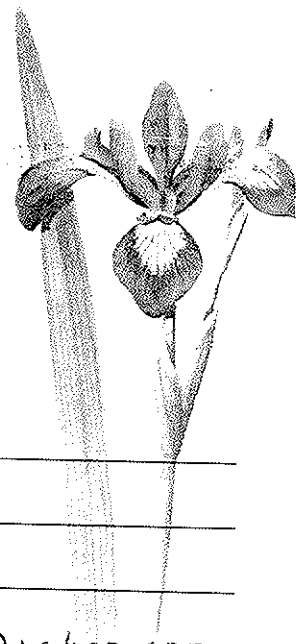
- [x] Habitat Restoration Projects
- [ ] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

ME Eric Kriete

DRESS 520 S. River St.

Y/STATE/ZIP Sheboygan, WI 53081

EPHONE # 920-627-1627 EMAIL cookrietestadoc@yahoo.com



ELL ME MORE

about the Sheboygan River

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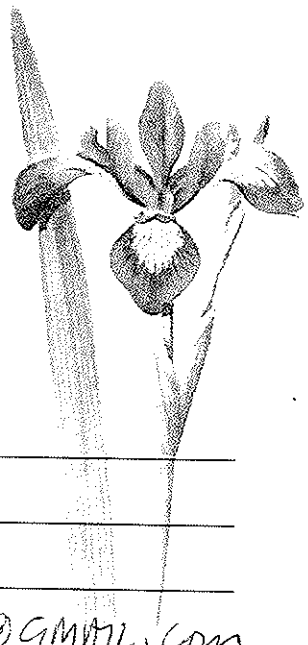
- [ ] Water Quality Monitoring
- [x] Baseline Surveys on my Property
- [ ] Shoreline Stabilization Projects
- [ ] Habitat Restoration Projects
- [x] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

Miroslav (Mick) Anic
315 Ridgeway Street
Kohler, WI 53044

[redacted]

LEPHONE # EMAIL MIROSLAV.ANIC@GMAIL.COM



L ME MORE

about the Sheboygan River

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- [ ] Habitat Restoration Projects
- [ ] Becoming a Member of the Sheboygan River Basin Partnership
- [ ] Volunteer as a Member of the AOC Citizens Advisory Committee

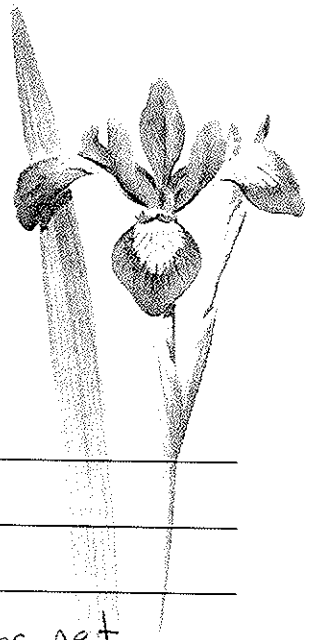
ESS

Judd Baumann
704 North 15Th Street
Sheboygan WI 53081

ASKA

STATE/ZIP

HONE # EMAIL Judicious@charter.net



Sheboygan River AOC Property Summary - Monitoring and Restoration Access

Landowner	Contact Name	Parcel Location	Parcel Size (approx)	Address	Email	Phone	Contact Date	Comments	Baseline	Restoration	Suitability
Kohler Company	Ina Heneger Jim Richarson Steven Beaumont Tom Caise	River Wildlife Blackwolf River Course Kohler Stable	> 100 acres >100 acres >100 acres >100 acres	NA	NA	920-457-8000	Via telephone 12/14/2010	Ok, check in before mobilizing to discuss access	Y	Unk	High for surveys and restoration
Village of Kohler	Bruce Neerhoff	WWTP	10 acres	NA	bneerhof@kohlervillage.org	920-459-6469	Via telephone 12/22/2010	Property open to public and accessible	Y	Y	Medium for surveys and restoration
City of Sheboygan	David Biebel	Kiwanis Park, Wildwood Island and other city owned lands	NA	NA	dbiebel@ci.sheboygan.wi.us	920-459-3440	Via Telephone and TAC mtgs 12/22/2010, 1/1/11, 1/12/11	Property is open to public and accessible. City would like to learn more about projects and compare to city plans. Field review completed and City is agreeable to project concepts - assume there is no cost to City and plans would need council approval	Y	Y	High for surveys and restoration
Sheboygan County	Aaron Brault	Taylor Drive Ponds and other county owned lands	NA	NA	braulacb@co.sheboygan.wi.us	920-459-3766	Via telephone 12/16/10	Property is open to public and accessible. County is agreeable to work and to improve functions of ponds. Aaron explained that the County is proposing a bike trail in this area and plans should include this trail.	Y	Y	High for surveys and restoration
Douglas Cook	Douglas Cook	In town, by Penn Bridge.	60' of frontage, house on hilltop	526 South Water St., Sheboygan, WI 53081	dgsc99@charter.net	920-458-7437/920-917-8580	Via phone 2/1/11	Will help with access, contacts, publicity, and any other requests. Volunteered use of pontoon boat.	Y	N	Low for surveys and restoration
Chad Spielvogel	Chad Spielvogel	Located in town	80' of frontage	702 South Water St., Sheboygan, WI 53081	chad@estateexecutors.net	920-208-7266	Via postcard 2/1/11	Ok with access. Would like dredging to go deeper (shallow spot by Penn Bridge).	Y	Y	Low for surveys and restoration
John Waggoner	John Waggoner	Residential condominium on lower river, near Penn Ave	Riverwalk along retaining wall	303 Pennsylvania Ave, Sheboygan, WI 53081	NA	608-238-6819, 608-345-2952	Via phone 2/8/11	Interested in becoming Member of SRBP. Condo property not suitable for surveys or restoration.	Y	N	Low for surveys and restoration
Eric Kriete	Eric Kriete	Residential property on lower river near Penn Ave	40' of frontage, house on bluffs, stairs to water	520 South River St., Sheboygan, WI 53081	conkrietestador@yahoo.com	920-627-1627	Via phone 2/1/11	Willing to volunteer, along with spouse. Ok with access by surveyors.	Y	N	Low for surveys and restoration
Holm	Holm	Residential condominium on lower river, near Penn Ave	Riverwalk along retaining wall	303 Pennsylvania Ave., Sheboygan, WI 53081	NA	NA	Via postcard 1/10/11	No contact information available. Condo property not suitable for surveys or restoration.	Y	Y	Low for surveys and restoration
Judd Baumann	Judd Baumann	Residential property on lower river near 14th St.	NA	704 North 15th St., Sheboygan, WI	judicious@charter.net	NA	Via postcard 1/10/11 and email 2/1/10	Emailed but received no response.	Y	Y	Low for surveys and restoration
Mick Anic	Mick Anic	Commercial property on lower river segment near 8th St.	2 acres	315 Ridgeway St., Kohler, WI 53044	miroslav.anic@gmail.com	NA	Via postcard 1/10/11, email on 2/1/11	Voice and email messages with no response. Owns Koepsell building on riverfront near 8th St.	Y	N	Low for surveys and restoration
Greg Powers	Greg Powers	Undeveloped at confluence of Onion River and Sheboygan River	8 acres, ~400' frontage	1130 Broadway St, Sheboygan Falls, WI 53085	greg.powers@bemismfg.com	920-467-2220 920-912-4981	Via email 12/14/2010, phone 2/1/11 and 3/1/11	Dredging in river has caused bank erosion on his land. Would allow field surveys. Would consider restoring forest on existing field.	Y	Y	Medium for surveys and restoration
John Schuchardt	John Schuchardt	Undeveloped Willow Creek frontage	180 acres	County Road H, Elkhorn, WI 53121	NA	262-742-3916	Via telephone 12/20/10, 1/7/11, 1/14/11	Initial contact: Willing to allow field surveys. Land currently for sale, would consider selling land for conservation purposes for the current asking price. Followup contact: Land has an accepted offer and understands that the new landowner will consider conservation development in future plans and is open to habitat restoration.	Y	Y	High for surveys and restoration (coordinate with new landowner)

Gumtow, Jon

From: Gumtow, Jon
Sent: Tuesday, December 14, 2010 7:54 AM
To: Powers, Greg
Cc: kathleen.kramasz@wisconsin.gov; Pappas, Victor C - DNR; stacy.hron@wisconsin.gov; Gumtow, Jon
Subject: RE: Sheboygan River

Greg,

Thank you for contacting me. I assume you received some information from me in the mail recently regarding restoring the Sheboygan River AOC. For now I am taking feedback from landowners and will compile responses to prioritize restoration areas.

