PRRIP – ED OFFICE MEMORANDUM

TO: HALL COUNTY BOARD OF SUPERVISORS

FROM: EXECUTIVE DIRECTOR'S OFFICE OF THE PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

SUBJECT: FEBRUARY 2015 ICE JAM

DATE: APRIL 2, 2015

CC: PRRIP GOVERNANCE COMMITTEE, CENTRAL PLATTE NRD

The Platte River Recovery Implementation Program (Program) has been made aware of a meeting of the Hall County Board of Supervisors on March 24th that included a presentation by landowners alleging that the Program caused an ice jam that occurred in February of 2015. The Program has obtained the video of that presentation and is requesting that this memorandum and associated documentation be reviewed by the Board of Supervisors and incorporated into the permanent record. We find this to be necessary in order to address inaccuracies and misconceptions that may have resulted from the one-sided testimony presented on March 24th. We would also request an opportunity to address The Board of Supervisors to present this material and address questions directly.

Property Overview

The Platte River Recovery Implementation Program (Program) acquired the Shoemaker Island property from the Binfield family on December 30, 2010. The property is approximately 1,500 acres in size and includes 2.5 miles of river frontage. The Program acquired the property for the purpose of creating and maintaining on- and off-channel habitat for endangered species including the whooping crane, least tern and piping plover. Major Program land and habitat management actions have included replacement of boundary fences, removal of woody vegetation from wet meadow areas, clearing of woody vegetation from in-channel islands, channel disking, channel widening, and construction of nesting islands.

All management actions are undertaken within the framework of the Program's Adaptive Management Plan. That plan specifies that all actions be implemented as rigorously-designed management experiments. When implemented as designed experiments, management actions are intensively monitored to 1) ensure that they are implemented as designed, 2) evaluate their function, and 3) determine target species response. This process of "learning by doing" allows the Program to closely track and adjust management actions as necessary.

At the March 24th Board of Supervisors meeting, participants indicated that they believed the Program to be "just playing with [the river], experimenting with it." That is not the case. Because of the Program's commitment to monitoring and evaluation, the Shoemaker Island reach is the most intensively monitored reach in the central Platte. Ongoing activities include development of hydrodynamic and sediment transport models, collection of detailed topographic and in-vegetation data twice annually during the growing season, monitoring of river stage on the north and main channel, monitoring of sediment transport during high flow events, collection of bed sediment samples, collection of aerial imagery series annually in June and November, and collection of detailed LiDAR topography data of the entire reach annually in November. Some of this data will be used to address inaccurate statements about Program island building and river conditions at the time of the ice jam.

Nesting Islands

The Program has designed, permitted, and constructed in-channel tern and plover nesting islands at the Shoemaker Island property as part of a larger effort to evaluate least tern and piping plover response to in- and off-channel nesting habitat at the Plum Creek, Cottonwood Ranch, Elm Creek, and Shoemaker Island habitat complexes. The Program received US Army Corps of Engineers (USACE) Section 404 approval for island building on July 25, 2013 (Attachment A). Authorized actions included construction of 14 nesting islands ranging from 0.5 to 13.1 acres in size, for a total of 59.4 acres, at an elevation allowing for a 3,000–8,000 cfs overtopping flow. Nesting island locations, sizes and heights were based on existing vegetated islands that occurred in the channel when the property was acquired.

The Program completed the final design and let the bid for island construction in the fall of 2013. The final design included construction of 41.2 acres of nesting islands in two complexes, one in the west and one in the east half of the property. The design drawings in Attachment B provide the nesting island footprints, elevations of existing islands, and targeted design elevations. The west islands were constructed during the period of mid-November 2013 to early January 2014. The east islands were constructed during the period of mid-August to mid-September 2014.

As described earlier, nesting island areas and heights were based on existing in-channel islands. Construction included clearing of woody and herbaceous vegetation and grading to slightly raise or lower the existing island topography to the design elevation. In the case of the west island complex, target heights for three of the islands were similar to or lower than existing topography and one was slightly higher (1.2 ft). Construction activities also included excavation adjacent to the bank and through a large island to locally increase wetted channel width and flow conveyance. Attachment C presents the width of channel actively conveying flow in June of 2010 prior to property acquisition and in June of 2014 following island construction. Attachment D presents elevation changes following island construction in the area of the west island complex. Attachment E presents aerial photos of the west island complex prior to Program management activities in 2012 and immediately following the ice jam in 2015.

Participants at the March 24th Board of Supervisors meeting testified that the Program nesting islands alternately blocked off the north half of the river, blocked the whole river, dammed up the river, or closed up the river system, causing the ice jam. Attachments B, C, D and E demonstrate that those claims are false. Program vegetation removal and island building increased flow width and conveyance at the location of the west island complex. Participants also testified that the Program intended to build the islands higher, and has received a $2 million dollar grant to do. Those claims are false. The islands were constructed to the design elevations specified in the construction drawings, which are consistent with the heights allowed under the USACE Section 404 authorization. The Program has not applied for any grants or received any grant money to construct additional island habitat on the Shoemaker Island Tract.

Further allegations at the March 24th Board of Supervisors meeting included the Program was adding flow to the river which created more ice and added to the flooding. That claim is false. No releases of environmental flows have ever been made during the months of December through February, nor are such releases remotely likely in the future.

Ice Jams

The National Weather Service in Hastings has compiled ice jam records for Hall County beginning in the 1940s (Attachment F). Hall County experienced ice jams frequently during the decades of the 1950s through the 1980s with comparatively less ice jam activity during dry period of the 2000s. There are also numerous records of ice jam activity on the Platte River in the Wood River to Grand Island reach in the USACE Cold Regions Research and Engineering Laboratory database including for the years of 1986, 1988, 1994, 1996, 1998, 2001, 2003, 2009, 2010, 2014, and 2015. Prior to the 2015 event, the most recent ice jam that caused out-of-bank flooding and damages in the vicinity Shoemaker Island property occurred in December of 2010. That ice jam began in the Doniphan area and progressed upstream resulted in flooding and closure of Shoemaker Island Road and evacuation of two homes in the area of the Platte River bridge at Highway 11. Aerial photographs and news stories from that event can be found in Attachment G. Participants at the March 24th Board of Supervisors meeting claimed that the 2010 ice jam was caused by Program activities. That claim is false. The Program had not yet acquired the property at the time the 2010 ice jam occurred and no releases for environmental flows were being made.

The Program was notified of the February 2015 ice jam by the USACE at 2:30 pm on afternoon of February 3rd. The Program chartered a flight that afternoon to document river conditions in the reach. Photographs and other documentation from that flight are located in Attachment H. The ice jam and overbank flooding occurred 0.25 miles downstream from the Shoemaker Island property west boundary and 0.4 miles upstream of the west complex of nesting islands. At the location of the ice jam, total channel width narrows to approximately 420 ft. On the afternoon of February 3rd, the entire channel was obstructed by ice at that location and the majority of river flow was overtopping the north bank and flowing northeast across Shoemaker Island.

The Program chartered another flight on February 6th to document river conditions. By the afternoon of the 6th, the ice jam had progressed to approximately one mile upstream of the Wood River bridge but no additional areas of overbank flow were observed (Attachment I). Additional flights were chartered on February 23rd following ice break up (Attachment J) and on March 26th (Attachment K) to document conditions following the ice jam.

During and following the ice jam period, the Program was contacted by three families that own property in the area. In all cases, the families requested and were provided with specific documentation. The Thesenvitz family requested and was provided with the bid package for the island construction project, including the island design drawings. The Gideon family requested and was provided with flight photos and maps of the ice jam location. The Luhr family was also provided with flight photos and maps of the ice jam location.

Participants at the March 24th Board of Supervisors meeting testified that the Program response to inquiries was "…just sue us…" That claim is false. All communications between the families and Program staff were courteous and the Program provided the families with design drawings, maps, and flight photos.

Addressing the Potential for Future Ice Jams

At a system scale, channel narrowing in the central Platte River is a major concern for future flood conveyance and ice jamming. Since 2009, the Program has contributed approximately $1.2 million dollars to the Platte Valley and West Central Weed Management Areas to assist in spraying and removal of invasive riparian vegetation from the channel throughout the central Platte River. Attachment L provides a map of spraying efforts in the Wood River to Alda bridge segment alone. Continuing that work into the future is critically important. In the vicinity of the Shoemaker Island property, the Program feels that the most benefit could be gained by 1) clearing vegetation from islands throughout the reach that have become stabilized over the past decade and 2) widening the 'pinch point' near the west property boundary where overbank flooding occurred in 2010 and 2015. These efforts may reduce the frequency and severity of ice jam flooding in the Shoemaker Island area, but it is highly unlikely that it could be eliminated entirely.

The Program annually disks vegetated portions of the channel within the Shoemaker Island tract property boundary. In addition, the Program has executed management agreements with two neighboring landowners downstream of the ice jam location that allow for disking of those properties at no cost to the landowners. Neighboring landowners across the river at the ice jam location and on Shoemaker Island upstream of the jam location have been approached several times, including following the ice jam, in an effort to secure similar agreements for disking and removal of in-channel vegetation at no cost to the owners. To date, they have indicated that they are not interested in working with the Program. Channel width at the 'pinch point' cannot be addressed without the cooperation of the south bank landowner.

At the March 24th Board of Supervisors meeting, participants indicated that the Program would rather they go away so that organizations like the Program could have the entire valley. That claim is false. The Program has contributed significant monetary resources to assist in riparian vegetation management on private lands. The Program has also attempted to work with neighboring landowners in the Shoemaker Island reach to manage in-channel vegetation and improve flow conveyance at no cost to those owners. To date, they have been unwilling to do so.

Attachment A: US Army Corps of Engineers Section 404 Authorization for construction of in-channel nesting islands.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NEBRASKA REGULATORY OFFICE - KEARNEY
2214 2ND AVENUE
KEARNEY, NEBRASKA 68847-5315

http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Nebraska.aspx

RECEIVED 8-1-13

July 25, 2013

Dr. Jerry Kenny
Platte River Recovery & Implementation Program
4111 4th Street
Kearney, Nebraska 68845

RE: 2012-02315-KEA (Shoemaker Island nesting island complex)

Dear Dr. Kenny:

Enclosed is a Department of the Army Permit, Number **2012-02315-KEA.** This project involves the creation/restoration of habitat for threatened and endangered species on the Platte River. The project is located in Sections 11+12+14+15+16, Township 9 North, Range 11 West, Hall County, Nebraska.

