

Memorandum

To: Programs, Projects and Operations Subcommittee

Subject: NRCS Emergency Watershed Protection Program (EWP)

Date: August 6, 2010

From: Gerry Bowen

Several instances of streambank erosion and flooding have been experienced along the Elkhorn River in Douglas and Washington Counties, and along Elk Creek in Dakota County this past June. In an effort to secure outside financial assistance to correct these problem areas, Management requested the assistance of the Natural Resources Conservation Service (NRCS) and their Emergency Watershed Protection Program (see attached letter).

The sites were investigated on July 27th and 28th by NRCS and District staff with the following results. A memo from Arlis Plummer, NRCS, is attached that indicates a preliminary determination of eligibility of these sites for EWP assistance.

1. Elkhorn River IPA – This District project installed bank protection along the Elkhorn River on the seven-mile river reach above King Lake in 1990. The site inspection revealed that the majority of the rock placed at that time was still there performing as expected. Several sites experienced damage and will be addressed by the District under routine operation and maintenance. NRCS noted that the damages would not be eligible under EWP.
2. Elkhorn Crossing Recreation Area – The area was damaged by flooding and sedimentation, but streambank erosion did not occur. Thus, NRCS EWP funding was not a possibility (Note: The NRD has applied for FEMA/NEMA financial assistance to repair both Elkhorn Crossing and Grasske Crossing recreation areas.).
3. Elkhorn Breakout Improvement Project Area – This joint project with the Lower Platte North NRD (lead agency) was installed in 1997 to control streambank erosion and attempt to constrain Elkhorn River flows to the banks of the river. The design elevation of the bank protection attempted to mirror the 10-year storm for the river. The benefitted area covered a large area in northwestern Douglas County. The streambank protection installed in 1997 is in place and continues to protect the streambank from erosion. NRCS has also indicated that this site does not appear eligible for assistance under EWP.
4. Elkhorn River near Arlington, Nebraska – Bruce Schmidt, a landowner along the Elkhorn River located northwest of Arlington, experienced severe streambank erosion. He has obtained a provisional 404 permit for bank protection. Mr. Schmidt asserts that if the erosion continues and progresses downstream, the former Fremont landfill (currently under private ownership) would be in jeopardy. NRCS also determined that since the landfill is privately owned and is not currently experiencing erosion, the erosion on the Schmidt property is not eligible for EWP assistance.
5. Elk Creek in Dakota County – Spoil bank levees along Elk Creek in Dakota County east of Jackson, Nebraska are maintained by the District. The levees, particularly the east side of the creek, experienced erosion and sloughing during the recent high water events. The NRCS

has determined that the correction measures will be eligible for EWP assistance. The cost of the corrective measures (bank protection and grade control) is estimated to be \$750,000 (see attached). Of this, \$187,500 would be the District's share.

6. Cambridge Estates/Oaks – This area in suburban Omaha near 160th & Pacific on the West Branch Papillion Creek was repaired under a previous District-sponsored EWP project in 2008. It was cooperative effort between the City of Omaha and the Cambridge Estates and Cambridge Oaks Homeowners Associations. An additional bank failure has occurred and has been determined to be eligible for a second EWP project. NRCS estimates the cost to correct the bank failure to be \$280,000 (see attached). Of this, \$70,000 would be the District's share.

It is proposed that the District sponsor the Elk Creek and Cambridge Estates/Oaks emergency projects and provide the local matching funds. It is further proposed that the General Manager be authorized to retain a consultant for this emergency work, if necessary.

- **It is recommended that the Subcommittee recommend to the Board that the General Manager be authorized to provide necessary professional engineering services and execute local sponsorship agreements with the Natural Resources Conservation Service for Emergency Watershed Protection Projects on the Elk Creek levee project near Jackson, Nebraska in Dakota County, and on the West Branch Papillion Creek near 160th & Pacific in Douglas County, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**

July 14, 2010

Mr. Steve Chick
State Conservationist
Natural Resources Conservation Service
Room 152 Federal Building
100 Centennial Mall North
Lincoln, Nebraska 68508-3866



8901 S. 154th Street
Omaha, NE 68138-3621
402-444-6222
www.papionrd.org

**Finding Solutions Today
For a Secure Tomorrow**

Re: Emergency Watershed Protection Program

Dear Mr. Chick:

Heavy rainfall during June, 2010 has caused severe streambank erosion along the Elkhorn River in Douglas, Sarpy, and Washington Counties, and along Elk Creek in Dakota County.

The Papio-Missouri River Natural Resources District (P-MRNRD) requests that the Natural Resources Conservation Service (NRCS) investigate the following areas for potential Emergency Watershed Protection (EWP) Program assistance.