I don't know the nature of the dredging adjacent to your property but if you would like to stabilize the bank this work will likely be regulated by WDNR. If you wish to pursue you can contact Kathy Kramasz, the local WDNR Water Management Specialist. I have her contact information below:

KATHLEEN KRAMASZ
Working Title: Water Regulations And Zoning Specialist
kathleen.kramasz@wisconsin.gov
920-892-6638 (Fax)
Supervisor: VICTOR PAPPAS

Thank you for your email and interest in the Sheboygan River AOC project.

Jon

Jon Gumtow, PWS, PSS
Senior Scientist
NRC now Stantec
706 West Midway Road
Menasha WI 54952
Ph: (920) 558-4393
Cell: (920) 980-2800
Jon.Gumtow@stantec.com
stantec.com

From: Powers, Greg [mailto:Greg.Powers@bemismfg.com]
Sent: Tuesday, December 14, 2010 7:31 AM
To: Gumtow, Jon
Subject: Sheboygan River

Good Morning Jon,
My name is Greg Powers and I am a land owner along the Sheboygan river in Sheboygan Falls. My property is just east of the junction with the Onion River across from Rochester Park in the City of Sheboygan Falls (1130 Broadway Street). Since the dredging of that section of river I have had issues with river bank erosion which has resulted in the loss of at least 40 feet of shoreline approximately 4 feet in, and several trees along that section of bank. I know that the sediments in that section of the river were very bad and they dredged quite deep there and I believe that the shoreline is now eroding

to fill that back in. Is there someone I can contact with my concerns about this? My concern is that in spring there will be more erosion with the higher and faster moving water. Any help in pointing me in a direction for assistance would be great. You can contact me at the following: HOME (920)-467-2220 CELL (920)-912-4981 or E-MAIL greg.powers@bemismfg.com

Thank you,
Greg Powers

Gumtow, Jon

From: Gumtow, Jon
Sent: Wednesday, December 15, 2010 4:08 PM
To: Williams.Heather@epamail.epa.gov
Cc: gotaway@hotmail.com; Gumtow, Jon
Subject: Sheboygan Outboard

Heather,

Roy Potter from the Sheboygan Outboard Club (920) 207-8157 and gotaway@hotmail.com contacted me this afternoon about a seawall construction project that his group is proposing on their property. He would like to coordinate his project with the Legacy dredging project. I suggested that you and he talk. Could you get in contact with Roy. Thanks. JON

Jon Gumtow, PWS, PSS
Senior Scientist
NRC now Stantec
706 West Midway Road
Menasha WI 54952
Ph: (920) 558-4393
Cell: (920) 980-2800
Jon.Gumtow@stantec.com
stantec.com

ATTACHMENT E

TABLE 1: Potential Sheboygan River AOC Restoration Projects - Stakeholder Brainstorming List Following Field Tour (October 2010)

Habitat Categories	**Projects**
Floodplain Forest	Restore floodplain forest habitats to improve riparian connectivity, climate change, and wildlife habitat (songbird nesting and stopover)
	Preserve existing floodplain forest habitats by establishing conservation easements
	Map potential floodplain forest restoration projects within AOC
Bank Stabilization/Naturalization	Kiwanis Park shoreline naturalization (replace concrete riprap)
	Taylor Drive parking area shoreline stabilization
	Kiwanis Park opposite shoreline (private ownership) shoreline naturalization
	Kohler property bank sloughing (3 areas)
	Plank Road trailhead bank stabilization project
	Enhance riparian buffers along private residences and Kohler stables
Aquatic	Remove or construct fish passage at Walderhaus dam (reconnect approx. 6 miles of river) for steelhead, coho, chinook, smallmouth, and northern pike
	Remove or construct fish passage at River Bend dam (reconnect approx. 6 miles of river) for steelhead, coho, chinook, smallmouth, and northern pike
	Redesign Lutheran High School pond as wetland with connection to river to promote northern pike spawning habitat
	Establish sturgeon stocking program and restore in stream habitat
	Create northern pike spawning habitat by planting emergent species in shallow water zone in backwaters near Wildwood Island
	Retrofit Willow Creek/I-43 culvert to improve fish passage and retrofit with daylight windows
	Retrofit Willow Creek/Glendale Road culvert to improve fish passage
	Remove Willow Creek/Erie Avenue culvert on Kohler property to improve fish passage and restore channel
	Remove large debris dams in Willow Creek downstream from Glendale Road
	Create woody debris accumulation areas within Sheboygan River
	Attach fish cribs to sheet pilings along urban areas
Stormwater	Taylor Drive stormwater BMPs
	Kiwanis Park storm sewer outfall(s) stabilization and stormwater treatment
	Plank Road trailhead groundwater infiltration pilot project
	Install stormwater BMPs within DOT ROW to promote groundwater infiltration and improve Willow Creek water quality
Recreational	Taylor Drive parking improvements and fishing access
	Establish greenway along Sheboygan River and Willow Creek with connection to Plank Road Trail
	Kiwanis Park boat landing improvements and fishing access
Invasive Species	Enhance existing floodplain forest habitats by managing for invasive species
	Establish invasive species control program (partner with Boy Scouts, Lutheran HS, Sheboygan South HS, Kohler HS, Oostburg HS, UW-Sheboygan, garden clubs, local citizens)
	Enhance Wildwood Island by removing invasive species and planting with fruit bearing tree and shrub species
	Complete invasive species survey throughout AOC and prioritize species and areas for control
Other	Purchase Schuchardt property to include Willow Creek frontage
	Develop urban forestry management opportunities to minimize EAB impacts
	Establish baseline water quality monitoring sampling at Willow Creek and Sheboygan River (partner with Boy Scouts, Lutheran HS, Sheboygan South HS, Kohler HS, Oostburg HS, UW-Sheboygan)
	Restore priority wetlands within the AOC
	Install avian nesting structures within the AOC, evaluate target species that will benefit
	Evaluate fish passage and habitats within Weedens Creek and Onion River watersheds
	Complete fish passage inventory within AOC
	Work with Blackwolf Run GC to establish native riparian buffers along waterways and obtain certification as a Green golf course

Table 2: Prioritized Sheboygan River AOC Habitat Restoration Projects - Fish and Wildlife TAC Concensus (November 2010)

	Habitat Category	Project	Location Relevant to AOC Boundaries	Tier Screening (Version 1)	Tier Screening (Version 2)	BUI Addressed	Current Baseline Survey Directly/Indirectly Addresses	Ability to Implement in Two Years	Priority Ranking	Funding Source	Comments
1	Floodplain forest	Restore floodplain forest habitats to improve riparian connectivity, climate change, and wildlife habitat (songbird nesting and stopover)	Y	1	2		No				
2		Preserve existing floodplain forest habitats by establishing conservation easements - Include Holfeltz parcels west of Wildwood Island and Schuckhardt parcel	Y	1	1	Wildlife habitat	No	Y	Yes/Tier 1	NRDA, NRCS	Establish a program to obtain easements, include land trust
3		Map potential floodplain forest restoration projects within AOC (compare to FF impact areas)	Y	1	2		No				
4		Plant non-ash trees in high-ash areas within AOC (~$1000/acre)	Y	2	2		No			USFS	
1	Bank stabilization/naturalization	Kiwanis Park (public ownership) shoreline naturalization (replace concrete riprap)	Y	1	1	Wildlife habitat and population	No	Y	Yes/Tier 1	USEPA, Legacy Act	Link with Taylor Drive project - pilot project consideration
2		Taylor Drive parking area and Wildwood Island shoreline stabilization (public ownership)	Y	1	1	Wildlife habitat and population	No	Y	Yes/Tier 1	USEPA, Legacy Act	Link with Kiwanis Park project - pilot project consideration
3		Kiwanis Park opposite shoreline (private ownership) shoreline naturalization	Y	1	2		No				
4		Kohler property bank sloughing (3 areas)	Y	1	1	Wildlife habitat	No	likely	Yes/Tier 1	USEPA	Assessment needed to evaluate cause
5		Plank Road trailhead bank stabilization project	Y	1	2		No				
6		Enhance riparian buffers along private residences and Kohler stables	Y	1	3		No				
7		Transitional bank habitat (segment from I-43 to Penn Ave) - set targets (i.e. linear feet, etc.)	Y	1	1	Wildlife habitat and population	No	Y	Yes/Tier 1	USEPA	Project considers prioritizing bank naturalization projects within segment
8		Habitat baskets / seawall improvements	Y	2	3		No				
1	Aquatic	Remove or construct fish passage at Walderhaus dam (reconnect approx. 6 miles of river) for steelhead, coho, chinook, smallmouth, and northern pike	Y	2	2		No				
2		Remove or construct fish passage at River Bend dam (reconnect approx. 6 miles of river) for steelhead, coho, chinook, smallmouth, and northern pike	Y	2	2		No				
3		Redesign Lutheran High School pond as wetland with connection to river to promote northern pike spawning habitat	Y	1	1	Fish habitat and population	No	Y	Yes/Tier 1	USEPA, USACE	Hydraulics study needed, planning to be completed in 2 years
4		Establish sturgeon stocking program and restore in stream habitat	Y	2	3		No				
5		Create northern pike spawning habitat by planting emergent species in shallow water zone in backwaters near Wildwood Island * - identify and address structural problem	Y	1	1	Fish habitat and population	No	Y	Yes/Tier 1	USEPA, Legacy Act, USFWS	Review historic air photos, talk with City, multiple ecological benefits, timeline based
6		Retrofit Willow Creek/I-43 culvert to improve fish passage and retrofit with daylight windows	Unk	1	2		No				
7		Retrofit Willow Creek/Glendale Road culvert to improve fish passage	Unk	1	2		No				
8		Remove Willow Creek/Erie Avenue culvert on Kohler property to improve fish passage and restore channel	Unk	1	2		No				
9		Remove large debris dams in Willow Creek downstream from Glendale Road	Unk	1	2		No				
10		Create woody debris accumulation areas within upper Sheboygan River - upstream of Walderhaus dam	Y	1	1	Fish habitat	No	Y	Yes/ Tier 1	USEPA	Talk to Fish Mgr., add woody debris
11		Attach fish cribs to sheet pilings along urban areas	Y	1	3		No				
12		Smallmouth bass habitat improvement within lower Sheboygan River - downstream of Wildwood Island	Y	1	1	Fish habitat	No	Y	Yes/Tier 1	USEPA, Legacy Act	Pop. loss from toxicity, turbidity, habitat degradation; add rock piles/woody debris
13		Schuckardt Parcel in-stream cold water improvements	Unk	1	2		No				
14		Weedens Creek - In-stream habitat improvements	Unk	1	2		No				
1	Stormwater	Taylor Drive stormwater BMPs	Y	1	2		No				
2		Kiwanis Park storm sewer outfall(s) stabilization and stormwater treatment	Y	1	2		No				
3		Plank Road trailhead groundwater infiltration pilot project	Unk	2	3		No				
4		Install stormwater BMPs within DOT ROW to promote groundwater infiltration and improve Willow Creek water quality	Unk	2	3		No				
5		Blue Harbor rain gardens / infiltration	Y	2	3		No				