Please note the special condition(s) on pages 2-3 of the permit.

The attached compliance certification form must be signed and returned to this office upon completion of the authorized work. A compliance inspection will be scheduled soon thereafter.

Should you, at any time, become aware that either an endangered and/or threatened species exists within the project area, you must immediately notify this office. In addition, you are responsible for all work accomplished in accordance with the terms and conditions of this permit. If a contractor or other authorized representative will be performing the work authorized by this permit on your behalf, we strongly recommend that they be provided a copy of this letter and the permit so that they are aware of the limitations of the permit. Any activity which fails to comply with all the terms and conditions of the permit will be considered unauthorized and subject to appropriate enforcement action.

The Omaha District, Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Nebraska.aspx. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

If you have any questions regarding this permit, please contact Mrs. Barb Friskopp at the above address or call (308) 234-1403 or e-mail barbara.j.friskopp@usace.army.mil and refer to the above permit number.

Sincerely,

Matthew T. Why

FOR John L. Moeschen
Nebraska State Program Manager

Enclosure

Copy Furnished:

EPA Region VII (Chamberlain)
NDEQ (Garber)

COMPLIANCE CERTIFICATION
KEARNEY REGULATORY OFFICE

Permit Number:	2012-02315-KEA
County:	Hall County
Name of Permittee:	Platte River Recovery & Implementation Program Jerry Kenny
Date of Issuance:	July 25, 2013
Project Manager:	Barb Friskopp

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U. S. Army Corps of Engineers
Nebraska Regulatory Office - Kearney
2214 2nd Avenue
Kearney, NE 68847

Please note that the permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with permit conditions, the permit may be subject to suspension, modification or revocation.

CERTIFICATION:

I hereby certify that the authorized work was done in accordance with the Nationwide Permit authorization, including any general, regional or activity-specific conditions.

I hereby certify that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions.

_____

Signature of Permittee Date

DEPARTMENT OF THE ARMY PERMIT

Permittee: Platte River Recovery & Implementation Program

Permit No: 2012-02315-KEA

Issuing Office: Nebraska Regulatory Office Omaha District Corps of Engineers

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:
1) Construct in-channel least tern and piping plover nesting islands. This involves moving sand in-channel to form island habitat, re-shaping macroforms (established island or sand bars within the Platte River channel) and/or place river sands in thalwegs. Fourteen nesting islands, ranging from .5 - 13.1 acres in size, will create a total of 59.4 acres of nesting habitat. The elevation of the islands will allow for a 3,000 - 8,000 cubic feet per second (cfs) overtopping flow. Total fill will be approximately 20,000 cubic yards. The fill material will come from existing macroforms or dredged from the adjacent channel bottom.

2) Create/restore in-channel whooping crane habitat by leveling sand bars, widening the channel and clearing vegetation.

3) Clear trees to improve the sight lines for whooping cranes both within the channel and within the forested wetland/riparian habitat along the north bank of the river. Approximately 120 acres of trees may be cleared. This activity will not result in the loss of wetland but rather a change in wetland type from palustrine forested to palustrine emergent and a change from wooded riparian habitat to herbaceous riparian habitat.

4) Clear and control in-channel vegetation; conduct in-channel vegetation control on macroforms by disking, shredding or other applicable methods of vegetation control.

Project Location:
Platte River; Sections 11+12+14+15+16, Township 9 North, Range 11 West, Hall County, Nebraska

Permit Conditions:

General Conditions:
1. The time limit for completing the work authorized ends on **June 30, 2018**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

wetland mitigation may be required to off-set the loss of 9.9 acres of wetland. Monitoring reports shall be submitted each year by December 1 for the remaining monitoring period of the first increment of the program.

5. Mitigation
The activity carried out at Shoemaker Island will impact approximately 9.9 acres of wetland - approximately 6.3 acres of PEMF will be impacted by filling activities and 3.6 acres of PEMC will be impacted by excavation. The yearly monitoring reports must demonstrate that the habitat construction resulted in an overall functional gain and a functional gain for target species habitat suitability for least tern, piping plover and whooping crane. If functional gains are not achieved, compensatory wetland mitigation may be required to off-set the loss of 9.9 acres of wetland.

6. Maintenance
Annual maintenance may be done provided 1) the maintenance does not go beyond the original geographical boundary of the complex as depicted in the attached map; and 2) the original footprint of fill (total acreage of island construction) is not exceeded. The maintenance plan shall be submitted to the Kearney Regulatory Office prior to construction.

7. The Permittee and/or the Permittee's contractor or any of the employees, subcontractors or other persons working in the performance of a contract or contracts to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the Nebraska Regulatory Office. Notification shall be by telephone or FAX within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the Permittee is notified by the Nebraska Regulatory Office.

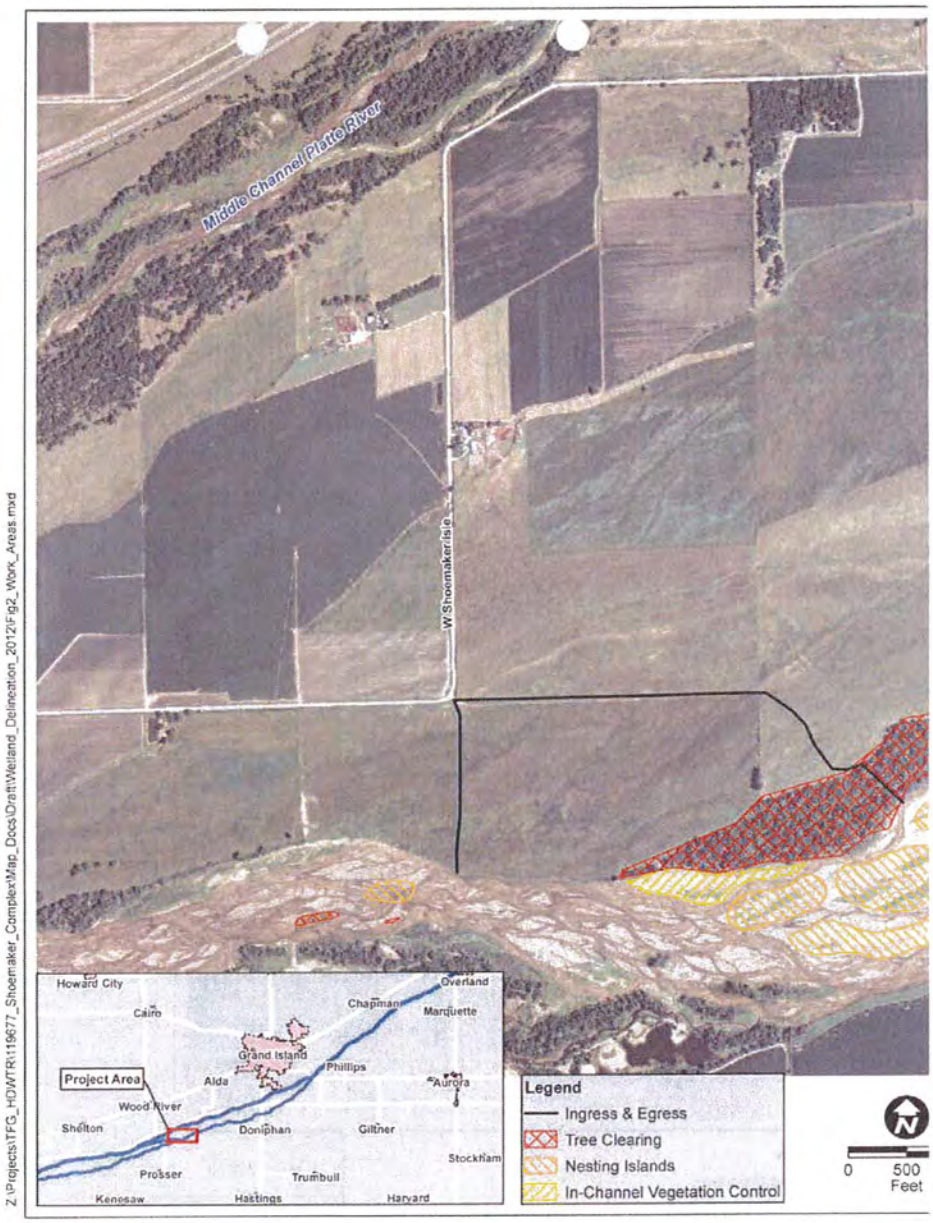
Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
   ( ) Section 10 of the River and Harbors Act of 1899 (33 U.S.C. 403).
   (**X**) Section 404 of the Clean Water Act (33 U.S.C. 1344).
   ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.
   a. This permit does not obviate the need to obtain other Federal, state, tribal, or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
   e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.



Geographical Boundary of Shoemaker Island Complex

US Army Corps
Of Engineers
Omaha District

PUBLIC NOTICE

Application Number: 2012-02315-KEA
Applicant: Platte River Recovery Implementation Program (Program)
Waterway: Platte River, wetlands adjacent to the Platte River
Issue Date: March 4, 2013
Expiration Date: March 25, 2013

21-DAY NOTICE

Reply To:
Kearney Regulatory Office
2214 2nd Avenue Kearney, NE 68847-5315
(308) 234-1403
http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Nebraska.aspx

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JOINT PUBLIC NOTICE: This public notice is issued jointly by the US Army Corps of Engineers, Omaha District, and the Nebraska Department of Environmental Quality (NDEQ). The NDEQ, PO Box 98922, Lincoln, Nebraska 68509-8922, will review the proposed project for state certification in accordance with the provisions of Section 401 of the Clean Water Act. NDEQ hereby incorporates this public notice as its own public notice and procedures by reference thereto. For the purposes of NDEQ, this public notice will expire 30 days from the above issue date.

AUTHORITY: Section 404 of the Clean Water Act (33 USC 1344).

APPLICANT: Platte River Recovery Implementation Program
Dr. Jerry Kenny, Executive Director
4111 4th Avenue, Suite 6
Kearney, Nebraska 68845

AGENT: HDR Engineering
Mr. Matt Pillard
8404 Indian Hills Drive
Omaha, Nebraska 68114

PROJECT LOCATION: Shoemaker Island Complex - Sections 11+12+14+15+16+17, Township 8 North, Range 11 West, Hall County, Nebraska

PROJECT DESCRIPTION: The applicant is proposing to construct in-channel least tern and piping plover nesting island and clear and control in-channel vegetation. This involves moving sand in-channel to form island habitat, re-shaping macroforms (established island or sand bars within the Platte River channel) and/or place river sands in thalwegs. In-channel whooping crane habitat involves sand bar leveling, channel widening and vegetation clearing.

