

# **PROSPECTUS**

**for**

## **ABEL WETLAND MITIGATION BANK SAUNDERS COUNTY, NEBRASKA**

**Bank Sponsor  
Western Sand & Gravel Company**

**Benesch Project No. 00120489.07  
USACE Project No.**

**December 21, 2018**

**Revision 0**

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## **I. PROJECT OVERVIEW AND OBJECTIVES**

### **A. Project Overview**

This document provides a Prospectus for a proposed wetland mitigation bank site located in Saunders County, Nebraska that will be used by Western Sand & Gravel Company to offset unavoidable wetland and stream impacts associated with their sand and gravel mining operation. WSG is developing this site for future mitigation needs within the service area. Sand and gravel demand in this area projects mining to occur along the west side of the Platte River from approximately Ashland upriver to Fremont, NE.

The proposed bank site is located approximately 1.5 miles northeast of Ashland, NE along the north side of Hwy 6. The site exists south of County Road A and is shown on Figure 1 of Appendix A. The site latitude and longitude are 41.056457° North, -96.342103° West. The Public Land Survey System (PLSS) description for the site is a portion of Section 31, Township 13 North, Range 10 East, Saunders County, Nebraska. See Figure 1 in Appendix A for the Site Location Map.

This Prospectus will disclose the wetland bank objectives, how the bank will be established and operated, where the service area is located, the need and feasibility of this bank, who will own and manage the bank, qualifications of the bank sponsor, the ecological suitability of proposed site and existing water rights.

### **A. Goals and Objectives**

WSG proposes to restore(reestablish) approximately 70 acres of wetlands and 2,421 feet of stream channel with goal of banking 70 wetland credits and approximately 10,000 stream credit units. The site will develop by restoring 10 acres of PEMA/C Riverine Channel wetlands along a restored stream channel and restoring 60 acres of PEMA/C Riverine Floodplain wetlands in the floodplain. See Figure 2 for a concept plan. The primary objective of the wetland bank is to have available wetland mitigation credits for future WSG sand and gravel mine sites that cannot entirely avoid and minimize wetland impacts. The bank credits would be used to offset impacts at these future locations within bank service area.

The channel will be restored by diverting the current realigned channel back to the historic channel bed, excavating slightly to match current stream outlet, and addition of a grade control structure(s). Riverine channel and riverine floodplain wetlands will be restored by raising the stream elevation and excavating 1-2 feet of soil to allow water

from the stream to saturate the subsurface of the floodplain and inundate a few inches occasionally. The site will be protected in the future by a conservation easement and potentially donated to a non-profit conservation organization.

## **II. ESTABLISHMENT AND OPERATION**

### **Establishment-**

WSG will perform all necessary work, in accordance with the provisions of the Wetland Banking Instrument and will establish and maintain wetland and stream habitat until it is demonstrated to the satisfaction of the agencies represented on the IRT (acting through the Chair) that the project complies with all the conditions of instrument, or until all credits are sold, whichever is later. Under direction from this Wetland Banking Instrument and the Bank Work Plan, wetland and stream credits will be developed by restoring a channelized stream, that was designed to drain the floodplain for agriculture purposes, to its historic location and elevation. The historic channel is two feet higher in elevation than the existing channel. Additionally, the floodplain will be lowered to allow wetland development and minimize water backing up water on adjacent landowners. Restoring the channel will reconnect the channel with its historic floodplain allowing more frequent flooding and the restoration of wetlands. See Figure 2 in Appendix A for conceptual restoration plan. The proposed project could expand with a second phase north of the site depending on future development.

The proposed site was selected because of its potential to restore aquatic resources similar to what would be impacted in the future along the floodplain of the Platte River. WSG has future mining rights on hundreds of acres located on the west side of Platte River from Ashland to Fremont. In addition, when this site became available it was discussed with the Corps Nebraska Regulatory the feedback received was positive based on their knowledge of historic wetlands in the area. Historic information documenting this is visible in the 1949 aerial image as it appears that unfarmed wet meadows/lowland prairie used for hay is present on most of the site and adjacent land to the east and north up the Platte River valley. Plowed fields appear present west of the site. See Appendix B for historic aerial.

