

Projects Committee Meeting  
 Thursday, February 25, 2021 7:30 AM  
 Lower Platte North NRD Office  
 P.O. Box 126  
 Wahoo, NE 68066

1. UNFINISHED BUSINESS

No unfinished business to address.

2. SWCP

Attached is the proposed 2021 SWCP policy for your review. We will plan on approving this at our April 12 Board meeting. As per usual, bring any questions/comments/clarification points to the March Projects committee. Main change for this year is the LFC program going district wide.

A. SWCP Application Approvals

None

B. SWCP Payments

C. 20-S-7	D. PAID	E. Robert & Linda Fickes	F. \$ 10,000.00	G. TOT/WASCO B w/TO
H. 20-S-4	I. PAID	J. Elaine Kaspar	K. \$ 6,218.65	L. WASCOB/TO

M. SWCP Cancellations

None

N. Wahoo Creek Cost Share Approvals

None

3. WATERSHEDS

A. Shell Creek

1. Shell Creek Environmental Enhancement Plan Implementation - 7:30 a.m.

a. SCWIG Meeting Report - 7:30 a.m.

An update was given on the SCWIG meeting held on February 22, 2021. Attached are the January 12, 2021, SCWIG meeting minutes and the February 22nd minutes will be attached when received. . Much discussion was on proceeding with the Shell Creek South Channel Improvement/Benching Project, proceeding with the Shell Creek Watershed Survey, anticipated upcoming landowner conservation projects and additional 319 grant assistance. Details on specific agenda items and needs are outlined below.

b. Shell Creek Watershed Water Quality Plan Update - 7:30 a.m.

As discussed last month, we need to update our Shell Creek Water Quality Management Plan with NDEE/EPA to remain eligible for future 319 grant

funding in that watershed. Since we need to move forward very soon, the Board moved to contact JEO about remodeling the pollutant loads for Shell Creek (and Wahoo Creek). Elbert Traylor's, NDEE, put together what is needed to revise both the Shell Creek Water Quality Management plan and attached is JEO's service agreement proposal to compete those tasks. We have grant funds in the Wahoo grant for that plan update and will be reimbursed by NDEE for at least 60% of the costs. The committee is asked for a recommendation to approve JEO's Agreement.

Adam Rupe, JEO, and Elbert Traylor, NDEE, joined the Projects committee meeting to discuss the proposal.

- c. Shell Creek South Channel/Benching Project Construction Contract 7:30 a.m.

At the SCWIG Meeting, it was brought up that Colfax County has been negotiating with Pruss Excavating on proceeding with completing the Shell Creek South Channel Improvement/Benching project south of the U.P. Railroad Bridge Replacement Project located near County road 15. Pruss Excavating completed the Shell Creek North Channel Improvement/Benching Project in 2020 and they have agreed to complete the South Channel Work at the same unit prices. A follow-up meeting with SCWIG members and Pruss estimates a maximum project cost of \$240,000. This proposal will be brought forward for a committee recommendation to proceed with the south project. LPNNRD has committed to reimbursing Colfax County for all the construction costs, while the county is providing all engineering services. We have been working with NDEE for additional grant assistance to help cover a share of the additional costs.

- d. Shell Creek Watershed Survey

At the last several SCWIG meetings, the group has been working with UNL about conducting a watershed survey (attachments) to approximately 1000 producers to help direct future priorities and projects. UNL has been working with a group to conduct the work at approximately \$22,000. This survey is strongly supported by NDEE and since the survey falls under the Shell Creek Plan Update process and will be eligible for EPA 319 grant assistance from NDEE.

- e. Shell Creek Watershed Enhancement Plan Project Payments

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k. Shell Creek Grant Funding Update

As previously reported, we have used approximately \$200,000 of our approved NDEE/EPA 319 Shell Creek grant that totaled \$365,000. In addition, there is about \$23,000 remaining of our approved Nebraska Environmental Trust grant that totaled \$104,688. It is anticipated that the remaining grant funds will be expended by this spring/summer. With that in mind, Mountford has requested NDEE to allocate another \$225,000 of EPA 319 grant funds for use in 2021-2022. NDEE has said that they will start putting together an amendment for our existing funding agreement for our future approval.

Elbert Traylor, NDEE, also has mentioned that there is a great opportunity to "wave our flag" again when we get the Shell Creek Channel Improvement/Benching Project (At UP Railroad Bridge Replacement site) completed. This would involve a possible press conference at the bridge and tour of the site with agency leaders, SCWIG, County officials, UP officials and maybe Governor. It's a good example of cooperation among agencies that don't normally interact. If this happens next fall when things have greened up, we might be positioned to announce the launch of the new Shell Creek Watershed Water Quality Management Plan.

B. Wahoo Creek Watershed

1. Wahoo Creek Dam Site Planning Update & FYRA Invoices

FYRA has been in the process of completing the final model runs on the Wahoo Creek Watershed economics and their email report is attached. The required cost/benefit ratio needs to be 1:1 for NRCS approval of the 13 Dam Watershed Plan and at this point things look encouraging. There is the pending cultural resource issue at Dam Site 83 and questions about what effect it will have on the final plan outcome, should that structure need to be removed from plan.

FYRA's invoice totaling \$17,597.50 is attached for review. After this payment, \$24,750 will remain on our \$95,469 contract addendum. NRCS will reimburse LPNNRD for this expense.

NRCS Nebraska Engineer Allen Gerhing and Missy Baier, NRCS Archeologist, joined the Projects Committee Meeting (Zoom) to discuss the outlook for

completing the Wahoo Creek Watershed Plan. FYRA and NRCS representatives plan to be available for the March 8th Board Meeting.

2. Olsson Design Update and Invoice

As reported every month, Our hired engineering firm, Olsson, has been put on hold with further dam design work until NRCS approves the Wahoo Creek Watershed Plan. No invoice is anticipated until that time.

3. Wahoo Creek Watershed Water Quality Plan Phase II

On February 23 Elliott and Director Sabatka met with NRCS personnel to develop a plan for moving forward with the landowner outreach portion of our Wahoo Creek Water Quality Phase 2.

Renee Hancock, Water Quality Specialist with NRCS, is in charge of assessing the watershed's water quality concerns from an NRCS point of view. She plans on completing her field assessment by the end of April. Once completed she will have a better idea as to where focus needs to be placed.

Director Sabatka is in charge of coordinating the landowner group that will tasked with "spreading the word" to masses. A list has been developed and will be finalized this summer once our plan has been finalized. We will plan to meet with the group towards the end of summer.

Currently NRCS' new NWQI funds are frozen and they don't expect to start allocating any funds to the NWQI Phase 2 projects until FY23.

a. Wahoo Creek Watershed Water Quality Plan Update - 7:45 a.m.

As discussed last month, we need to update our Wahoo Creek Water Quality Management Plan with NDEE/EPA to remain eligible for future 319 grant funding in that watershed. Since we need to move forward very soon, the Board moved to contact JEO about remodeling the pollutant loads for Wahoo Creek (and Shell Creek). Elbert Traylor's, NDEE, put together what is needed to revise both the Wahoo Creek Water Quality Management plan and attached is JEO's service agreement proposal to compete those tasks. We have grant funds in the Wahoo grant for that plan update and will be reimbursed by NDEE for at least 60% of the costs.

Adam Rupe, JEO, and Elbert Traylor, NDEE, will join the Projects committee to discuss the proposal. **(NOTE: A similar need is required to update the Shell Creek Watershed Water Quality Plan, so that item will be discussed as well.)**

4. JOINT WATER MANAGEMENT ADVISORY BOARD

An update was given on Dodge County Projects at the February 23, 2021, JWMA Board Meeting. Attached is the meeting agenda including Dodge County's Project Summary that was discussed.

5. HAZARD MITIGATION PLAN UPDATE

No new information. JEO continues to work with entities provide their approved Hazard Mitigation Plan resolutions.

6. EROSION AND SEDIMENT RULES AND REGULATIONS

No new issues to report.

7. OTHER

A. LPNNRD/NRCS Local Work Group Meeting Update

On February 18 the NRD hosted NRCS' annual Local Work Group (LWG) meeting. The meeting is open to any interested party learning how NRCS allocates it's local funds. The NRD benefits from participating with the LWG by providing input as to our goals and resources, as well as, getting a potential "heads-up" as to any policy shifts that may be on the horizon.

This years LWG was held at the Wanhoo Education Building with 8 participants in person and ~25 participants on Zoom. Mark Walkenhorst, District Conservationist with NRCS, gave a presentation detailing NRCS programs and funding policies. Throughout the meeting feedback was given as to potential areas the programs could benefit local landowners, the NRD, or possible changes to incentive payments.

The presentation provides a large amount of material to process at one time, so all participants are encouraged to follow-up their responses with NRCS/NRD staff.

8. ADJOURNMENT

The Projects Committee adjourned at 8:57 a.m.

**Lower Platte North  
Natural Resources District**

**Soil & Water Conservation Program  
(SWCP)**

**LPNNRD Board Approval 4/12/21**

# Table of Contents

<b>I. PURPOSE</b>	<b>PG. 3</b>
<b>II. ELIGIBILITY, DISTRIBUTION OF FUNDS</b>	<b>PG. 3</b>
<b>III. APPLICATION REQUIREMENTS</b>	<b>PG. 3</b>
<b>IV. ELIGIBLE HIGH PRIORITY PRACTICES</b>	<b>PG. 3</b>
<b>V. INELIGIBLE PRACTICES</b>	<b>PG. 4</b>
<b>VI. APPLICATION SUBMITTAL, APPROVAL &amp; COMPETITION PERIODS</b>	<b>PG. 5</b>
<b>VII. 2017 PRIORITY AREAS &amp; ELIGIBLE COST SHARE PERCENTAGES</b>	<b>PG. 6</b>
<b>VIII. COST SHARE PERCENTAGE - PRACTICE EXCEPTIONS</b>	<b>PG. 7</b>
<b>IX. MAXIMUM COST SHARE LIMITS</b>	<b>PG. 7</b>
<b>X. AMENDMENTS FOR ADDITIONAL COST SHARE</b>	<b>PG. 8</b>
<b>XI. APPLICATION EXTENSIONS</b>	<b>PG. 8</b>
<b>XII. CONSERVATION PRACTICE DESIGN, STAKING &amp; PERMITS</b>	<b>PG. 8</b>
<b>XIII. SUBMITTING BILLS &amp; PAPERWORK ON COMPLETED WORK</b>	<b>PG. 8</b>
<b>XIV. COST SHARE PAYMENTS</b>	<b>PG. 8</b>
<b>XV. PAYMENT OVERRUNS &amp; REQUESTED REFUNDS</b>	<b>PG. 9</b>
<b><u>ATTACHMENTS:</u></b>	
<b>ATTACH A: SEDIMENT &amp; WATER CONTROL BASINS/DIVERSIONS</b>	<b>PG. 10</b>
<b>ATTACH B: PLANNED GRAZING SYSTEMS</b>	<b>PG. 11</b>
<b>ATTACH C: WATER IMPOUNDMENT &amp; GRADE STAB. STRUCTURES</b>	<b>PG. 12-14</b>
<b>ATTACH D: WINDBREAK RENOVATION PRACTICES</b>	<b>PG. 15</b>
<b>ATTACH E: EMERGENCY REPAIR OF CONSERVATION PRACTICES</b>	<b>PG. 16</b>
<b>ATTACH F: LANDS FOR CONSERVATION PROGRAM</b>	<b>PG. 17</b>

## **LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT POLICY 2021 SOIL & WATER CONSERVATION PROGRAM (SWCP)**

### **I. PURPOSE**

The purpose of this program is to provide guidance for administering federal (EPA 319 grants), state (NSWCP, Environmental Trust grants) and local cost-share assistance as an incentive to landowners for the construction and application of soil and water conservation practices.

### **II. ELIGIBILITY, DISTRIBUTION OF FUNDS**

- A. Any landowner within the Lower Platte North NRD (LPNNRD), individual, partnership, corporation or other legal entity is eligible to apply for SWCP funds.
- B. Cost-share program funds will be approved and distributed based on the number of high priority applications received each fiscal year (July 1 - June 30).
- C. Funds may be reserved and targeted toward high priority watersheds and projects as determined and approved by the LPNNRD Projects Committee and Board.
- D. Unobligated or unused SWCP funds in priority watersheds may be redistributed to other areas if not used in a timely manner.
- E. The LPNNRD may supplement the Nebraska Soil and Water Conservation Program (NSWCP) state funds with available federal, other state & local funds. The amount of local funds budgeted and available will be decided each year.
- F. Landowners will be expected to apply for available federal EQIP cost-share funding when applicable and available for eligible high priority practices A, C through M, before state and local cost share funding is approved. It is also generally expected to approve available state funding before local funds are considered.
- G. Lands for Conservation (LFC) program is exempt from the payment cap stipulations of the SWCP policy.

### **III. APPLICATION REQUIREMENTS**

- A. Eligible SWCP applicants are to apply at their local NRCS Service Office (also the LPNNRD office if for tree planting or windbreak renovations). Applications with appropriate NRCS comments/recommendations are to be forwarded to the NRD for consideration.
- B. Applications will contain sufficient information to include:
  - 1. Date construction (summer or fall) is expected to be completed.
  - 2. Type of Project to be installed.
  - 3. Whether the proposed project is located in a priority watershed area or if other special conditions exist.
  - 4. An aerial photograph showing the project location.
  - 5. Total estimated cost-share needed for the project.
  - 6. When applying for a small dam or grade stabilization structure, the estimated percent of land treatment draining to the proposed site (Attachment C).

### **IV. ELIGIBLE HIGH PRIORITY PRACTICES**

- A. **Establishment of warm and cool season grass on crop land**
- B. **Small conservation project (terraces, basins, diversion, grass waterways and/or underground outlets) applications.** This priority practice includes newly established

grass waterways and/or replacement grass waterways.

- i. Small projects are only eligible on fields where a complete no-till cropping management system is currently being applied.
- ii. Existing grassed waterway applications must be over 10-years old and part of an approved terrace system or on 100% no-tilled fields)
- iii. Small Projects may involve the construction of a new terrace and/or sediment & water control basins systems or it may include the extension of an existing terrace system with the inclusion of sediment & water control basins (this priority does “NOT” include the replacement of functionally obsolete terrace systems, waterways and sediment & water control basins in excess of 10-years old).
- iv. Small projects do not include practice of installing tile outlets into existing functional terrace outlet systems (refer to priority G).
- v. Small projects will not exceed \$5000.00 in cost incentive request.  
\*For small projects, landowners will not be expected to apply for available federal EQIP cost-share funding for eligible high priority practice B. It will generally be expected to approve available state funding before local funds are considered.

- C. **\*Construction of new terrace systems** (includes replacement of functionally obsolete terrace systems in excess of 20-years old).
- D. **Construction of sediment & water control basins when part of a new terrace system where cost share incentives exceeds \$5,000** (Attachment A).
- E. **Construction of Diversions when part of a new terrace system or dam** (Attachments A & C).
- F. **Planned Grazing Management Systems** (Attachment B)
- G. **\* Installation of Tiled Outlets into Existing Terraces** (includes the storage portion of the terrace).
- H. **Water Impoundment and Grade Stabilization Structures** (Attachment C)
- I. **Tree/Shrub Planting** (Only when NRD stock is provided and planted by the District) For riparian buffer strips, field, acreage and farmstead windbreaks and for wildlife habitat 200- tree/shrub minimum is required for riparian buffer strips, and for field and farmstead windbreaks. A 300-tree/shrub minimum is required for wildlife habitat.
- J. **Windbreak Renovation** (Attachment D)
- K. **Supplementing EOIP Contracts in Priority Areas**  
When federal EQIP funds are approved in LPNRRD priority areas, the District may approve additional local and/or state cost share not to exceed the established maximum cost share percentage approved for a practice or the specific area.
- L. **Emergency Repair of Conservation Practices** (Attachment E)
- M. **Lands for Conservation (LFC) Program ;** (Attachment F) Any approved EQIP contract that agrees to the terms of the LFC program; summer construction Jun 1 – September 30 of the calendar year.