Table 2: Prioritized Sheboygan River AOC Habitat Restoration Projects - Fish and Wildlife TAC Concensus (November 2010)

	Habitat Category	Project	Location Relevant to AOC Boundaries	Tier Screening (Version 1)	Tier Screening (Version 2)	BUI Addressed	Current Baseline Survey Directly/Indirectly Addresses	Ability to Implement in Two Years	Priority Ranking	Funding Source	Comments
1	Recreational	Taylor Drive parking improvements and fishing access	Y	2	2		No				
2		Establish greenway along Sheboygan River and Willow Creek with connection to Plank Road Trail	Unk	2	3		No				
3		Kiwanis Park boat landing improvements and fishing access	Y	2	2		No				
4		Schuckardt Parcel acquisition	Y	1	1	Wildlife habitat	No	Y	Tier 1(acquire) Tier 2 (restore)	NOAA, NRDA, DNR, WCMP, Co.	Needs guidance regarding applicability from USEPA, talk to City/Town/landowner
1	Invasive Species	Enhance existing floodplain forest habitats by managing for invasive species	Y	1	2		No				
2		Establish invasive species control program (partner with Boy Scouts, Lutheran HS, Sheboygan South HS, Kohler HS, Oostburg HS, UW-Sheboygan, garden clubs, local citizens)	Y	2	3		No				
3		Enhance Wildwood Island by removing invasive species and planting with fruit bearing tree and shrub species	Y	1	1	Wildlife habitat	No	Y	Yes/Tier 1	USEPA/Legacy Act	Part of plan for Wildwood Island
4		Complete invasive species survey throughout AOC and prioritize species and areas for control	Y	1	3		No				
5		Replace Japanese knotweed and Phragmites with high value species along streambanks (consider teasel, crown vetch, buckthorn, and RCG control as secondary species)	Y	2	1	Wildlife habitat	No	Y	Yes/Tier 1	USEPA, USFS	Incorporate invasive species control into other site-specific projects
6		Focus on newly emerging invasive populations within AOC	Y	1	3		No				
1	wildlife	Promote mink population	Y	2	2						
2		Eliminate waterfowl consumption advisory - mallards and lesser scaup	Y	2	2						
3		Establish habitat for migratory songbirds	Y	1	1	Wildlife habitat	No	Y	Yes/Tier 1	USEPA/Legacy Act	Linked with Tier 1 shoreline projects on public lands, prioritize lower river
4		Promote wood duck nest success	Y	2	2						
5		Increase king fisher populations	Y	2	2						
6		Increase wetland species diversity through restoration	Y	2	2						
7		Add nesting structures for raptor (eagles, osprey)	Y	2	2						
8		Install purple marten / tree swallow boxes on private lands near AOC waterways	Y	1	2						
9		Increase floodplain forest habitat for red-shouldered hawks	Y	1	2						
		Reduce goose populations (reduce mowed grass and increase shrub cover in riparian zone)	Y	2	3						
		Summary: The following seven (7) projects recommended as Tier 1 projects (Projects lumped by location)									
		1a) Restore riparian woody habitat on public lands east of I-43 to improve fish and wildlife habitat and reduce stormwater impacts (Kiwanis Park and Wildwood Island).									
		1b) Rehabilitate stormwater outfalls in Kiwanis Park or other public lands below Taylor Drive (Kiwanis Park and Wildwood Island).									
		2) Re-design Lutheran High School pond to wetlands and create northern pike spawning habitat with link to Taylor Drive fishing area.									
		3) Restore aquatic and wildlife habitat, stabilize shoreline, and control invasive species on Wildwood Island and adjacent lands.									
		4) Acquire Schuckhardt parcel to preserve large tract from development and protect wildlife habitat, coldwater aquatic habitat (groundwater protection), and historically significant land adjacent to the AOC.									
		5) Control pioneer colonies of invasive plants (following baseline survey).									
		6) Restore in-stream smallmouth bass habitat in upper and lower river segments.									
		7) Stabilize sloughing banks in upper river to reduce sedimentation.									

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
TTY Access via relay - 711

November 5, 2010

John Perrecone
RAP/AOC Program Manager
Great Lakes National Program Office
US EPA, Region 5
77 West Jackson Blvd.
Chicago, IL 60604

Subject: Sheboygan River AOC Fish & Wildlife Habitat BUI Projects

Dear Mr. Perrecone,

A Sheboygan River AOC technical advisory team comprised of Citizen Advisory Committee members, UW Extension Basin Educator, Fish and Wildlife Service, Wisconsin Department of Natural Resources (DNR), and NOAA resource managers has identified projects that can run concurrent with the GLRI-funded DNR project to collect critical baseline data for a fish and wildlife habitat restoration plan. The technical team is grateful for the assistance and consultation by Kevin O'Donnell, GLNPO, in compiling and prioritizing the projects. Taking action to delist the Sheboygan River AOC is a priority for DNR. We welcome this opportunity to identify key fish and wildlife habitat projects that will make significant strides towards delisting the Fish & Wildlife Habitat BUI in the Sheboygan River AOC.

The project list is consistent with the GLRI Action Plan, derived with local support and is science-based. These projects will be the principle projects identified in the Sheboygan River Delisting Strategy (Stage II report). Upon the completion of the fish and wildlife habitat restoration project, additional efforts to remove the Fish & Wildlife Population BUI and Fish & Wildlife Habitat BUI will be identified and acted on. These habitat projects in concert with the planned sediment remediation projects by Superfund followed by a Legacy Betterment action are the necessary actions to restoring the Sheboygan River and will benefit the local and state economy.

Sincerely,

Stephen Galarneau
Director
Office of the Great Lakes

C: Kevin O'Donnell, GLNPO
Vic Pappas, WDNR
Deb Beyer, UWEX

Sheboygan River AOC Tier 1 restoration project summary
November 5, 2010

- Seven projects restore or protect fish and wildlife habitat on an estimated
  - 217 acres,
  - 0.75 mile of shoreline, and
  - 1.25 miles in-stream.
- Two projects for project management activities required for delisting BUIs
- Two projects will help to successfully achieve the accelerated timeline for delisting the fish and wildlife BUIs.