Overall, the mitigation plan is to restore the perennial stream channel to its existing channel location which will raise the stream bed elevation from approximately 1055.0 to 1,057.0 with water flowing out of site at 1058.0. A grade control structure with a temporary adjustable weir will be placed at the east end of channel to prevent head cutting and allow water from high flow or flood events to flood onto the floodplain to

elevation 1058.0. Note the adjustable portion of the weir will become fixed once the correct outlet elevation is confirmed and adjustments can be made during the monitoring period for maintenance activities, for example lowering to mow. The current floodplain elevation varies from 1058.0 to 1061.0 and is proposed to be lowered to elevation 1058.0 and 1058.5 around the property edge. Excess soil material will be used to fill in realigned channel with any excess to be hauled to and utilized by the landowner contiguous to the west. Prior to excavation the existing top soil will be stripped and reused on the new wetland surface by over excavating 6-12 inches and adding topsoil. Next, the site will be seeded with a high diversity seed mix from local prairies/wetlands along the Platte River within 100 miles.

Access to the site is proposed to occur at two locations both off County Road A. The first access point would be located near the west end of the project to allow access on the west side of stream. A second access point would be located on east side of the project to allow access on the east side of the stream. The access point may include a short rock road to transition from County Road A to the site but would then transition to a mowed trail along the property line for monitoring and management access.

The surrounding land use consists of farmed agricultural fields and undeveloped land associated with the Nebraska National Guard and Lincoln Water Works. The site is near Salt Creek which is located less than 1,000 feet to the south.

#### **Operation-**

WSG will operate the bank under an approved wetland bank instrument. WSG proposes to utilize this bank primarily for sand and gravel mining projects within the service area that have wetland mitigation requirements and secondarily to sell in the private market. WSG will plan to own and maintain the site through its use as a wetland bank and potentially in perpetuity unless a non-profit conservation group would have interest in taking over the site. The site will be maintained using standard management techniques, such as, prescribed fire, grazing, haying, selected herbicide application, to achieve historic disturbance patterns that eliminated woody species establishment and maintained species diversity.

Wetland and Stream Credit Production- Credits will be produced at the site through restoration of wetland and stream areas. Production of credits will vary depending on the type of potential mitigation available at the site. Minimum wetland credit production ratios have been established in accordance with the U.S. Army Corps of Engineers' Guidance for Compensatory Mitigation and Mitigation Banking in the Omaha

District and the Compensatory Mitigation Final Rule (33 CFR Parts 325 and 332). The minimum credit production ratio relates to the number of acres required to produce one (1) credit. Ratio determinations are based on the guidance provided by USACE and comprise of 1:1 for restoration and 4:1 for buffer.

Stream credit availability shall be applied using the Corps of Engineers Omaha District Nebraska Stream Condition Assessment Procedure or another USACE approved methodology. When the Nebraska Stream Condition Assessment Procedure is used, one functional credit is worth one functional debit. After construction, the Nebraska Stream Condition Assessment Procedure will determine the number of functional units (and therefore credits) are available.

Wetland and Stream Credit Release Schedule- Credit release will be based on standard Omaha District guidance: 30% of the proposed credit number will be released as pre-certified credits at 5%, 15% and 30% depending on bank development with the remaining credits released as performance measures are met and sustainable. Table 1 below defines this schedule.

Table 1. Crediting ratios for certain stages of Bank development and percentages of Bank credits allowed to be sold at that ratio.

| Status                                                     | Ratio | Released (%) | Cumulative (%) |
|------------------------------------------------------------|-------|--------------|----------------|
| Instrument signed                                          | 1.5:1 | 5            | 5              |
| Construction completed                                     | 1.5:1 | 10           | 15             |
| Site meets COE 1987 Delineation<br>Manual success criteria | 1:1   | 15           | 30             |
| Site is certified by COE                                   | 1:1   | 70           | 100            |

Note: Upland buffer credits are based on an area within a 50 ft offset from wetland boundary.

