



**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM  
REQUEST FOR PROPOSALS**

**SUBJECT:** Sediment Augmentation Experiment Feasibility Analysis,  
Design, and Permitting  
**REQUEST DATE:** April 27, 2009  
**PRE-PROPOSAL MEETING:** May 18, 2009  
**CLOSING DATE:** May 29, 2009  
**POINT OF CONTACT:** Chad Smith  
Director of Natural Resources – Headwaters Corporation  
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Mobile: (402) 432-7950  
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**I. OVERVIEW**

The Platte River Recovery Implementation Program (**Program**) was initiated on January 1, 2007 between Nebraska, Wyoming, Colorado, and the Department of the Interior to address endangered species issues in the central and lower Platte River basin. The species considered in the Program, referred to as “target species”, are the whooping crane, piping plover, interior least tern, and pallid sturgeon.

A Governance Committee (**GC**) reviews, directs, and provides oversight for activities undertaken during the Program. The GC is comprised of one representative from each of the three states, three water user representatives, two representatives from environmental groups, and two members representing federal agencies. The GC has named Dr. Jerry Kenny to serve as the Program Executive Director (**ED**). Dr. Kenny established Headwaters Corporation as the staffing mechanism for Program. Program staff is located in Nebraska and Colorado and are responsible for assisting in carrying out Program-related activities.

Achieving sediment balance in the Platte River downstream of the J-2 Return is a primary component of the Program’s Flow-Sediment-Mechanical (**FSM**) management strategy, one of two key management strategies to be implemented as part of the Program’s Adaptive Management Plan (**AMP**). **The Program’s specific sediment-related experimental objective for the period of 2009-2013 will be to test the ability of sediment augmentation to help achieve sediment balance at or above a point immediately upstream of the Cottonwood Ranch habitat complex.** Given this objective, the GC submits this Request for Proposals (**RFP**) to solicit proposals from contractors to conduct a sediment augmentation feasibility analysis (**Phase I** scope, as detailed in this RFP) and to develop final augmentation design/construction documents, acquire necessary permits, and develop an augmentation monitoring and assessment protocol (**Phase II** scope, to be detailed after successful completion of Phase I).

**II. PROJECT DESCRIPTION**

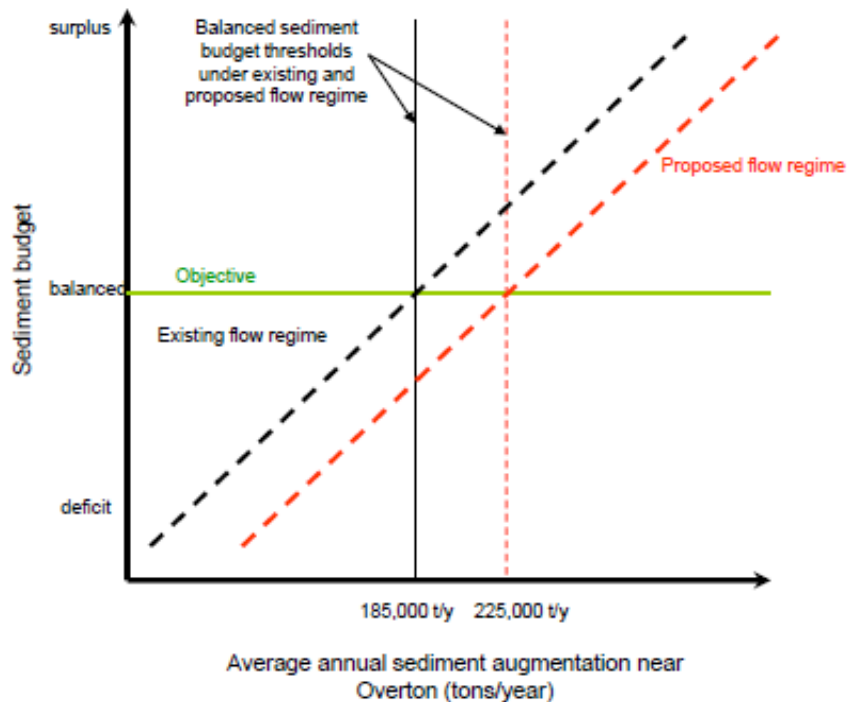
During development of the Final Environmental Impact Statement (**FEIS**) for the Program, the Bureau of Reclamation conducted 1-D sediment transport modeling with the SedVeg model that