Project title	**Potential impacts**	**Budget request**
Kiwanis Park Shoreline Stabilization, Naturalization and Habitat Improvement	.75 mile of shoreline	$3,000,000
Taylor Drive Northern Pike Spawning Area	6 acres and .25 stream miles	$690,000
Restoration of Wildwood Island Fish and Wildlife Habitat	11 acres island and riparian habitat	$632,500
Acquisition of Schuckardt parcel for habitat protection	180 acres uplands, wetlands, tributary stream, springs	$1,260,000
Smallmouth Bass Habitat Assessment and Enhancement	1 stream mile(?), TBD	$100,000
Targeted Invasive Species Control in the AOC	10 acres (?), TBD	$26,484
Sloughing Banks Stabilization in Upper River	10 acres (?) TBD	$52,000
	Subtotal	***$5,760,984***
Other Support:		
Two Sheboygan River AOC restoration project managers (contractors?)	Support the accelerated timeline toward delisting BUIs	$200,000
Sheboygan River AOC group facilitation and education 60% FTE for 1.5 years (Contract with UWEX)	Support the accelerated timeline toward delisting BUIs	$82,301
Development of Fish and Wildlife Population and Habitat Restoration Plan (contractor)	Required for delisting fish and wildlife BUIs as per 2008 Delisting Targets Final Report	$111,300
Evaluation of waterfowl consumption advisories within the Sheboygan River AOC	Essential data needed for delisting wildlife consumption BUI	$148,518
	Subtotal	***$542,119***

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Sloughing Banks in Sheboygan AOC - Upper River

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: TBD

Name of Organization/Agency:

Address:

Phone Number: **E-mail:**

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: TBD miles **Acres restored:** TBD acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners:

Kohler Corporation would need to agree to project since it is likely they own 5 identified banks.

PROJECT LOCATION

County, Township, Section, Range:

County - Sheboygan

Village - Kohler

PLSS - T 15N, R 23E, S 31 & 32

Map - "Sloughing Bank Map.pdf"

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project:

Bank erosion is a natural process that contributes beneficial woody debris to aquatic systems. This project however, will address sedimentation from large sections of unstable and failing banks that are adversely impacting aquatic communities (fish and benthos) and associated wildlife populations.

The F&W TAC identified five sloughing banks in the Upper River during a reconnaissance survey (Sept. 2010). These will be targeted for restoration by 1) completing a survey of the AOC to confirm these are priority sites, 2) evaluating river hydrology and adjacent land use to determine causes of sloughing, 3) regrading to a more stable slope (if appropriate), 4) stabilizing bare soil using a combination of live native plantings, bioengineering techniques, and rock stabilization of the bank toe. A more complete study of the river to identify root causes of sloughing banks and watershed solutions is strongly recommended as a Tier 2 project.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials		$24,000	
Travel		$3,000	
Contracts		$24,000	
Other _____	permits	$1,000	
Other _____			
SUBTOTAL	**$**	**$**	**$**
Indirect Costs			
TOTAL	$0	$52,000	$52,000

BUDGET NOTES:

Consultant est. at $120/hr - QAPP, assessment, planning, administration, and reporting (5 weeks).

Supplies & materials estimated based on:

5 banks treated, each 100' linear feet. 2 x fieldstone toes & whole tree terraces ($17,000), 2 x tree revetments ($3,000), 1 x log raft structure ($2,000, provides fish habitat while stabilizing bank), native plantings ($2,000). (See emails beteween E. Hanson and C. Pierce 11/3/10 for more details on price estimates). These are VERY rough draft estimates, grading costs not included. Travel costs & administration time unknown.

Attachment A - Photos showing 2 of the 5 identified sloughing banks in the Upper Sheboygan River.

Bank 1

Bank 4 (?)

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Sheboygan River AOC Smallmouth Bass Habitat Enhancement

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Travis Motl - Fisheries Biologist

Name of Organization/Agency: Wisconsin Department of Natural Resources

Address: 1155 Pilgrim Rd, Plymouth, WI 53073

Phone Number: 920-892-8756 X 3049 **E-mail:** travis.motl@wisconsin.gov

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: To Be Determined miles **Acres restored:** NA acres

Acres preserved (acquisition only): NA acres

PROJECT PARTNERS

List any project partners: ?

PROJECT LOCATION

County, Township, Section, Range: To Be Determined

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: See Attachment

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts			
Other _____			
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$	$

BUDGET NOTES: Smallmouth Bass Habitat Improvement = $75,000 per mile

Habitat Inventory = $25,000

Smallmouth bass habitat degradation is apparent within stretches of the Sheboygan River AOC project boundaries. For this reason I recommend habitat enhancement based on standard practices. Sediment reduction can be achieved through the placement of scour structures. It is common practice to place large boulders as scour structures to speed water flow and increase turbulence in a localized area thus increasing the rate that fine sediment is scoured away from that area. Greater scour deepens the channel and exposes habitat.

Often coupled with the placement of scour structures is the addition of in-stream cover. Cover is a term that describes characteristics of or objects in a stream that provide shelter or hiding places for fish. Abundance and biomass of warmwater gamefish in a section of stream tend to be positively related to the amount of cover present. Any number of objects may be considered cover for fish but in this instance logs and large woody debris would be my recommendation to keep with natural aesthetics and functionality. Logs and large woody debris would need to be pinned in place by the boulders installed as scour structures or otherwise secured to the river banks to prevent unwanted movement downstream. Depending on habitat enhancement locations, riparian landowner permissions would be needed to carry out habitat work.

The key to success in any habitat improvement project is to first identify and then improve the characteristics of the habitat that are limiting to the fish populations of interest. Identification of specific limiting habitat characteristics if often difficult and requires detailed quantitative data on the physical and biotic characteristics of the stream prior to improvement. Based on these needs I would recommend a historic and current inventory of the habitat and aquatic communities in the project area. Macro invertebrate studies are being conducted fall of 2010 and fish surveys are to be conducted spring/summer of 2011. A quantitative habitat survey is yet to be scheduled.

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Taylor Drive Northern Pike Spawning Area - Fish and Wildlife Habitat Restoration Project

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Jon Gumtow

Name of Organization/Agency: Sheboygan River Basin Partnership

Address:

Phone Number: (920) 980-2800 **E-mail:** Jon.Gumtow@Stantec.com

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: 0.25 miles **Acres restored:** 6 acres

Acres preserved (acquisition only): 0 acres

PROJECT PARTNERS

List any project partners: City of Sheboygan, Sheboygan County, Wisconsin DNR, US Fish and WIldlife Service, US EPA, Sheboygan River Basin Partnership

PROJECT LOCATION

County, Township, Section, Range: Sheboygan River AOC, Sheboygan County, WI

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: The Sheboygan River AOC F&W TAC has identified restoration of a tributary to the Sheboygan River and rehabilitation of an existing constructed wildlife pond as a Tier 1 project to replace the loss of fish and wildlife habitat within the middle river segment of the AOC. Restoration of this 6-ac system will provide northern pike spawning habitat and improve fish passage/connectivity of the Sheboygan River and adjacent wetlands . Rehabilitation of the wildlife pond will increase the emergent wetland zone and improve habitat for herps and waterbirds.

Due to the project setting, the TAC acknowledges that this project requires preliminary design analysis to evaluate the hydraulics and performanance prior to constructoin. Therefore, a phased approach is proposed to include design in Year 1 followed by construction in Year 2.

The SRPB has made initial contacts with the landowner (Sheboygan County) who is willing to participate in the project.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts		690,000	690,000
Other _____			
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$690,000	$690,000

BUDGET NOTES:

$100,000 (Planning and Preliminary Design Analysis)

$500,000 (Construction estimate)

Total $690,000 (includes 15% contingency)

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Schuckhardt Parcel Acquisition - Fish and Wildlife Habitat Protection Project to Delist the Sheboygan River AOC

Project Type (check one): ☒ Land Acquisition ☐ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Jon Gumtow

Name of Organization/Agency: Sheboygan River Basin Partnership

Address:

Phone Number: (920) 980-2800 **E-mail:** Jon.Gumtow@Stantec.com

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: miles **Acres restored:** acres

Acres preserved (acquisition only): 180 acres

PROJECT PARTNERS

List any project partners: City of Sheboygan, Town of Sheboygan, Sheboygan County, Wisconsin DNR, US Fish and WIldlife Service, US EPA, Sheboygan River Basin Partnership, Trout Unlimitied, Glacial Lakes Conservancy

PROJECT LOCATION

County, Township, Section, Range: Sheboygan River AOC, Sheboygan County, WI

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: The Sheboygan River AOC F&W TAC has identified acquisition of the Schuckhardt parcel as a Tier 1 project to replace the loss of fish and wildlife habitat and prevent population degradation within the middle river segment of the AOC. Acquisition of this parcel provides an opportunity to preserve a unique large tract of unfragmented land adjacent to the AOC from urban development. This parcel contains a diverse mix of high quality habitats including upland forested/shrub (70-ac), wetland forest/shrub/sedge (50-ac), steep slopes, groundwater seeps, scattered cropland (60-ac) , and a Class II trout stream. The parcel and surrounding lands are also historically significant with documented historic and archealogical sites.