Accounting- WSG will maintain a ledger of all available wetland credits and stream units and keep track of all crediting and debiting transactions according to Section 332.8(d)(6)(ii). WSG will submit a statement to the COE each time credits are debited, or additional credits are approved. If requested, the COE will distribute the statement to other members of the IRT. At a minimum WSG will submit an annual ledger to the COE for distribution to all members of the IRT, showing all transactions at the bank for the previous year.

### **III. PROPOSED SERVICE AREA**

This site is located within Hydrologic Unit Code (HUC) 10200202 and 10200203 and Lower Platte Alluvial Plain (47j) and Nebraska/Kansas Loess Hills(47h) Ecoregion IV. The service area will consist of 8-digit HUC's of HUC 102002 within Ecoregion 47j and 47h. Please see attached Figure 3 for the proposed service area.

### **IV. NEED AND FEASIBILITY**

The wetland Bank site is needed to offset potential wetland and stream impacts along the Platte River associated with sand and gravel mining. WSG has future mining rights on hundreds of acres of ground located on the west side of Platte River from Ashland to Fremont and will be mining this area over the next 50 years. Planning for the future WSG determined that wetlands in this area would not be completely avoidable and require mitigation. Development of one site that can be used as bank when wetland impacts occur is efficient for the WSG and the Corps NE Regulatory. Also, developing a Platte River Wetland Meadow bank is the most needed for wetland impacts in this area.

The site has a high likelihood for success because it is restoring a stream back to its original channel that will flood onto the floodplain like once historically before channelization and farming manipulations. Wetland hydrology was evaluated to ensure that there would be enough water to flood temporarily flood the site using a HEC model of existing average monthly precipitation, site soil permeability, evaporation and site topography and a 1058.0 grade control on east end. Results indicated the site with would have water at or above the proposed wetland surface for most of the growing season.

### **V. OWNERSHIP, LONG TERM MANAGER**

Bank Owner: Western Sand & Gravel Company

Contact: Mr. T.J. Hyland  
Project Manager  
330 County Road B  
Ashland, NE 68003  
Phone: (402) 944-3331

The site long tem manager could change to a non-profit, conservation organization.

### **VI. SPONSOR QUALIFICATION**

WSG is a first-time wetland bank owner but has been involved with several wetland mitigation banks. WSG will be responsible for assuring the mitigation wetland is constructed according to this plan and that it meets success criteria during the monitoring period. WSG is and will continue to be financially responsible for the site in perpetuity. Financial assurance would be in the form of an insurance bond issued by Universal Surety Company, 601 South 12th Street, Suite 100 Lincoln, Nebraska 68508.

## **VII. ECOLOGICAL SUITABILITY**

Historic wetland communities that existed at this site and along the Platte River floodplain include Lowland Prairie, Eastern Cordgrass Wet Prairie and Eastern Sedge Wet Meadow according to descriptions provided in Terrestrial Ecological Systems and Natural Communities of Nebraska (Rolfsmeier and Steinauer, 2010). All these communities have few high-quality sites remaining as most have been drained and converted to cropland or have been heavily grazed. The proposed site is suitable to meet the objectives of restoring a stream and wet meadow/wet prairie/lowland prairie wetlands based on its geographic location and landscape position in a floodplain of the Platte River. Historic wetland meadows and wet prairie discussed in the literature that have been lost to agriculture were in places like this site. More specifically the proposed site should be successful in restoring wetlands because of it being within a relatively flat, floodplain that will be flooded on a more frequent basis once the realigned channel is abandoned and restored to historic stream valley which is 2 feet higher than the existing channel. In addition, some of the topographic high elevations will be excavated to maximize the floodplain wetlands.