45 suggested a sediment imbalance in the Platte River system, primarily from the J-2 Return on the  
46 south channel of the river adjacent to Jeffrey Island to a point downstream between Elm Creek  
47 and Kearney, Nebraska. Results of the modeling analysis in the FEIS estimated the annual  
48 addition of 185,000 (129,500 yds<sup>3</sup>) to 225,000 (157,500 yds<sup>3</sup>) tons of sediment with a D<sub>50</sub> of <  
49 1.00 mm below the J-2 Return and above the Overton bridge to bring the river back into  
50 sediment balance as a part of implementation of the FSM management strategy.

51  
52 In December 2008, the Program’s Adaptive Management Working Group (AMWG) convened a  
53 workshop to develop details for a sediment augmentation adaptive management experiment in  
54 the 2009-2013 timeframe as the initial implementation action for sediment augmentation. As a  
55 result of the workshop, sediment augmentation-related actions over the next five years will focus  
56 on assessing Priority Hypothesis Sediment #1 (Figure 1) that states: “Average sediment  
57 augmentation near Overton of 185,000 tons/year under the existing flow regime and 225,000  
58 tons/year under the GC proposed flow regime achieves a sediment balance to Kearney”.

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**Figure 1.** X-Y graph of Sediment #1 Priority Hypothesis.

63 FEIS modeling assumed sediment augmentation would occur upstream of the Overton bridge,  
64 likely in the south channel of the Platte River along Jeffrey Island. The Program has acquired  
65 property along the south channel in this area for sediment augmentation purposes, but is also  
66 investigating other possible augmentation actions including:

67

- 68 • Augment downstream of Overton bridge with sandpit spoil.
- 69 • Augment at Program property above the Overton bridge with channel and/or upland  
70 sediment.



- 71 • Mechanical augmentation in the channel between Program property above the Overton  
72 bridge and Cottonwood Ranch (island leveling, channel widening).  
73 • Potential additional augmentation possibilities below the J-2 Return.  
74

### 75 III. SCOPE OF WORK

76 The scope of work for this project will be accomplished in three phases. **Phase I** will consist of  
77 a sediment augmentation feasibility analysis. The Phase I scope of services is presented in more  
78 detail below. **Phase II** will include preparation of final design/construction documents, permit  
79 acquisition, and development of an augmentation monitoring and assessment protocol. This RFP  
80 will result in a contract for both Phase I and Phase II, though the Phase II scope of services will  
81 be dependent on the results of the Phase I analysis and as such will be developed at the  
82 conclusion of Phase I. **Phase III** will include sediment augmentation implementation oversight  
83 and monitoring and will be handled under a separate contract.  
84

85 **Proposals should focus primarily on the Phase I scope of work tasks below, since the Phase**  
86 **II scope of work will be detailed upon successful completion of Phase I. However,**  
87 **proposals should reflect the ability of the contractor to conduct Phase II activities as**  
88 **referenced above (final design/construction documents, permit acquisition, and**  
89 **development of an augmentation monitoring and assessment protocol).**  
90

91 Phase I tasks, task objectives, descriptions, and deliverables follow:  
92

#### 93 1) Project Scoping and Kickoff

- 94 a) **Objective** – Facilitate early gathering of ideas and input from AMWG. Develop a  
95 detailed Phase I scope, schedule, and budget.  
96 b) **Task Description** – Kickoff meeting with AMWG to review scope and gather ideas and  
97 input. Contractor meeting with Program staff (and others as necessary) to review and  
98 refine scope of work and project timeline and establish a firm budget. To facilitate  
99 development of the scope, conduct a review of information (data, assumptions, etc.)  
100 related to the previous modeling effort that provided the estimate of the sediment  
101 imbalance and the development of Priority Hypothesis Sediment #1.  
102 c) **Deliverables** – Detailed scope, timeline, and budget document.  
103

#### 104 2) Project Management and Meetings

- 105 a) **Objective** – Ensure that project management and meeting needs are explicitly included in  
106 project scope and budget.  
107 b) **Task Description** - Coordination of work and solicitation of input from Program staff and  
108 participants throughout the project. Meetings will be conducted as necessary for the  
109 coordination of project activities and to keep the Technical Advisory Committee (TAC),  
110 AMWG, and GC informed of project progress. Informal meetings with Program staff,  
111 technical advisors, and participants will also likely be necessary.  
112 c) **Deliverables** – Meeting minutes from all Project Management meetings; draft minutes in  
113 Microsoft Word format provided to ED Office for review/comment; final minutes in PDF  
114 format.