1. Elkhorn River Improvement Project Area – In 1991, the NRD completed a bank stabilization project along the Elkhorn River in northwest Douglas County between Nebraska Highway 36 and the King Lake area. The revetments covering a distance of seven river miles, have been damaged by the high, erosive flows from the river.
2. Elkhorn Crossing Recreation Area – The recreation area (installed as a part of the Elkhorn River IPA) is located on the west side of the river, one mile south of Nebraska Highway 36. Streambank erosion threatens the continued use of the boat ramp and camping facilities in the recreation area.
3. Elkhorn Breakout Improvement Project Area – This streambank erosion project was installed by the Lower Platte North Natural Resources District on the Elkhorn River in Dodge County (LPNNRD) to prevent erosion and flooding along the former Rawhide Creek channel, a distance of approximately 4.5 miles downstream from the revetment. The revetment itself covers a distance of approximately 1,000 feet. The P-MRNRD is involved because a significant portion of the benefitted area is in northwest Douglas County outside of the LPNNRD.
4. Elkhorn River near Arlington, Nebraska – Streambank erosion along the Bruce Schmidt farm (1.5 miles north and two miles west of Arlington) in the P-MRNRD has claimed a large amount of agricultural land, plus several center pivots. Approximately 1500 feet of streambank has been affected. The erosion, if left unchecked, would erode into the former Fremont landfill property (LPNNRD).

Papio-Missouri River Natural Resources District Board of Directors

Larry Bradley Fred Conley John Conley Tim Fowler Scott Japp David Klug Rick Kolowski
Dorothy Lanphier John Schwope Richard Tesar Jim Thompson
John Winkler, General Manager

5. Elk Creek in Dakota County – sloughing along Elk Creek near Jackson, Nebraska has damaged the P-MRNRD's levees along the creek a distance of approximately 2 miles. The damages affect the levees themselves, state and local highways, and agricultural land.
6. Cambridge Estates/Oaks – This area in suburban Omaha is located north of 160th & Pacific along the West Branch Papillion Creek. Super saturated conditions caused a bank failure potentially affecting several residences in the subdivision.

Location maps of these areas are attached for your reference.

The P-MRNRD is a potential sponsor for these projects, however, the NRD Board would have to take action at their next meeting on August 12, 2010. Please schedule field investigations as soon as possible. The NRD is currently sponsoring an EWP project on the Elkhorn River in Sarpy County near the Douglas County line. If you have any questions, please contact either Gerry Bowen or Marlin J. Petermann of our staff.