**\*NOTE:** Cost share only applies toward the tile outlet portion of approved terrace systems to establish a stable outlet. A stable outlet is considered to be on land that has a 2% grade or less. A landowner may choose to install a portion of the outlet without cost share assistance provided that it meets NRCS design standards and specifications.

## V. **INELIGIBLE PRACTICES**

- A. Any application that would allow the installation of terraces on land that has established

- grass will not be approved.
- B. The LPNNRD will not approve any conservation practice that will encourage the conversion of grassland, including CRP land, to crop land. This includes CRP land in the last year of the contract.
  - C. Rebuilding grassed waterways or tile outlets if under 10-years old. Note: Cost share for replacing grass waterways will be considered on a case-by-case basis when over ten (10) years old and part of an approved terrace system or on 100% no-till fields (see IV. M.).
  - D. Work that is considered normal maintenance of existing conservation practices.
  - E. Rebuilding terraces on existing terrace lines.
  - F. Terraces systems on Class VI land or greater.
  - G. Sediment removal from small dams or other impoundments and/or from adjacent lands of said structures.
  - H. Work started or constructed prior to approval.
  - I. Livestock Waste Pits.
  - J. The District will not provide cost share for practices on farmland that does not have a certified Nitrogen operator or on irrigated land where the irrigated acres are not certified by LPNNRD.
  - K. Any practice on fields that are determined sod-busted by the NRCS.
  - L. Repair of damage to conservation practices that is determined to be landowner negligence in performing normal maintenance as outlined in NRCS specifications.

## **VI. APPLICATION SUBMITTAL, APPROVAL & PROJECT COMPLETION PERIODS**

### **A. Summer Construction Applications (For June through September 15 ):**

To insure LPNNRD consideration, **applications for summer construction must be submitted by February 1.** Most generally, the Projects Committee will review, rank and recommend summer application approvals at the **February/March Projects Committee Meeting.** However, consideration and approval of summer applications received after **February 1** may occur depending on available funds. All **summer construction projects are to be completed by September 15** and **final paperwork submitted to the LPNNRD office by October 15.** The Projects Committee will review all uncompleted or unpaid applications at the end of each period to determine if application extensions and/or cancellations are warranted. **The field must be available for construction by August 1. The area must be planted to a cover crop or a crop preceding or after construction. The crop or cover may be harvested or pastured during the contract period.** Work not **completed by September 15,** may be canceled or receive reduced cost share as determined by the **Projects Committee/Board.**

**NOTE: Cooperators who are approved for incentive payments within special designated watersheds, must follow these same summer construction requirements (refer to the “Lands for Conservation Program” – Attachment F).**

### **B. Fall Construction Applications (September through December project completion):**

To insure LPNNRD consideration, applications for fall construction must be received **by July 1.** Most generally, the Projects Committee will review, rank and recommend fall construction application approvals at the **July/August Projects Meeting.** However, additional approvals for fall work may occur after July/August as funds are available.

**Approved fall applications will be given until December 31 to complete the work.** The Committee will review all unpaid applications at the end of each year to determine application extensions and cancellations.

**C. Grass, Tree Planting, Windbreak Renovation Applications:**

Application periods for grass establishment will be approved based on NRCS seed and seeding specifications. Applications for trees are generally considered for approval just before the spring planting season. For approved Windbreak Renovation applications, tree removal will normally be completed in the summer or fall so the site will be ready before spring tree planting.

**D. Small Dam Application (Attachment C):**

To ensure consideration for approval, the **District will need NRCS/NRD technician recommended applications by December 15.** The Projects Committee will review and prioritize and submit a recommendation for approval at the January Board Meeting.

**E. LPNNRD Signatures on Approved Applications & Related Documents:**

The Manager, Assistant Manager and Projects Coordinator are authorized to sign Board approved SWCP applications, Completion and Document Certifications and other related documents on behalf of the LPNNRD.

**VII. 2021 PRIORITY AREAS & ELIGIBLE COST-SHARE PERCENTAGES**

Priority areas for 2021 listed below are given first consideration for District cost share assistance. Each year, high priority practice applications located in priority areas are reviewed and approved by the Projects Committee and Board for the upcoming program year. The cost-share assistance payment may not exceed a total of the eligible percent for an area when combining all sources of federal, state and local assistance. If there is not enough funding for all applications for all listed priority areas, the Projects Committee may rank areas for approval or approve a lower maximum cost share percent.

LPNNRD Cost-Share Amounts	Average (%) and Actual
FALL Work (District Wide) max \$ limit: \$12,500.00	75
FALL Work (Targeted Areas) max \$ limit: \$12,500.00	75
SUMMER Work (District Wide) max \$ limit: \$10,000.00	75
SUMMER Work (Targeted Areas) max \$ limit: \$12,500.00	75

Targeted Areas	Notes
A. LPNNRD Lands North of the Platte River	Platte, Boone, Madison, Colfax & Dodge Counties. Shell Creek is also in ET & EPA 319 grant area - actual percent depends on priority area and practice as defined in approved grant application).
B. Lake Wanhoo (Sand/Duck Creek) Watershed	
C. Czechland Lake Recreation Area Watershed	
D. Homestead Lake Recreation Area Watershed	
E. Wahoo Creek Sub-Basins	Dunlap Creek; North Fork Wahoo Creek; Miller Branch Creek. These Wahoo Creek Sub-Basins are designated EQIP NWQI, EPA 319 and Environmental Trust Priority Areas.
F. Skull Creek Watershed	It is anticipated to alternate this watershed with the Bone Creek Watershed every two years
G. Watersheds Above All Existing and Planned LPNNRD Flood Control Structures	Non-public structures that are or will be LPNNRD Flood Control Structures operated and maintained by the District
H. Watersheds Above Proposed or Completed Landowner SWCP Cost Share Dams	That will or have received LPNNRD assistance
I. Voluntary Compliance of Verified Erosion & Sediment Complaints	District-wide
J. All High Priority Practice Summer Applications	District-wide (June 1 through September 15 completion)
K. Tree/Shrub Planting	District-wide
L. Voluntary Compliance of Verified Erosion & Sediment Complaints	District-wide
M. All High Priority Practice Summer Applications	District-wide (June 1 through September 15 completion)
N. Tree/Shrub Planting	District-wide

## VIII. COST SHARE PERCENTAGE - PRACTICE EXCEPTIONS

The maximum cost share percentage for most high priority conservation practices will be 75%; depending on the where the practice is located (**Refer to VII. above**). The exception to this is for the following high priority practices:

- A. **Water Impoundment Dams and Grade Stabilization Structures: 65% - 75%**  
(Attachment C)
- B. **Windbreak Renovation Practice: 50%** (Attachment D)
- C. **Emergency Repair of Conservation Practices: 50%** (Attachment E)

## IX. MAXIMUM COST SHARE LIMITS

### A. **General Maximum Limit:**

A cooperator may receive up to \$12,500 SWCP funds within any program year (July 1 - June 30) for most high priority practices unless otherwise specified below.

### B. **Priority Areas with Federal or State Grant Funding:**

Within priority areas (**Wahoo Creek and Shell Creek e.g.**) that are receiving reimbursable federal or state grant funding, the maximum limits may be exceeded to expedite use of those special funds within the specified grant period time line.

### C. **Planned Grazing Systems – Livestock Well Pumping Plants:**

The maximum limit for planned grazing systems is \$12,500, however a maximum cost share limit of \$5,000 will also apply toward the livestock well and well pumping plant components (combined) when part of the approved system (Attachment B).

### D. **Water Impoundment & Grade Stabilization Structures:**

The maximum limit for water impoundment dams and grade stabilization structures is \$15,000 upon NRCS recommendation and Projects Committee/Board approval on a case-by-case basis (Attachment C).

### E. **Windbreak Renovation:**

The maximum limit for windbreak renovation is \$1,000 per landowner per year (Attachment D).

### F. **Emergency Repair of Conservation Practices:**

The maximum limit for emergency repair of conservation practices is \$1,000 per landowner per year (Attachment E).

### G. **2020 Summer Conservation Practices in Non-Priority Areas:**

For 2020, the maximum limit for approved conservation practices in non-priority areas will be \$10,000 per landowner per year.

## X. AMENDMENTS FOR ADDITIONAL COST SHARE

When applications are approved under the maximum limit, additional funds, up to the limit, may be approved if notified by the landowner or technician before construction. LPNNRD staff is authorized to approve an additional \$1,000 above the original approval (up to the maximum limit) if the request is received from the landowner and/or technician prior to construction. Staff will notify the Projects Committee of any staff authorized changes.

## **XI. APPLICATION EXTENSIONS**

Extensions may be granted for inclement weather or for other conditions beyond the landowner's control. All extension requests will be considered by the Projects Committee and Board on a case-by-case basis. No more than one 6-month extension can be approved for the same application.

## **XII. CONSERVATION PRACTICE DESIGN, STAKING & PERMITS**

- A. All conservation measures must be designed and staked by Natural Resources Conservation Service personnel (NRCS), NRD technicians or other NRCS approved technical service providers. All completed conservation work must be according to the NRCS design standards and specifications as outlined in the NRCS Procedures Handbook for LPNNRD.
- B. The landowner is responsible for contacting the NRCS office to secure funds and schedule the layout (design and staking) of the approved work
- C. The landowner is responsible for obtaining all required local, state and federal permits.

## **XIII. SUBMITTING BILLS & PAPERWORK ON COMPLETED WORK**

- A. The landowner is responsible for submitting all bills to the NRCS office. The NRCS will calculate the eligible cost share payment (on NSWCP form # 3) and submit completed and properly signed paperwork to the LPNNRD.
- B. Drawings of the completed practices at to be provided by the NRCS/NRD technician on an aerial photo and submitted with the payment request.

## **XIV. COST SHARE PAYMENTS**

- A. LPNNRD has approved use of NeDNR's 2021 conservation practice payment rates for calculating SWCP contract cost-share payments. Payments will be based on NeDNR's conservation practice payment rates that were in force at the time the application was approved. The cost-share percent may be lowered if summer work is extended into fall.
- B. The LPNNRD calculates and pays cost-share on terraces only by the linear foot, not by the cubic yard.
- C. The cost-share percentages are calculated by multiplying the eligible cost share percentage by the approved cost share practice payment schedule rate or actual cost whichever is less. The cost-share assistance payment may not exceed a total of the eligible percent for an area when combining all sources of federal, state and local assistance.
- D. **Splitting Cost-Share Percentages:** When a field splits two cost-share priority areas, the corresponding eligible cost share percentage will be applied to each portion of the field being treated. When a field splits into a non-priority area, that area will be allowed up to 50% cost share assistance, if the non-priority area is 50% or less of the entire field being treated.
- E. When grant funds are available special conditions aligned with terms of grants will be implemented; in some cases a higher payment percentage rate, or payment cap may be allowed.

## **XV. PAYMENT OVERRUNS AND LANDOWNER REQUESTED REFUNDS**

**A. Payment Overruns:**

Overruns of up to 10 % above the approved project amount may be approved by staff. Overruns above 10% will need Board approval. Payments are not to exceed the maximum cost share limits set for the various practices. Exception to this is when payments are combined with grant funds in priority areas.

**B. Landowner Refunds:**

If an SWCP practice is purposely damaged, removed or destroyed within ten years after completion (25 years for a small dam), the cooperator who received cost share, will be requested to reimburse the District, all or a portion of the SWCP cost share funds, as determined by the Projects Completion (25 years for a small dam), the cooperator who received cost share will be required to reimburse the District all or a prorated portion of the funding assistance, as determined by the Projects Committee and Board.

**SWCP ATTACHMENT A**  
**SEDIMENT & WATER CONTROL BASINS AND DIVERSIONS**

This attachment is to help clarify the use of sediment & water control basins and diversions as an eligible cost-share practice. Basins and diversions are to be used as a part of an approved conservation system according to the NRCS technical guides and field manual.

- A. Sediment & water control basins and diversions may be approved as a high priority practice when in conjunction with terraces or dams.
- B. Basins and diversions will be considered a high priority practice when a part of a terrace system or in conjunction with a 100% no-till system. A 100% no-till system must have the goal of controlling soil erosion to soil replacement levels (“T”). A 100% no-till system is accepted land treatment when ephemeral and gully erosion is controlled, or “T” is met. Basins and/or diversions built separately on a terraced field are not considered a part of the terrace system.
- C. Basins and diversions not part of a terrace system may be considered as a high priority practice on fields where the NRCS or NRD technician determines terraces are not feasible and/or they offer the most practical solution to a problem. This will be determined by the Projects Committee on a case-by-case basis.

## LOWER PLATTE NORTH NRDSWCP ATTACHMENT B PLANNED GRAZING SYSTEM PRACTICE

### I. GENERAL REQUIREMENTS

- A. An applicant must have at least 40 acres of connecting grassland to be developed into at least two grazing cells with planned rest periods in accordance with Natural Resources Conservation Service (NRCS) recommendations.
- B. Applicants must complete a minimum 10-year planned grazing system developed by the NRCS prior to submitting an application.
- C. Applicants are required to sign a 10-year cost-share agreement with the LPNNRD. (Form NSWCP-10)
- D. All approved cost-share items must meet NRCS Standards and Specifications.
- E. Funds for approved practices may be used on CRP lands if such lands are in the last year of the CRP contract.
- F. The amount and type of eligible practices approved for each application will be determined by the overall grazing system plan and the most cost effective alternative available.
- G. Cost-share on eligible practices will be based on the approved cost-share percentage times the approved practice payment schedule cost share rate or 75 percent of the actual cost, whichever is less.

### II. ELIGIBLE PRACTICES

- A. **Cross Fencing:** Only fencing designed to facilitate cell division is eligible for cost-share (Standard 382 specifications). Boundary fences are not eligible for cost-share.
- B. **Livestock Water Dugouts:** Dugouts will be sized by daily animal needs and Nebraska Engineering Handbook Standards.
- C. **Livestock Well Installation:** Livestock wells will be sized to provide a maximum of 15 gallons of water per animal-unit per day within each cell. No cost-share will be available for domestic or irrigation wells. Well test holes are not eligible for cost-share.
- D. **Pumping Plants for Livestock Wells** (As outlined by State NSWCP Guidelines): While a cooperator may receive up to \$12,500 SWCP funds toward completing a Planned Grazing System, a maximum cost share limit of \$5,000 will apply toward the livestock well and well pumping plant component (combined) if part of the approved system.
- E. **Livestock Water Tanks:** Tanks sized according to standard storage requirements in the NRCS Technical Guide, Standard 614, are eligible.
- F. **Livestock Water Pipeline Installation**

**LOWER PLATTE NORTH NRD  
SWCP ATTACHMENT C  
GUIDELINES FOR WATER IMPOUNDMENT (SMALL DAMS) &  
GRADE STABILIZATION STRUCTURES**

**I. PURPOSE**

The purpose of this program is to assist landowners with the construction of water impoundment and grade stabilization structures on their property.