Soils from the exploratory borings taken at the site match those identified by Rolfsmeier and Steinhauer for Eastern Sedge Wet Meadow, Cordgrass Wet Prairie and Lowland Prairie as poorly drained silty and clay loams formed in alluvium. Soils found at this site are described as “being located on alluvial bottomlands near the Platte River. The bottomlands are a flood plain setting consisting of relatively deep deposits of alluvium. Soils generally consist of silty and clayey alluvium near the surface.” Groundwater was found to range from 2.6 to 6.3 feet from the floodplain surface and is affected by drawdown from nearby Lincoln Water Works drinking water wells.

Wetland hydrology is proposed to be supplied from surface water draining to the site via restored channel. Occasional influence from groundwater is also expected. Surface hydrology studied at the site found that the mitigation site after grading activities and restoration of stream channel would allow the site to be saturated or flooded



depending on the weir elevation between 12 inches below the surface (1057.5-1058.0) to throughout the year using the natural soils without compaction.

Field visits to the site did not identify any noxious species within the non-cropped areas. Reed canary grass was observed along the existing stream channel.

## **VIII. WATER RIGHTS**

Water rights would be retained by WSG during the transfer of the property. “According to Nebraska state water rights the landowner obtains rights to divert surface water of the state based upon the date the right was obtained. Surface water rights allow landowner or organizations to remove a set amount of water from a specific location. This system protects those who received their water rights first during periods when the overall water supply is insufficient to meet all appropriated water rights. Thus, the entity with the earliest priority date (First-in-Time) is entitled to their full appropriation (First-in-Right) before a later priority date entity receives any water. The water right issued by the Nebraska Department of Natural Resources (NDNR) is legally attached to a parcel of land or a position in the state and is transferred with the land to subsequent owners” (NDNR, 2018). It is not anticipated that upstream water rights will negatively impact the project water supply.

## **Literature Cited**

LaGrange, T. 2015. Wetland Program Plan for Nebraska. Nebraska Game and Parks Commission. 72 pp.

Steinauer, G. and S. Rolfsmeier. 2010. Terrestrial Natural Communities of Nebraska, version III. Nebraska Natural Heritage Program, Nebraska Game and Parks Commission, Lincoln, Nebraska.

University of Nebraska at Lincoln, Institute of Agriculture and Natural Resources, website, 2018. <https://water.unl.edu/article/agricultural-irrigation/regulations-policies>