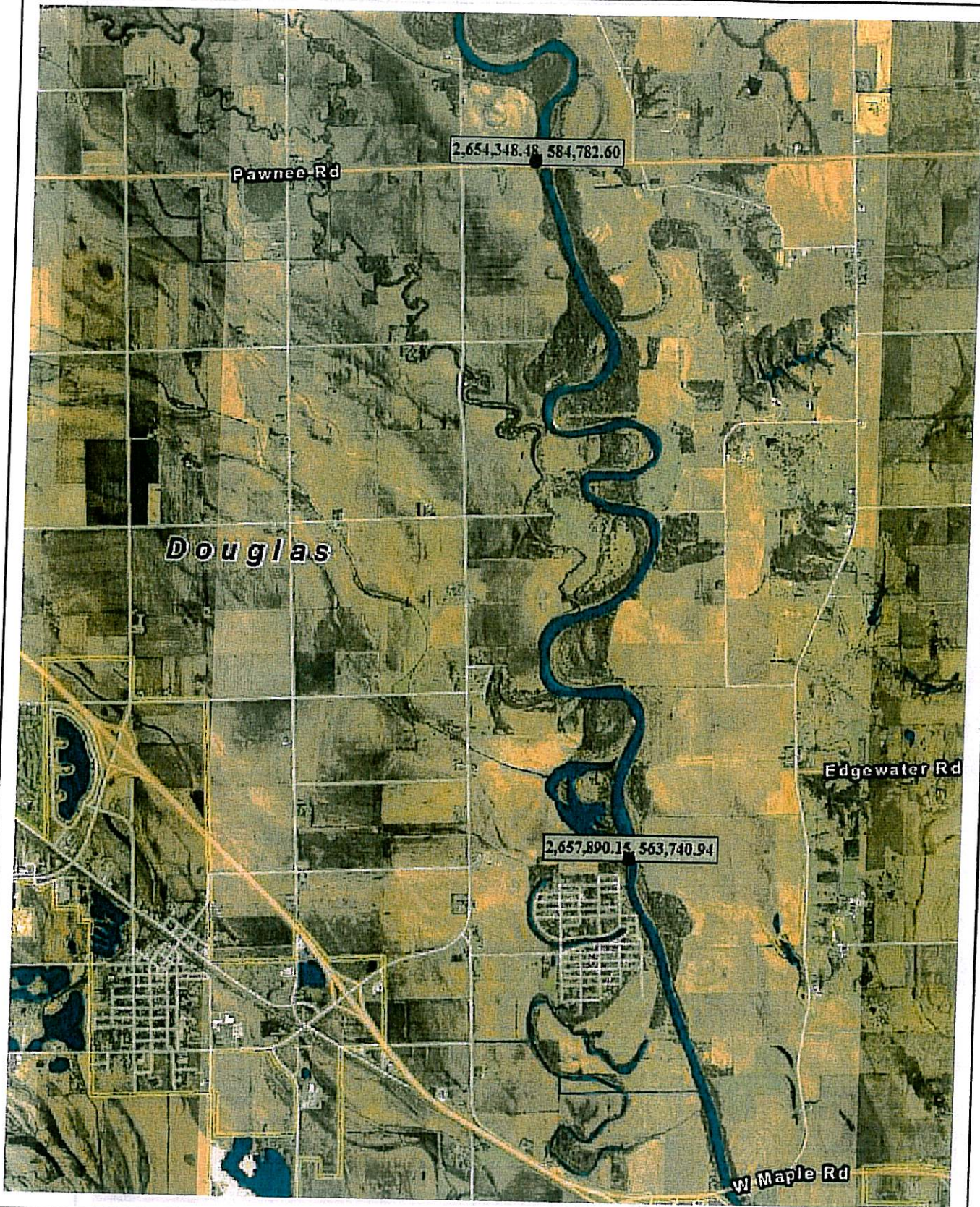
Sincerely,



John Winkler
General Manager

Enclosures

cc: Neil Jensen, Chuck Leinen, NRCS Omaha
John Miyoshi, LPNNRD
Marlin J. Petermann and Gerry Bowen, P-MRNRD
Terry Schumacher, P-MRNRD Blair