The SRPB has made initial landowner contact who is willing to consider purchase or easement options. The SRBP has also made initial contacts with community leaders to gain support and identify a long term land steward. Habitat restoration is a future task.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts			
Other _____			
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$800,000	$800,000

BUDGET NOTES:

Option 1:

$1,260,000 (Land acquisition budget: 180 acres x $7,000/acre = $1,260,000)

Option 2:

$400,000 (Conservation easement budget: 100 acres x $4,000/acre = $400,000)

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Restoration of Wildwood Island Fish and Wildlife Habitat

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Jon Gumtow

Name of Organization/Agency: Sheboygan River Basin Partnership

Address:

Phone Number: (920) 980-2800 **E-mail:** Jon.Gumtow@Stantec.com

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: 0 miles **Acres restored:** 11 acres

Acres preserved (acquisition only): 0 acres

PROJECT PARTNERS

List any project partners: City of Sheboygan, Sheboygan County, Wisconsin DNR, US Fish and WIldlife Service, US EPA, Sheboygan River Basin Partnership

PROJECT LOCATION

County, Township, Section, Range: Sheboygan River AOC, Sheboygan County, WI

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: The Sheboygan River AOC F&W TAC has identified restoration of a natural island complex as a Tier 1 project to replace the loss of fish and wildlife habitat and populations within the lower river segment of the AOC. Restoration of this 11-ac riparian complex will provide northern pike spawning habitat, enhance existing emergent wetland and floodplain forest habitat, remove invasive plant species (phragmites, buckthorn), plant native fruiting plants,and protect the island using bioengineered bank stabilization techniques. This complex provides a natural refuge for fish and wildlife due to it's isolated location and backwater setting which is unique to the AOC, especially the urbanized segment. Restoration of this complex will improve habitat for herps, waterbirds, songbirds, small mammals, and raptors.

Design and construction will be completed concurrently.

The SRPB has made initial contacts with the landowner (City of Sheboygan) who is willing to participate in the project.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts		632,500	632,500
Other _____			
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$632,500	$632,500

BUDGET NOTES:

$100,000 (Planning and Design)

$25,000 (Permitting)

$75,000 (Invasive species removal)

$150,000 (Native species planting)

$200,000 (400 feet bank stabilization)

Total $632,500 (includes 15% contingency)

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Kiwanis Park Shoreline Stabilization, Naturalization and Habitat Improvement

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Peter Pittner

Name of Organization/Agency: Sheboygan River Basin Partnership

Address:

Phone Number: 920-458-6164 **E-mail:** peter@sheboyganrivers.org

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: 3/4mile of shorelinemiles **Acres restored:** acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners: Sheboygan River Basin Partnership, City of Sheboygan

PROJECT LOCATION

County, Township, Section, Range: Sheboygan County, T15N R23E Section 22

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project:

The shoreline and habitat of the Sheboygan River along Kiwanis Park in Sheboygan has been degraded by erosion, vegetation removal, and construction of several storm water outfalls. Restoration of the shoreline habitat and addressing storm water outfalls and bank erosion between New Jersey Avenue and 14th Street along the Kiwanis Park shoreline are the focus of this project.

Good quality shrub and tree habitat is missing from the landscape along the Sheboygan River. This type of habitat is beneficial to many bird species along the river for nesting and brood rearing. It is also important for many species during migration. The Lake Michigan shoreline is a heavily-used migration route for many birds. The close proximity to Lake Michigan makes this area crucial for migratory habitat. Shrubs are one of the most used habitat types during migration.

The goal of this project is to restore the habitat of the shoreline, as well as stabilize the riverbanks to reduce sedimentation and associated habitat impacts. Actions undertaken as part of the project include:

- The erosive flows from storm water outfalls will be addressed by retrofitting existing outlet structures.
- The riverbanks will be stabilized using hard structures and geotextile fabrics in combination with vegetative re-establishment.
- Habitat will be re-established by planting the stabilized banks with a combination of native trees, shrubs, and herbaceous vegetation.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			50,000
Supplies & Materials			
Travel			
Contracts			2,950,000
Other _____			
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$	$3,000,000

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Group process facilitation and community education toward delisting the Sheboygan River fish and wildlife BUIs

Project Type (check one): ☐ Land Acquisition ☐ Restoration Project ☒ Other process facilitation/education

CONTACT INFORMATION

Project Manager: Ken Genskow

Name of Organization/Agency: University of Wisconsin - Extension

Address: ERC, 445 Henry Mall, Rm 202, Madison, WI 53706-1577

Phone Number: 608-262-2031 **E-mail:** kgenskow@wisc.edu

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: miles **Acres restored:** acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners: WDNR, USEPA, USFWS, NOAA, Sheboygan River Basin Partnership

PROJECT LOCATION

County, Township, Section, Range: Sheboygan County.

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: This project is to help expedite technical advisory committee (TAC), citizen advisory committee (CAC) and agency work towards delisting the fish and wildlife population and fish and wildlife habitat BUIs by providing group process facilitation and development of educational materials and media for the Sheboygan River AOC. This project will provide 60% FTE for 1.5 years to coordinate and facilitate TAC and CAC group processes, facilitate communication among TAC and CAC members, and develop educational materials and media for the public. Such support is critical to keeping stakeholders and partners informed, engaged, and contributing to the processes.

This effort builds upon the 20% FTE funded for these purposes through a GLRI 2010 grant awarded to the University of Wisconsin - Extension. The additional 60% FTE for 1.5 years requested here is due to the increased activity in the Sheboygan River AOC and because two GLRI 2010 proposals for this work were not funded.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits		65,565	65,565
Supplies & Materials		1,500	1,500
Travel		4,500	4,500
Contracts			
Other _____			
Other _____			
SUBTOTAL	$	$71565	$71565
Indirect Costs		10,736	10,736
TOTAL	$	$82,301	$82,301

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Development of the Sheboygan River AOC fish and wildlife population and habitat restoration plan

Project Type (check one): ☐ Land Acquisition ☐ Restoration Project ☒ Other data analysis, planning

CONTACT INFORMATION

Project Manager: Jon Gumtow

Name of Organization/Agency: Sheboygan river Basin Partnership

Address:

Phone Number: 920-980-2800 **E-mail:** Jon.Gumtow@Stantec.com

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: miles **Acres restored:** acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners: WDNR, USEPA, USFWS, NOAA, City of Sheboygan, Sheboygan County, others

PROJECT LOCATION

County, Township, Section, Range: Sheboygan River AOC

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: The development of a fish and wildlife and habitat restoration plan is required for delisting the Sheboygan River AOC fish and wildlife population and habitat BUIs, as per the 2008 Sheboygan River AOC Delisting Targets Final Report. This project is a logical next step in analyzing and using the WDNR's 2011 ecological assessment work (funded primarily through the 2010 GLRI) and will compile data gathered through the WDNR's assessment along with other pertinent data, such as locations of stormwater structures, and develop a fish and wildlife population and habitat restoration plan. This work will be done in close collaboration with the Sheboygan River AOC Fish and Wildlife TAC, the Sheboygan River AOC CAC, and other partners. Some of this work may be done concurrently with the WDNR's fish and wildlife assessment work. Therefore the project time period begins immediately and runs through Sept. 2012.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts		111,300	111,300
Other _____			
Other _____			
SUBTOTAL	$	$111,300	$111,300
Indirect Costs			
TOTAL	$	$111,300	$111,300

BUDGET NOTES:

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: EVALUATION OF WATERFOWL CONSUMPTION ADVISORIES WITHIN THE SHEBOYGAN RIVER AREA OF CONCERN

Project Type (check one): ☐ Land Acquisition ☐ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Sean M. Strom

Name of Organization/Agency: WI Department of Natural Resources

Address: 101 S. Webster St. Box 7921, Madison, WI

Phone Number: (608) 264-6121 **E-mail:** Sean.Strom@Wisconsin.gov

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY)

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☐ Loss of fish and wildlife habitat
- ☒ Restrictions on fish and wildlife consumption
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☐ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: miles **Acres restored:** acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners:

PROJECT LOCATION

County, Township, Section, Range:

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: Waterfowl consumption advisories have been in place along the Sheboygan River since 1987. However, these consumption advisories have not been re-evaluated since their inception. Therefore, we propose to re-examine the state of the advisories and determine if any of the existing advisories and subsequent biological use impairments (BUIs) can be removed or if any additional advisories are warranted.

Advisories currently in place for the Sheboygan River AOC include an advisory not to eat mallards from the Sheboygan River from Sheboygan Falls downstream to the river's mouth at Lake Michigan. In addition, an advisory not to eat scaup from Sheboygan Harbor is also in place.