**II. ELIGIBLE PROJECT ITEMS**

A. Eligible Project Costs Include:

1. Construction (Not to include site preparation)
2. Seeding (Structure and emergency spillway)
3. Fencing when required by the NRCS

**III. LAND TREATMENT REQUIREMENT**

To be eligible for cost-share assistance, a minimum of 75% land treatment is required within the watershed above each proposed structure site. To calculate this percentage, non-highly erodible land is considered treated.

**Land Treatment Definition:**

Land treatment is defined as any practice or combination of practices (i.e. terraces, no-till etc.), that control soil erosion rates on highly erodible soils to soil replacement levels or less (Soil replacement level or "T" = 5 tons/acre in the LPNNRD). Any approved NRCS farm plan that treats land to "T" qualifies under this definition (8/2/00 Projects Committee).

**IV. COST-SHARE PERCENTAGE AND MAXIMUM ASSISTANCE**

The cost-share percent for approved applications outside selected priority areas is up to a maximum of 65%. For small dams approved within selected LPNNRD priority areas, the cost-share rate is up to a maximum of 75%. Eligible assistance will be based on the eligible cost-share percent times the county average costs or 75% of actual costs whichever is less. The maximum cost-share limit will be \$15,000 upon NRCS recommendation and Projects Committee approval on a case-by-case basis (see Special conditions below).

**Special conditions:** The Board may approve a higher cost-share percentage and increase the maximum assistance if an application site is above an LPNNRD recreation area, within a targeted watershed or when other special conditions exist. The Board may also approve a lower cost-share percent and decrease the maximum assistance for structure sites of lower priority. **Special** conditions will be evaluated by the Board on a case-by-case basis.

**V. PRIORITY AREAS**

Priority-areas for small dams and grade stabilization structures include the following watersheds:

- A. Sand & Duck Creek
- B. Wahoo Creek\*

- C. Skull Creek
- D. Shell Creek\* (Additional grant funding available)
- E. Bone Creek
- F. Watersheds above Pubic Recreation Structures (e.g. Czechland Lake, Homestead Lake, Lake Wanahoo)
- G. Above all existing LPNNRD Operated and Maintained Watershed Structures.

**VI. APPLICATION ELIGIBILITY AND SIGN-UP**

- A. Any landowner within the Lower Platte North NRD who is an individual, a partnership, a corporation or other legal entity.
- B. Applications may be submitted any time during the year; however, only NRCS inspected and recommended applications received by December 15, will ensure consideration for the following construction year. Unapproved applications will expire on May 1 of each year, requiring a new landowner application for future consideration. The Projects Committee will review, prioritize and submit a recommendation for approval at the January Board Meeting.
- C. The applicant shall apply at the county NRCS office on forms provided by the LPNNRD. An aerial photo showing the proposed project location must accompany the application. The application must be signed by the applicant and sent to the LPNNRD before December 15 of each year to insure consideration for the immediate year's construction.
- D. At the time of application, the NRCS will be requested to provide an estimate of drainage acres, percentage of land treatment present, quantities and costs for the project.

**VII. APPLICATION EVALUATION AND TENTATIVE APPROVAL**

- A. Application sites will be inspected by LPNNRD and NRCS representatives to evaluate feasibility, benefits and cost. Benefits to be evaluated will include but not be limited to: flood control, grade control, erosion and sediment control, wildlife habitat enhancement, livestock water, and protection to public roads and property.
- B. The Projects Committee will most generally review, prioritize, and make recommendations on applications at their January meeting.
- C. The NRD Board of Directors will generally approve, reject, or table each request at the January Board Meeting.
- D. After receiving LPNNRD approval, the applicant will be required to submit a \$500 deposit to the NRD before a survey or design is started. The deposit will be returned to the applicant after project completion. If the deposit is not received by February 1, the application will be canceled. If the applicant withdraws from the project after the design has been complete, the deposit will be retained by the LPNNRD unless conditions in XII. B. apply.
- E. In February of each year, the Natural Resources Conservation Service will be requested to proceed with survey and design of approved projects.
- F. After receiving LPNNRD approval, the applicant will be given two years to obtain necessary permits, complete the structure and submit all required paperwork. If the project is delayed due to adverse weather conditions, or other conditions beyond the

applicant's control, an extension may be granted by the LPNNRD Board of Directors. Extensions will be considered by the LPNNRD Board on a case-by-case basis.

### **VIII. LAND RIGHTS, AGREEMENTS AND PERMITS**

- A. The applicant is responsible for obtaining any required easements and any required federal, state and local (i.e. NDNR, Army COE, and County Zoning) permits.
- B. The applicant is responsible for the relocation or modification of water lines, power lines and telephone lines and pay the costs involved.
- C. The applicant will be required to enter into a 25-year cost-share agreement with the LPNNRD. This agreement states that the applicant will refund cost-share funds if the project is removed, altered, or modified without the consent of the LPNNRD.

### **IX. STRUCTURE DESIGN AND CONSTRUCTION**

- A. The NRCS will be requested to survey, design, and supervise all structures approved by the LPNNRD Board.
- B. Construction will not commence until formal notice to proceed is given by the LPNNRD. This notice will be given after NRD Board approval, and after receiving the applicant's deposit and signed cost-share agreement.

### **X. FINAL APPROVAL AND PAYMENT**

- A. Final Approval and Payment will occur when:
  - 1. The project is completed and certified by the NRCS/NRD technician to meet all NRCS standards and specifications.
  - 2. The completed application form NSWCP-3 is signed and returned to the LPNNRD with a copy of all project bills.

### **XI. OPERATION AND MAINTENANCE**

The landowner is responsible for all operation and maintenance after project construction.

### **XII. SMALL DAM DEPOSIT REQUIREMENT & REIMBURSEMENT**

- A. The applicant will be required to submit a \$500 deposit to the NRD before a survey or design is started. The deposit will be returned to the applicant after NRCS approves the completed project and all paperwork is submitted and approved by the District. If the deposit is not received by February 1, the application will be canceled. If the applicant withdraws from the project after the design has been complete, the deposit will be retained by the LPNNRD unless conditions in B. apply.
- B. If a landowner does not proceed with the small dam project because the final cost estimate is 40% or more over the original project estimate, the LPNNRD will return the \$500 deposit based on financial hardship. All other conditions will be reviewed by the Projects Committee on a case-by-case basis.

**LOWER PLATTE NORTH NRD  
SWCP ATTACHMENT D  
WINDBREAK RENOVATION PRACTICE**

**I. PURPOSE**

To provide for the restoration of farmstead, acreage or field windbreaks that have been rendered substantially ineffective due to the death of trees or other windbreak plantings as a result of weather, disease, or other natural causes.

**II. PLAN REQUIREMENT**

A windbreak renovation plan is to be based on a plan reviewed and approved by a forester of the Nebraska Forest Service. The forester is to certify that the windbreak has lost its effectiveness, should be renovated and that they approve the plan of renovation.

**III. SITE PREPARATION**

Tree removal off the site is required to be accomplished in late fall/early winter at least before the planting occurs the following spring. The only area that is replanted with a new windbreak receives cost share for removal costs. Tree removal work should not be initiated until the application is approved by the Lower Platte North NRD and the landowner agrees to replant the windbreak in the same area.

**IV. COST SHARE RATE AND MAXIMUM ASSISTANCE**

The windbreak renovation cost-share payment will not be based on a cost greater than the county average unit cost adopted by the USDA-FSA. The renovation practice is not to include the replanting of the windbreak because of different cost-share percentage rates. The windbreak planting cost-share will be separate. The Lower Platte North NRD will cost share at a 50% rate, up to \$1,000.

Tree planting cost-share is eligible for riparian buffers, farmsteads, acreages, field and livestock protection windbreaks. Windbreaks must contain 200 or more trees and shrubs which are purchased through and planted by the NRD. When the planting is strictly for wildlife habitat, a minimum of 300 trees/shrubs purchased and planted by the NRD is required.

**LOWER PLATTE NORTH NRD  
SWCP ATTACHMENT E  
FOR EMERGENCY REPAIR OF CONSERVATION PRACTICES**

**I. PURPOSE**

On occasion, the LPNNRD Board of Directors may approve local SWCP funds for the Repair of conservation practices damaged from intense rainstorms. The decision for approving emergency repair funds will be considered annually, with the location and total amount of available funds dependent on the severity of storm damage to conservation practices in designated areas in the District. When approved by the Board, Emergency repair funds will be allocated in the following manner:

- A. The LPNNRD Board will consider approval of the amount and eligible area for emergency repair funds, with a recommendation from the Projects Committee. Typically, this will occur on or prior to the LPNNRD September Board Meeting.
- B. Only eligible Conservation Practices, two years old and newer that were originally built to NRCS design specifications, will be eligible for cost-share assistance.
- C. The committee will consider approval of emergency repair assistance only when it is determined by an NRCS technician that the damage was not due to landowner negligence in performing normal maintenance as outlined in NRCS O&M specifications.
- D. To be eligible for emergency repair funds, the landowner must be following an approved NRCS farm plan.
- E. Prior to LPNNRD approval, applications will receive recommendations from LPNNRD and NRCS staff. The LPNNRD Projects Committee will prioritize application practices and areas.
- F. Eligible assistance will be 50% of the approved amount up to a maximum of \$1,000 per landowner per program period.

**LOWER PLATTE NORTH NRD  
SWCP ATTACHMENT F  
2021 LANDS FOR CONSERVATION PROGRAM  
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**Purpose:** The Lands for Conservation program provides landowners with an incentive to get conservation structures constructed on the land during the growing season.

1. The Lands for Conservation program will be on contractual basis between the landowner (cooperator) and the Lower Platte North Natural Resources District for one year while conservation practices are being established. Applications deadline for each calendar year will be February 1.
  2. Sediment and Water Control Basins with tile outlets and/or terraces with grassed waterways and terraces with tile outlets qualify for this program. Sediment and Water Control Basins/Terraces and/or waterways must be seeded during the contract period.
  3. NRCS and/or NRD personnel will design terraces with waterways or tile drains or Sediment and Water Control Basins with tile outlets. These practices must protect the entire field on which they are established. However, the area under contract will be the smallest practical area to encompass the practices, as agreed upon with the cooperator.
  4. Land enrolled in another program (ex: CRP) may not be eligible for Lands for Conservation contracts.
  5. Sediment and Water Control Basins with tile outlets and terraces with waterways or tile outlets may be cost-shared through the EQIP program administered by Natural Resources Conservation Service (NRCS). If federal funds are not available, cost-sharing assistance may be available through LPNNRD's Soil & Water Conservation Cost-Share Program.
  6. **Construction must be done between June 1 and September 15.** The field must be available for construction by August 1. The area enrolled in the LPNNRD Lands for Conservation will be planted to cover crop or a non-grain forage crop (forage sorghum, etc.) preceding and/or after construction. The crop or cover may be harvested or pastured during the contract period.
  7. **For 2020: Payment is \$205 per acre\***  
\*Payment Rate will be reviewed annually. Payment rate is based on 2020 Nebraska Non-Irrigated Cropland Cash Rent Paid per Acre, Source: USDA National Agricultural Statistics Service.  
**Payment will not be processed and forward to the NRD applicant until the project (including the planting of the cover crop) has been certified as completed by the NRCS.**
  8. If used for permanent pasture before or after the contract period, these areas are not eligible for the Lands for Conservation Program. Money received through this program resulting in permanent pasture after the contract period, must be returned. Land can be used for hayland as a normal part of the crop rotation.
  9. If ownership of land changes during the contract period, the contract becomes void. The new owner may continue the contract, if agreed to with the Lower Platte North NRD.
  10. Approval of contracts will be on a rotating basis.
  11. The landowner will contract for the construction of Sediment and Water Control Basins, terraces, waterways, tile outlets and any other necessary construction.
  12. Terraces, Sediment and Water Control Basins, waterways and tile outlets must be maintained for 10 years or as long as the current owner has control of the land, whichever is less.
  13. **Eligible Watersheds for the Lands for Conservation Program: Within the Wahoo Watershed, three of the HUC 12 sub watersheds were identified as highest priority areas for this program: North Fork-Wahoo Creek, Dunlop Creek and Miller Branch-Wahoo Creek. The Shell Creek Watershed.**
  14. **Separate fund pool allotted in 2021 for the remainder of the LPNNRD outside of 319/NWQI watersheds.**
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February 20, 2021

To: Shell Creek Watershed Improvement Group

Subject: Minutes of January 12, 2021 meeting

The Meeting of the Shell Creek Watershed Improvement Group was held at the Matt Bailey farm, January 12, 2021. Present: Matt, Raymond Flood, Mark Seier, Carl Groteluschen, and Gene Wissenburg. Joining by Zoom: Elbert Traylor, Katy Pekarek, Tom Mountford, Sean Elliott, Bill Bos, and Eric Smith.

Elbert and Katy led a review of proposed SCWIG Survey questions. Suggestions included an enclosed card if further information or a contact is desired, and possible promotional information about SCWIG and members of the group.

Gene moved and Mark seconded to proceed with survey as presented. Motion carried. Katy will contact BOSR with goal of sending in Feb-March timeline. Eric continues to work with FSA on assembling the mailing list; he may need some help in Boone County.

Bill and Tom reported on final walk through of Tom Sprunk project. It is complete with final cost of \$43,000. There are other "head-cut" projects in the area that could be done if not cost prohibitive. Some might be tied in with grass waterway or buffer strip projects.

Tom discussed costs and grant dollars available for Shell Creek work north and south of the Union Pacific Bridge, east of Schuyler.

Bill discussed several other projects being done: Pasture wells, Septic systems, Waterways, and Buffer strips.

Mark Minelli arrive at 3:15 pm and added more information regarding the U.P. bridge project and bank stabilization on the creek.

Katy shared the screen with her notes from the meeting regarding survey, cover letter, post card, names and contacts.

Carl moved and Matt seconded to adjourn. Motion carried; adjourned at 3:41 pm.

Respectfully submitted

Gene Wissenburg, secretary



**AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR  
PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of March 8, 2021 ("Effective Date") between Lower Platte North Natural Resources District (NRD) ("Owner") and JEO Consulting Group, Inc. ("Engineer").

Owner's project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

Shell Creek Watershed Plan Update ("Project").

JEO Project Number: 210166.00

Owner and Engineer further agree as follows:

**ARTICLE 1 - SERVICES OF ENGINEER**

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**1.01 Scope**

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

**ARTICLE 2 - OWNER'S RESPONSIBILITIES**

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**2.01 Owner Responsibilities**

- A. Owner responsibilities are outlined in Section 3 of Exhibit B.

**ARTICLE 3 - COMPENSATION**

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**3.01 Compensation**

- A. Owner shall pay Engineer as set forth in Exhibit A and per the terms in Exhibit B.
- B. The fee for the Project is: \$31,630.00
- C. The Standard Hourly Rates Schedule shall be adjusted annually (as of approximately January 1st) to reflect equitable changes in the compensation payable to Engineer. The current hourly rate schedule can be provided upon request.

**ARTICLE 4 - EXHIBITS AND SPECIAL PROVISIONS**

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**4.01 Exhibits**

Exhibit A – Scope of Services  
Exhibit B – General Conditions

**4.02 Total Agreement**

A. This Agreement (consisting of pages 1 to 2 inclusive, together with the Exhibits identified as included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Owner: Lower Platte North NRD

Engineer: JEO Consulting Group, Inc.

