

**CONSTRUCTION SUMMARY
DEPOSIT POG1-B REMEDIATION
PHASE 2
GW PARTNERS, LLC**

1.0 BACKGROUND

Deposit POG1-B is located on the shore of Little Lake Butte des Morts, directly east of Deposit POG1-A. Deposit POG1-B consists of a relatively thin surface layer of wood chips, which is contaminated with low concentrations of polychlorinated biphenyls (PCBs), less than 50 milligrams per kilogram (mg/kg). Deposit POG1-A was dredged in the autumn of 2005, leaving an abrupt bank of approximately 2 to 4 feet on the west side of Deposit POG1-B. From this bank, Deposit POG1-B extends at a nearly level grade to the levee of the Menasha Lock and Channel.

To remediate Deposit POG1-B a two phase approach was developed. Phase I was intended to secure the deposit in the winter of 2006, before potential high water flooded the area during spring thaw. Phase I also included securing the slope of the adjacent Menasha Channel and Lock by installing riprap and removing trees. This work was completed in January 2006. Phase 2 of the remedial activities was outlined in a July 27, 2006 Work Plan and included grading the bank riprap and recycled construction road gravel to form a gradual slope into the lake. The Work Plan included filling the levee slope with clean imported soil fill and topsoil to a 3 to 4:1 grade. The newly formed shore slope and the relatively flat area between the levee and the shore would be covered with clean imported fill and topsoil. Following soil placement the site was to be seeded with native grasses and forbs and planted with shrubs. A line of trees was also proposed along the pedestrian path at the top of the levee.

Phase 2 remedial activities were completed in September through early November 2006. This document describes the work activities and construction materials used to complete Phase 2. Monthly updates will be provided to document site conditions until the vegetation is established and the site is stable.

2.0 LEVEE AND SHORE GRADING AND FILLING

A preconstruction meeting with STS, Synagro and the Department of Natural Resources was held September 20, 2006. STS provided grade-staking and construction started on September 25, 2006. A snow fence was erected along the pedestrian path to restrict site access. The snow fence will remain in place to protect plantings and the erosion control mat through the spring months of 2007.

The first construction activity included the grading of the bank riprap to form the shore slope. The voids in the riprap were filled with crushed gravel recycled from the construction access road. The crushed gravel was graded to form a relatively smooth surface. Excess crushed gravel from the construction access road and ramp were removed from the site and incorporated into access roads on the George Whiting Paper Company property.

Clean imported soil fill was obtained from Michele's Materials in Neenah and included reddish brown sandy clay and dark brown silt (USCS). The imported soil fill was placed progressively from the north to the south. As the fill placement progressed, topsoil was brought in and spread across the soil fill. The

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topsoil was obtained from the Tom Van Handel Corporation. The topsoil was a silt loam (USDA) with an organic content of 4.0% by weight.

Following are the gradations of soil fill and topsoil samples:

Material	USCS		USDA	
Soil Fill	S-1	S-3	S-1	S-3
Classification	ML	CL	Silt Loam	Silty Clay Loam
Sand	21%	19%	26%	19%
Silt	61%	48%	56%	48%
Clay	18%	33%	18%	33%
Topsoil	S-2		S-2	
Classification	ML		Silt Loam	
Sand	23%		29%	
Silt	59%		53%	
Clay	18%		18%	

STS monitored the soil fill and topsoil thicknesses by comparing the soil fill and topsoil surface to STS grade stakes. The completed surface grades are shown on the attached drawing. Soil and topsoil filling was completed October 17, 2006.

As fill placement progressed from north to south, a silt fence was installed at the edge of the water. The silt fence was left in place for sediment control and to help reduce wave erosion. The silt fence will be removed in 2007.

Photograph 1 – Soil fill covered by topsoil, looking north.



Photograph 2 – Completed topsoil surface, looking northeast.



3.0 SEEDING AND PLANTING

The late construction start required dormant seeding of the site. STS marked the boundary between the mesic prairie and wet meadow seeding and the alignment for the lines of shrubs. Seeding and planting started the week of October 23, 2006. Topsoil was prepared for seeding with a spring-tooth harrow.

The required seed application for the prairie mix was 10.8 pounds (10.98 pounds per acre) and 19.2 pounds were applied. The required seed application for the meadow was 1.8 pounds (5.45 pounds per acre) and 10.1 pounds were applied. The annual nurse crop consisted of 100 pounds of winter wheat. Seed was incorporated with a landscape rake. Following is a list of species included in the mixes:

Meadow

Fringed and prairie brome
Virginia and Canada wild rye
Manna grass
Big bluestem
Side oats grama
Indian grass
Switchgrass
Dropseed
Porcupine sedge
Common sedge
Brown fox sedge
Inland and common rush
Swamp milkweed

False aster
Turtle head
Boneset
Bottle gentian
Southern blue flag
Prairie blazing star
Cardinal flower
Great blue lobelia
Prairie loosestrife
Winged loosestrife
Bunch flower
Wild mint
Monkey flower

Marsh betony
Wild sweet William
Mountain mint
Black-eyed Susan
Mad-dog skullcap
Riddell's goldenrod
Pink vervain
Golden Alexanders
Tall bell flower
Partridge pea
Grey-head coneflower
Prairie cinquefoil

Prairie

Little and big bluestem
Prairie brome
Side oats grama
Indian grass
Switchgrass
Dropseed
Canada wild rye
Oval sedges
Stiff gentian
Bellflower
Purple prairie clover
Wild bergamot

Saint John's wart
Stiff goldenrod
Culvers root
Nodding onion
Smooth blue aster
White and cream wild indigo
Prairie coreopsis
Midland shooting star
Purple coneflower
Rattlesnake master
Cream gentian
Meadow blazing stars

Prairie blazing star
Wild quinine
Wood betony
Foxglove beardtongue
Prairie phlox
Mountain mint
Black-eyed Susan
Wild petunia
Ohio spiderwort
Golden Alexanders

The shrubs included dormant bare-root stock for the late season planting. Approximately 145 shrubs were planted, including:

Red osier dogwood
Silky dogwood

American (black) elderberry
Common ninebark

Arrowwood viburnum
Serviceberry

Thirteen maple and crabapple trees were planted and staked adjacent to the pedestrian path. Trees consisted of 2- to 4-inch ball and burlap dormant stock.

The entire site, 1.3 acres, was covered with erosion control mat. The mat consisted of Erosion Control Blanket S31 BD and S32 B. Both mats consist of a 100% straw blanket stitched with jute nets and cotton thread. The S31 BD product has jute net on one side and was placed from the water line to the top of the levee and lock slope (43,000 square feet). The S32 BD product has jute net on both sides and was placed below elevation +739, down to the water level (approximately 14,000 square feet).

Seeding, planting and erosion control mat installation was completed November 3, 2006.

Photograph 3 – Shrub plantings and tree staking, looking west.



Photograph 4 – Completed site with erosion control mat, looking north.



Photograph 5 - Completed site with erosion control mat, looking north.



Attachments:
Drawing PH2-As-Constructed Grades