1 mile

Elkhorn River IPA

Printed: Jul 14, 2010



www.dcgis.org/dogis



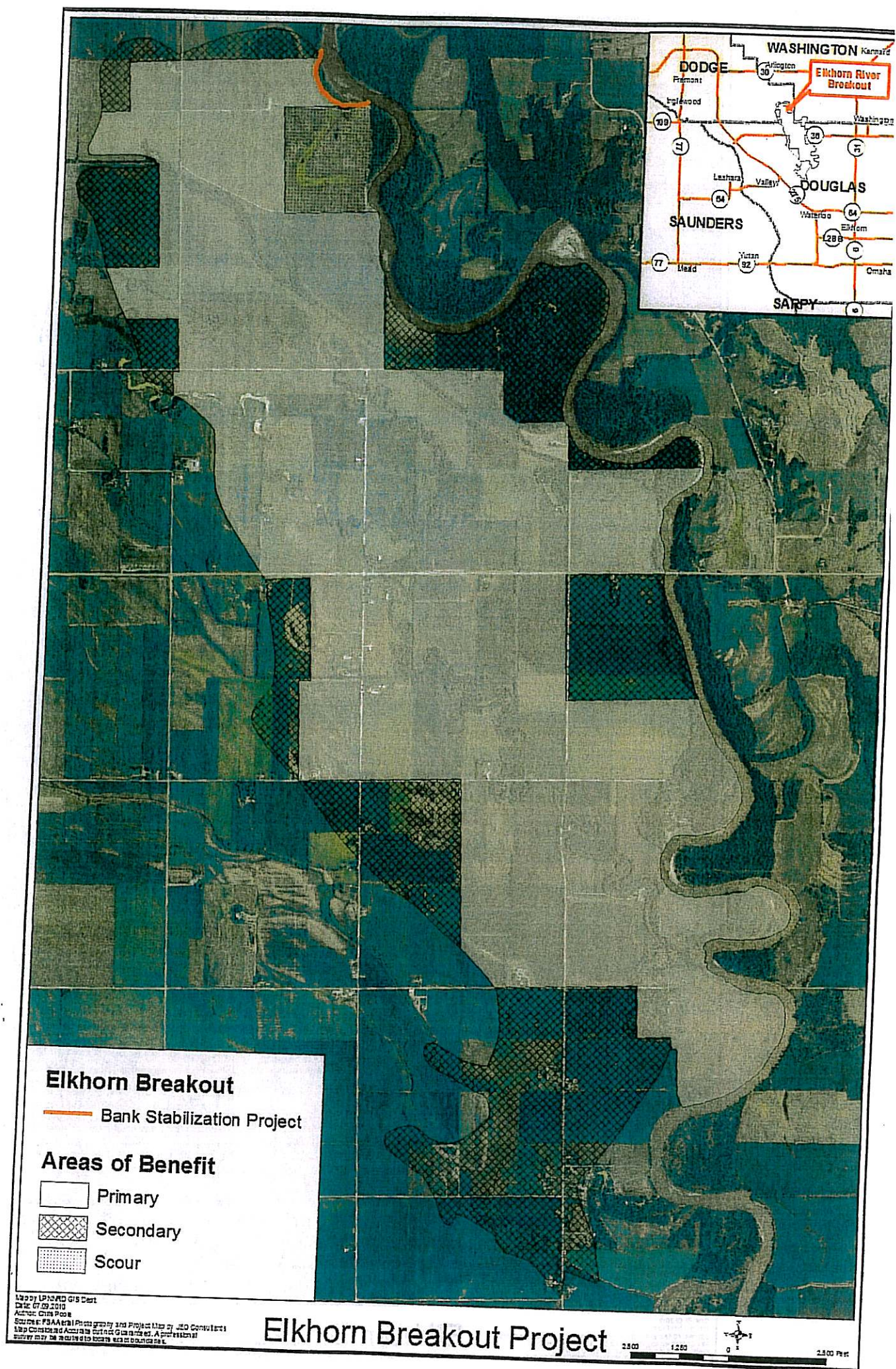
Elkhorn Crossing Recreation

1300 feet

Printed: Jul 14, 2010



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Elkhorn Breakout

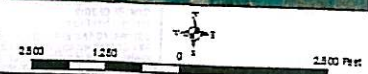
— Bank Stabilization Project

Areas of Benefit

- Primary
- Secondary
- Scour

Map by JED CONSULTANTS
Date: 07.09.2010
Author: Chris Pohl
Source: FSA Aerial Photo and Project Map by JED Consultants
Map Contained Aerial Photo and Project Map by JED Consultants
Survey may be required to locate exact boundaries.