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By: \_\_\_\_\_

By: Lalit K. Jha, PE, D. WRE, CFM

Title: \_\_\_\_\_

Title: Vice President, Water Resources

Date Signed: \_\_\_\_\_

Date Signed: February 17, 2021

Address for giving notices:

Address for giving notices:

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JEO Consulting Group, Inc.

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1937 N Chestnut St.

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Wahoo, NE 68066

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**Exhibit A: Scope of Work**  
**LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**  
**Shell Creek Water Watershed Plan Update**  
**JEO Project Number: 210166.00**

**PROJECT OVERVIEW**

Shell Creek Watershed has been the focus of multiple water quality improvement projects in recent years. In 2016, the Lower Platte North Natural Resources District (LPNNRD) completed the Shell Creek Watershed Environmental Enhancement Plan with the use of Section 319 funds from U.S. Environmental Protection Agency (EPA) and the Nebraska Department of Environment and Energy (NDEE) (formerly Department of Environmental Quality). To remain eligible for Section 319 project funding, this plan is required to be updated every five years.

Currently, the planning process to update the plan is being led by NDEE staff. LPNNRD and NDEE staff have requested JEO Consulting Group (JEO) to provide support to this effort by providing water quality modeling services to evaluate previous implementation efforts, estimate existing pollutant loads, and identify additional load reductions needed to meet water quality goals. To serve in the best interest of this project, JEO has also enlisted the support of Wright Water Engineers (WWE). JEO and WWE have successfully completed multiple watershed planning projects in Nebraska in recent years.

This scope of services was developed based upon discussions with LPNNRD and NDEE staff and recent project experience. Should the project's needs or the assumptions detailed in this scope change, additional services may be negotiated between JEO and LPNNRD. The tasks to complete this project have been organized and broken down as follows.

**TASK SUMMARY**

- Task 1: Evaluate Water Quality Data
- Task 2: Quantify Pollutant Loads
- Task 3: Quantify Pollutant Reductions
- Task 4: Project Management

### **TASK 1: EVALUATE WATER QUALITY DATA**

The approach to Task 1 is to utilize paired water quality and flow data collected in the Shell Creek watershed to compare pre- versus post- Watershed Plan implementation pollutant loads in Shell Creek. The United States Geological Survey (USGS) Gage #06795500 Shell Creek near Columbus, NE is regularly monitored for flow, however water quality monitoring data collected by the USGS appears to end in October 2016. JEO will area weight the flow data published by the USGS at this gage to estimate pre-versus post- Watershed Plan implementation loads in the watershed at the three water quality monitoring locations (Shell 129, Shell 205, and Shell 207) included in the 2016 Shell Creek Watershed Environmental Enhancement Plan. This analysis can provide the NDEE and LPNNRD with insight regarding water quality trends in the Shell Creek Watershed post plan implementation. This analysis can also be completed for additional monitoring stations as requested by the NDEE and LPNNRD.

#### **Responsibilities and Assumptions for this Task**

- JEO
  - Water quality parameters of interest are limited to flow, nitrogen, phosphorus, sediment, *E. coli* bacteria, and atrazine.
- Sponsors
  - Identify or provide any additional monitoring data (other than USGS data) at the beginning of this task
  - Review draft memorandum in a timely fashion

#### **Deliverables for this Task**

- Pre- versus post- Watershed Plan implementation load estimation memorandum for bacteria, nitrogen, phosphorus, sediment, and atrazine. It is anticipated that his memorandum will be provided to NDEE and LPNNRD for approval prior to finalizing.
- Final memorandum summarizing the results of the load analysis, as well as a discussion on any observable trends in the water quality data pre- versus post Watershed Plan implementation

### **TASK 2: QUANTIFY POLLUTANT LOADS**

The approach to Task 2 is to develop a simple spreadsheet-based water quality model. The model will be used to perform empirical calculations to quantify existing annual *E. coli*, nitrogen, phosphorus, atrazine, and sediment loads from various point and nonpoint sources within the Shell Creek watershed.

Loads from nonpoint sources will be assigned typical runoff concentrations for pollutants based on peer reviewed literature. An evaluation of land use data within the watershed will be performed.

Loads from point sources, such as animal feeding operations, onsite wastewater treatment plants, and grazing livestock will be estimated by assigning typical unit loading rates to each of the identified point sources in the watershed. Load contributions from permitted facilities (such as wastewater treatment plant effluent) will be quantified based on effluent data provided by the facility to the NDEE.

This analysis will not be calibrated to existing concentration data. It is assumed the loads generated by each land use and point source as part of this analysis produce the impaired instream concentrations of *E. coli* and atrazine, and annual nutrient and sediment loads calculated from Task 1.

**Responsibilities and Assumptions for this Task**

- No fate or transport modeling will be conducted.
- All pollutant loads will be associated with surface water runoff contributions to surface waters within the watershed. Pollutant loads associated with groundwater will not be estimated.
- Load estimates will be provided on a HUC 12 basis, by pollutant source

**Deliverables for this Task**

- Load estimation approach memorandum. It is anticipated that this memorandum will be provided to NDEE for approval prior to quantifying existing loads.
- Technical memorandum summarizing the results of the existing load analysis.

**TASK 3: QUANTIFY POLLUTANT REDUCTIONS**

The approach to Task 3 is to perform empirical calculations to quantify the reduction of annual loads for the parameters of concern from various point and nonpoint sources as a result of implementing BMPs within the Shell Creek watershed. Load reductions are estimated from both point and nonpoint sources by applying BMP treatment efficiencies to the loads estimated from Task 2. BMPs are then assigned treatment efficiencies identified in peer reviewed literature. BMPs will be applied to the model until the estimated load reduction meets or exceeds the same percent reduction needed to achieve the instream water quality standard for atrazine and *E. coli*, and target reductions for nutrients and sediment. Since the existing load analysis will not be calibrated, it is assumed that any reductions in load will result in the same relative reduction in the instream concentration.

Once the BMPs are applied within the model, the estimated area of each BMP, or the number of specific BMP structures to be implemented will be summarized.

**Responsibilities and Assumptions for this Task**

- No fate or transport modeling will be conducted.
- JEO will work with LPNDRD and NDEE to identify the locations and types of BMPs in the watershed necessary to meet the reductions.

**Deliverables for this Task**

- GIS maps, figures, and shapefiles will be provided to LPNDRD and NDEE. These will be limited to those developed in support of the modeling and reporting efforts.
- A stand-alone report summarizing the approach, assumptions, and results of Tasks 2 and 3. This will include delivery of all pertinent excel files summarizing existing loads and estimated load reductions as a result of implementing BMPs.
- A BMP Load Reduction Calculator Tool. This simple excel sheet calculator will allow the LPNDRD and NDEE the ability to estimate pollutant load reductions as a result of implementing BMPs, without having to re-run the water quality model. This is useful for developing future project implementation plans (PIPs) and future project reporting.

**TASK 4: PROJECT MANAGEMENT**

JEO will provide a project manager (PM) who will be responsible for maintaining the project schedule, budget, and work quality. JEO will provide monthly progress reports and invoices to the LPNNRD. It is anticipated that the phone calls, progress reports, and email communications will be sufficient to facilitate most work efforts. No facilitated meetings are anticipated as a part of this project.

**Responsibilities and Assumptions for this Task**

- JEO
  - Provide project management services through September 2021
  - Ensure that LPNNRD and NDEE standards and requirements are met
  - Track and manage costs and the schedule
  - Identify to LPNNRD and NDEE any out-of-scope requests or direction that JEO receives. JEO will not proceed on out-of-scope requests or direction unless it is agreed upon by both JEO and the LPNNRD
- Sponsors
  - Review invoices, status reports, and necessary documentation and upon approval make payment to JEO
  - Furnish relevant programmatic and technical requirements to JEO
  - Ensure reviewing agencies perform reviews in agreed upon times

**Deliverables for this Task**

- Monthly invoices and progress reports

EXHIBIT A: SCOPE OF WORK  
 Shell Creek Watershed Plan Update

**PROJECT FEE**

JEO will provide the services described herein for lump sum fee amount of \$31,630.00. Owner will be billed monthly for services. A Task Series breakdown of the project fee is provided below. Additional services can be provided based upon current hourly rates as requested by the owner. JEO will begin work immediately following the receipt of Notice to Proceed. JEO reserves the right to redistribute budget among tasks so long as the total fee amount does not change.

<b>Project Tasks</b>		<b>Fee</b>
Task 1	Evaluate Water Quality Data	\$4,540
Task 2	Quantify Pollutant Loads	\$13,240
Task 3	Quantify Pollutant Reductions	\$11,420
Task 4	Project Management	\$2,430
<b>Total</b>		<b>\$31,630</b>

**ANTICIPATED SCHEDULE:**

The following schedule is anticipated.

- Notice to Proceed:** -----March 2021
- Task 1:** Evaluate Water Quality Data ----- May thru June 2021
- Task 2:** Quantify Pollutant Loads: ----- June thru July 2021
- Task 3:** Quantify Pollutant Reductions-----July thru August 2021
- Task 4:** Project Management -----March thru September 2021

*Note: Project schedule is dependent upon availability of funding, timing of notice to proceed, timely reviews by agencies and stakeholders, as well as timely project direction from the project sponsors.*

**SERVICES NOT INCLUDED**

- GIS mapping or data collection not outlined in scope of services
- Watershed plan development or review
- Regulatory permits
- Website hosting, maintenance, or other social media posts
- Quality Assurance Project Plan (QAPP)
- Water quality sampling, stream gaging, analysis, or data acquisition
- Other data collection not outlined in the scope of services
- Design or construction engineering services
- Topographic survey; or property, deed, or title searches

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

**1. SCOPE OF SERVICES:** JEO Consulting Group, Inc. (JEO) shall perform the services described in Exhibit A. JEO shall invoice the owner for these services at the fee stated in Exhibit A.

**2. ADDITIONAL SERVICES:** JEO can perform work beyond the scope of services, as additional services, for a negotiated fee or at fee schedule rates.

**3. OWNER RESPONSIBILITIES:** The owner shall provide all criteria and full information as to the owner's requirements for the project; designate and identify in writing a person to act with authority on the owner's behalf in respect to all aspects of the project; examine and respond promptly to JEO's submissions; and give prompt written notice to JEO whenever the owner observes or otherwise becomes aware of any defect in work.

Unless otherwise agreed, the owner shall furnish JEO with right-of-access to the site in order to conduct the scope of services. Unless otherwise agreed, the owner shall also secure all necessary permits, approvals, licenses, consents, and property descriptions necessary to the performance of the services hereunder. While JEO shall take reasonable precautions to minimize damage to the property, it is understood by the owner that in the normal course of work some damage may occur, the restoration of which is not a part of this agreement.

**4. TIMES FOR RENDERING SERVICES:** JEO's services and compensation under this agreement have been agreed to in anticipation of the orderly and continuous progress of the project through completion. Unless specific periods of time or specific dates for providing services are specified in the scope of services, JEO's obligation to render services hereunder shall be for a period which may reasonably be required for the completion of said services.

If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or date are changed through no fault of JEO, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If the owner has requested changes in the scope, extent, or character of the project, the time of performance of JEO's services shall be adjusted equitably.

**5. INVOICES:** JEO shall submit invoices to the owner monthly for services provided to date and a final bill upon completion of services. Invoices are due and payable within 30 days of receipt. Invoices are considered past due after 30 days. Owner agrees to pay a finance charge on past due invoices at the rate of 1.0% per month, or the maximum rate of interest permitted by law.

If the owner fails to make any payment due to JEO for services and expenses within 30 days after receipt of JEO's statement, JEO may, after giving 7 days' written notice to the owner, suspend services to the owner under this agreement until JEO has been paid in full all amounts due for services, expenses, and charges.

**6. STANDARD OF CARE:** The standard of care for all services performed or furnished by JEO under the agreement shall be the care and skill ordinarily used by members of JEO's profession practicing under similar circumstances at the same time and in the

same locality. JEO makes no warranties, express or implied, under this agreement or otherwise, in connection with JEO's services.

JEO shall be responsible for the technical accuracy of its services and documents resulting therefrom, and the owner shall not be responsible for discovering deficiencies therein. JEO shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in owner furnished information.

**7. REUSE OF DOCUMENTS:** Reuse of any materials (including in part plans, specifications, drawings, reports, designs, computations, computer programs, data, estimates, surveys, other work items, etc.) by the owner on a future extension of this project, or any other project without JEO's written authorization shall be at the owner's risk and the owner agrees to indemnify and hold harmless JEO from all claims, damages, and expenses including attorney's fees arising out of such unauthorized use.

**8. ELECTRONIC FILES:** Copies of Documents that may be relied upon by the owner are limited to the printed copies (also known as hard copies) that are signed or sealed by JEO. Files in electronic media format of text, data, graphics, or of other types that are furnished by JEO to the owner are only for convenience of the owner. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk.

a. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30 day acceptance period shall be corrected by the party delivering the electronic files. JEO shall not be responsible to maintain documents stored in electronic media format after acceptance by the owner.

b. When transferring documents in electronic media format, JEO makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by JEO at the beginning of the project.

c. The owner may make and retain copies of documents for information and reference in connection with use on the project by the owner.

d. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

e. Any verification or adaptation of the documents by JEO for extensions of the project or for any other project shall entitle JEO to further compensation at rates to be agreed upon by the owner and JEO.

**9. SUBCONSULTANTS:** JEO may employ consultants as JEO deems necessary to assist in the performance of the services. JEO shall not be required to employ any consultant unacceptable to JEO.

**10. INDEMNIFICATION:** To the fullest extent permitted by law, JEO and the owner shall indemnify and hold each other harmless and their respective officers, directors, partners, employees, and consultants from and against any and all claims, losses, damages, and expenses (including but not limited to all fees and charges of

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) to the extent such claims, losses, damages, or expenses are caused by the indemnifying parties' negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of JEO and the owner, they shall be borne by each party in proportion to its negligence.

**11. INSURANCE:** JEO shall procure and maintain the following insurance during the performance of services under this agreement:

- a. Workers' Compensation: Statutory
- b. Employer's Liability
  - i. Each Accident: \$500,000
  - ii. Disease, Policy Limit: \$500,000
  - iii. Disease, Each Employee: \$500,000
- c. General Liability
  - i. Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
  - ii. General Aggregate: \$2,000,000
- d. Auto Liability
  - i. Combined Single: \$1,000,000
- e. Excess or Umbrella Liability
  - i. Each Occurrence: \$1,000,000
  - ii. General Aggregate: \$1,000,000
- f. Professional Liability:
  - i. Each Occurrence: \$1,000,000
  - ii. General Aggregate: \$2,000,000
- g. All policies of property insurance shall contain provisions to the effect that JEO and JEO's consultants' interests are covered and that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any of the insureds or additional insureds thereunder.
- h. The owner shall require the contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause JEO and JEO's consultants to be listed as additional insured with respect to such liability and other insurance purchased and maintained by the contractor for the project.
- i. The owner shall reimburse JEO for any additional limits or coverages that the owner requires for the project.

**12. TERMINATION:** This agreement may be terminated by either party upon 7 days prior written notice. In the event of termination, JEO shall be compensated by owner for all services performed up to and including the termination date. The effective date of termination may be set up to thirty (30) days later than otherwise provided to allow JEO to demobilize personnel and equipment from the site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble project materials in orderly files.