- 115 3) **Existing Information Gathering and Review**
- 116 a) **Objective** – Collect and review relevant existing information and data from ongoing
- 117 Program monitoring in order to inform the feasibility analysis and identify information
- 118 gaps and needs.
- 119 b) **Task Description** – Collection and review of hydrologic data/reports, cross-section and
- 120 thalweg profile data, topographic mapping (including LiDAR), planform description and
- 121 rate of change data/reports, vegetation community mapping, hydraulic modeling/data,
- 122 and sediment data/reports (bed and banks). Assess utility of data being collected by
- 123 ongoing implementation of the Program’s Geomorphology/In-channel Vegetation
- 124 Monitoring Protocol. Compile data pertinent to the sediment augmentation experiment
- 125 feasibility analysis.
- 126 c) **Deliverables** – Technical memorandum summarizing available information and
- 127 identifying data/analysis gaps.
- 128
- 129 4) **Supplemental Channel Survey**
- 130 a) **Objective** – Supplement existing condition LiDAR topography data to verify accuracy of
- 131 LiDAR data, facilitate hydraulic model development and experimental design, enable
- 132 earthwork quantity calculations, and provide detailed baseline topography (longitudinal
- 133 profile and cross sections) for future monitoring.
- 134 b) **Task Description** – Conduct supplemental bathymetric surveys within the Jeffrey Island
- 135 north and south channels and downstream (as necessary) to Kearney Canal Diversion
- 136 downstream of Cottonwood Ranch; combine with LiDAR data; develop Digital Terrain
- 137 Model (DTM) for channel area from the upstream end of Jeffrey Island to the Kearney
- 138 Canal Diversion; survey existing drainage structures (bridges, diversions, etc.). Identify
- 139 and compile relevant survey data collected from Geomorphology/In-channel Vegetation
- 140 Monitoring Protocol. Identify and collect supplemental cross section and profile data
- 141 necessary to support sediment balance/continuity evaluation of river from Lexington to
- 142 Kearney Canal Diversion. Supplemental survey data will include limited cross
- 143 section/profile data on tributaries to the river to support the estimation of sediment
- 144 delivery from the tributary sources.
- 145 c) **Deliverables** – Memorandum stating methods and results of LiDAR data verification,
- 146 DTM of combined LiDAR and channel bathymetry data.
- 147
- 148 5) **Augmentation Site Alternatives Identification**
- 149 a) **Objective** – Identify potential sediment augmentation material source locations to help
- 150 inform materials sampling and testing.
- 151 b) **Task Description** – Meeting with Program staff, AMWG, TAC, and others to identify
- 152 potential sediment augmentation locations, methods to introduce sediment to the river as
- 153 a means of augmentation to achieve sediment balance, and sediment delivery
- 154 methodologies.
- 155 c) **Deliverables** – Meeting minutes detailing alternatives discussion; draft minutes in
- 156 Microsoft Word format provided to ED Office for review/comment; final minutes in PDF
- 157 format.
- 158

159 6) **Materials Sampling and Testing**

- 160 a) **Objective** – Obtain grain sizes of potential augmentation materials for input into sediment  
161 transport model. Determine material depths and grain sizes at material borrow sites to  
162 guide development of borrow strategy/design.
- 163 b) **Task Description** – Identify number and location of soil borings at each of the  
164 augmentation source material sites. Conduct soil borings, develop soil logs, subsample  
165 excavated materials for testing, and conduct grain size analysis. Conduct a comparative  
166 evaluation of the sediment collected from potential augmentation sites, results of previous  
167 bed and bank material samples within the study reach, and bed and bank material  
168 sampling results from the Geomorphology/In-channel Vegetation Monitoring Protocol.
- 169 c) **Deliverables** – Geotechnical report, Microsoft Excel file of sieve analysis results.