Fourteen nesting islands, ranging from .5 - 13.1 acres in size, will create a total of 59.4 acres of nesting habitat. The elevation of the islands will allow for a 3,000 - 8,000 cubic feet per second (cfs) overtopping flow. Total fill will be approximately 20,000 cubic yards. The fill material will come from existing macroforms or dredged from the adjacent channel bottom.

letter dated July 16, 2012; the Service concurs that this proposal "may affect but are not likely to adversely affect" the federally listed species and/or critical habitat beyond what was described in the PBO.

In order to complete our evaluation of this activity, comments are solicited from the US Fish and Wildlife Service and other interested agencies and individuals.

FLOODPLAIN: The USACE views the Department of the Interior as the lead Federal agency for the proposed project and is., therefore, responsible to ensure compliance with Executive Order 11988, Floodplain Management, which discourages direct or indirect support of floodplain development whenever there is a practicable alternative.

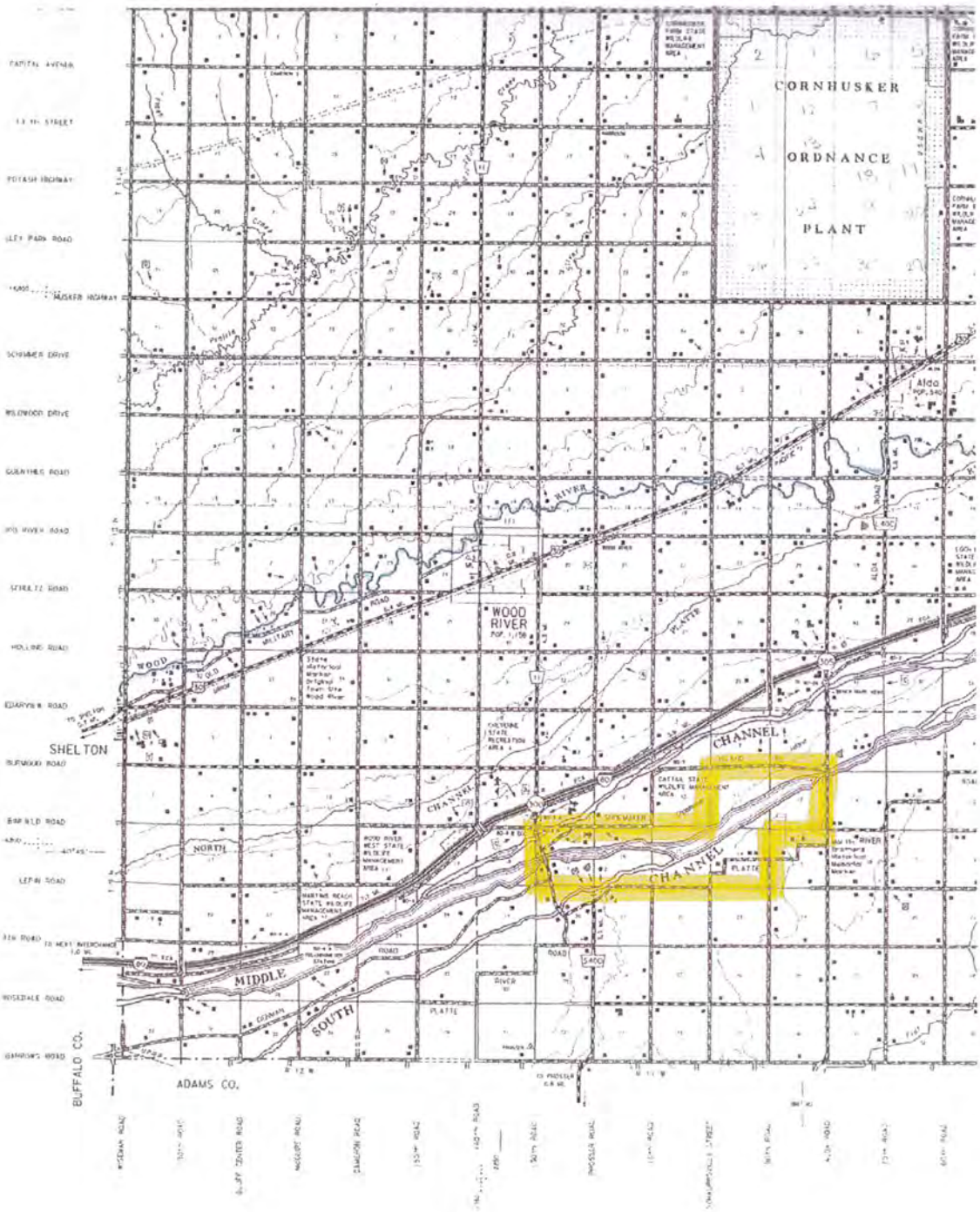
WATER QUALITY CERTIFICATION: Section 401 of the Clean Water Act (33 USC 1341) requires that all discharges of fill material must be certified by the appropriate state agency as complying with applicable effluent limitations and water quality standards. This public notice serves as an application to the state in which the discharge site is located for certification of the discharge. The discharge must be certified before a Department of the Army permit can be issued. Certification, if issued, expresses the state's opinion that the discharge will not violate applicable water quality standards.

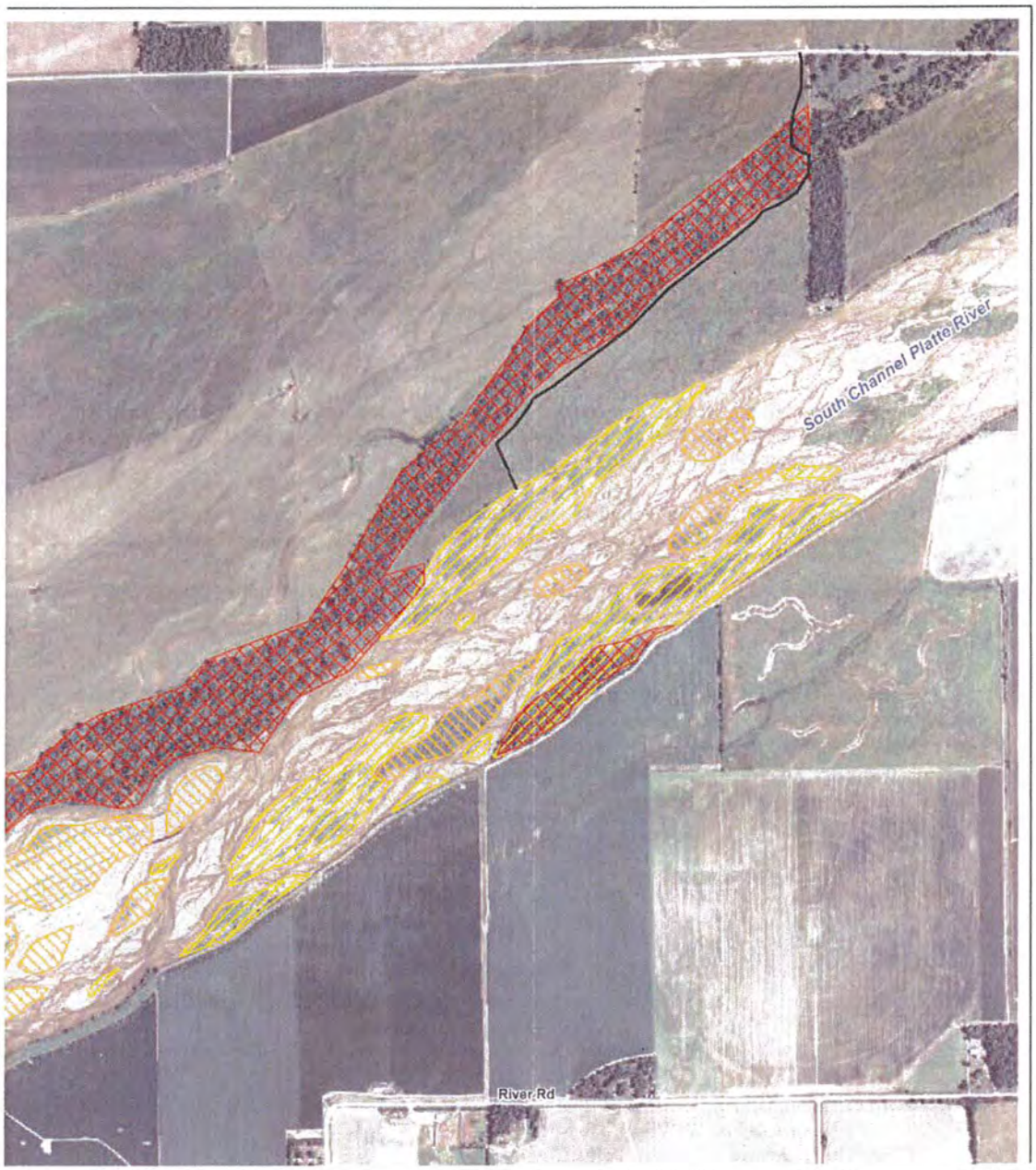
PUBLIC INTEREST REVIEW: The decision whether to issue the Corps' permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against their reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the work on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

COMMENTS: The Corps of Engineers is soliciting comments from the public, Federal, State, and Local agencies and officials, Indian Tribes and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

Anyone whose interests may be affected by the proposed/completed work is invited to submit favorable or unfavorable written comments to the **Kearney Regulatory Office 2214 2nd Avenue Kearney, NE 68847-6856 or send an e-mail to barbara.j.friskopp@usace.army.mil**. The District Engineer is particularly interested in receiving comments related to the proposal's probable impacts on the affected aquatic system's functional values, cumulative and secondary effects and endangered species. All comments received will be considered public information; copies of all comments, including names and addresses of commentors, may be provided to the applicant unless confidentiality is requested. Comments must be submitted on or before the expiration date (located at the top of the first page) of this notice to be considered in the subsequent actions on this application.

PUBLIC HEARING: Before the expiration date of this notice, anyone may request, in writing, that a public hearing be held to consider this application. Requests shall specifically state the reason(s) for holding a public hearing. If the


CORNHUSKER
ORDNANCE
PLANT
WOOD
RIVER
SHELTON
CHANNEL
CHANNEL
CHANNEL
NORTH
MIDDLE
SOUTH
PLATTE
RIVER
BUFFALO CO.
ADAMS CO.