**13. GOVERNING LAW:** This agreement is to be governed by the law of the state in which the project is located.

**14. SUCCESSORS, ASSIGNS, AND BENEFICIARIES:** The owner and JEO each is hereby bound and the partners, successors, executors, administrators and legal representatives of the owner and JEO are hereby bound to the other party to this agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, with respect to all covenants, agreements and obligations of this agreement.

a. Neither the owner nor JEO may assign, sublet, or transfer any rights under or interest (including, but without limitation, monies that are due or may become due) in this agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under this agreement.

b. Unless expressly provided otherwise in this agreement: Nothing in this agreement shall be construed to create, impose, or give rise to any duty owed by the owner or JEO to any contractor, contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

c. All duties and responsibilities undertaken pursuant to this agreement shall be for the sole and exclusive benefit of the owner and JEO and not for the benefit of any other party.

**15. PRECEDENCE:** These standards, terms, and conditions shall take precedence over any inconsistent or contradictory language contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding JEO's services.

**16. SEVERABILITY:** Any provision or part of the agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the owner and JEO, who agree that the agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

**17. NON-DISCRIMINATION CLAUSE:** Pursuant to Neb. Rev. Stat. § 73-102, the parties declare, promise, and warrant that they have and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A § 1985, et seq.) and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. § 48-1101, et seq., in that there shall be no discrimination against any employee who is employed in the performance of this agreement, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

**18. E-VERIFY:** JEO shall register with and use the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the state where the work shall be performed. Engineer shall require the same of each consultant.

February 22, 2021

Katie Pekarek  
University of Nebraska – Lincoln  
612 Harding Hall  
Lincoln, NE 68583-0972

Department of Sociology  
907 Oldfather Hall  
P.O. Box 880325  
Lincoln, NE 68588-0325  
(402) 472-3672  
FAX (402) 472-4568  
1-800-480-4549  
Email: bosr@unl.edu

Dear Katie,

Thank you for allowing the Bureau of Sociological Research (BOSR) the opportunity to create a budget estimate for your project. Using the information, you (the Researcher) have provided, I have created a budget estimate based on the following assumptions:

- BOSR will conduct a mail survey with 978 address in the Shell Creek watershed area.
- The first mailing will be an initial survey packet to include a letter explaining the survey, the survey, a business reply envelope for the survey to be mailed back to BOSR, and a brochure about SCWIG. The second mailing will consist of a postcard reminder followed by a final mailing replicating the materials sent in the first mailing excluding the brochure.
- The Researcher will provide the mail addresses.
- BOSR will assist with the IRB protocol.
- BOSR will provide assistance with the questionnaire and communication development.
- The questionnaire will be approximately eight pages in length and printed in grayscale.
- BOSR staff will prepare, compile and process all mailings.
- BOSR will prepare for and complete all data entry, including programming of the survey into software allowing for double entry of returned surveys.
- BOSR staff will assist with troubleshooting respondent inquiries and problems associated with the survey. Questions that BOSR staff are not able to answer will be communicated to the Researcher.
- Data will be provided to the Researcher in one SPSS data file. Other types of data files are possible (such as Excel, portable files, etc.) but will need to be negotiated with the BOSR at the beginning of the project.
- BOSR will provide a basic report of the findings.

The cost estimate for this project is \$19,559, including a 5% indirect fee.

This estimate is based on the BOSR service center charge out rates as of February 22, 2021. All work performed by BOSR will be subject to the charge out rates at that time.

The BOSR is a cost recovering unit, meaning we only charge out to clients the amount that it actually costs us to complete the project. If we are able to finish the project under the amount estimated, we will send you an invoice for only the amount spent. At the same time, if we find that costs are running higher than anticipated or changes are made to the methodology that would increase the costs above the estimate I have generated, we would discuss options for keeping the project within budget with you as the occasion arises. If you have any information that may be helpful in forecasting costs for your project, please let me know and adjustments can be made to the cost estimations.

Costs associated with work completed on BOSR projects are billed on a quarterly basis. If other arrangements for the invoicing of the costs of your project are needed, please let us know prior to the start of any work.

If you have any questions regarding the assumptions or the budget estimate provided here, I would be happy to discuss them with you at your convenience via email at [lwitt2@unl.edu](mailto:lwitt2@unl.edu) or by telephone at (402) 472-3672.

Cordially,



Lindsey Witt-Swanson  
Associate Director  
Bureau of Sociological Research  
University of Nebraska - Lincoln

# Shell Creek Watershed

## Water Quality

1. Have you had your drinking water tested for nitrate in the past 5 years?

- Yes
- No
- Don't remember

2. Have you had your drinking water tested for bacteria (*E. coli*) in the past 5 years?

- Yes
- No
- Don't remember

3. Is your wastewater treated with a septic system?

- Yes
- No (Skip to question 7)

4. Was your septic system installed prior to January 1, 2000?

- Yes
- No

5. Has your septic system or lagoon been inspected within the last 5 years?

- Yes
- No
- I don't know

6. Has your septic system been pumped within the last 5 years?

- Yes
- No
- I don't know

7. Do you have an unused or abandoned well on a farm you own or rent?

- Yes
- No
- I don't know

8. How concerned are you about each of the following?

	Very concerned	Concerned	Not at all concerned
a. Water quality affecting your farm management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Water quality affecting drinking water in the Shell Creek watershed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Water quality affecting habitat and wildlife in the Shell Creek watershed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. How concerned are you about the following resource issues in the Shell Creek watershed?

	Very concerned	Concerned	Not at all concerned
a. Soil erosion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Stream bank erosion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Soil health / soil quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Upland wildlife habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Aquatic habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Other, please specify:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>			

### Nitrate

Nitrate is both a natural and manmade inorganic compound. It may originate from fertilizer, manure, human waste and decaying organic matter. It enters groundwater through infiltration through the soil and enters streams through overland runoff.

10. How concerned are you with the nitrate levels in your groundwater?

- Very concerned
- Concerned
- Not at all concerned

### E. coli

E. coli bacteria are excreted in the feces of humans and animals. It enters a stream, river, or lake by direct deposit from livestock, wildlife, and/or runoff from animal feedlots or land application of manure. Discharges also may come from municipal and private wastewater systems.

11. How concerned are you with E. coli in Shell Creek?

- Very concerned
- Concerned
- Not at all concerned

### Atrazine

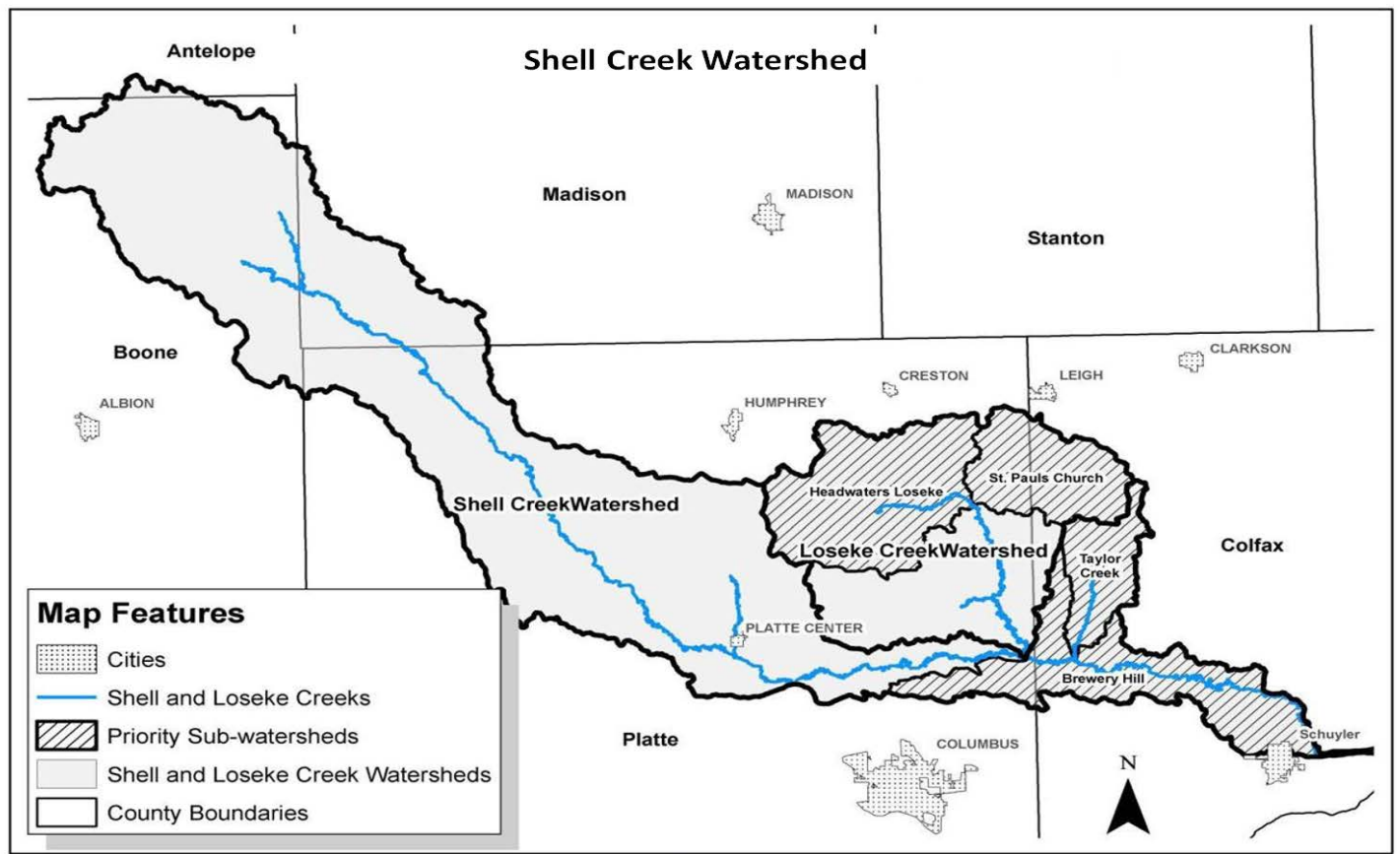
Atrazine is a manmade compound that does not naturally occur in nature. It enters streams through spills, over-spray and runoff of land application.

12. How concerned are you with Atrazine levels in Shell Creek?

- Very concerned
- Concerned
- Not at all concerned

# Shell Creek Watershed Needs

13. Please circle on the map any area of the Shell Creek watershed that you feel needs attention.



0 1.5 3 6 9 12 Miles

Date: 3/31/2017

14. What issues need to be addressed in the area(s) you circled?

15. If you would like to meet with someone to talk about specific issues you would like to see addressed in the Shell Creek watershed, please provide your contact information below.

Name:

Email address:

Phone number:

## Best Management Practices

16. Do you currently implement any best management practices (BMPs) which benefit water quality?

- Yes  
 No

17. Have you received a cost share payment for the BMP?

- Yes  
 No

18. Would you be more likely to adopt or maintain a BMP or conservation practice if...

	Yes	Maybe	No	N/A
a. You knew they had benefits downstream	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. You could get financial assistance to implement the practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. You had evidence that the practices would not reduce yield	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. You had evidence that the practices would improve your profitability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Most of your neighbors you knew had adopted the practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. You could talk to other farmers about how to make the practices work on your farm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Farming

19. Please describe the ownership or management arrangement of your farm(s) in the Shell Creek Watershed. Do you:

	No	Yes		How many acres?
a. Rent – Crop-share	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="text"/>
b. Rent – Cash rent	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="text"/>
c. Own	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="text"/>

20. How many years have you been farming?

- Less than one year  
 1-5 years  
 6-10 years  
 11-20 years  
 21+ years

21. Have you changed the way you farm in the past 5 years in an attempt to make your farm more successful...

	Yes	No
a. Economically?	<input type="radio"/>	<input type="radio"/>
b. For long-term sustainability?	<input type="radio"/>	<input type="radio"/>
c. For environmental benefits?	<input type="radio"/>	<input type="radio"/>

22. Do you use the following sources when selecting conservation practices for your farming operation? If yes, how influential are the following on your farming decisions?

Source of conservation information	Use			Influence on your farming decisions		
	No	Yes		Very influential	Somewhat influential	Not influential
a. Natural Resources Conservation Service (NRCS)	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Family	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Seed dealer	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. University Extension	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Chemical dealer	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Non-farming friend	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. National Resource Directory (NRD)	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Nebraska Department of Agriculture	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Farm organization	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Farm Service Agency (FSA)	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Banker/lawyer	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Consultant	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Landlord	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Other farmers	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Cropland

23. Do you currently use each of the following cropland practices on your farm? If yes, how long have you been using each practice?

Conservation Practice	Use			Length of practice			
	No	Yes		Less than 1 year	1-4 years	5-8 years	9+ years
a. Nutrient management	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Irrigation management	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Wetland creation/enhancement	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Grassed waterway	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Integrated pest management	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reduced or no-tillage	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Conservation crop rotation	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Cover crop	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Terraces, contour farming	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Buffers/filter strips/tree establishment	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Other, please specify:	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. If money and time were not an issue, how likely would you be to try each of these practices?

Conservation Practice				
	Already Use	Very Likely	Likely	Not at all likely
a. Nutrient management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Irrigation management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Wetland creation/enhancement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Grassed waterway	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Integrated pest management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reduced or no-tillage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Conservation crop rotation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Cover crop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Terraces, contour farming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Buffers/filter strips/tree establishment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Other, please specify:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>				

## Livestock

25. Do you raise livestock in the Shell Creek watershed?

- Yes  
 No → Go to #33

26. How many cattle do you raise in the Shell Creek watershed?

- None  
 1-50  
 51-299  
 300 – 699  
 700+

27. How many hogs do you raise in the Shell Creek watershed?

- None  
 1-100  
 101 - 299  
 300-749  
 750 – 2499  
 2,500 +

28. How much poultry do you raise in the Shell Creek watershed?

- None  
 1-100  
 101-37,499  
 37,500-124,999  
 125,000+

29. Where do you maintain your livestock?

	Yes	No
a. Pasture or range	<input type="radio"/>	<input type="radio"/>
b. Open lot	<input type="radio"/>	<input type="radio"/>
c. Confinement building	<input type="radio"/>	<input type="radio"/>

30. Do your livestock have access to an intermittent stream (only flows after rain storm)?

- Yes  
 No

31. Do your livestock have access to a perennial stream (continuously flowing water)?

- Yes, complete access  
 Yes, but partially excluded  
 No

32. Are your pastured livestock in a rotational, or managed, grazing system?

- Yes  
 No

33. If money and time were not an issue, how likely would you be to try each of these practices?

Conservation Practice	Already Use	How likely would you be to try each of these practices?		
		Very Likely	Somewhat Likely	Not at all likely
a. Vegetated Treatment Area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Prescribed Grazing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Manure Management System	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Stream Crossing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Exclusion Fencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Water Diversion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Other, please specify:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>				

34. Which of the following livestock practices do you currently use on your farm?

Conservation Practice	Use			Length of practice		
	No	Yes		1-4 years	5-8 years	9+ years
a. Vegetated Treatment Area	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Prescribed Grazing	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Manure Management System	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Stream Crossing	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Exclusion Fencing	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Water Diversion	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Other, please specify:	<input type="radio"/>	<input type="radio"/>	If yes →	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>						

35. Did you or someone else graze livestock on your cropland after harvest?

- Yes  
 No

## Demographics

36. What is your gender?

- Male  
 Female

37. How often do you use the following media formats?

	Frequently	Sometimes	Never
a. TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Web	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Social Media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Print	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Field Day/Events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**38. On a continuum of early conservation adopter to late adopter, where “Early Adopter” is adopting a new technology along with the first set of farmers and “Late Adopter” is adopting the technology after most farmers adopt it, where would you place yourself?**

- Early adopter (one of the first set)
- Early majority
- Neither early majority nor late majority
- Late majority
- Late adopter (one of the last set)

**39. What is the highest level of education you have completed?**

- No diploma
- High school diploma/GED
- Some college, but no degree
- Technical/Associate/Junior College (2yr, LPN)
- Bachelor’s Degree (4yr, BA, BS, RN)
- Graduate degree (Masters, PhD, Law, Medicine)

**40. Please use the space below to provide any comments or feedback.**

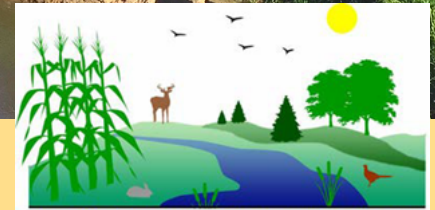
# Thank you!