Elkhorn Breakout Project



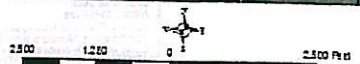


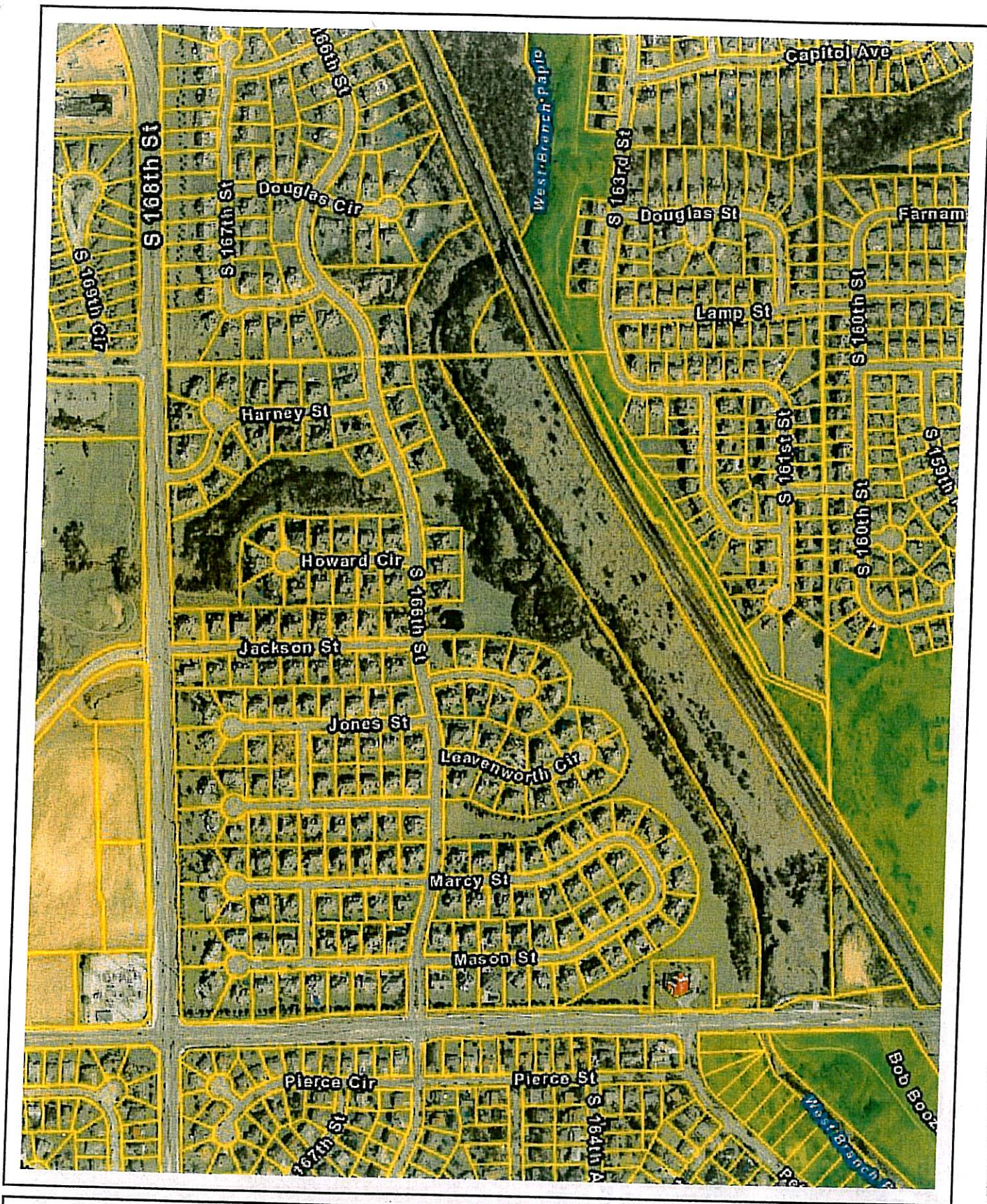
Elkhorn Breakout

— Bank Stabilization Project

Map by LPHARD GIS Dept
Date: 07/03/2010
Author: Chris Pook
Source: FSA Aerial Photography and Project Map by JEO Consultants
Map Contained Accurate, but not Guaranteed. A professional
survey may be required to locate exact boundaries.