1,000

Work Areas

Shoemaker Island Complex
Sections 11, 12, 14, 15, 16, & 17
Township 9 North, Range 11 West
Hall County, Nebraska

HDR

DATE
January 2013

FIGURE
2

Attachment B: In-channel nesting island final design drawings.

SHOEMAKER ISLAND ROAD

ALDA ROAD

EAST ISLAND ACCESS POINT
Shoemaker Island Road

EAST STAGING AREA

MANAGEMENT AREA
BOUNDARY

EAST ISLAND COMPLEX

WEST STAGING AREA

WEST ISLAND ACCESS POINT
Shoemaker Island Road

WEST ISLAND COMPLEX

NOTE: All construction activities must occur within the Management Area Boundary, including activities within the river channel.

Legend

- AccessRoute
- Management Boundary
- Nesting Islands
- Excavation Areas

N

0 500 1,000 2,000 Feet

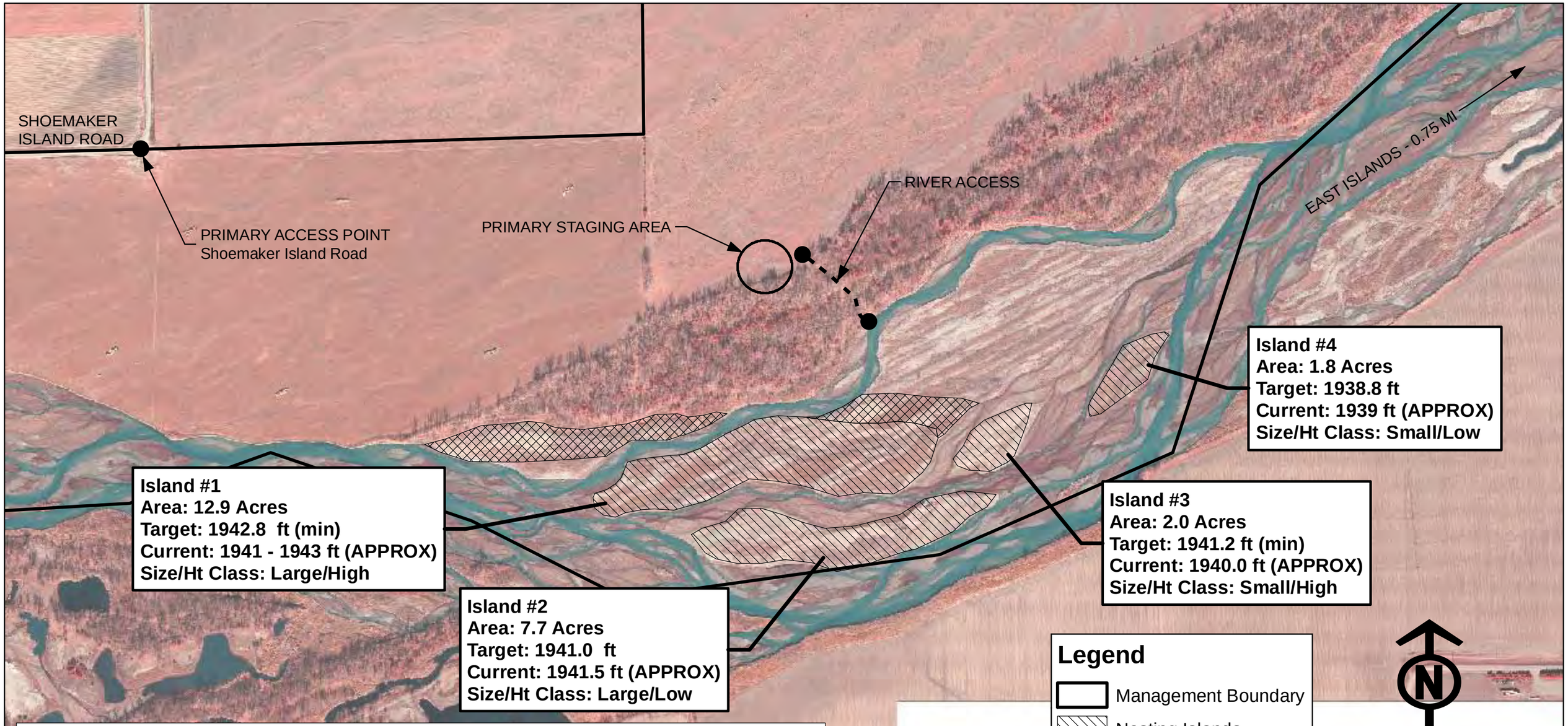
PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

PROJECT NO. P13-004

2013 SHOEMAKER ISLAND COMPLEX
RIVER ISLAND CONSTRUCTION

SITE LAYOUT

SHEET NO:	DATE:	DRAWN BY:
1 of 3	08/12/13	JDB



NOTES:

Island Footprints are shown with diagonal hatch.

Work will occur under the guidance of Project Engineer. Island and borrow locations may vary slightly depending on site conditions at the time of construction.

Islands will be built to the specified elevation. The "current" elevations are approximate and vary within the island footprint. They are given for a general idea of the need for cut or fill.

Areas marked with crosshatch will be excavated to low flow water levels in order to establish flow channels and can be used as borrow areas if needed for islands.

Photograph is from November 2012 and reflects current site conditions.

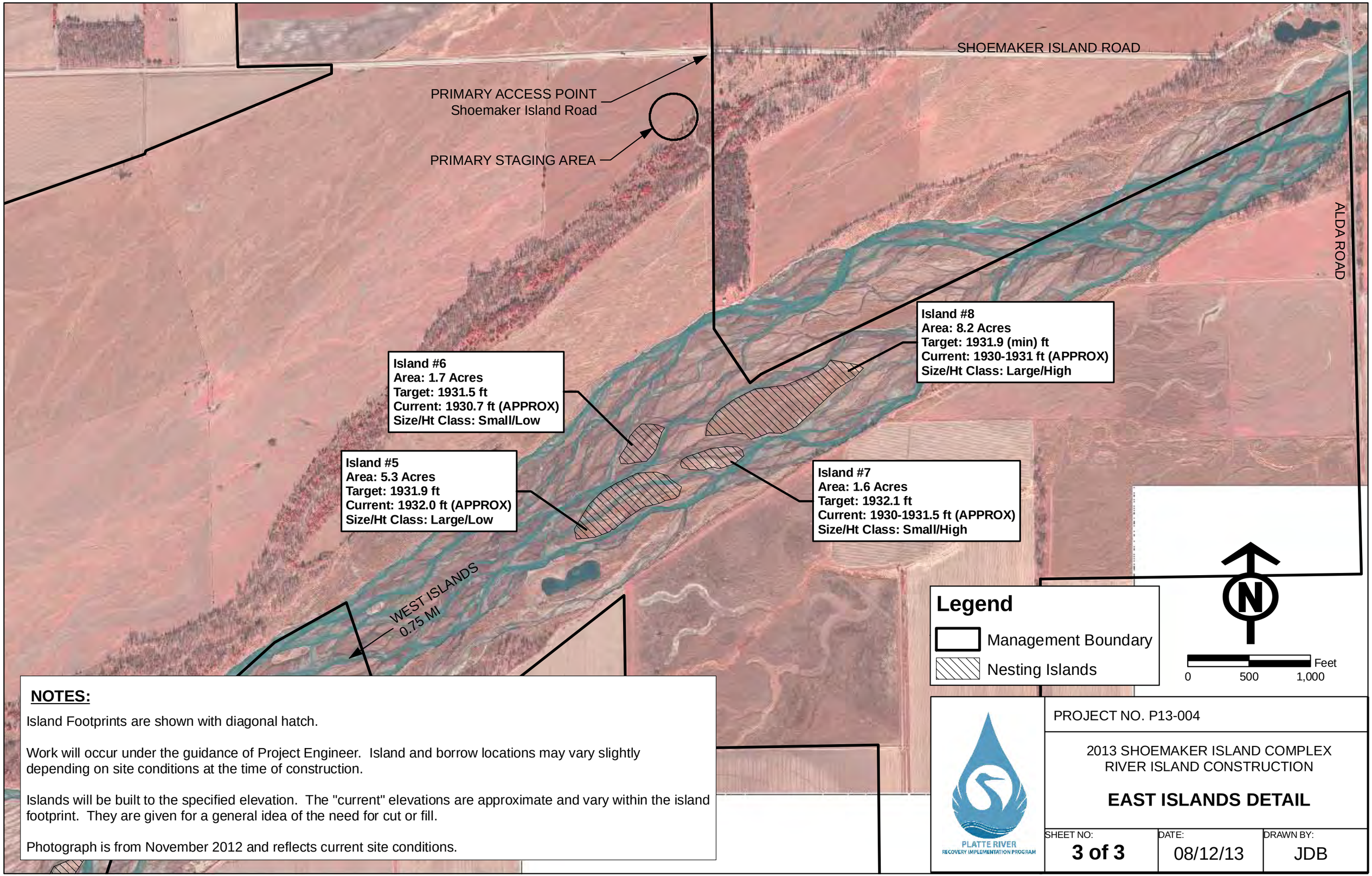
PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

PROJECT NO. P13-004

2013 SHOEMAKER ISLAND COMPLEX
RIVER ISLAND CONSTRUCTION

WEST ISLANDS DETAIL

SHEET NO:	DATE:	DRAWN BY:
2 of 3	08/12/13	JDB



NOTES:

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Islands will be built to the specified elevation. The "current" elevations are approximate and vary within the island footprint. They are given for a general idea of the need for cut or fill.

Photograph is from November 2012 and reflects current site conditions.