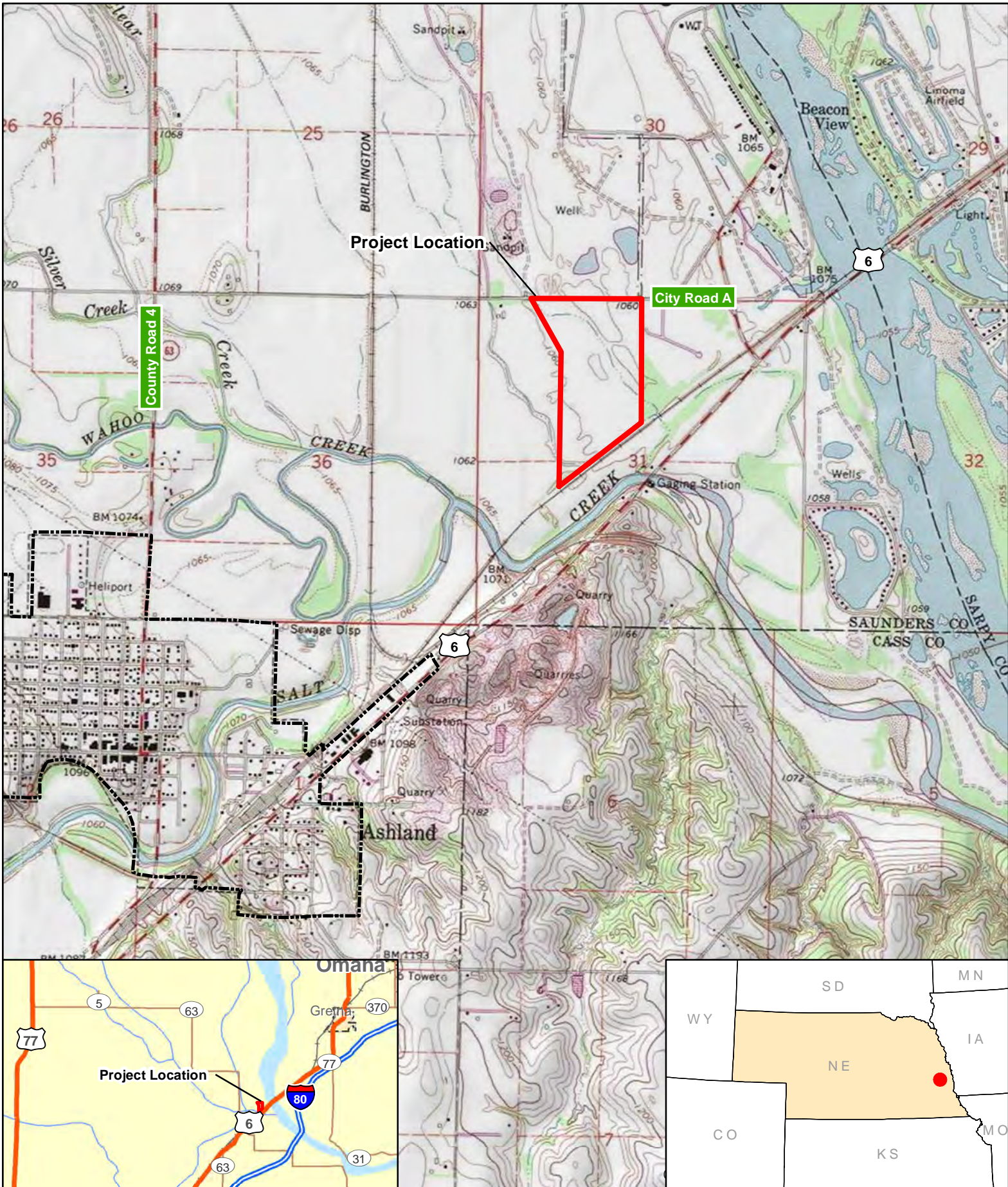
## **APPENDIX A**

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### **SITE MAPS**

- |                  |                               |
|------------------|-------------------------------|
| <b>FIGURE 1:</b> | <b>SITE LOCATION MAP</b>      |
| <b>FIGURE 2:</b> | <b>CONCEPTUAL WETLAND MAP</b> |
| <b>FIGURE 3:</b> | <b>HUC/ECOREGION MAP</b>      |

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USGS Topographic Imagery (1983 Ashland East)