Elkhorn Breakout Project





Cambridge Estates/Oaks

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North ↑

Arlington, Nebraska

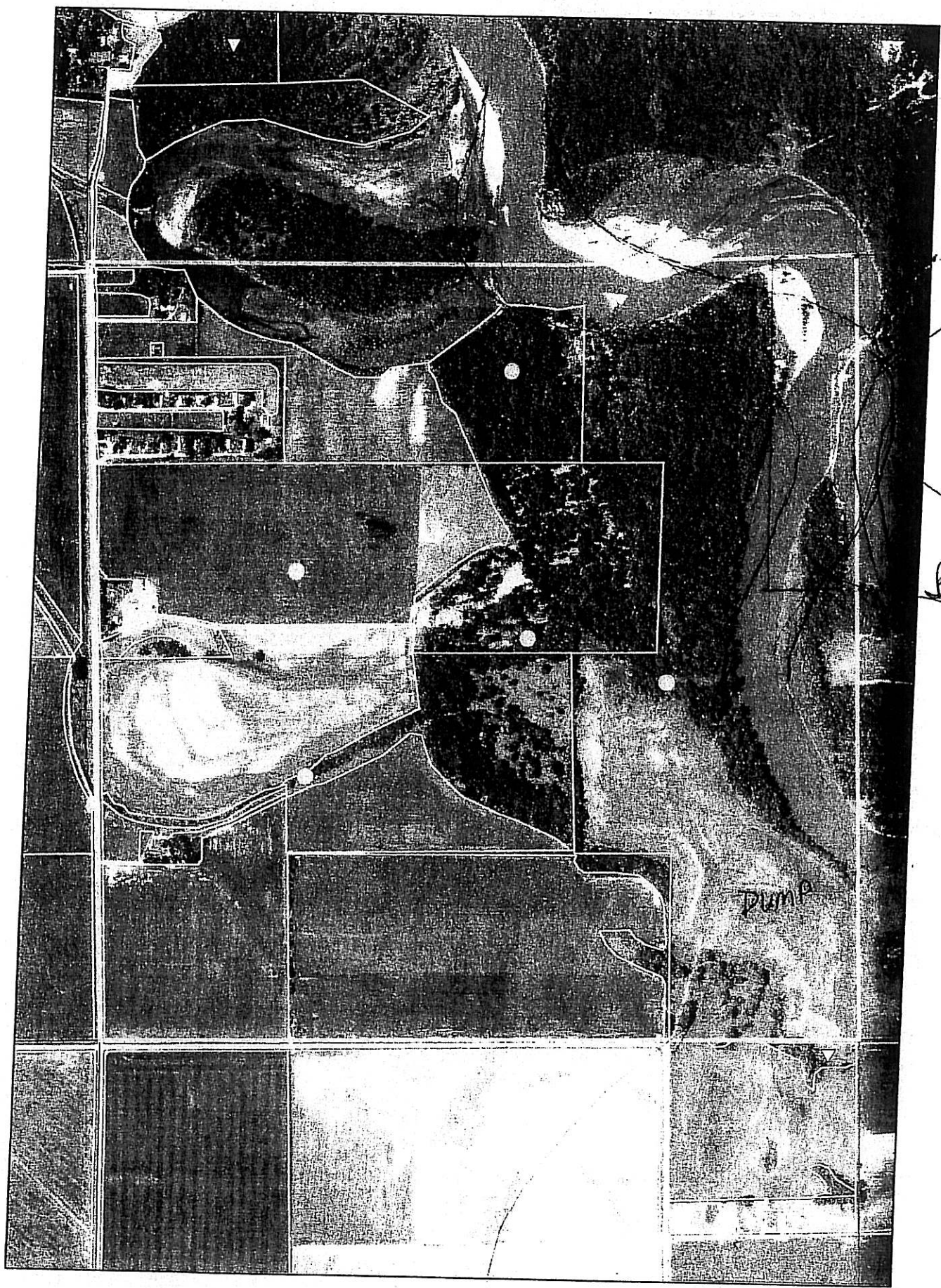
Hwy. 30

Schmidt Property

Fremont Landfill

N ↑

Bruce
Start
East Bank
Bruce
End



ELK CREEK DRAINAGE DISTRICT

137th St

JACKSON

20

Ithaca Way

Kelsey Ave

160th St

Hall Ave



August 6, 2010

Gerry Bowen
Papio-Missouri River NRD
8901 South 154th Street
Omaha, NE 68138-3621

Gerry Bowen,

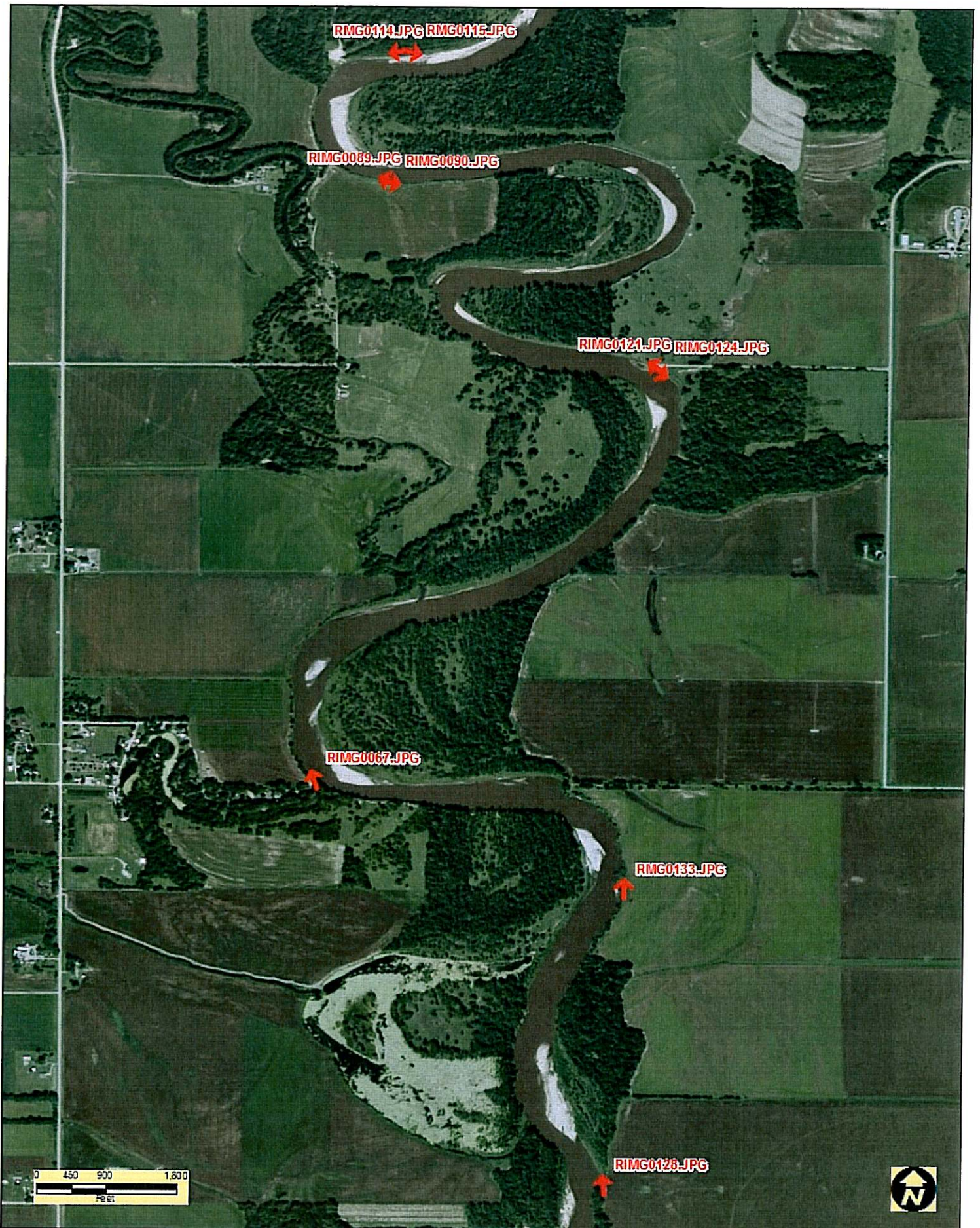
Several potential EWP sites have been reviewed by Papio-Missouri River NRD and NRCS staff. The initial findings of this review are:

1. Elkhorn River (Graham/Gilmore Site, Sarpy County) – This site is eligible for EWP, it protects 3 landowners, one business, 3 homes and associated utilities and the road east if the channel were to break out behind the homes. Estimated cost \$502,100.
2. Elkhorn River Improvement Project Area (including the Elkhorn Crossing Recreation Area) - This site is not eligible for EWP, the area was flooded during the recent heavy rain falls. The existing bank protection worked as designed. No additional bank protection is necessary. EWP does not provide funding for clean-up of flooded areas.
3. Elkhorn Breakout Improvement Project Area - This site is not eligible for EWP, the area was flooded during the recent heavy rain falls. The existing bank protection worked as designed. No additional bank protection is necessary. EWP does not provide funding for clean-up of flooded areas.
4. Elkhorn River near Arlington, Nebraska (Schmidt Farm) - This site is not eligible for EWP, the area was flooded during the recent heavy rain falls eroding a large amount of agricultural land on the east side and some bank erosion on the west side. The first site on the east side is owned by one individual and there is no public utilities, roads, bridges, etc that were in imminent danger of damage or failure to protect. The second site on the west side is near the Fremont dump, our current information is that this site is owned by one private company and so there is no public utilities, roads, bridges, etc that were in imminent danger of damage or failure to protect.
5. Elk Creek in Dakota County - This site is eligible for EWP, this site has levees that are the P-M River NRD's responsibility that protect several landowners. The levees were damaged by the high flows and further high flows could breach the levee in various locations. Estimated cost \$737,100.
6. Cambridge Estates/Oaks - This site is eligible for EWP, this is a site that was repaired with EWP funds from the 2008 high rainfalls. The recent high rainfalls caused some slope failures in areas without rock toes and where vegetation had not yet established. Repair of this area is the second time within a 10 year time frame. This site would not be eligible for EWP funding again until 10 years past the first repair. Estimated cost \$252,650.

We are available for review of any further sites and will be filing the Damage Survey Reports in total when it appears all Nebraska EWP sites have been reviewed and DSR's completed.