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

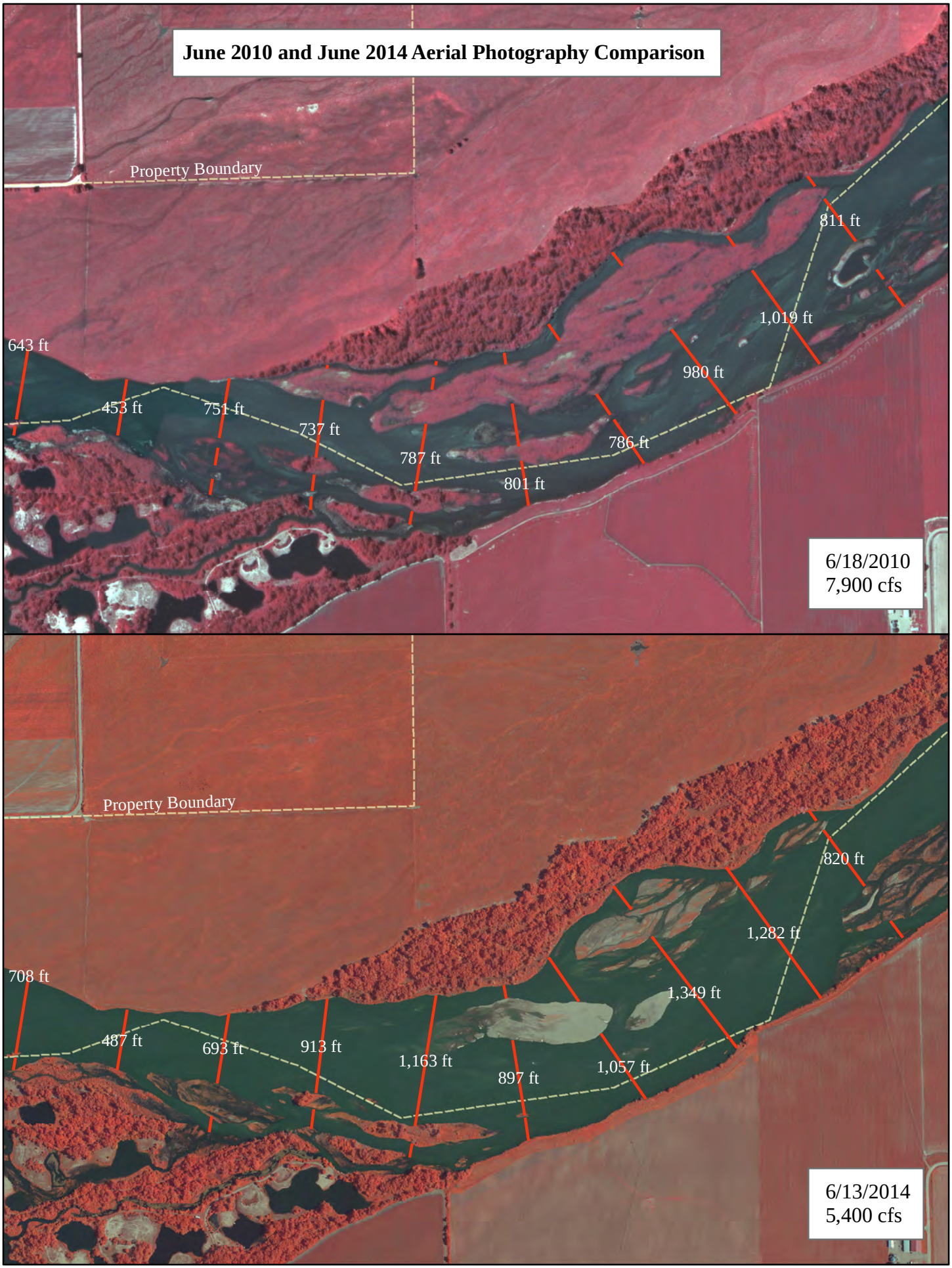
PROJECT NO. P13-004

2013 SHOEMAKER ISLAND COMPLEX
RIVER ISLAND CONSTRUCTION

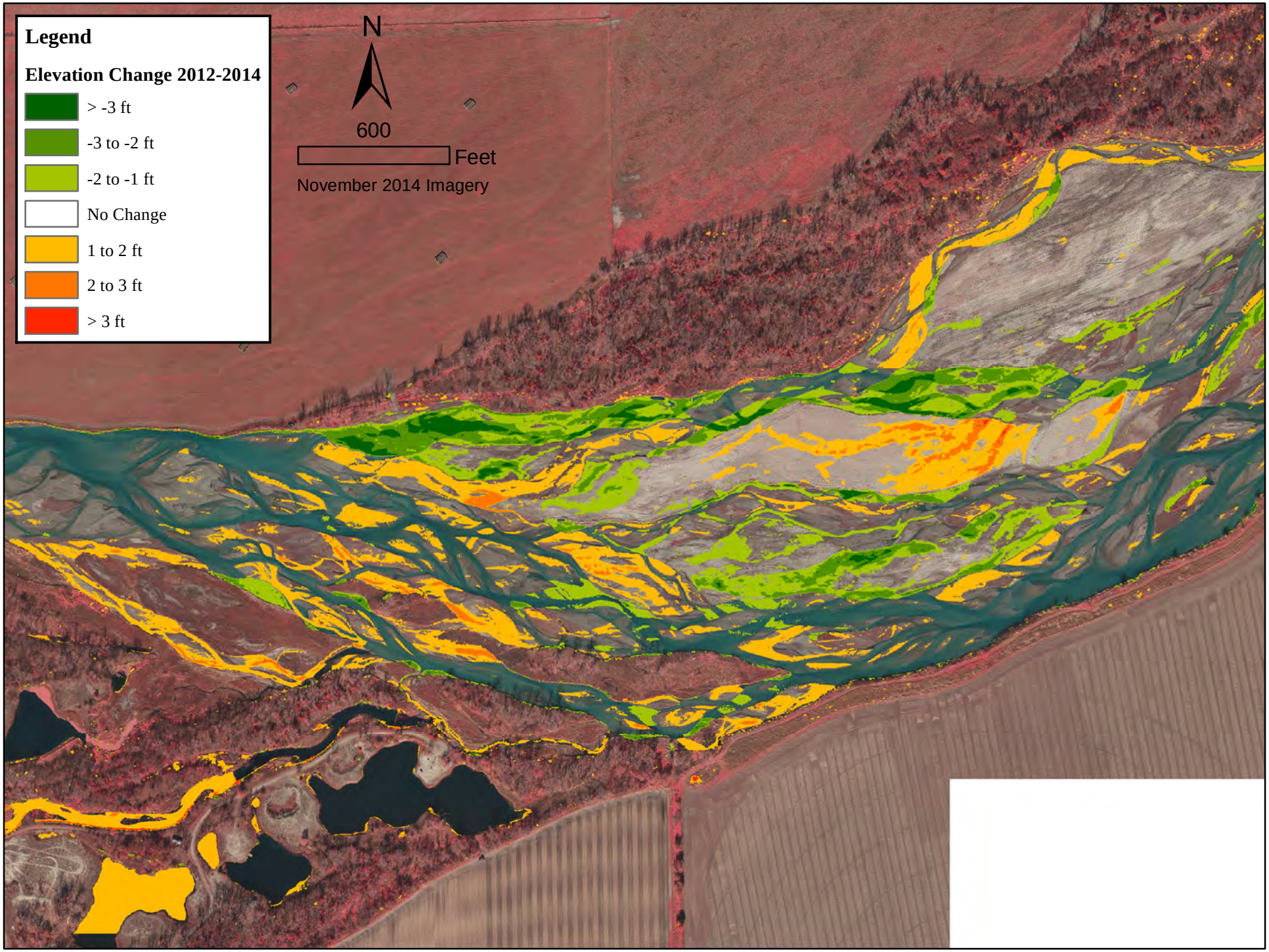
EAST ISLANDS DETAIL

SHEET NO:	DATE:	DRAWN BY:
3 of 3	08/12/13	JDB

Attachment C: Map indicating width of channel actively conveying flow in June of 2010 prior to property acquisition.


June 2010 and June 2014 Aerial Photography Comparison
Property Boundary
643 ft
453 ft
751 ft
737 ft
787 ft
801 ft
786 ft
980 ft
1,019 ft
811 ft
6/18/2010
7,900 cfs
Property Boundary
708 ft
487 ft
693 ft
913 ft
1,163 ft
897 ft
1,057 ft
1,349 ft
1,282 ft
820 ft
6/13/2014
5,400 cfs

Attachment D: Map indicating in-channel topographic (elevation) change from 2012 to 2014, following nesting island construction. Change reflects construction activities and natural geomorphic processes.


Legend
Elevation Change 2012-2014
> -3 ft
-3 to -2 ft
-2 to -1 ft
No Change
1 to 2 ft
2 to 3 ft
> 3 ft
N
600
Feet
November 2014 Imagery

Attachment E: Aerial photographs of west island complex area on 3/30/2012 prior to Program island building activities and on February 2/23/2015 immediately following the 2015 ice jam.

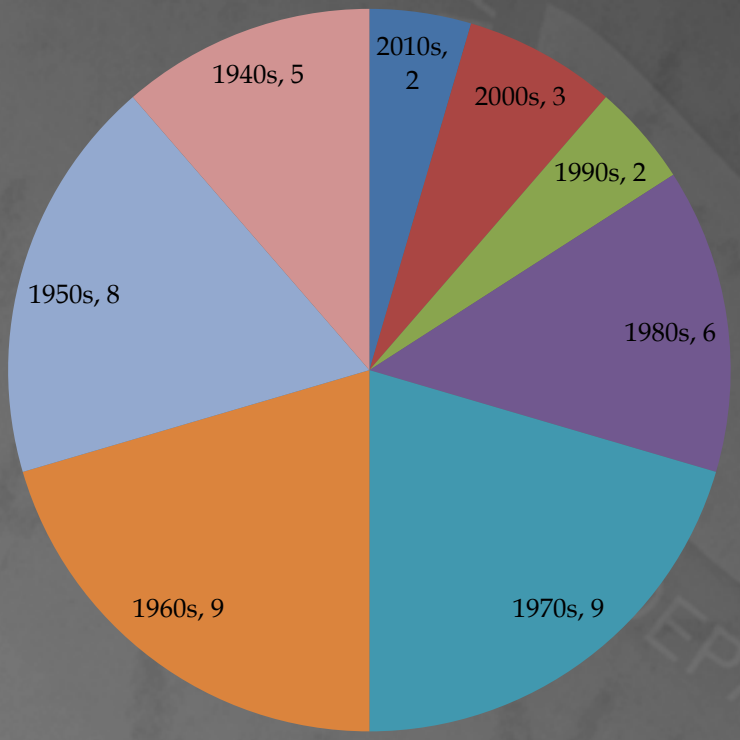
30.03.2012 09:31

2/23/2015

Attachment F: National Weather Service graphic indicating the number of ice jams in Hall County by decade for the period of 1940-2014.

