EA APPENDIX D

COMPENSATORY MITIGATION PLAN

COMPENSATORY WETLAND MITIGATION PLAN

SANGAMON EXPERIMENTAL SEDIMENT TRAP
LA GRANGE POOL
ILLINOIS WATERWAY RIVER MILE 88.9

Approximately 0.4 acre of wetlands and mudflats is proposed to be impacted as a result of the excavation of a pilot channel to allow access for a dredge pipeline to reach the placement site from the experimental sediment trap location. Three compensatory mitigation alternatives were considered in developing the compensatory mitigation plan for the Sangamon sediment trap project. Site 1 involves the preservation of approximately 2 acres of existing wetlands that are currently under threat of development. Site 1 is no longer available. Site 2 involves the enhancement of approximately 1.7 acres of existing low-quality wetlands through excavation of construction sediment and reed canary grass rhizomes. Site 3 involves the creation of approximately 0.8 acre of wetlands to provide breeding habitat for the State-threatened Illinois chorus frog in an area where they are known to exist. Plate EA-1 shows the general location of each of these three alternatives. Since Site 1 is no longer available, this mitigation plan will describe Sites 2 and 3 only. Only one of these alternative mitigation sites will be chosen and constructed to replace wetland functions and values lost as a result of this project.

Proposed Site 2 mitigation plan:

Goal: To achieve a wetland that provides wildlife habitat for waterfowl, wading birds, and amphibians to replace similar habitat to be impacted through construction of the Sangamon sediment trap project.

Objectives:

Enhance approximately 1.7 acres of emergent wetland through the removal of invasive species and the voluntary re-seeding of native species.

Restore a surface water hydrologic connection between the enhanced wetland and the larger wetland complex to the west.

Create a 10-foot vegetated buffer between the emergent wetland enhancement and the medical complex. The buffer will be planted with native species.

Ensure long-term success of the mitigation effort through monitoring and remediation efforts during the first 5 years after construction.

Project Features:

- Create a plan view engineering drawing to show the locations and topography of the proposed excavation areas and the location of vegetated buffer, with description of proposed construction methods.
- Excavate 1.7 acres of reed canary grass dominated wetland approximately 2 feet to remove silt and reed canary grass rhizomes.
- Leave uneven bottom (1-foot variability) and side contours to simulate natural conditions. The minimum excavation would be 1.5 feet and the maximum excavation would be 2.5 feet in order to achieve the variability in bottom elevations.
- Install an 18- to 24-inch culvert underneath the roadway that separates the mitigation site from the existing larger wetland complex to the west of the site. This will bring a surface water connection from the wetland complex into the mitigation site, along with seeds from the wetland plants in the larger wetland complex. The mitigation site is expected to re-vegetate with cattails, which dominate the larger wetland complex.
- Maintain a 10-foot buffer between enhanced wetland and medical complex.
- Seed 10-foot buffer with native seed mix at a rate of approximately 10 pounds of seeds per acre.
- Place 1.7-acre excavated area plus 10-foot buffer into permanent Conservation Easement.
- Monitor excavated area and buffer for 5 years. Monitoring reports will be prepared annually, including: (1) annual photos from the same locations (taken during the growing season); (2) a description of the volunteer re-vegetation of the excavated area; (3) a description of any reed canary grass re-growth into excavated area; (4) a description of the vegetative community within the buffer; and (4) recommendations to increase functioning of mitigation site. A qualified biologist will perform the monitoring and District biologists will review the monitoring reports each year. District biologists will recommend remediation efforts when needed.
- Remediation actions during 5-year monitoring period to meet goals of mitigation site include the periodic spraying of reed canary grass volunteers into the mitigation site over the 5-year monitoring period. Additional excavation may be required if a reed canary grass monoculture redevelops within the excavated area.

<u>Proposed Site 3 mitigation plan:</u>

Goal: To achieve a wetland or series of wetlands that provide breeding habitat for the State-threatened Illinois Chorus Frog as well as other wildlife habitat in order to replace habitat to be lost through construction of the Sangamon sediment trap project.

Objectives:

Create approximately 0.8 acre of seasonally flooded emergent wetland through the excavation of soil to reach the seasonal high water table and through the planting of wetland vegetation. Approximately 1.5 to 2 acres of upland would be excavated in order to achieve the 0.8 acre wetland with shallow side slopes (4:1).

Maintain a 20-foot buffer around the wetland creation area to filter runoff from entering the wetland and to ensure the existence of suitable upland Illinois chorus frog non-breeding habitat adjacent to the seasonal breeding ponds.

Ensure long-term success of the mitigation effort through monitoring and remediation efforts during the first 5 years after construction.

Project Features:

- Create a plan view engineering drawing to show the locations and topography of the proposed excavation areas and the location of the vegetated buffer, with a description of proposed construction methods.
- Excavate 0.8 acre of upland at 4:1 side slopes approximately 6 to 9 feet to reach the seasonal high water table.
- Leave uneven bottom (1- to 2-foot variability) and side contours to simulate natural conditions.
- Plant persistent emergent vegetation such as sweet flag, water plantain and arrow arum at a combined density of 1,000 plants per acre.
- Maintain 20-foot buffer from top of wetland slopes.
- Seed 20-foot buffer with native seed mix if it is not currently vegetated with native plants.
- Place excavated wetland area plus 20-foot buffer into Conservation Easement.
- Monitor excavated area and buffer for 5 years. Monitoring reports will be prepared annually, including: (1) annual photos from the same locations (taken during the growing season); (2) a description of the survival of the persistent emergent vegetative plantings; (3) a description of any volunteer vegetation of the excavated area; (4) a description of the vegetative community within the buffer; and (5) recommendations to increase functioning of mitigation site. A qualified biologist will perform the monitoring and District biologists will review the monitoring reports each year. District biologists will recommend remediation efforts when needed.

- Remediation actions during 5-year monitoring period to meet goals of mitigation site may include the regrading of the site if the desired seasonally flooded wetland hydrology is not met and the re-planting of the desired persistent emergent wetland vegetation if the survival does not exceed 70% by the third year of monitoring.