**PROJECT LOCATION MAP - FIGURE 1**



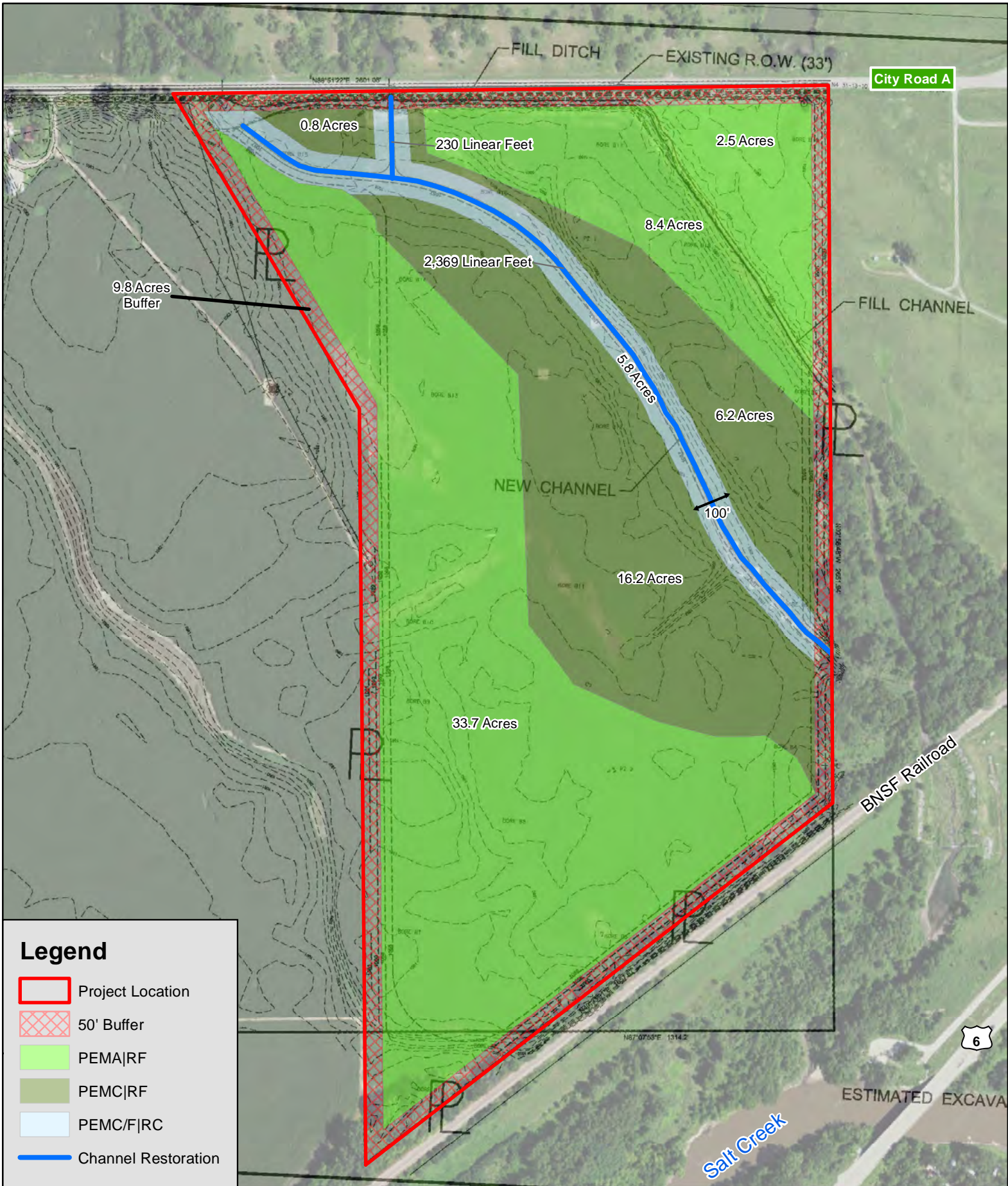
0 1,000 2,000  
Feet

Map Created 6/14/2018

Map Scale 1:24,000

Western Sand and Gravel - Mitigation Bank  
Ashland, Saunders County, Nebraska

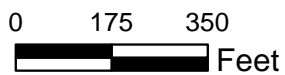




**Legend**

- Project Location
- 50' Buffer
- PEMA|RF
- PEMC|RF
- PEMC|F|RC
- Channel Restoration