Historical Platte River Ice Jams

Number of Hall County Ice Jams Per Decade



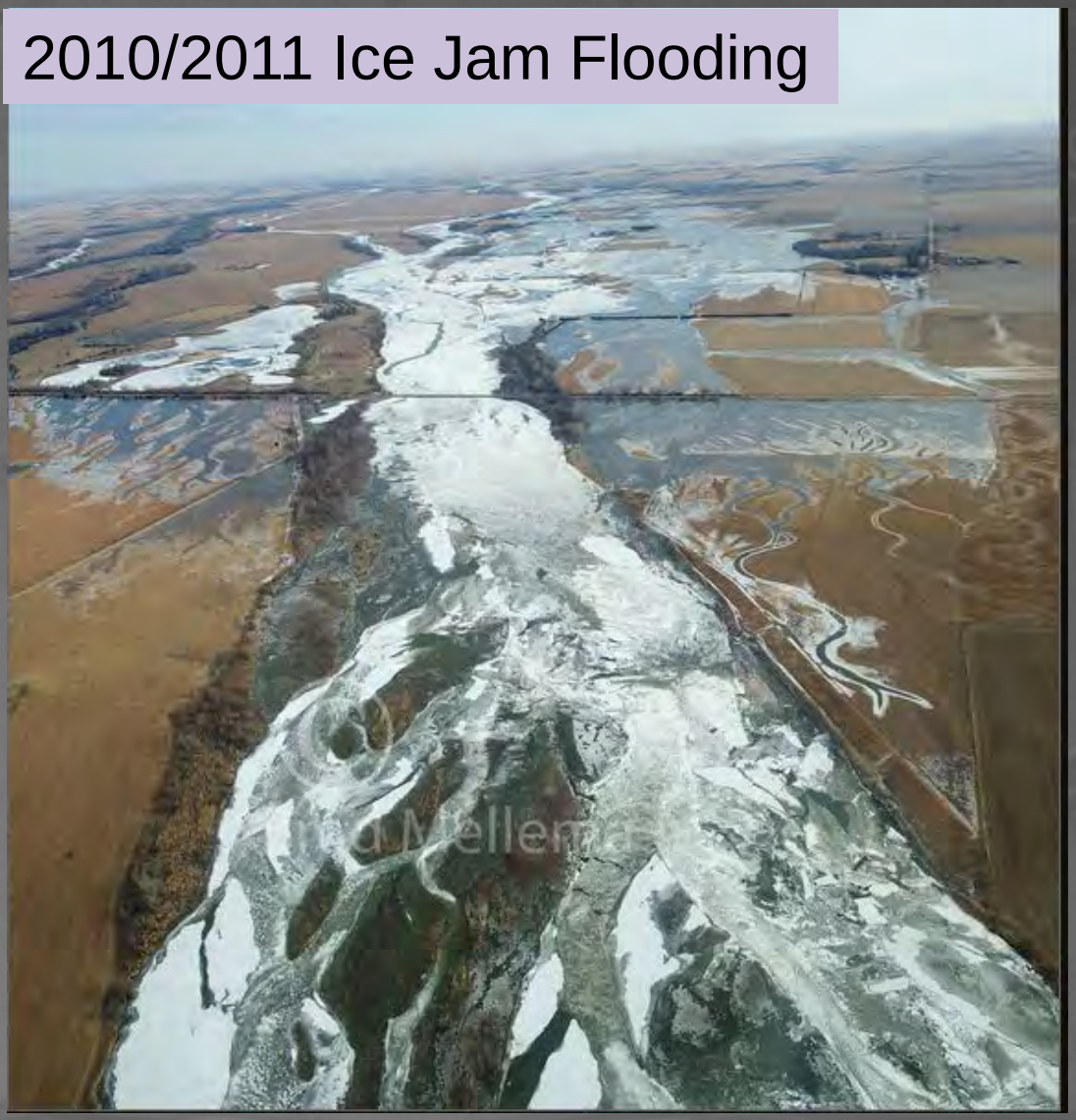
Attachment G: Documentation of December 2010 ice jam flood in the Shoemaker Island reach.

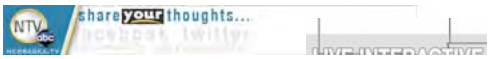
Historical Platte River Ice Jams

2010/2011 Ice Jam Flooding

Historical Platte River Ice Jams

2010/2011 Ice Jam Flooding





Cargill

Story

Icy Waters Threaten Homes, Farms Near Wood River

Posted: Dec 27, 2010 5:30 PM CST
Updated: Jan 03, 2011 5:19 PM CST

Christmas was anything but a vacation for farmer Lloyd Luehr, as ice jams forced frigid water out of the banks of the Platte River, over a Hall County road living up to its namesake.

"Shoemaker Island is an island. We have no access to the east," he said.

With ice and water over the road, residents get around the only way they can.

Luehr said, "Our neighbors now are crossing cornfields with four-wheel drive pickups to get back and forth to home."

The farmer going off-road in his truck told NTV he's expecting a grandchild, so his son and daughter-in-law went into town.

With this road closed, and ice jams continuing, there is a public safety threat, according to the county's emergency management director.

Jon Rosenlund said, "Want to make sure we get fire trucks, ambulances through the area if we need to."

The immediate threat is over for two homes south of Wood River on Highway 11 that had to be evacuated.

"I checked this morning, houses look OK," Rosenlund said. The water was down five inches from the night before.

Only days into the winter season, however, the threat could persist indefinitely.

That's what worries Lloyd Luehr. He said, "It's a perfect storm right now because this water and ice is not going away until spring."

"Ice jams are funny things," Rosenlund said. "We may see this backing up, off and on flooding near the banks of the Platte River on one of the channels until a good full thaw in the spring."

While Santa Claus was making his rounds, Lloyd Luehr was out in his fields moving hay bales well past midnight on Christmas Eve.

"It was an eleventh hour decision we had to make," he explained. Two nights later he was helping neighbors evacuate their homes.

It's unlike anything Luehr has seen in his 65 years on the farm.

"I've never seen anything this bad," he said. "It's a serious situation."

The state monitors ice jams and winter flooding, however, they do not track this far west. That may be an indication how rare this is.

Rosenlund said the flooding has moved six miles west in a week from Doniphan to Wood River, so he advised people to the west to have a flood evacuation plan in place.

Reporter's Notes by Steve White:
Rosenlund said families near the Platte should have 72 hours of supplies on hand, and also have a plan to deal with the loss of utilities due to flooding. He said the Red Cross assisted with the two evacuations on Sunday.

Luehr said his concern on Shoemaker Island road is that the state is planning to do bridge work to the west starting this spring. He said if the flooding continues, that could cut off his only way out.

Luehr's home was not affected by flooding, however, much of his farm land had been affected.

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Rising Platte forces evacuation

Your

Posted: Monday, December 27, 2010 4:37 pm | *Updated: 12:20 pm, Mon Jan 17, 2011.*

Barrett Stinson/WORLD-HERALD NEWS SERVICE

Platte River flooding washed out a section of road west of Alda on Dec. 20.

Platte River flooding washed out a section of road west of Alda on Dec. 20.

WOOD RIVER, Neb. — Another Hall County home was evacuated Sunday night due to Platte River floodwaters rising from ice jams.

The National Weather Service Office in Hastings issued a flood warning at 6:50 p.m. Sunday that will remain in effect until 6:30 p.m. Tuesday.

Grand Island/Hall County Emergency Management Director Jon Rosenlund said the home was evacuated Sunday night in the area of the Platte River bridge at Highway 11.

"The water was approaching and threatening the home," he said.

Volunteers from the Wood River Fire Department were called in shortly after 6 p.m. Sunday to assist with what was first considered to be "possible evacuations."

When evacuation orders were given later in the evening, Rosenlund said the firefighters were assisted by the Central Plains Chapter of the American Red Cross.

The National Weather Service issued a flood warning shortly before 7 p.m. Sunday due to the ice jams.

"At 6:45 p.m. emergency management reported flooding was occurring along the Platte River in southern Hall County due to ice jams," the weather service warning stated. "Most of the flooding was occurring around Shoemaker Island. . . . The flood waters were beginning to threaten a few homes in the area."

Weather service officials said that predicting river levels influenced by ice action is very difficult.

"It is possible the minor flooding could last several days," the weather service warning stated. "The ice jams and flooding will continue to be monitored over the next several days."

The NWS forecast for Grand Island calls for sunny skies and highs in the mid-30s today, climbing into the low to mid-40s Tuesday through Thursday.

Rosenlund was coordinating with Hall County sheriff's deputies to conduct frequent checks of the area to watch for other property that may be threatened.

He said the "ice jam has moved up river" since last week.

Motorists are urged not to drive through water that is crossing a road. The water depth may be too deep, or road damage may have occurred, weather service and road officials said.

Hub Staff

Tweets from a list by Kearney Hub

A list of Kearney Hub reporters and accounts.

Kearney Hub @KearneyHub 4m

Hastings College names interim athletic director: bit.ly/19Q7teE pic.twitter.com/78wYeEHZOR

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PRINT AD
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A similar evacuation occurred Dec. 19 due to flood waters from ice jams in the same area.

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- **ARTICLE**: Sen. Fischer asks J-2 project questions on behalf of owners
- **ARTICLE**: Water balancing a continuous struggle in Nebraska
- **ARTICLE**: Changing climate means sun might begin to set on sandhill cranes' migration through Nebraska
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Posted in Local on *Monday, December 27, 2010 4:37 pm. Updated: 12:20 pm.* | Tags: Platte River,

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- Be truthful. Don't knowingly lie about anyone or anything.
- Absolutely no personal attacks or slander toward others
- Be nice. No racism, sexism or any sort of -ism that is degrading to another person.
- Advertising is not free. Do not use comments as a means to promote your website or business.
- Be proactive. Use the 'Report' link on each comment to let us know of abusive posts.
- Share with us. We'd love to hear eyewitness accounts, the history behind an article.

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Grand Island, NE | Good Samaritan Society-

Charge Nurse & MA/CNA
Minden, NE | Bethany Home

Wood River, Alda residents evacuated; Shelton could be next if ice builds up

Your

Posted: Tuesday, December 28, 2010 2:00 pm | *Updated: 12:20 pm, Mon Jan 17, 2011.*

Crystal LoGiudice, Grand Island Independent

Area of flood water and ice

A vehicle traveling south on Highway 11 makes its way past an area of flood water and ice on Monday. Ice jams in the main channel on the Platte River have caused flooding near Highway 11 and have closed Shoemaker Island Road between Alda Road and Highway 11.