A dabbler species (mallard) and a diving species (scaup) will be collected at each section of the river where advisories are currently in place. In addition, we will also collect samples from resident Canada geese. Ten samples of each species from each location will be collected each year for three consecutive years.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits		2532	
Supplies & Materials		900	
Travel		2250	
Contracts		142470	
Other _____			
Other _____			
SUBTOTAL	**$**	**$148152**	**$**
Indirect Costs		366	
TOTAL	$	$148518	$

BUDGET NOTES: The project funds requested are for 3 years of sample collection. The salary of all the Project Leaders will be included as the non-federal match. The WDNR will also provide additional staff time, as needed, beyond the salary amounts designated in the stated budget.

Sheboygan AOC TAC Restoration Proposal

Due November 4, 2010

Project Name: Targeted Invasive Species Control in the Sheboygan AOC

Project Type (check one): ☐ Land Acquisition ☒ Restoration Project ☐ Other (fill in type of project)

CONTACT INFORMATION

Project Manager: Betsy Galbraith

Name of Organization/Agency: U.S. Fish & Wildlife Service, Green Bay Field Office

Address: 2661 Scott Tower Drive

Phone Number: (920) 866-1753 **E-mail:** betsy_galbraith@fws.gov

BUI(S) THAT THIS PROJECT WILL HELP DELIST (CHECK BOX ELECTRONICALLY):

For more information on Sheboygan River & Harbor BUIs, read the description at http://www.epa.gov/greatlakes/aoc/sheboygan.html#Beneficial_

- ☒ Loss of fish and wildlife habitat
- ☐ Restrictions on fish and wildlife consumptions
- ☐ Fish tumors or other deformities
- ☐ Bird or animal deformities or reproduction problems
- ☐ Degradation of phytoplankton and zooplankton populations
- ☐ Degradation of benthos
- ☐ Eutrophication or undesirable algae
- ☒ Degradation of fish and wildlife populations
- ☐ Restrictions on Dredging Activities

POTENTIAL RESTORATION IMPACTS

Stream miles restored: miles **Acres restored:** TBD acres

Acres preserved (acquisition only): acres

PROJECT PARTNERS

List any project partners: U.S. Fish & Wildlife Service, Wisconsin Bureau of Endangered Resources, Sheboygan River Basin Partnership, City of Sheboygan, Kohler Company

PROJECT LOCATION

County, Township, Section, Range: various locations throughout 14 mile AOC

*Attach a map or aerial photo of the project site to this proposal

Briefly describe the project: This project will eradicate small, isolated patches of several invasive species that provide the greatest threat to fish and wildlife habitat within the AOC including Japanese knotweed *(Polygonum cuspidatum)* and Giant reed grass *(Phragmites australis).* These two species are generally not widespread throughout the AOC with population levels that are currently controllable. The project will proceed using the following steps: 1) Populations of invasive species within the AOC will be inventoried and mapped, 2) Local landowners, both private and municipal, will be contacted for permission to treat the patches of invasive species that reside on their property, 3) Any necessary permits will be obtained, 4) Herbicides will be used to treat the invasive plants for at least two successive growing seasons with mowing prior to treatment for Japanese Knotweed populations, and 5) Continued monitoring and mapping will be used to determine treatment success and follow-up actions.

This project will benefit habitat for fish and wildlife species such as northern pike, migratory birds, and amphibians specifically in the near-shore, floodplain, and wetland areas throughout the AOC. *Phragmites* outcompetes native vegetation, alters the water regime through increased evaporation and trapping of sediments, and results in loss of food and shelter for wildlife. Japanese knotweed inhabits banks and shorelines, creating an impenetrable wall of vegetation, reducing plant diversity, and leaving banks vulnerable to erosion during the winter months when it dies back.

PHOTOS & OTHER COMMUNICATION

Submit at least two recent digital photos of the project.

BUDGET

Budget Category	Matching Funds & In-Kind Services	Project Funds Requested	Total Estimated Project Expenses
Salaries/Benefits			
Supplies & Materials			
Travel			
Contracts		$26,334	$26,334
Other: permits		$150	$150
Other _____			
SUBTOTAL	$	$	$
Indirect Costs			
TOTAL	$	$26,484	$26,484

BUDGET NOTES: Contracted costs include 1) two seasons of herbicide applications for 1.12 acres of invasive species plus mowing of Japanese knotweed prior to treatment (based on 12 cent per acre cost), 2) pre and post assessment of targeted invasive species in project area including GPS field mapping and follow-up monitoring of the 14 mile AOC for two successive growing seasons (136 hours), 3) QAPP writing (40 hours), 4) landowner contacts (40 hours), and 4) administrative reporting (40 hours). Consultant costs were billed at $80/hour.

Project Title:
EVALUATION OF WATERFOWL CONSUMPTION ADVISORIES WITHIN THE SHEBOYGAN RIVER AREA OF CONCERN

Project Applicant: WI Department of Natural Resources, Bureau of Wildlife Management

Contact Person:
Sean M. Strom
WI Dept of Natural Resources
101 S. Webster St.
Box 7921
Madison, WI 53707
(608) 264-6121
Sean.Strom@Wisconsin.gov
DUNS Number:

Type of Organization: State agency

Total Funding Request: **$148,518**

Project Description:
Waterfowl consumption advisories have been in place along the Sheboygan River since 1987. These advisories are the result of contamination from persistent, bioaccumulative, and toxic chemicals, primarily polychlorinated biphenyls (PCBs). However, these consumption advisories have not been re-evaluated since their inception. Therefore, we propose to re-examine the state of the advisories and determine if any of the existing advisories and subsequent biological use impairments (BUIs) can be removed or if any additional advisories are warranted.

Advisories currently in place for the Sheboygan River AOC include an advisory not to eat mallards from the Sheboygan River from Sheboygan Falls downstream to the river's mouth at Lake Michigan. In addition, an advisory not to eat scaup from Sheboygan Harbor is also in place.

Methods:
Based on historical data, we will sample species similar to those collected during the WDNR's original contaminants monitoring program conducted in the 1980's. A dabbler species (mallard) and a diving species (scaup) will be collected at each section of the river where advisories are currently in place. In addition, we will also collect samples from resident Canada geese. Ten samples of each species from each location will be collected each year for three consecutive years.

We realize the difficulty regarding the issuance of consumption advisories for waterfowl. Because they are mobile and migratory, it is difficult to pinpoint whether waterfowl have accumulated contaminants from outside WI or the United States or from a location in the state other than the area where they are harvested. To address this issue, we will focus on

collecting adult mallards and Canada geese known to be members of a resident flock and/or juvenile birds known to have been hatched in Wisconsin. In addition, we will also try to collect migrating mallards in order to determine if a difference exists in the level of contamination between resident and migrant mallards.

Samples for analysis will be submitted to the WI State Lab of Hygiene (SLOH). Samples will be analyzed for legacy contaminants (PCBs, Pb, Hg, DDT/DDE, OC pesticides) as well as emerging contaminants such as PBDEs, PFOS, and PFOA. Wildlife Health will evaluate and interpret sample results from the SLOH. This process will include consultation with the Department of Health Services (DHS) on the interpretation of results.

Budget Sheet

Project Duration: June 1, 2011 - December 31, 2013

Personnel		
FTE		
	Sean Strom - Wildlife Toxicologist (Project Manager)	$0
	Wildlife Management Staff	$0
	FTE subtotal	$0
LTE	40 Hours @ $16.570/hr	$663
	LTE subtotal	$663
	Salary Total	$663
Fringe		
FTE	at 48.59%	$0
LTE	at 27.23%	$181
	Fringe Total	$181
Travel		
Site visits for sample collection		$750
	Travel Total (Yearly)	$750
Supplies		
Ammunition and sampling supplies		$300
	Equipment Total (Yearly)	$300
Laboratory Analyses		
30 Samples @ $1583/sample		$47,490
	Laboratory Analysis Total (Yearly)	$47,490
Total Direct Charges (Yearly)		$49,384
Indirect		
Salaries + Fringe * Indirect Rate (.1441)		$122
	Indirect Total	$122
Yearly Total	Yearly total for 3 consecutive years	$49,505
Total Project Cost	Combined total	**$148,518**

ATTACHMENT F

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February 2, 2011

10-1-18583 10-100

Mr. Jon Gumtow, P.W.S., P.S.S.
Stantec
706 Midway Road
Menasha, WI 54952

Subject: **Sheboygan River Area of Concern**

Dear Jon:

Attached are the conceptual cost estimate worksheets for the proposed Kiwanis Park and Wildwood Island projects. If, after your review, you need additional detail, please let me know.

Kiwanis Park

The proposed Kiwanis Park project has been divided into 5 "Reaches". **Reach 1** starts just upstream of the 14th Street Bridge and extends for a distance of about 750 feet. This reach is characterized by a steep riverbank with a vertical cut at the shoreline/water interface. The concept plan in this area calls for the shoreline to be stabilized with riprap or "softer structures" as appropriate. A unit cost of $600 per lineal foot was attributed to this section.