2016 NAIP Saunders County Aerial Imagery  
Western Sand & Gravel Survey (Benesch)



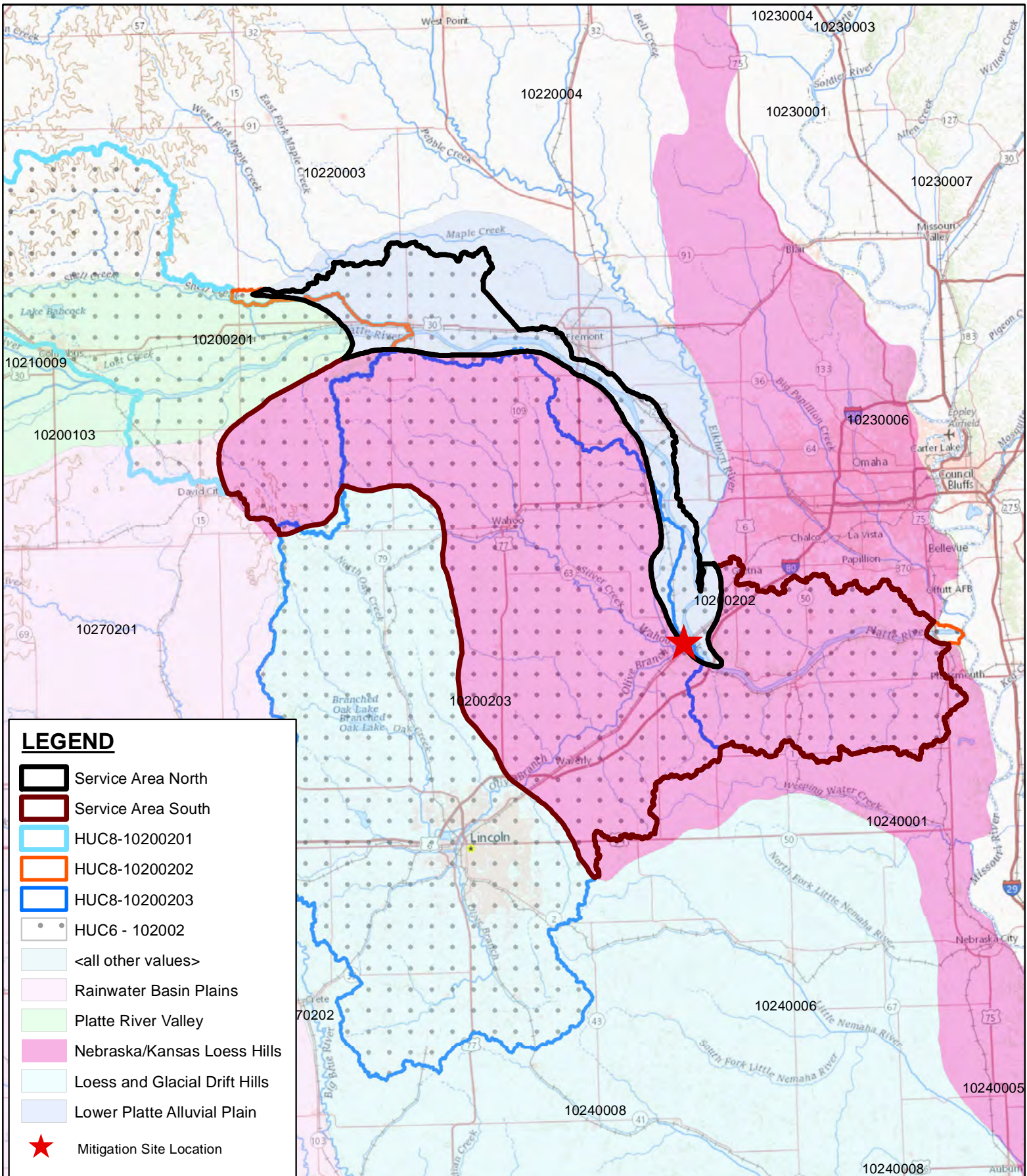
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Map Scale 1:4,200














**FIGURE 2 - WETLAND MITIGATION CONCEPT  
POTENTIAL COWARDIN CLASSIFICATIONS**

Western Sand and Gravel - Mitigation Bank  
Ashland, Saunders County, Nebraska

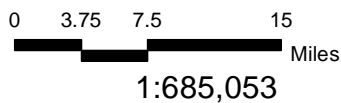




**LEGEND**

-  Service Area North
-  Service Area South
-  HUC8-10200201
-  HUC8-10200202
-  HUC8-10200203
-  HUC6 - 102002
-  <all other values>
-  Rainwater Basin Plains
-  Platte River Valley
-  Nebraska/Kansas Loess Hills
-  Loess and Glacial Drift Hills
-  Lower Platte Alluvial Plain
-  Mitigation Site Location

**BANK SERVICE AREA  
NORTH & SOUTH - FIGURE - 3**



1:685,053

Western Sand & Gravel  
Benesch Project Number 120489.07  
Wetland Mitigation Bank  
Saunders County, NE  
S. 31, T. 13N, R. 10E

## **APPENDIX B**

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**1949 Aerial Photograph**



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