Please use the postage-paid return envelope included in your survey packet to return your questionnaire.

Questions or requests from this survey can be directed to:

Bureau of Sociological Research  
University of Nebraska-Lincoln  
907 Oldfather Hall | PO Box 880325  
Lincoln, NE 68588-0325  
Phone: 1-800-480-4549 (toll free)  
E-mail: bosr@unl.edu

The Shell Creek covers almost 110 miles, running through 5 different counties in Nebraska, and drains approximately 304,873 acres of surrounding farmland.



Shell Creek Watershed Improvement Group

**240+**

producers have participated in conservation efforts in the Shell Creek Watershed.

**340+**

conservation management practices have been implemented in the Shell Creek Watershed.

## CONTACT INFO

Shell Creek Watershed  
Improvement Group

Bill Bos  
NRCS Program Assistant  
(402) 564-0506 Ext. 3  
william.bos@ne.usda.gov

**SHELL CREEK  
WATERSHED  
IMPROVEMENT  
GROUP**

PUTTING THE SHELL BACK IN  
SHELL CREEK!

# BACKGROUND

Over the last 20 years, concerns about poor water quality and the effect of erosion on agriculture production led to the formation of a local group and grassroots efforts to identify and promote essential conservation practices in the Shell Creek Watershed.

The Shell Creek Watershed Improvement Group (SCWIG) was initiated in 1999 to work with landowners and producers in the watershed to identify and promote priority conservation practices and engages various agencies on the local, state, and federal level to provide additional assistance.

Engaging youth, families and communities is a priority for the SCWIG. In 2002, SCWIG engaged two local high schools and their science and ag instructors, to develop the Shell Creek Watershed Monitoring Program, for high school students.

# OUR VALUES

## COLLABORATIVE CONSERVATION

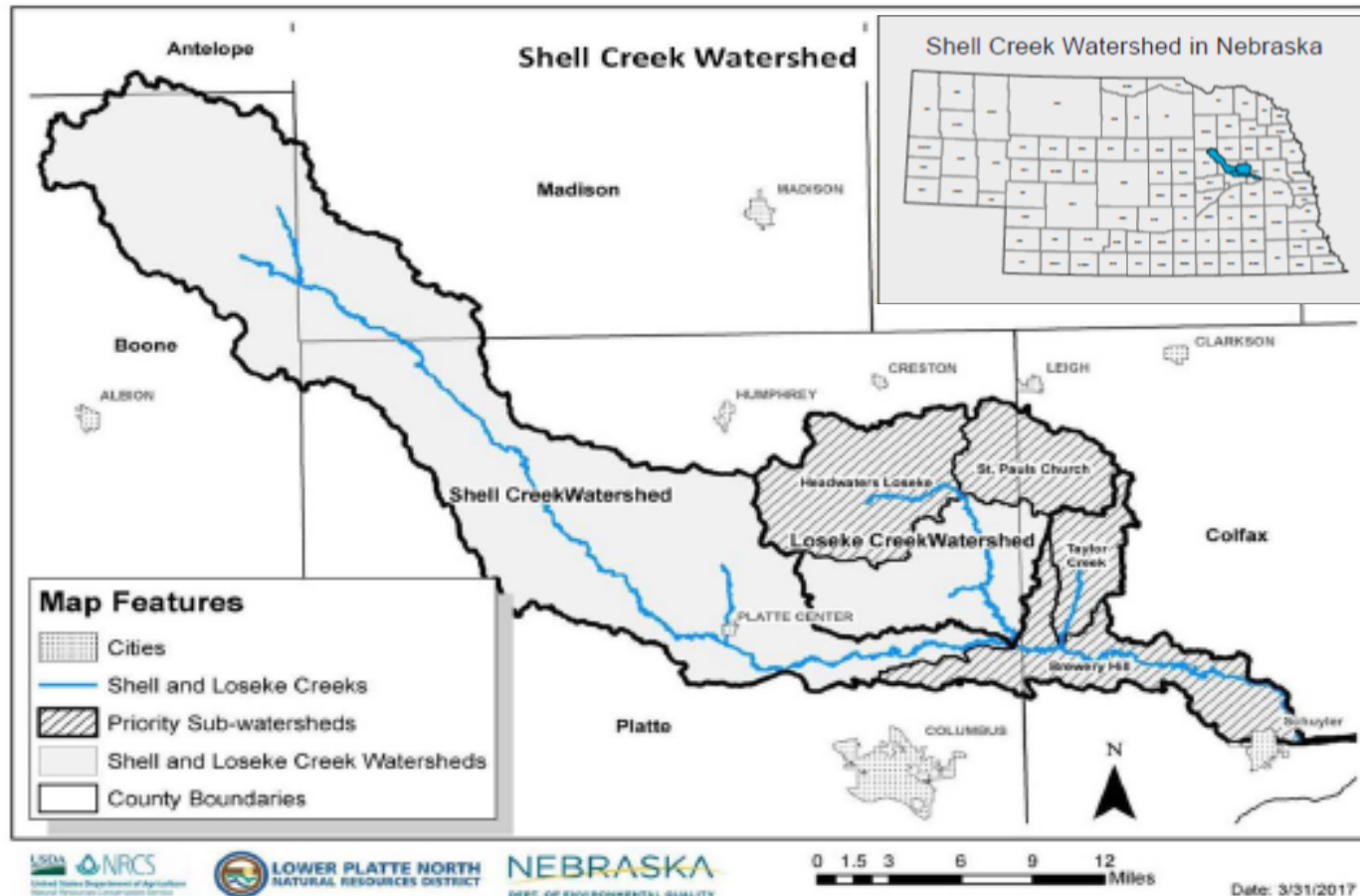
Combined efforts by the Shell Creek Watershed Improvement Group, landowners, partners, and agencies have collectively spent more than \$3.7 million on land and water conservation practices since the SCWIG formed in 1999.

## PARTNERS

Partners historically involved in this project include: SCWIG, Lower Platte North NRD, NDEE, NET, Nebraska Extension, USDA NRCS, US EPA, Nebraska Game & Parks Commission, Pheasants Forever, Prairieland RC&D, USGS, and the Newman Grove and Schuyler High School Science Programs.

## LOCALLY DRIVEN SOLUTIONS

Local conservation management practices are key in improving the water quality in the Shell Creek Watershed.



## Amendment to Shell Creek PIP

A decision by Union Pacific Railroad to replace its bridge over the lower reach of Shell Creek provided an opportunity to extend the current excavation and creation of an enhanced flow channel and flood plain bench on the north side of the UP tracks into the reach below the south side of the UP tracks. Union Pacific agreed to install a longer bridge to match the width of the improved channel. Both the channel improvements and the bridge replacement remove choke points in the stream that exacerbate flooding in the Schuyler Nebraska area. The improved channel provides a vegetated bench flood plain within the entrenched reach of Shell Creek that creates aquatic habitat and filters pollutants before they enter the Platte River downstream.

The extended work adds an additional cost of \$200,000 to the original project for clearing and grubbing, excavation, grading and seeding, and spoiling of soil. Extending the work within the current project allows the contractor already on site to continue the channel redevelopment without incurring additional mobilization fees.

An additional amount of \$25,000 is added to support part-time employment, materials and supplies, outreach, and cost share to promote and support installation of watershed BMPs. The work amended into the project are consistent with the original plan of work, adding to the quantity of planned work rather than adding new tasks and activities.

## Tom Mountford

---

**From:** Tom Mountford  
**Sent:** Tuesday, February 23, 2021 2:49 PM  
**To:** 'Gehring, Allen - NRCS, Lincoln, NE'  
**Subject:** FW: Wahoo Econ update

**From:** Mike Sotak <msotak@fyraengineering.com>  
**Sent:** Tuesday, February 23, 2021 2:47 PM  
**To:** tmountford@lpnrd.org  
**Cc:** Janel Kaufman <jkaufman@fyraengineering.com>  
**Subject:** Wahoo Econ update

Tom:

As promised, here is an update on the economics work for Wahoo Creek. In short, we have good news to report.

We have, using our new tool developed, calculated updated agricultural benefits. They are similar to indexed values we used before using indices before the latest method that NRCS sent out that really raised benefits. Good shape there.

We re-calculated urban/structural damages for about the 70 structures in the model damaged by flood flows. Using market value (after investigating using recent sales info vs. assessed values used by the County, damages went up.

Finally, looking at road and bridge values, we assessed value based on the replacement value of bridges and applies that to a depth-damage curve developed by NRCS for similar bridge types. Doing this, we arrived at an overall B:C number significantly over the required 1.0. We likely will be asked to reduce the replacement costs of the bridges with current values of the bridges, which is information that is not available. The County only tracks replacement values.

Next steps are to meet w/ State NRCS and review our findings in detail and we will touch base w/ Allen right away to do that. If State staff agrees w/ our processes and results, we just need to update the Plan verbiage and re-submit it to NRCS. Hopefully that only takes a few short weeks.

As always, let me know if you have any questions.

### Michael K. Sotak, P.E., D.WRE

12702 Westport Parkway, Suite 300 | Omaha, NE 68138  
Phone: 402.502.7131 | Direct: 402.934.8328 | Cell: 402.850.6169  
[www.fyraengineering.com](http://www.fyraengineering.com)  
[msotak@fyraengineering.com](mailto:msotak@fyraengineering.com)





**FYRA Engineering, LLC**

12702 Westport Parkway, Suite 300  
 Omaha, NE 68138  
 Phone: 402.502.7131  
 Fax: 402.932.6940

**INVOICE FOR SERVICES**

**Lower Platte North NRD**  
**Tom Mountford**  
**511 Commercial Park Road**  
**Wahoo, NE 68066**

**DATE:** 22 February 2021  
**PROJECT NO.:** 022-17-02  
**PERIOD COVERED:** 23 Jan 2021 Through 19 Feb 2021  
**INVOICE NO.:** 022-055  
**FED ID:** 45-5611118

**Project Name:** Wahoo Creek Watershed Plan/EA  
**Contract Amount:** \$574,990.00  
**31 Oct 2019 Addendum Amount:** \$48,000.00  
**Contract Date:** 8 December 2017  
**3 Sep 2020 Addendum Amount:** \$95,469.00  
**Contract Date:** 3 September 2020

**022-17-02-6.01-Additional Services-Economics-Project Management**

Description	Employee	Billing Rate	Hours	Current Due
Principal	Sotak, Mike	\$ 225.00	3.00 \$	675.00
Engineer	Kaufman, Janel	\$ 160.00	5.00 \$	800.00
Admin	Stratton, Ann	\$ 80.00	0.75 \$	60.00
<b>022-17-02-6.01-Additional Services-Economics-Project Management</b>			<b>8.75 \$</b>	<b>1,535.00</b>

**022-17-02-6.02-Additional Services-Economics-Flood Damage**

**Reduction Economics**

Description	Employee	Billing Rate	Hours	Current Due
Principal	Sotak, Mike	\$ 225.00	3.00 \$	675.00
Engineer Intern	Kelley, Connor	\$ 120.00	43.50 \$	5,220.00
Engineer Intern	Roenigk, Ryan	\$ 110.00	76.00 \$	8,360.00
Engineer Intern	Suing, Eric	\$ 110.00	3.00 \$	330.00
<b>022-17-02-6.02-Additional Services-Economics-Flood Damage Reduction Economics</b>			<b>125.50 \$</b>	<b>14,585.00</b>

**022-17-02-6.03-Additional Services-Economics-Revised Plan Economics**

Description	Employee	Billing Rate	Hours	Current Due
Principal	Sotak, Mike	\$ 225.00	3.75 \$	843.75
Engineer	Gregalunas, Bob	\$ 205.00	0.75 \$	153.75
Engineer	Kaufman, Janel	\$ 160.00	3.00 \$	480.00
<b>022-17-02-6.03-Additional Services-Economics-Revised Plan Economics</b>			<b>7.50 \$</b>	<b>1,477.50</b>

**TOTAL DUE CURRENT INVOICE: \$ 17,597.50**

**CONTRACT AMOUNT:** \$ 718,459.00  
**PREVIOUS BILLING:** \$ 676,111.50  
**CURRENT INVOICE:** \$ 17,597.50  
**TOTAL INV'D. TO DATE:** \$ 693,709.00  
**CONTRACT REMAINING:** \$ 24,750.00

FYRA Engineering, LLC  
 12702 Westport Parkway, Suite 300  
 Omaha, NE 68138

Lower Platte North NRD  
 Tom Mountford  
 511 Commercial Park Road  
 Wahoo, NE 68066

DATE: 22 February 2021  
 PROJECT NO.: 022-17-02  
 PERIOD COVERED: 23 Jan 2021 Through 19 Feb 2021  
 INVOICE NO.: 022-055  
 FED ID: 45-5611118

Project Name: Wahoo Creek Watershed Plan/EA  
 Contract Amount: \$574,990.00  
 31 Oct 2019 Addendum Amount: \$48,000.00  
 Contract Date: 8 December 2017  
 3 Sep 2020 Addendum Amount: \$95,469.00  
 Contract Date: 3 September 2020