Reach 2 starts immediately above reach 1 and extends for a distance of approximately 750 feet. This reach is characterized by a flat riverbank with little erosive features. The concept plan for this section includes removal of invasive species and shoreline "clean up" within the footprint of a proposed 25' wide vegetative buffer. Replanting of the buffer with native species (including 2 trees per 100 lineal feet) is included in the $100 per lineal foot cost estimate for this reach.

Reach 3 extends upstream of reach 2 for a distance of approximately 750 feet. Efforts in this area will be similar to reach 2, however, less "cleanup" of existing invasive vegetation and debris is anticipated. A cost estimate of $50 per lineal foot is suggested, which includes planting of a 25' wide native vegetative buffer.

Upstream of Reach 3, the riverbank again steepens and becomes covered with brushy (mostly invasive) vegetation. In addition, concrete rubble has been placed in this area to provided steam bank stabilization. **Reach 4**, which extends for about 750 above Reach 3, appears to have relatively good access for the removal of debris and the placement of riprap at the water/shoreline interface. A cost estimate of $400 per lineal foot is suggested for this area, which includes planting of a 25' wide native vegetative buffer.

Reach 5 extends upstream of reach 4 for a distance of approximately 750 feet. Efforts in this area will be similar to reach 4, however, access in this area will be more difficult. A cost estimate of $500 per lineal foot is suggested, which includes planting of a 25' wide native vegetative buffer.

In addition to the above costs, contingencies were added for design and permitting, project administration, and construction phase services. A separate cost estimate of $300,000 was also provided for retrofits of existing stormwater outfalls that are located along the park property. In aggregate the conceptual cost estimate provided included the following:

• Project administration	$75,000
• Storm water outfall retrofits	$300,000
• Riverbank stabilization and earthwork	$1,380,000
• Re-establishment of native vegetation	$300,000
Total Cost Estimate	**$2,055,000**

Wildwood Island

The proposed Wildwood Island project has been divided into 2 segments. These include about 500' of shoreline along the west and northwest portion of the island and about 1000' of shoreline along the southeast bank of the southeast river channel. In each area the existing riverbank is steep and severely eroded, with about 5' vertical drop between the top of the bank and the water surface. Concept plans preliminarily call for the riverbank to be "cutback" on a 4:1 slope with riprap or other "softer structures", as appropriate, being placed at the water/shoreline interface. The newly graded riverbank will then be planted with native vegetation. A cost estimate of $265 per lineal foot is suggested for the riverbank section. An increase in price to $280 lineal food is suggested for work on the island due to increased difficulty in accessibility.

These conceptual cost estimates are provided only for work along the riverbank and do not include costs for work on the interior of the island, inland of the stream channel, or within the river. It is anticipated that administrative costs will be calculated as a part of that additional work, which is integral to this project and will be provided by others. The conceptual cost estimate provided includes the following stream bank restoration:

• 500' on Wildwood Island	$140,000
• 1000' on the southeast riverbank	$265,000
Total Cost Estimate	**$405,000**

If you have any questions, please contact us at (800) 969-7013.

Sincerely,
MILLER ENGINEERS & SCIENTISTS

Peter G. Pittner, P.S.S.
Vice President

Roger E. Strohm, P.E.
Senior Civil Engineer

PGP/sbt

Enclosures: Kiwanis Park and Wildwood Island Worksheets

I:\DATA\2010\18000\10-1-18583 Stantec\10-100 Concept Des Support\Cost Estimate.doc

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SUBJECT Kiwanis Park Shoreline Restoration JOB NO 10-1-12583 PAGE 1/3.

CLIENT SRBP (Local Sponsor?) DATE 1-17-2011 BY J.H.

PROJECT River Bank Restoration / Habitat CHECKED BY

BACKGROUND

EXHIBITS "A" & "B" ... NOV. 4, 2010 ... WITHOUT CONSENSUS ON WORK-SCOPE ... THE INITIAL RESTORATION ESTIMATES WERE PREPARED BY J.H.

NORTH 1/3 (4Z) ... Major Grading ... Armored Bank & Restoration ($300/L.F.)

MIDDLE 1/3 (Z) ... Minor Restoration ($75/L.F.)

SOUTH 1/3 (2Z) ... Concrete Removal ... Some Restoration ($150/L.F.)

THE PROBLEM WAS ... NO CONSENSUS.

EXHIBIT "C" ... TAC CONFERENCE CALL 12-16-20 (SEE ATTACHED) REALIZATION ... SCOPE FOR 11-4-2010 ESTIMATES ... TOO BROAD (AND EXPENSIVE).

EXHIBIT "D" ... TAC MEETING ON JAN. 11, 2011 ...
WALK-THRU SCHEDULED ... WED. JAN. 12TH 1:00 PM
(SEE PETER PITTNER'S NOTES & PHOTOS)

EXHIBIT "E" ... DOCUMENTATION FROM WALK-THRU. JAN. 12, 2011
(   )

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SUBJECT Kiwanis Park Shoreline Restoration JOB NO. 10-1-18383 PAGE 2/5.

CLIENT SCRAP (Local Sponsor?) DATE 1-17-2011 BY [initials]

PROJECT River Bank Restoration & Habitat CHECKED BY

Exhibit "F". Began work scope exhibit. 24" x 36"

Overlay of Aerial Photo. (1" = 100 FT.)

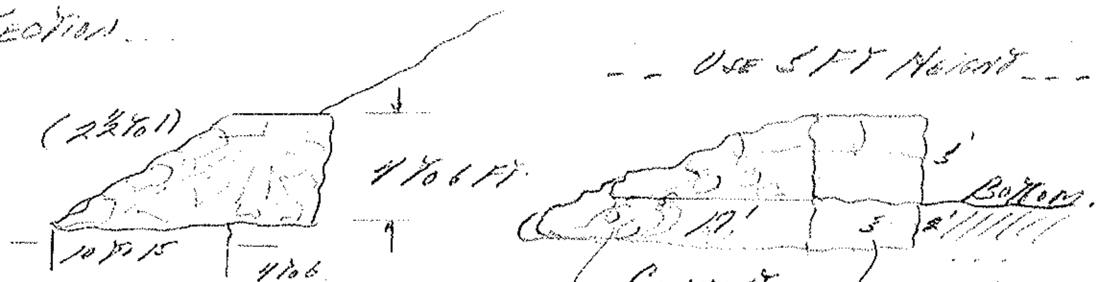
Beginning at North End.

(1.) Reach 1... Sta 0+00 to 7+50... 750 L.F. "Armored Stone"

Work in water's edge only.

Typ. Section...

-- Use 5 FT Height --



Convert 117 SQ.FT.

35 SQ.FT.

Use 150 SQ.FT. Avg. Section.

150 CU.FT./L.F. ... 5 CU.YDS./L.F.

Density: = 125#/C.F.

$ = [750 L.F. × 8.4 Tons/L.F. × $65/Ton]

= $409,500 (1.15)

Tons/L.F. = (5)(27)(125)/2000

8.4 Tons/L.F.

Stone: Purchase... $20/Ton

Haul... $5/Ton

Place $40/Ton

$65/Ton

Options: Work from Behind...

Reach ≤ 20'... OK.

Clear... 20' Wide...

with [illegible]

... Fence & Ha...

$5000/Day = < 100 Days. $.5 Million (OK)

Reach #1. OK

Cost: $475,000.

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SUBJECT Kiwanis Park Shoreline Restoration JOB NO. 10-1-1883 PAGE 3/5.

CLIENT SEBP (Local Sponsor?) DATE 1-19-2011 BY JHB.

PROJECT River Bank Restoration of Mouth CHECKED BY

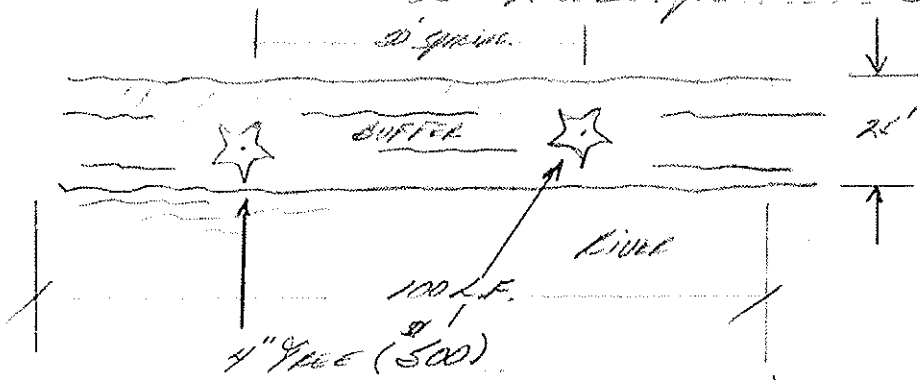
(2.) Reach #2 Sta. 7+50 To 15+00 750 L.F. "Intermittent"

Clean up Area. Create as "Buffer" of Vegetation
Some Fishing Access?