170

171 7) **Hydraulic and Sediment Transport Model Development**

- 172 a) **Objective** – Develop hydraulic and sediment transport model from Lexington to the  
173 Kearney Canal Diversion as a design aid tool for use in evaluating sediment  
174 augmentation alternatives (Task 8), informing selection of a preferred alternative (Task  
175 10), predicting sediment augmentation requirements, evaluating methods of sediment  
176 delivery, assessing sediment transport impacts/trends under a range of flow conditions,  
177 and for facilitating adjustment of augmentation implementation activities based on  
178 assessment of monitoring data. **Contractor should propose most appropriate modeling**  
179 **tool(s) for this effort (1-D vs. 2-D, HEC-RAS, etc.).**
- 180 b) **Task Description** – Develop model reflecting existing channel conditions using  
181 topographic/survey data and land cover information. Calibrate using existing stage-  
182 discharge and other available data. Conduct hydraulic model simulations for a range of  
183 flow conditions and tabulate/evaluate hydraulic/sediment transport parameters (velocity,  
184 shear stress, streampower, etc.) to provide insight into the changes in sediment transport  
185 characteristics from the north and south channels along Jeffrey Island to the Kearney  
186 Canal Diversion. Based on the bed/bank materials sampling and testing data along with  
187 results of the hydraulic modeling effort, develop bed, bank, and tributary sediment supply  
188 estimates for sediment transport analysis. Incorporate sediment transport into model.  
189 Calibrate as able using historic data (rating curves at the Overton gage, specific gage data  
190 reflecting changes at Overton gage, etc.). Conduct sediment transport simulations for a  
191 range of flow conditions (annual flow duration curve, specific hydrographs, etc.) to  
192 provide insight into sediment balance within the study reach; refine previous simulation  
193 results related to sediment balance and estimates of sediment augmentation requirements.
- 194 c) **Deliverables** – Calibrated model for the reach from Lexington to the Kearney Canal  
195 Diversion, including sediment and topographic input data.

196

197 8) **Conceptual Design and Screening of Alternatives**

- 198 a) **Objective** – Develop conceptual construction designs for proposed sediment  
199 augmentation alternatives. Screen alternatives based on technical feasibility, cost, and  
200 longevity. Recommend a preferred alternative for implementation.
- 201 b) **Task Description** – Develop conceptual alternative designs (excavation and placement)  
202 based on Task 5 discussion. Incorporate alternative designs into hydraulic and sediment



203 transport model and run for range of hydrologic conditions. For each alternative, utilize  
204 model to: (1) estimate efficiency of sediment augmentation in terms of decreasing  
205 sediment imbalance within study reach; (2) provide estimates of changes in channel (by  
206 evaluating cross section results); and (3) identify impacts of sediment augmentation  
207 alternatives on study reach (both downstream and upstream of augmentation sites).  
208 Based on results of modeling efforts, identify implementation issues, concerns, or fatal  
209 flaws. Develop estimate of probable costs for implementation. Present conceptual  
210 designs and screening results to AMWG. Recommend a preferred alternative for  
211 implementation.  
212 c) **Deliverables** – Conceptual design drawings/illustrations and other materials necessary for  
213 presentation and review of screening analysis.

214

#### 215 9) **Permit Identification and Early Consultation**

- 216 a) **Objective** –Initiate early consultation with appropriate agencies/authorities to identify  
217 potential permitting issues/needs.  
218 b) **Task Description** – Identify permits needed for sediment augmentation implementation.  
219 Contact appropriate permitting agencies/authorities to discuss screening analysis results  
220 and identify permitting needs/issues that need to be incorporated into the final design.  
221 c) **Deliverables** – Discussion of permitting needs and results of early consultation that will  
222 be made part of the Alternatives Screening Summary Report (Task 10).

223

#### 224 10) **Alternatives Screening Summary Report**

- 225 a) **Objective** – Compile a summary report for the GC explaining the screening analysis and  
226 providing recommendations.  
227 b) **Task Description** – Preparation of a summary report to be provided to the GC. The report  
228 will summarize the alternatives screening process and results and will identify the  
229 alternative (if any) recommended to be carried forward to full design.  
230 c) **Deliverables** – Draft report in Microsoft Word format; final report in PDF format.