Arlis Plummer
Hydraulic Engineer

Elkhorn IPA



RIMG0067



RIMG0089 -



RIMG0090 -



RIMG0114 -



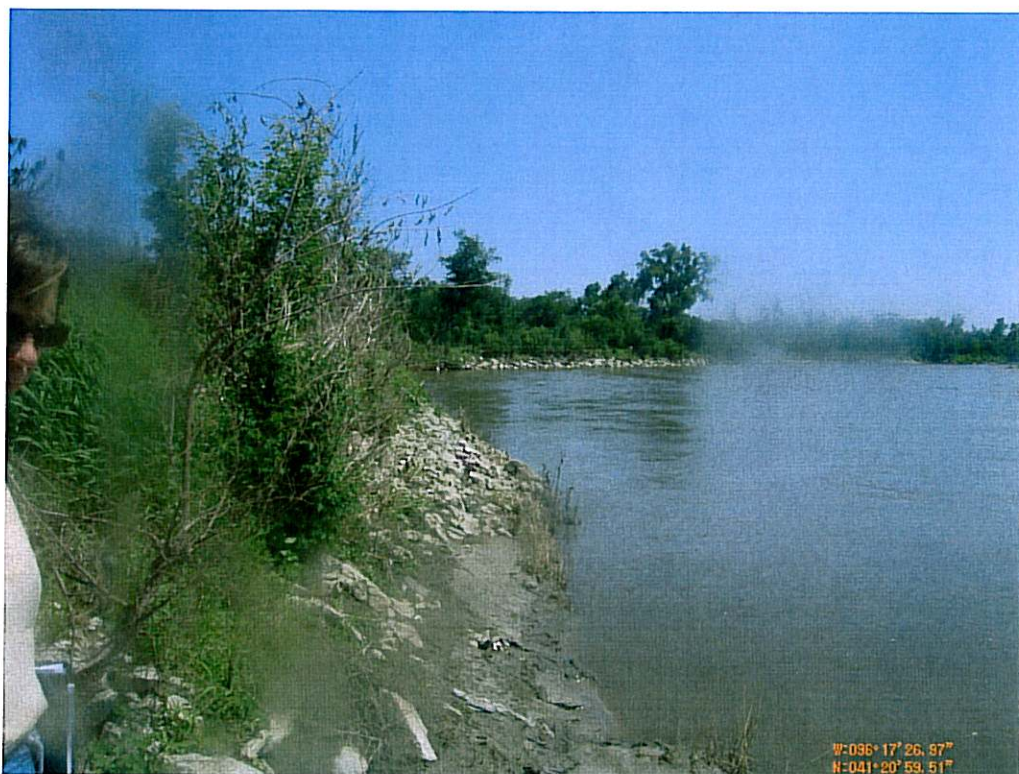
RIMG0115 -



RIMG0121 -



RIMG0124 -



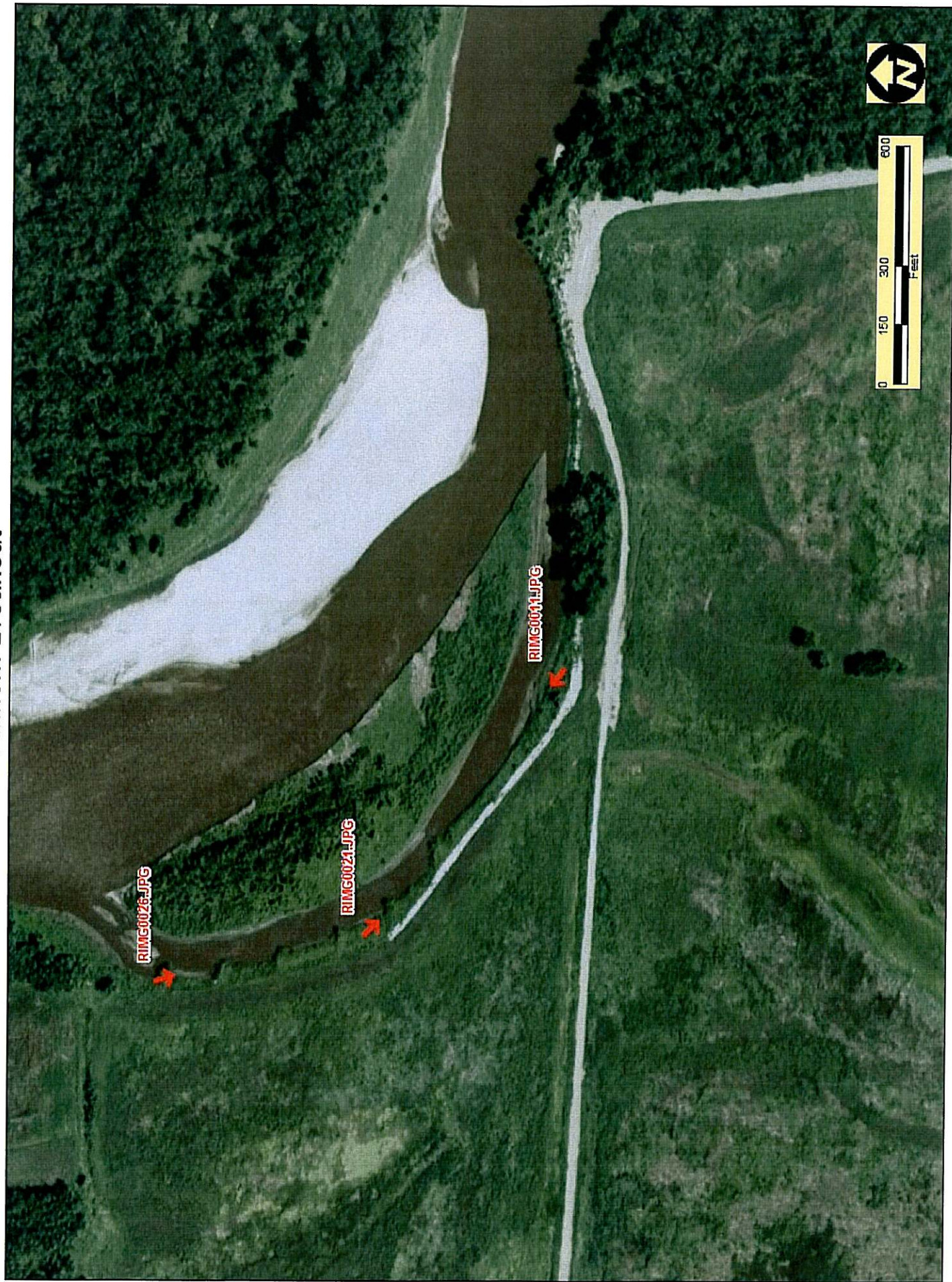
RIMG0128 -



RIMG0133 -



Elkhorn Breakout



RIMG0011



RIMG0021



RIMG0026



Schmidt Farm



RIMG0063



RIMG004



RIMG0053



Elk Creek



RIMG0013



RIMG0019 -



RIMG0031 -



RIMG0052 -



RIMG0056 -



RIMG0065





Cambridge Estates
7-2-10



Cambridge Estates
7-2-10