Summary for Invoice: 022-039  
 Project Name: Wahoo Creek Watershed Plan/EA

Tasks	Contracted Fee	Previously Billed	This Invoice	Total To Date
022-17-02-1.01 Coord Meetings w/LPNNRD	\$ 5,724	\$ 16,175.49	\$ -	\$ 16,175.49
022-17-02-1.02-Coord Meetings w/NRCS	\$ 8,904	\$ 11,366.25	\$ -	\$ 11,366.25
022-17-02-1.03-Project Meetings	\$ 49,372	\$ 23,605.04	\$ -	\$ 23,605.04
022-17-02-1.04-Monthly Invoicing/Schedule	\$ 7,875	\$ 13,510.50	\$ -	\$ 13,510.50
022-17-02-1.05-Project Scoping	\$ 7,170	\$ 7,068.75	\$ -	\$ 7,068.75
022-17-02-1.06-Plan Review	\$ 6,740	\$ 24,541.09	\$ -	\$ 24,541.09
022-17-02-2.01-Develop, Write & Summarize Plan	\$ 60,100	\$ 83,011.48	\$ -	\$ 83,011.48
022-17-02-2.02-Maintain Admin Record	\$ 3,560	\$ 859.25	\$ -	\$ 859.25
022-17-02-2.03-Develop and Describe Purpose & Need	\$ 2,320	\$ 1,820.00	\$ -	\$ 1,820.00
022-17-02-2.04-Formulate, Describe & Compare Alternatives	\$ 27,270	\$ 19,239.25	\$ -	\$ 19,239.25
022-17-02-2.05-Collect & Analyze Social/Demographic Data	\$ 1,435	\$ 1,562.50	\$ -	\$ 1,562.50
022-17-02-2.06-Historic & Cultural Resources	\$ 675	\$ 9,869.00	\$ -	\$ 9,869.00
022-17-02-2.07-Prime & Unique Farmland	\$ 675	\$ 2,404.75	\$ -	\$ 2,404.75
022-17-02-2.08-Identify Wetlands & Other Water Bodies	\$ 117,145	\$ 102,862.36	\$ -	\$ 102,862.36
022-17-02-2.09-Collect Soils Data	\$ 810	\$ -	\$ -	\$ -
022-17-02-2.10-Identify and Anlyze Soil Erosion	\$ 810	\$ 1,952.75	\$ -	\$ 1,952.75
022-17-02-2.11-Collect & Analyze Floodplain Data	\$ 3,900	\$ 6,521.00	\$ -	\$ 6,521.00
022-17-02-2.12-Collect & Analyze Data on Critical Areas	\$ 6,300	\$ 3,071.00	\$ -	\$ 3,071.00
022-17-02-2.13-Identify Land Use and Crop Inventory	\$ 810	\$ 1,125.00	\$ -	\$ 1,125.00
022-17-02-2.14-T&E Species & Migratory Birds	\$ 11,500	\$ 12,192.50	\$ -	\$ 12,192.50
022-17-02-2.15-Consumptive Use Data	\$ 1,840	\$ 1,366.50	\$ -	\$ 1,366.50
022-17-02-2.16-Effects on Public Health & Safety	\$ 4,440	\$ 1,936.00	\$ -	\$ 1,936.00
022-17-02-2.17-Effects to Homes/Bus/Ag	\$ 4,440	\$ 4,124.75	\$ -	\$ 4,124.75
022-17-02-2.18-Cummulative Impacts	\$ 11,080	\$ 2,821.25	\$ -	\$ 2,821.25
022-17-02-2.19-Federal, State & Local Permits	\$ 1,790	\$ 1,775.00	\$ -	\$ 1,775.00
022-17-02-2.20-Conflicts w/Other Plans	\$ 4,460	\$ 3,822.50	\$ -	\$ 3,822.50
022-17-02-2.21-Interagency & Public Involvement	\$ 2,940	\$ 5,197.02	\$ -	\$ 5,197.02
022-17-02-2.22-Risk & Uncertainty	\$ 4,880	\$ 4,292.00	\$ -	\$ 4,292.00
022-17-02-2.23-Preferred Alternatives Discussion	\$ 11,840	\$ 14,006.00	\$ -	\$ 14,006.00
022-17-02-2.24-Mitigation Features	\$ 6,760	\$ 4,486.00	\$ -	\$ 4,486.00
022-17-02-2.25-Hydrologic Investigation	\$ 26,460	\$ 33,403.25	\$ -	\$ 33,403.25
022-17-02-2.26-Economic Data & Discussion	\$ 14,640	\$ 51,211.00	\$ -	\$ 51,211.00
022-17-02-2.27-Installation & Financing	\$ 2,600	\$ 775.00	\$ -	\$ 775.00
022-17-02-2.28-Operations, Maintenance & Replacement	\$ 3,240	\$ 740.00	\$ -	\$ 740.00
022-17-02-2.29-Project Maps	\$ 24,850	\$ 28,438.25	\$ -	\$ 28,438.25
022-17-02-2.30-Utility Investigations	\$ 5,200	\$ 1,940.00	\$ -	\$ 1,940.00
022-17-02-2.31-Recreation Site 77 Planning	\$ 7,350	\$ -	\$ -	\$ -
022-17-02-3.01-Interagency Scoping Mtg	\$ 10,720	\$ 6,396.50	\$ -	\$ 6,396.50
022-17-02-3.02-Agency Coord	\$ 7,680	\$ 6,181.00	\$ -	\$ 6,181.00
022-17-02-4.01-Breach Analysis	\$ 26,343	\$ 36,054.50	\$ -	\$ 36,054.50
022-17-02-4.02-Hydraulics/Structure Sizing	\$ 19,244	\$ 30,321.25	\$ -	\$ 30,321.25
022-17-02-4.03-Develop Land Rights & Structure Costs	\$ 29,784	\$ 29,048.25	\$ -	\$ 29,048.25
022-17-02-4.04-Land Rights Assessment	\$ 4,534	\$ 1,496.25	\$ -	\$ 1,496.25
022-17-02-4.05-Site Survey	\$ 14,779	\$ 5,080.00	\$ -	\$ 5,080.00
022-17-02-5-Additional services for the Wahoo Creek Watershed Plan-EA	\$ 48,000	\$ 6,033.02	\$ -	\$ 6,033.02
022-17-02-6.01-Additional Services-Economics-Project Management	\$ 8,329	\$ 2,357.50	\$ 1,535.00	\$ 3,892.50
022-17-02-6.02-Additional Services-Economics-Flood Damage Reduction Economics	\$ 64,690	\$ 42,815.50	\$ 14,585.00	\$ 57,400.50
022-17-02-6.03-Additional Services-Economics-Revised Plan Economics	\$ 22,450	\$ 7,235.25	\$ 1,477.50	\$ 8,712.75
<b>Totals:</b>	<b>\$ 718,459</b>	<b>\$ 676,111.50</b>	<b>\$ 17,597.50</b>	<b>\$ 693,709.00</b>



**AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR  
PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of March 8, 2021 ("Effective Date") between Lower Platte North Natural Resources District (NRD) ("Owner") and JEO Consulting Group, Inc. ("Engineer").

Owner's project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

Wahoo Creek Watershed Quality Management Plan Update ("Project").

JEO Project Number: 170124.00

Owner and Engineer further agree as follows:

**ARTICLE 1 - SERVICES OF ENGINEER**

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**1.01 Scope**

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

**ARTICLE 2 - OWNER'S RESPONSIBILITIES**

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**2.01 Owner Responsibilities**

- A. Owner responsibilities are outlined in Section 3 of Exhibit B.

**ARTICLE 3 - COMPENSATION**

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**3.01 Compensation**

- A. Owner shall pay Engineer as set forth in Exhibit A and per the terms in Exhibit B.
- B. The fee for the Project is: \$31,630.00
- C. The Standard Hourly Rates Schedule shall be adjusted annually (as of approximately January 1st) to reflect equitable changes in the compensation payable to Engineer. The current hourly rate schedule can be provided upon request.

**ARTICLE 4 - EXHIBITS AND SPECIAL PROVISIONS**

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**4.01 Exhibits**

Exhibit A – Scope of Services  
Exhibit B – General Conditions

**4.02 Total Agreement**

A. This Agreement (consisting of pages 1 to 2 inclusive, together with the Exhibits identified as included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Owner: Lower Platte North NRD

Engineer: JEO Consulting Group, Inc.

\_\_\_\_\_

  
\_\_\_\_\_

By: \_\_\_\_\_

By: Lalit K. Jha, PE, D. WRE, CFM

Title: \_\_\_\_\_

Title: Vice President, Water Resources

Date Signed: \_\_\_\_\_

Date Signed: February 17, 2021

Address for giving notices:

Address for giving notices:

\_\_\_\_\_

JEO Consulting Group, Inc.

\_\_\_\_\_

1937 N Chestnut St.

\_\_\_\_\_

Wahoo, NE 68066

\_\_\_\_\_

\_\_\_\_\_



**Exhibit A: Scope of Work**  
**LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**  
**Wahoo Creek Water Quality Management Plan Update**  
**JEO Project Number: 170124.00**

**PROJECT OVERVIEW**

Wahoo Creek Watershed has been the focus of multiple water quality improvement projects in recent years. In 2013, the Lower Platte North Natural Resources District (LPNNRD) completed the Wahoo Creek Watershed Water Quality Management Plan (WQMP) was completed with the use of Section 319 funds from U.S. Environmental Protection Agency (EPA) and the Nebraska Department of Environment and Energy (NDEE) (formerly Department of Environmental Quality). To remain eligible for Section 319 project funding, the WQMP is required to be updated every five years.

Currently, the planning process to update the WQMP is being led by NDEE staff. LPNNRD and NDEE staff have requested JEO Consulting Group (JEO) to provide support to this effort by providing water quality modeling services to evaluate previous implementation efforts, estimate existing pollutant loads, and identify additional load reductions needed to meet water quality goals. To serve in the best interest of this project, JEO has also enlisted the support of Wright Water Engineers (WWE). JEO and WWE have successfully completed multiple watershed planning projects in Nebraska in recent years.

This scope of services was developed based upon discussions with LPNNRD and NDEE staff and recent project experience. Should the project's needs or the assumptions detailed in this scope change, additional services may be negotiated between JEO and LPNNRD. The tasks to complete this project have been organized and broken down as follows.

**TASK SUMMARY**

- Task 1: Evaluate Water Quality Data
- Task 2: Quantify Pollutant Loads
- Task 3: Quantify Pollutant Reductions
- Task 4: Project Management

### **TASK 1: EVALUATE WATER QUALITY DATA**

The approach to Task 1 is to utilize paired water quality and flow data collected in the Wahoo Creek watershed to compare pre- versus post- Watershed Plan implementation pollutant loads in Wahoo Creek. The United States Geological Survey (USGS) Gage #06805000 Salt Creek Near Ashland, NE is regularly monitored for flow, and nutrient, sediment, and bacteriological concentrations. This data published by USGS at this gage will be used to estimate pre- versus post- Watershed Plan implementation loads in the watershed, providing the NDEE and LPNNRD with insight regarding water quality trends in the Wahoo Creek Watershed. This analysis can also be completed for additional monitoring stations as requested by the NDEE and LPNNRD.

#### **Responsibilities and Assumptions for this Task**

- JEO
  - Water quality parameters of interest are limited to flow, nitrogen, phosphorus, sediment, *E. coli* bacteria, and atrazine.
- Sponsors
  - Identify or provide any additional monitoring data (other than USGS data) at the beginning of this task
  - Review draft memorandum in a timely fashion

#### **Deliverables for this Task**

- Pre- versus post- Watershed Plan implementation load estimation memorandum for bacteria, nitrogen, phosphorus, sediment, and atrazine. It is anticipated that this memorandum will be provided to NDEE and LPNNRD for approval prior to finalizing.
- Final memorandum summarizing the results of the load analysis, as well as a discussion on any observable trends in the water quality data pre- versus post Watershed Plan implementation

### **TASK 2: QUANTIFY POLLUTANT LOADS**

The approach to Task 2 is to develop a simple spreadsheet-based water quality model. The model will be used to perform empirical calculations to quantify existing annual *E. coli*, nitrogen, phosphorus, atrazine, and sediment loads from various point and nonpoint sources within the Wahoo Creek watershed.

Loads from nonpoint sources will be assigned typical runoff concentrations for pollutants based on peer reviewed literature. An evaluation of land use data within the watershed will be performed.

Loads from point sources, such as animal feeding operations, onsite wastewater treatment plants, and grazing livestock will be estimated by assigning typical unit loading rates to each of the identified point sources in the watershed. Load contributions from permitted facilities (such as wastewater treatment plant effluent) will be quantified based on effluent data provided by the facility to the NDEE.

This analysis will not be calibrated to existing concentration data. It is assumed the loads generated by each land use and point source as part of this analysis produce the impaired instream concentrations of *E. coli* and atrazine, and annual nutrient and sediment loads calculated from Task 1.

#### **Responsibilities and Assumptions for this Task**

- No fate or transport modeling will be conducted.

EXHIBIT A: SCOPE OF WORK  
Wahoo Creek WQMP Update

- All pollutant loads will be associated with surface water runoff contributions to surface waters within the watershed. Pollutant loads associated with groundwater will not be estimated.
- Load estimates will be provided on a HUC 12 basis, by pollutant source

**Deliverables for this Task**

- Load estimation approach memorandum. It is anticipated that this memorandum will be provided to NDEE for approval prior to quantifying existing loads.
- Technical memorandum summarizing the results of the existing load analysis.

**TASK 3: QUANTIFY POLLUTANT REDUCTIONS**

The approach to Task 3 is to perform empirical calculations to quantify the reduction of annual loads for the parameters of concern from various point and nonpoint sources as a result of implementing BMPs within the Wahoo Creek watershed. Load reductions are estimated from both point and nonpoint sources by applying BMP treatment efficiencies to the loads estimated from Task 2. BMPs are then assigned treatment efficiencies identified in peer reviewed literature. BMPs will be applied to the model until the estimated load reduction meets or exceeds the same percent reduction needed to achieve the instream water quality standard for atrazine and *E. coli*, and target reductions for nutrients and sediment. Since the existing load analysis will not be calibrated, it is assumed that any reductions in load will result in the same relative reduction in the instream concentration.

Once the BMPs are applied within the model, the estimated the area of each BMP, or the number of specific BMP structures to be implemented will be summarized.

**Responsibilities and Assumptions for this Task**

- No fate or transport modeling will be conducted.
- JEO will work with LPNDRD and NDEE to identify the locations and types of BMPs in the watershed necessary to meet the reductions.

**Deliverables for this Task**

- GIS maps, figures, and shapefiles will be provided to LPNDRD and NDEE. These will be limited to those developed in support of the modeling and reporting efforts.
- A stand-alone report summarizing the approach, assumptions, and results of Tasks 2 and 3. This will include delivery of all pertinent excel files summarizing existing loads and estimated load reductions as a result of implementing BMPs.
- A BMP Load Reduction Calculator Tool. This simple excel sheet calculator will allow the LPNDRD and NDEE the ability to estimate pollutant load reductions as a result of implementing BMPs, without having to re-run the water quality model. This is useful for developing future project implementation plans (PIPs) and future project reporting.

**TASK 4: PROJECT MANAGEMENT**

JEO will provide a project manager (PM) who will be responsible for maintaining the project schedule, budget, and work quality. JEO will provide monthly progress reports and invoices to the LPNNRD. It is anticipated that the phone calls, progress reports, and email communications will be sufficient to facilitate most work efforts. No facilitated meetings are anticipated as a part of this project.

**Responsibilities and Assumptions for this Task**

- JEO
  - Provide project management services through July 2021
  - Ensure that LPNNRD and NDEE standards and requirements are met
  - Track and manage costs and the schedule
  - Identify to LPNNRD and NDEE any out-of-scope requests or direction that JEO receives. JEO will not proceed on out-of-scope requests or direction unless it is agreed upon by both JEO and the LPNNRD
- Sponsors
  - Review invoices, status reports, and necessary documentation and upon approval make payment to JEO
  - Furnish relevant programmatic and technical requirements to JEO
  - Ensure reviewing agencies perform reviews in agreed upon times

**Deliverables for this Task**

- Monthly invoices and progress reports

**PROJECT FEE**

JEO will provide the services described herein for lump sum fee amount of \$31,630.00. Owner will be billed monthly for services. A Task Series breakdown of the project fee is provided below. Additional services can be provided based upon current hourly rates as requested by the owner. JEO will begin work immediately following the receipt of Notice to Proceed. JEO reserves the right to redistribute budget among tasks so long as the total fee amount does not change.