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### 232 **IV. PROJECT BUDGET**

233 *Contractors who submit a proposal are **NOT** to indicate or display any fee related data*  
234 *whatsoever.*

235

### 236 **V. CONTRACT TERMS**

237 The selected contractor will be retained by:

238

239 Nebraska Community Foundation

240 PO Box 83107

241 Lincoln, NE 68501

242

243 **The selected firm will negotiate with the ED Office to establish a fair and equitable**  
244 **contract. If an agreement cannot be reached, a second firm will be invited to negotiate and so on**  
245 **until an agreement is reached. The initial term of the contract will be for a period beginning**  
246 **in July 2009 and terminating in December of 2010 with an option to renew at the sole**



247 **discretion of the GC.** Contracted services will be performed on a time and material not to  
248 exceed basis. Under the final contract, annual written Notice to Proceed from the Executive  
249 Director will be required before works begins. All work will be contingent on availability of  
250 Program funding.

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## 252 **VI. SUBMISSION REQUIREMENTS**

253 All interested parties having experience providing the services listed in this RFP are requested to  
254 submit a proposal.

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### 256 **Instructions for Submitting Proposals**

257 *One electronic copy of your proposal must be submitted in PDF format to Chad Smith at*  
258 *[smithc@headwaterscorp.com](mailto:smithc@headwaterscorp.com) no later than 5:00 p.m. Central time on Friday, May 29, 2009.*

259 Maximum allowable PDF size is **8MB**. A proposal is late if received any time after 5:00 p.m.  
260 Central time and will not be eligible for consideration.

261

262 Questions regarding the information contained in this RFP should be submitted to **Chad Smith**  
263 ([smithc@headwaterscorp.com](mailto:smithc@headwaterscorp.com)). **A list of compiled contractor questions and responses will**  
264 **be maintained on the Program web site ([www.PlatteRiverProgram.org](http://www.PlatteRiverProgram.org)) in the same location**  
265 **as this RFP solicitation.**

266

### 267 **Pre-Proposal Meeting**

268 A pre-proposal meeting of interested parties will be held on **Monday, May 18, 2009** at the  
269 Headwaters Corporation/Program Conference Center (Suite 5, Central Business Station Center,  
270 3710 Central Avenue) in Kearney, Nebraska from **2:30-4:00 p.m. Central time** to address  
271 questions associated with this RFP. **Attendance** at this pre-proposal meeting is **REQUIRED**.  
272 The meeting will include a discussion of adaptive management and how it is being implemented  
273 through the Program; the reasoning behind the sediment augmentation experimental objective  
274 and how it relates to priority hypotheses and management objectives in the AMP; and additional  
275 details about Program needs, the scope of services, and the timeline.

276

### 277 **Proposal Content**

278 Proposals should respond to the following general topics:

279

280 1) **Executive summary** that presents brief firm overview and condenses and highlights the  
281 contents of the proposal in such a way as to provide a broad understanding of the contractor's  
282 qualifications and proposal.

283

284 2) **Project understanding** that demonstrates the contractor understands project goals and  
285 objectives and identifies issues critical to project success.

286

287 3) **Project approach** that documents how the contractor would organize and execute the scope  
288 of work detailed in this RFP and provides project team organization, resumes, and  
289 responsibilities. Proposals should focus primarily on the Phase I scope of work detailed in  
290 this RFP, since the Phase II scope of work will be detailed upon successful completion of



291 Phase I. However, proposals should reflect the ability of the contractor to conduct Phase II  
292 activities as referenced in this RFP.

293

294 4) **Qualifications and project experience** relevant to this project including the  
295 involvement/role of the proposed team in those projects.

296

297 5) **Schedule** for completing the project.

298

299 6) **Conflict of interest statement** addressing whether or not any potential conflict of interest  
300 exists between this project and other past or on-going projects, including any projects  
301 currently being conducted for the Program.

302

303 7) **Description of insurance** shall be provided with the proposal. Proof of insurance will be  
304 required before a contract is issued. Minimum insurance requirements will include  
305 \$1,000,000 general liability per occurrence.