By Amy Schweitzer Grand Island Independent

WOOD RIVER — Shane and Kristen Burr were spending a quiet evening Sunday watching a football game at their house near the Platte River south of Wood River when water started creeping towards his home.

"It all started about 5 (p.m.)," Shane Burr said, adding that he noticed the issue when his neighbor, Cheri Nikkila, called to say her Bobcat got stuck while trying to clean out her drive.

Hall County Emergency Manager Jon Rosenlund stopped to talk to the neighbors about 5:30 p.m. Sunday and suggested that Nikkila find somewhere else to stay.

"He thought we'd probably be OK," Burr said. "But just to be on the safe side, we started packing up our stuff."

The couple left about 10:30 p.m. and spent the night at Burr's parents in Juniata.

Last week, travelers saw flooding near the Alda bridge due to an ice jam, and the ice floes have been back building up the Platte. William and Dolores Morrow of 10833 S. 60th were evacuated a

6:30 p.m. tonight.

Rosenlund said the water level had been steadily dropping Monday at the Highway 11 bridge south of Interstate 80 after threatening several nearby homes and farms.

Capt. Jim Castleberry of the Hall County Sheriff's Department said deputies have been keeping an eye on the roads and the water levels constantly.

He said he felt the water levels would have to rise considerably for there to be any danger of the north channel flooding.

Castleberry said if the forecast of temperatures in the 40s holds for the next three days, enough of the ice

may melt to allow the water flows to continue.

However, if the ice continues to build to the point where it shuts off the north channel, residents near Shelton could see the flooding next.

“I think we should see some relief if we get three or four nice days,” Castleberry said.

Rosenlund said residents in the area should be able to go home soon.

He also noted that a hog farm on the north bank of the Platte was threatened by high waters on Sunday, but a hog evacuation was not necessary.

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Posted in Local on *Tuesday, December 28, 2010 2:00 pm. Updated: 12:20 pm.*

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Ice Jam Flooding Moves West into Buffalo County

By: Megan Johnson Email
Updated: Mon 8:49 PM, Jan 03, 2011

The trouble with ice jams in the Platte River continues its westward journey, this time causing flooding in southern Buffalo County.

Ice jams first started causing flooding south of Alda two weeks ago. One home was evacuated and several roads, including Shoemaker Island Road, were closed by Hall County authorities. A week later two homes south of Wood River along Highway 11 were evacuated when ice jams caused flooding there. This weekend the jam built even farther westward.

Buffalo County Emergency Manager Darrin Lewis said the biggest problems with flooding occurred Saturday night near Sweetwater Road, between the Great Platte River Road Archway and the I-80 Interchange at Minden. The Nebraska Youth Camp and about half a dozen homes were evacuated that night.

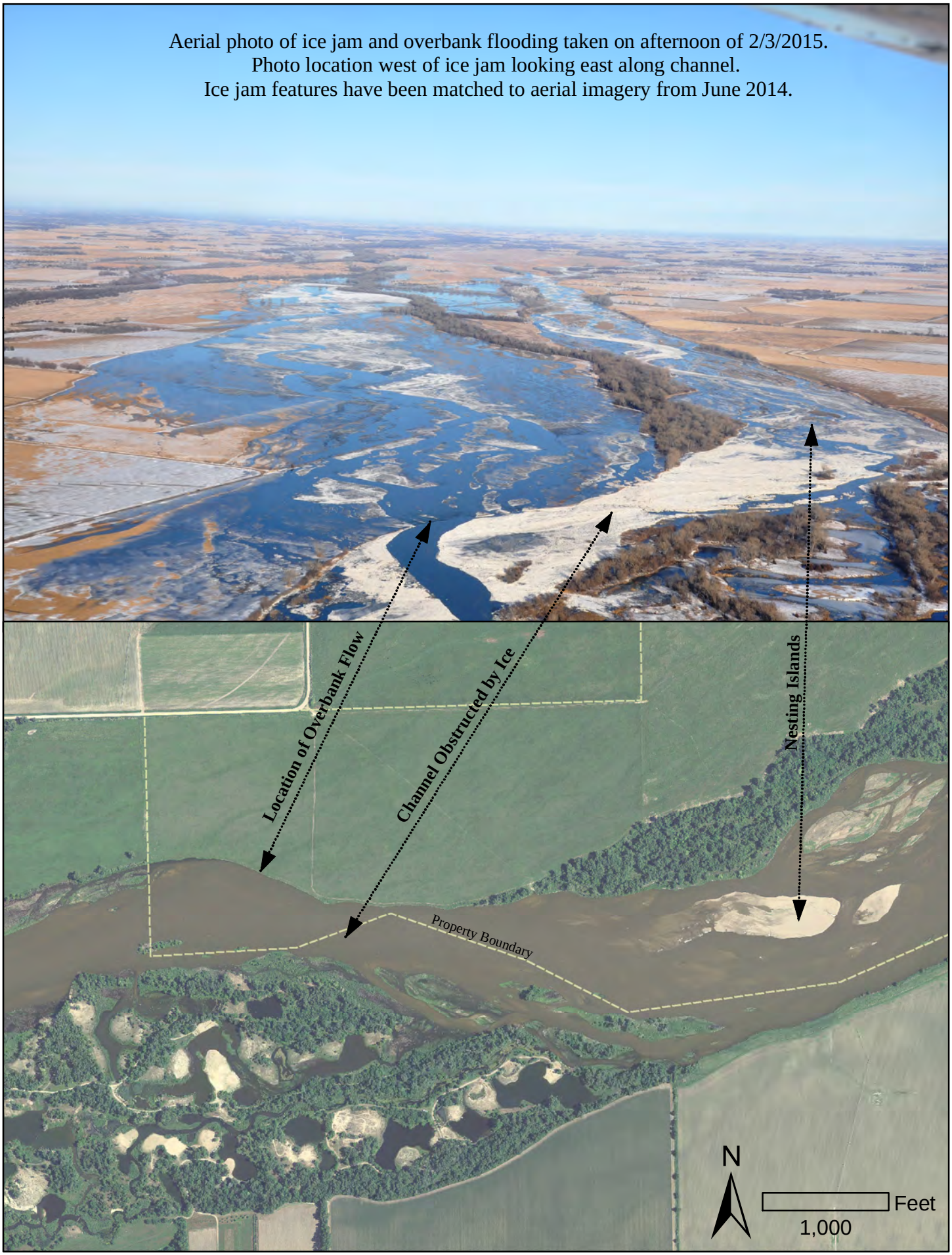
Lewis said the water has since receded about two and a half feet, but even on Sunday some property owners had water up to their doorsteps. He said no one needed assistance, and almost everyone, save a few dogs and horses that had been moved to higher ground, had returned home by Monday.

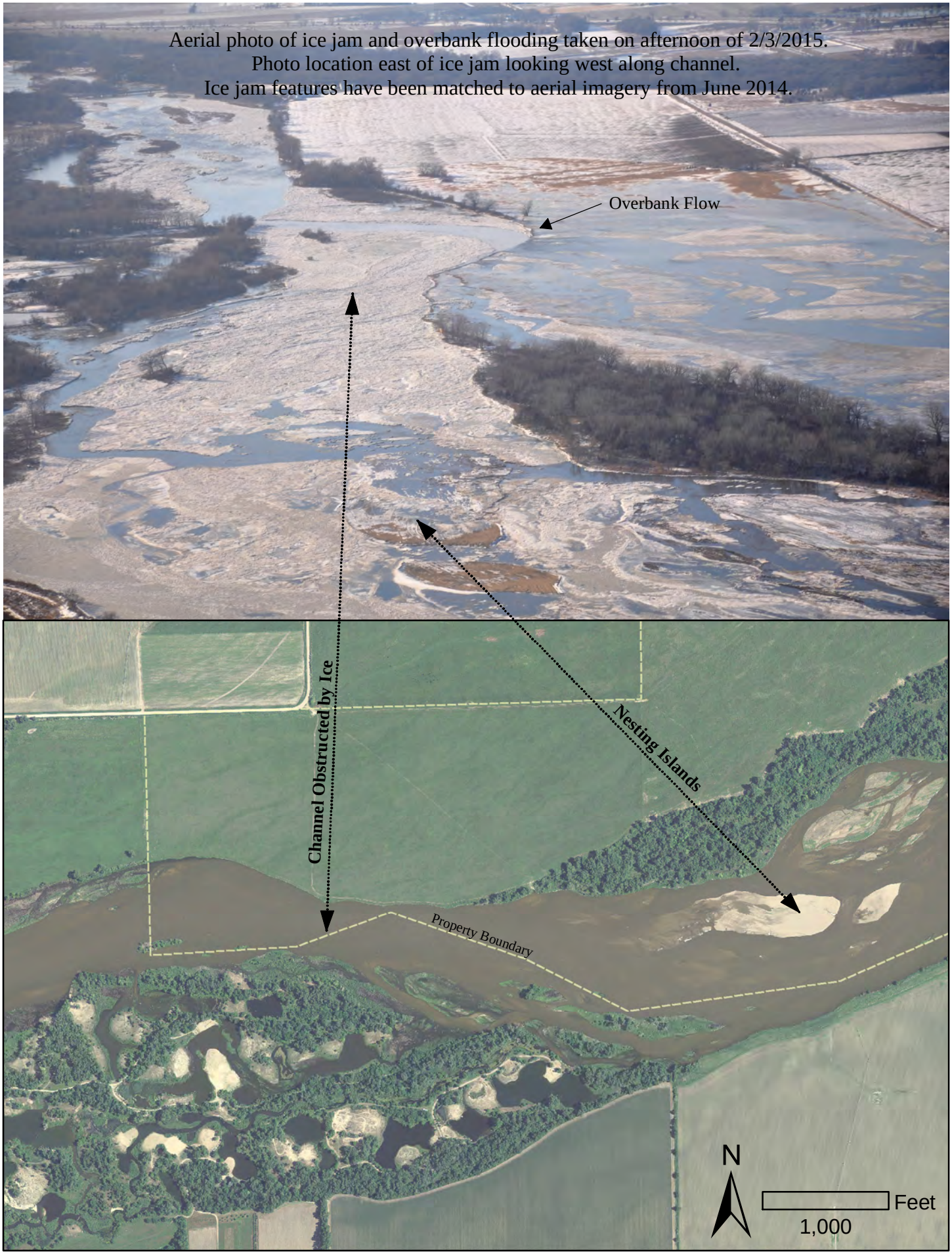
Authorities and the National Weather Service continue to monitor the Platte, but anyone living near the river is encouraged to keep an eye out for sudden changes as temperatures continue to fluctuate this week.