A) Work 5 Days ... @ $5000/day ... $25,000. a) (Total)

B) Plant. Per (750)(25)/9 = 2083 Sq. yds ...

Use 2500 Sq. yds ..... @ $10/sq.yd. ... $2500. b) (Total)



c) Major Trees. 2/Sta ... $1000/Sta. (7.5) = $7500. (Total)

D.) Grass. Per. (2500)(9)/43560 = .5 Acres..

@ $10000/Ac. = $5000. (Total)

Reach #2.

Cost: $25,000.

Σ_a = $42,500.

(1.15) Contingency

= 71,825.

Use

Note: We will continue to use $100/L.F. For Buffer Vegetation Restoration along the balance of the Park Frontage.

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SUBJECT Kiwanis Park Shoreline Restoration JOB NO. 10-1-18583 PAGE 4/5.

CLIENT SRRA (Local Sponsor?) DATE 1-17-2011 BY JM.

PROJECT River Bank Restoration & Habitat CHECKED BY

(3) Reach #3 Station 15+00 to 22+50 .. 750 L.F. .. "Clean-Up & Access"

Clean .. some limited plantings ... only

1/2 the effort of Reach #2 .... $50/L.F.

(750)(50) = 37,500(1.15) = $43,125.

Use, $40,000.

Reach #3

Cost: $40,000.

Reach #4 Station 22+50 to 30+00, 750 L.F. Concrete Rubble Cleanup & Buffer

This stretch of riverbank is littered

with concrete slabs/debris .. access here is good to excellent.

A.) Work 10 days ... at $5000./day .... $50,000. a)

Plus .. Hauling/Disposal .... Add, $25,000

B) Riprap Base ... following clearing/grubbing.

$150/L.F. (750) 1/2 Ac. @ 1000/Ac.

$112,500 + $5000. ... $117,500. b)

C.) Plus ..

Restoration at $100/L.F. (750) = $75,000. c)

Sub-total = $267,500.(1.15) = $307,625.

(4) Reach #4

Cost: $300,000.

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SUBJECT Kiwanis Park Shoreline Restoration JOB NO. 10-1-18893 PAGE 5/15.

CLIENT SRBP (Local Sponsor?) DATE 1-17-2011 BY

PROJECT River Bank Restoration & Habitat. CHECKED BY

(5.) Reach #5 Station 30+00 To 37+50 (Plus).

Difficult access. And higher banks...

Use Reach 4 as a base...

A) Work 10 days at $5000/day = $50,000.
plus hauling $25,000.

B.) Rip Rap Base... 1.5 times (117500)... ~~146,250~~ $175,000.

C. Restoration at $100/L.F. = $75,000.

Sub-Total = $325,000. (1.15) ≈ $375,000 (±).

Reach #5

Cost: $375,000.

Cost Summary: Reach	$/Reach
1.	475 K.
2.	75 K.
3.	40 K.
4.	300 K.
5.	375 K.

Construction: $1,265,000.

Plus: Design & Permitting (15%)... 190,000.

Plus: Const. Phase Services (15%) 190,000.

Project Total: $1,645,000. + Administrative Costs (By SRBP).

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SUBJECT Sheboygan River AOC JOB NO. 101-18583 PAGE 1/3

CLIENT Stantec DATE 1-28-11 BY PGP

PROJECT Wildwood Island CHECKED 1-31-11 BY PES

CLAY

Typical Cross Section

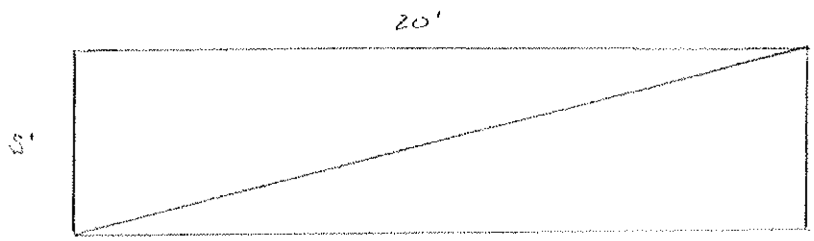
Unclassified Excavation

\$20.00 YD³

× 2 YD³/FT

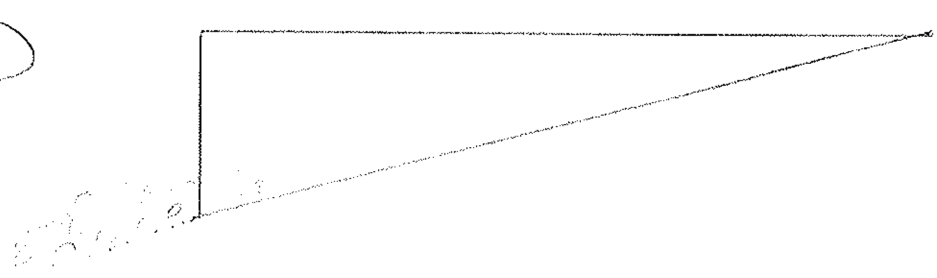
\$40/FT × 1.15

\$45/FT ✓



5' × 20' = 100 FT³/FT / 2 = 50 FT³/FT /27 = 1.85 SAY 2 YD³/FT

STONE



Rock Section 2-3' thick by 8-10 linear feet

SAY 2.5 × 9 = 22.5 FT³/FT /27 0.83

SAY 1 YD³/FT

TONS STONE $\frac{(1)(27)(125)}{2000}$ = 1.7 TONS/LF

SAY 1.7 TONS/LF @ \$65/TON

= 110.5 × 1.15 =

\$130 LF FOR STONE ✓

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SUBJECT Sheboygan River AOC — JOB NO. 10-1-18583 — PAGE 2/3

CLIENT Stantec — DATE 1-26-11 — BY PRP

PROJECT Willow Island — CHECKED 1-31-11 — BY RDS

FABRIC

SAY 10' WIDTH PER LF = 10 FT^2 / LF

$\frac{10}{9}$ = 1.11 X 1.15 SAY 1.3 YD^2/LF

AT $10 / YD^2 = $13 LF SAY $15.00 LF ✓

CLEAR & GRUB

20' WIDTH X 1' =

20 FT^2 / LF / 9 = 2.22 YD^2/LF

X 1.15 = 2.55 YD^2/LF

@ $5.00 / YD^2 17.00

SAY $13.00 LF ✓

SILT FENCE

SAY $2.00 LF ✓

SILT CURTAIN

SAY $10.00 LF ✓

REVEGETATE

FOR COST SAY 10,000/ACRE

25' WIDTH PER FOOT = $\frac{25 FT^2}{43560}$ = .0006 X 1.15

= .0007 X 10,000 = $7.00 LF ✓

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SCIENTISTS

SUBJECT Sheboygan River AOC JOB NO 10-1-19993 PAGE 3/3

CLIENT Grantee DATE 1-28-11 BY PGP

PROJECT Wildwood Island CHECKED 1-31-11 BY [illegible]

TOTAL:

45
130
15
13
2
10
7

#222 LF + 15% Design Fee = 255/LF

+ 5% Difficult Access = 268/LF

-SA1-

- Base Section Price P.L.F. = $265/LF
- Island Add Cost to Remove Mineshell = $2800/LF

MILLER
ENGINEERS
SCIENTISTS

PRELIMINARY

CONCEPT

N

STABILIZATION OF STEEP BANKS (DIFFICULT ACCESS) STORM OUTFALL RETROFIT

SHORELINE CLEANUP INVASIVES REMOVAL AND NATIVE BUFFER. STORM OUTFALL RETROFIT

INVASIVES REMOVAL AND NATIVE BUFFER

REMOVE DEBRIS & STABILIZE BANK

REMOVE DEBRIS & STABILIZE BANK (DIFFICULT ACCESS)

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00

KIWANIS PARK DR

RIVER PARK DR

N 14TH ST

N 15TH ST

N 17TH ST

N 18TH ST

S 14TH ST

S 15TH ST

S 17TH ST

NIAGARA AVE

WISCONSIN AVE

NEW YORK AVE

CENTER AVE

PENNSYLVANIA AVE

JEFFERSON AVE

VIRGINIA AVE

NEW JERSEY AVE

ONTARIO AVE

S PARK ST

SHEET	OF
1	1

CK	BY	JOB	DATE	SCALE
PGP	SMW	185B3-A	3-10-11	HOR. 1"=250' VER.

STANTEC

PROJECT NAME

PROJECT ADDRESS

PROJECT LOCATION

NO.	DATE	DESCRIPTION	BY

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PRELIMINARY
CONCEPT

N

SHEET 1 OF 1

BY	DESCRIPTION	DATE	NO.

SCALE HOR. 1"=250' VER.
DATE 3-10-11
JOB 18583-A
BY SMW
CK PGP

STANTEC
PROJECT NAME
PROJECT ADDRESS
PROJECT LOCATION

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