306

### 307 **Criteria for Evaluating Proposals**

308 The Governance Committee appointed a Proposal Selection Panel that will evaluate all proposals  
309 and select a contractor based on the following principal considerations:

310

311 1. Understanding of the overall objectives of the project and approach to meeting those  
312 objectives and addressing critical project tasks and issues.

313

314 2. Qualifications and the relevant experience of the proposed project team members.

315

316 3. Clarity and content of the schedule proposed to implement the project scope of work.

317

### 318 **Award Notice**

319 After completing the evaluation of all proposals and, if deemed necessary, interviews, the  
320 Proposal Selection Panel will select a contractor. That firm will negotiate with the ED Office to  
321 establish a fair and equitable contract. If an agreement cannot be reached, a second firm will be  
322 invited to negotiate and so on. If the Program is unable to negotiate a mutually satisfactory  
323 contract with a contractor, it may, at its sole discretion, cancel and reissue a new RFP.

324

### 325 **Program Perspective**

326 The Governance Committee of the Program has the sole discretion and reserves the right to  
327 reject any and all proposals received in response to this RFP and to cancel this solicitation if it is  
328 deemed in the best interest of the Program to do so. Issuance of this RFP in no way constitutes a  
329 commitment by the Program to award a contract, or to pay contractor's costs incurred either in  
330 the preparation of a response to his RFP or during negotiations, if any, of a contract for services.  
331 The Program also reserves the right to make amendments to this RFP by giving written notice to  
332 contractors, and to request clarification, supplements, and additions to the information provided  
333 by a contractor.

334



335 By submitting a proposal in response to his solicitation, contractors understand and agree that  
336 any selection of a contractor or any decision to reject any or all responses or to establish no  
337 contracts shall be at the sole discretion of the Program. To the extent authorized by law, the  
338 contractor shall indemnify, save, and hold harmless the Nebraska Community Foundation, the  
339 states of Colorado, Wyoming, and Nebraska, the Department of the Interior, members of the  
340 Governance Committee, and the Executive Director's Office, their employees, employers, and  
341 agents, against any and all claims, damages, liability, and court awards including costs, expenses,  
342 and attorney fees incurred as a result of any act or omission by the contractor or its employees,  
343 agents, subcontractors, or assignees pursuant to the terms of this project. Additionally, by  
344 submitting a proposal, contractors agree that they waive any claim for the recovery of any costs  
345 or expenses incurred in preparing and submitting a proposal.

346

## 347 VII. AVAILABLE INFORMATION

348 The following pertinent Program-related documents can be accessed either from the Program  
349 web site ([www.PlatteRiverProgram.org](http://www.PlatteRiverProgram.org)) or by contacting Chad Smith  
350 ([smithc@headwaterscorp.com](mailto:smithc@headwaterscorp.com)):

351

- 352 • Strategic Science Plan for Adaptive Management Plan Implementation, 2009-2013
- 353 • Adaptive Management Plan
- 354 • Integrated Monitoring and Research Plan (part of the Adaptive Management Plan; includes  
355 guidance on data needs, design, and analysis)
- 356 • Program Monitoring Protocol – *Monitoring the Channel Geomorphology and In-Channel*  
357 *Vegetation of the Central Platte River*
- 358 • Final Environmental Impact Statement
- 359 • U.S. Fish and Wildlife Service's Final Biological Opinion on the Platte
- 360 • The Platte River Channel: History and Restoration (Bureau of Reclamation)
- 361 • Parsons/EIS Team Ratings
- 362 • Platte River Flow and Sediment Transport Between North Platte and Grand Island, Nebraska  
363 (1895 – 1999), (Bureau of Reclamation)
- 364 • Platte River Sediment Transport and Riparian Vegetation Model Report (Bureau of  
365 Reclamation)
- 366 • Physical History of the Platte River in Nebraska: Focusing Upon Flow, Sediment Transport,  
367 Geomorphology, and Vegetation (Simons & Associates, Inc.)
- 368 • Channel Morphology and Bed-Sediment Characteristics Before and After Riparian  
369 Vegetation Clearing in the Cottonwood Ranch, Platte River, Nebraska, Water Years 2001-  
370 2004 (USGS)
- 371 • Trends of Aggradation and Degradation Along the Central Platte River: 1985 to 2005  
372 (Bureau of Reclamation)