The Loup River in Loup County was also under a flood advisory on Monday. That advisory has since expired, but the area being watched near Highway 183 is known for ice jam flooding during prolonged cold spells.

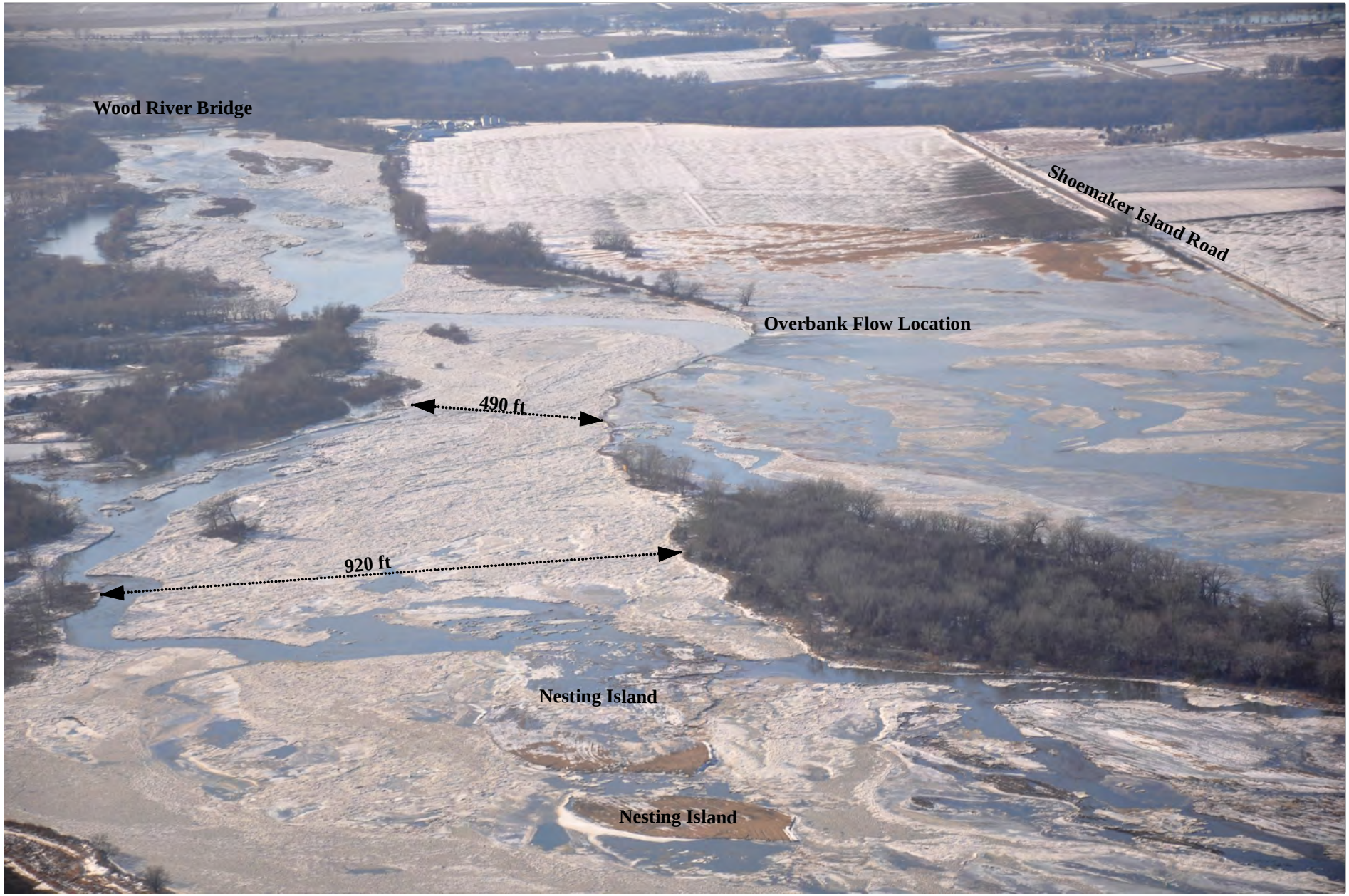
Attachment H: Photographs and documentation of ice jam conditions on February 3rd, 2015.

Aerial photo of ice jam and overbank flooding taken on afternoon of 2/3/2015.
Photo location west of ice jam looking east along channel.
Ice jam features have been matched to aerial imagery from June 2014.
NORTH
Nesting Islands
Ice Jam
Location of Overbank Flow
Property Boundary
N
Feet
1,000


Aerial photo of ice jam and overbank flooding taken on afternoon of 2/3/2015.
Photo location west of ice jam looking east along channel.
Ice jam features have been matched to aerial imagery from June 2014.
Location of Overbank Flow
Channel Obstructed by Ice
Nesting Islands
Property Boundary
N
Feet
1,000


Aerial photo of ice jam and overbank flooding taken on afternoon of 2/3/2015.
Photo location east of ice jam looking west along channel.
Ice jam features have been matched to aerial imagery from June 2014.
Overbank Flow
Channel Obstructed by Ice
Nesting Islands
Property Boundary
N
Feet
1,000

Aerial photo of ice jam and overbank flooding taken on afternoon of 2/3/2015.
Photo location east of ice jam looking west along channel.



Attachment I: Images from February 6th photo flight.

Photo taken on the afternoon of February 6th upstream of Wood River bridge looking downstream.

Photo taken afternoon of February 6th downstream of west nesting island complex looking upstream.

Photo taken afternoon of February 6th near west nesting island complex looking downstream.

Attachment J: Images from February 23rd photo flight.

Photo taken afternoon of February 23rd north of channel looking downstream at inundated area.

Photo taken on February 23rd near west nesting islands looking northeast.

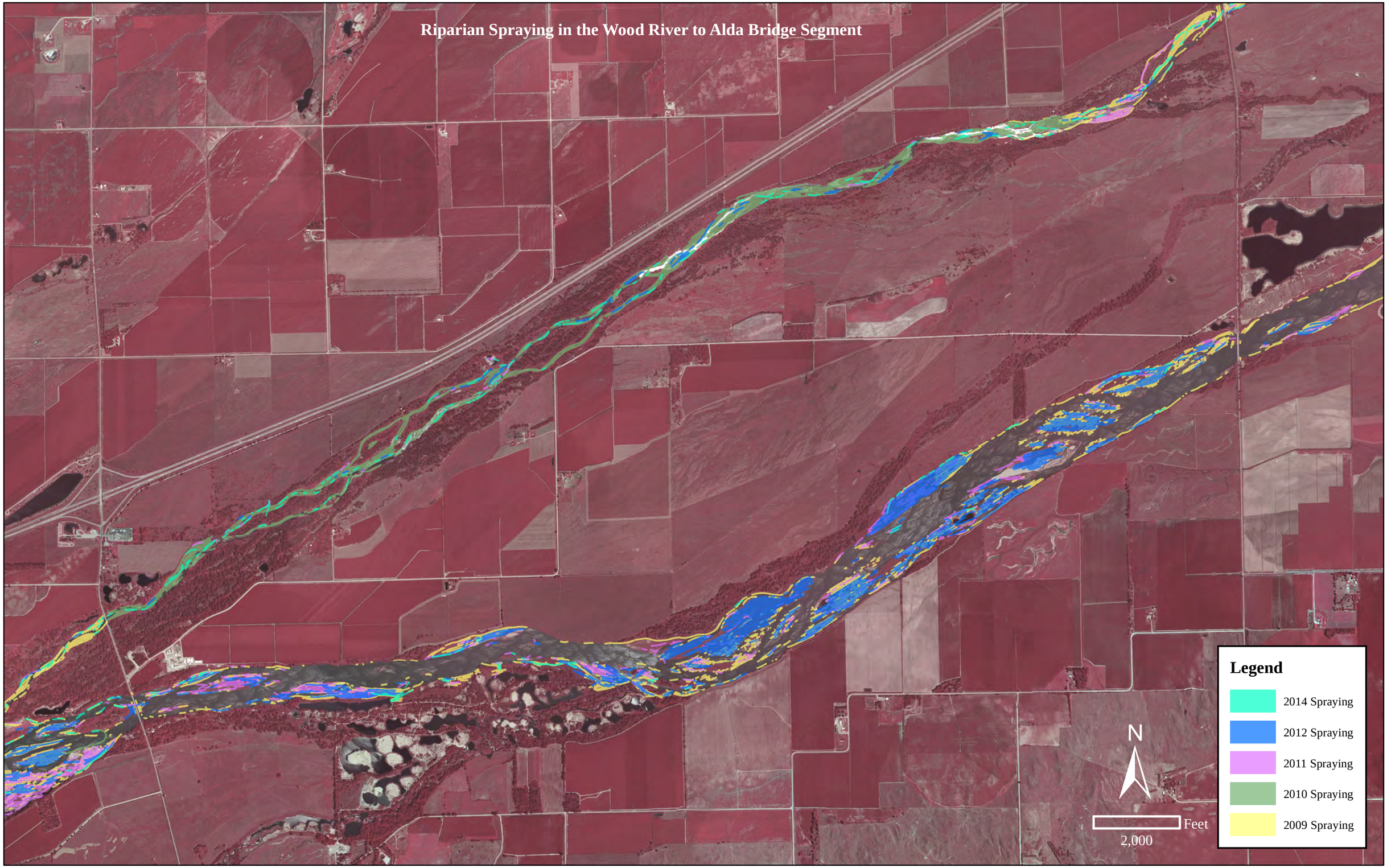
Photo taken afternoon of February 23rd near west property boundary looking downstream.

Attachment K: Images from March 26th photo flight.

Approximate photo centers from March 26th photo flight. Photographs are numbered in upper right corner.
1
2
3
4
5
6
7
8
9
10
11
12
13
N

Aerial photo series taken on March 26th from south side of channel looking north toward areas inundated by ice jam flooding. Photo numbers located in the upper right corner.

Attachment L: Map of riparian vegetation spraying in the Wood River to Alda bridge segment.


Riparian Spraying in the Wood River to Alda Bridge Segment
Legend
2014 Spraying
2012 Spraying
2011 Spraying
2010 Spraying
2009 Spraying
N
Feet
2,000