<b>Project Tasks</b>		<b>Fee</b>
Task 1	Evaluate Water Quality Data	\$4,540
Task 2	Quantify Pollutant Loads	\$13,240
Task 3	Quantify Pollutant Reductions	\$11,420
Task 4	Project Management	\$2,430
<b>Total</b>		<b>\$31,630</b>

**ANTICIPATED SCHEDULE:**

The following schedule is anticipated.

- Notice to Proceed:** -----March 2021
- Task 1:** Evaluate Water Quality Data ----- March thru April 2021
- Task 2:** Quantify Pollutant Loads: ----- April thru May 2021
- Task 3:** Quantify Pollutant Reductions----- May thru June 2021
- Task 4:** Project Management ----- March thru July 2021

*Note: Project schedule is dependent upon availability of funding, timing of notice to proceed, timely reviews by agencies and stakeholders, as well as timely project direction from the project sponsors.*

**SERVICES NOT INCLUDED**

- GIS mapping or data collection not outlined in scope of services
- Watershed plan development or review
- Regulatory permits
- Website hosting, maintenance, or other social media posts
- Quality Assurance Project Plan (QAPP)
- Water quality sampling, stream gaging, analysis, or data acquisition
- Other data collection not outlined in the scope of services
- Design or construction engineering services
- Topographic survey; or property, deed, or title searches

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

**1. SCOPE OF SERVICES:** JEO Consulting Group, Inc. (JEO) shall perform the services described in Exhibit A. JEO shall invoice the owner for these services at the fee stated in Exhibit A.

**2. ADDITIONAL SERVICES:** JEO can perform work beyond the scope of services, as additional services, for a negotiated fee or at fee schedule rates.

**3. OWNER RESPONSIBILITIES:** The owner shall provide all criteria and full information as to the owner's requirements for the project; designate and identify in writing a person to act with authority on the owner's behalf in respect to all aspects of the project; examine and respond promptly to JEO's submissions; and give prompt written notice to JEO whenever the owner observes or otherwise becomes aware of any defect in work.

Unless otherwise agreed, the owner shall furnish JEO with right-of-access to the site in order to conduct the scope of services. Unless otherwise agreed, the owner shall also secure all necessary permits, approvals, licenses, consents, and property descriptions necessary to the performance of the services hereunder. While JEO shall take reasonable precautions to minimize damage to the property, it is understood by the owner that in the normal course of work some damage may occur, the restoration of which is not a part of this agreement.

**4. TIMES FOR RENDERING SERVICES:** JEO's services and compensation under this agreement have been agreed to in anticipation of the orderly and continuous progress of the project through completion. Unless specific periods of time or specific dates for providing services are specified in the scope of services, JEO's obligation to render services hereunder shall be for a period which may reasonably be required for the completion of said services.

If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or date are changed through no fault of JEO, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If the owner has requested changes in the scope, extent, or character of the project, the time of performance of JEO's services shall be adjusted equitably.

**5. INVOICES:** JEO shall submit invoices to the owner monthly for services provided to date and a final bill upon completion of services. Invoices are due and payable within 30 days of receipt. Invoices are considered past due after 30 days. Owner agrees to pay a finance charge on past due invoices at the rate of 1.0% per month, or the maximum rate of interest permitted by law.

If the owner fails to make any payment due to JEO for services and expenses within 30 days after receipt of JEO's statement, JEO may, after giving 7 days' written notice to the owner, suspend services to the owner under this agreement until JEO has been paid in full all amounts due for services, expenses, and charges.

**6. STANDARD OF CARE:** The standard of care for all services performed or furnished by JEO under the agreement shall be the care and skill ordinarily used by members of JEO's profession practicing under similar circumstances at the same time and in the

same locality. JEO makes no warranties, express or implied, under this agreement or otherwise, in connection with JEO's services.

JEO shall be responsible for the technical accuracy of its services and documents resulting therefrom, and the owner shall not be responsible for discovering deficiencies therein. JEO shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in owner furnished information.

**7. REUSE OF DOCUMENTS:** Reuse of any materials (including in part plans, specifications, drawings, reports, designs, computations, computer programs, data, estimates, surveys, other work items, etc.) by the owner on a future extension of this project, or any other project without JEO's written authorization shall be at the owner's risk and the owner agrees to indemnify and hold harmless JEO from all claims, damages, and expenses including attorney's fees arising out of such unauthorized use.

**8. ELECTRONIC FILES:** Copies of Documents that may be relied upon by the owner are limited to the printed copies (also known as hard copies) that are signed or sealed by JEO. Files in electronic media format of text, data, graphics, or of other types that are furnished by JEO to the owner are only for convenience of the owner. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk.

a. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30 day acceptance period shall be corrected by the party delivering the electronic files. JEO shall not be responsible to maintain documents stored in electronic media format after acceptance by the owner.

b. When transferring documents in electronic media format, JEO makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by JEO at the beginning of the project.

c. The owner may make and retain copies of documents for information and reference in connection with use on the project by the owner.

d. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

e. Any verification or adaptation of the documents by JEO for extensions of the project or for any other project shall entitle JEO to further compensation at rates to be agreed upon by the owner and JEO.

**9. SUBCONSULTANTS:** JEO may employ consultants as JEO deems necessary to assist in the performance of the services. JEO shall not be required to employ any consultant unacceptable to JEO.

**10. INDEMNIFICATION:** To the fullest extent permitted by law, JEO and the owner shall indemnify and hold each other harmless and their respective officers, directors, partners, employees, and consultants from and against any and all claims, losses, damages, and expenses (including but not limited to all fees and charges of

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) to the extent such claims, losses, damages, or expenses are caused by the indemnifying parties' negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of JEO and the owner, they shall be borne by each party in proportion to its negligence.

**11. INSURANCE:** JEO shall procure and maintain the following insurance during the performance of services under this agreement:

- a. Workers' Compensation: Statutory
- b. Employer's Liability
  - i. Each Accident: \$500,000
  - ii. Disease, Policy Limit: \$500,000
  - iii. Disease, Each Employee: \$500,000
- c. General Liability
  - i. Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
  - ii. General Aggregate: \$2,000,000
- d. Auto Liability
  - i. Combined Single: \$1,000,000
- e. Excess or Umbrella Liability
  - i. Each Occurrence: \$1,000,000
  - ii. General Aggregate: \$1,000,000
- f. Professional Liability:
  - i. Each Occurrence: \$1,000,000
  - ii. General Aggregate: \$2,000,000
- g. All policies of property insurance shall contain provisions to the effect that JEO and JEO's consultants' interests are covered and that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any of the insureds or additional insureds thereunder.
- h. The owner shall require the contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause JEO and JEO's consultants to be listed as additional insured with respect to such liability and other insurance purchased and maintained by the contractor for the project.
- i. The owner shall reimburse JEO for any additional limits or coverages that the owner requires for the project.

**12. TERMINATION:** This agreement may be terminated by either party upon 7 days prior written notice. In the event of termination, JEO shall be compensated by owner for all services performed up to and including the termination date. The effective date of termination may be set up to thirty (30) days later than otherwise provided to allow JEO to demobilize personnel and equipment from the site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble project materials in orderly files.

**13. GOVERNING LAW:** This agreement is to be governed by the law of the state in which the project is located.

**14. SUCCESSORS, ASSIGNS, AND BENEFICIARIES:** The owner and JEO each is hereby bound and the partners, successors, executors, administrators and legal representatives of the owner and JEO are hereby bound to the other party to this agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, with respect to all covenants, agreements and obligations of this agreement.

a. Neither the owner nor JEO may assign, sublet, or transfer any rights under or interest (including, but without limitation, monies that are due or may become due) in this agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under this agreement.

b. Unless expressly provided otherwise in this agreement: Nothing in this agreement shall be construed to create, impose, or give rise to any duty owed by the owner or JEO to any contractor, contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

c. All duties and responsibilities undertaken pursuant to this agreement shall be for the sole and exclusive benefit of the owner and JEO and not for the benefit of any other party.

**15. PRECEDENCE:** These standards, terms, and conditions shall take precedence over any inconsistent or contradictory language contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding JEO's services.

**16. SEVERABILITY:** Any provision or part of the agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the owner and JEO, who agree that the agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

**17. NON-DISCRIMINATION CLAUSE:** Pursuant to Neb. Rev. Stat. § 73-102, the parties declare, promise, and warrant that they have and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A § 1985, et seq.) and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. § 48-1101, et seq., in that there shall be no discrimination against any employee who is employed in the performance of this agreement, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

**18. E-VERIFY:** JEO shall register with and use the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the state where the work shall be performed. Engineer shall require the same of each consultant.

**Joint Water Management Advisory Board**  
**February 23, 2021 - 9:00 A.M.**  
**Fremont Municipal Building, 2<sup>nd</sup> Floor Meeting Room,**  
**400 East Military, Fremont Nebraska**

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## **Videoconference Meeting Participation Notice**

In the interest of public health and safety, this meeting will be conducted both in person and online through the Zoom link below. Citizens may also call into the meeting by dialing one of the numbers listed below.

Topic: Joint Water Management Advisory Board  
Time: Feb 23, 2021 9:00 AM Central Time (US and Canada)

Join Zoom Meeting  
<https://zoom.us/j/98510663373?pwd=Sjh0OG0zbFN4a0xzOXN4dVlpK3d1Zz09>

Meeting ID: 985 1066 3373  
Passcode: 905168  
One tap mobile  
+12532158782,,98510663373# US (Tacoma)  
+13462487799,,98510663373# US (Houston)

Dial by your location  
+1 253 215 8782 US (Tacoma)  
+1 346 248 7799 US (Houston)  
+1 669 900 9128 US (San Jose)  
+1 301 715 8592 US (Washington DC)  
+1 312 626 6799 US (Chicago)  
+1 646 558 8656 US (New York)

Meeting ID: 985 1066 3373  
Find your local number: <https://zoom.us/u/abPGEMZYnJ>

### **Zoom Tutorial:**

[https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials?\\_ga=2.150510262.1497980210.1584968460-1067452037.1584536802](https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials?_ga=2.150510262.1497980210.1584968460-1067452037.1584536802)

### **Agenda:**

1. Meeting called to order – Bob Missel
2. Roll call.
3. Approval of the minutes from the August 4, 2020 meeting.
4. Grant Updates

- a. Review of the Dodge County Flood Mitigation, Disaster 4420 Flood Mitigation Projects – Tom Smith, Tom Mountford, & Lottie Mitchell (document attached)
  - b. Other grants
5. 2021 flood status
6. Platte River ice jam removal agreement – John Miyoshi
7. Member updates
8. Public comments
9. Adjournment.

A meeting notice was printed in the Fremont Tribune and the agenda was posted at the Municipal Building on February 16, 2021, and was distributed to the governing partners of the advisory board. The official current copy of the agenda is available at Municipal Building, 400 East Military, office of the City Clerk. A copy of the Open Meeting Law is posted in the 2<sup>nd</sup> floor meeting room for review by the public.

DRAFT

## **Joint Water Management Advisory Board**

**Meeting Minutes, August 4, 2020 - 9:00 A.M.**

**Fremont Municipal Building, City Council Chambers,  
400 East Military, Fremont Nebraska**

10. **Meeting called to order.** A meeting of the Joint Water Management Advisory Board (JWMAB) was called to order by Bob Missel. It was noted that a copy of the Open Meetings Act is posted continually for public inspection near the entrance door and a notice of the meeting was printed in the Fremont Tribune.
11. **Roll call.** Authorized representatives and guests attending in person and by Zoom were asked to identify themselves and are shown on the attached attendance sheet. A quorum was established by only those attending in person.
12. **Approval of the May 19, 2020 meeting minutes.** A motion was made by Ruzicka and seconded by Nielsen to approve the meeting minutes as submitted. Ayes: City of Fremont: Jacobus and Jensen; Ames Dike: Hansen; SID #5: Wagner and Vlach; SID #7: Vlach; Lower Platte North Natural Resource District (LPNNRD): Ruzicka, Saeger, and Pollard; Dodge County: Missel; Inglewood: Nielsen; and North Bend Drainage: Ruzicka and Taylor. Nays: none. Motion carried 8-0.
13. **Grant Updates.**
  - a. **Elkhorn Township Drainage Study.** Smith reported that Dodge County received notice from Nebraska Emergency Management Agency (NEMA) that they will be forwarding the Advance Assistance Grant application to the Federal Emergency Management Agency (FEMA) for comments and approval. Smith has been working with Haggerty (State consultant) on a final review of the application.
  - b. **Platte River Cameras and Sensors.** Mountford and Smith reported that all of the interlocal agreements are in place and the equipment will be installed in several phases. The first phase consists of 5 cameras. Once the Local Hazard Mitigation Plan has been approved, the grant application can be submitted for approval.
  - c. **Platte River Breach (Rod & Gun Club).** Miyoshi, Mountford, and Smith reported that the Community Development Block Grant (CDBG) funds have been approved and all of the interlocal agreements for the local match are in place. SID#3, Ventura will begin dredging this month and will continue through December. They also received the Army Corps of Engineers permit for the project.
  - d. **North Bend Drainage District.** Ruzicka said the District submitted a Notice of Interest for Hazard Mitigation Grant Program (HMGP) funds of \$1.7 million to make improvements to the North Bend Drainage ditch to mitigate future flooding events. The local match of the grant would be 25% or \$425,000. Tom Smith reported he is working on the grant application. The application must be sent to NEMA by August 28 for a final submission to FEMA on September 17. Requests for Proposals were solicited from engineering firms and proposals from two firms were reviewed by a committee of the Board. The committee recommended the proposal from FYRA be accepted. Newton passed out a draft Letter of Commitment that Dodge County, Lower Platte North NRD, City of North Bend, North Bend Drainage District, and City

of Fremont will be required to have approved by their respective governing bodies for the final grant submission. Newton also discussed a draft interlocal agreement that proposes to split the local match as follows: Dodge County, Lower Platte North NRD, City of North Bend, and City of Fremont - \$100,000 each; and North Bend Drainage District - \$25,000. Newton pointed out the Letter of Commitment and Interlocal Agreement are required by the grant application. He noted that CDBG funds will be pursued to cover the 25% local match, but if the CDBG funds are not secured, the participants listed above will be required to fund the local match.

A motion was made by Jensen and seconded by Frank to accept the recommendation of the committee to award the engineering of the North Bend Drainage ditch improvements to FYRA, and recommend the local match be split as follows: Dodge County, Lower Platte North NRD, City of North Bend, and City of Fremont - \$100,000 each; and North Bend Drainage District - \$25,000. The motion carried 8-0 by roll call vote.

**e. Joint Water Management Advisory Board Resiliency Plan.**

**i. Hazard Mitigation Grant Program.** Lottie Mitchell reported that the grant was not prioritized for HMGP funds.

**ii. EDA FY2019 Disaster Supplemental Funding.** Mitchell reported that the U.S. Economic Development Administration (EDA) indicated that all of their 2019 grant funds have been obligated.

**iii. Water Sustainability Fund.** Lalit Jha, JEO reported that an application was submitted on July 15 for a watershed & flood prevention operations (WFPO) grant from the National Resources Conservation Service (NRCS). He said we might hear something about the application in mid-September.

**f. Ames Dike.** Grant Hanson reported the project funded by CDBG funds was nearing completion, but several minor items remain. He praised the assistance he received from Northeast Nebraska Economic Development District.

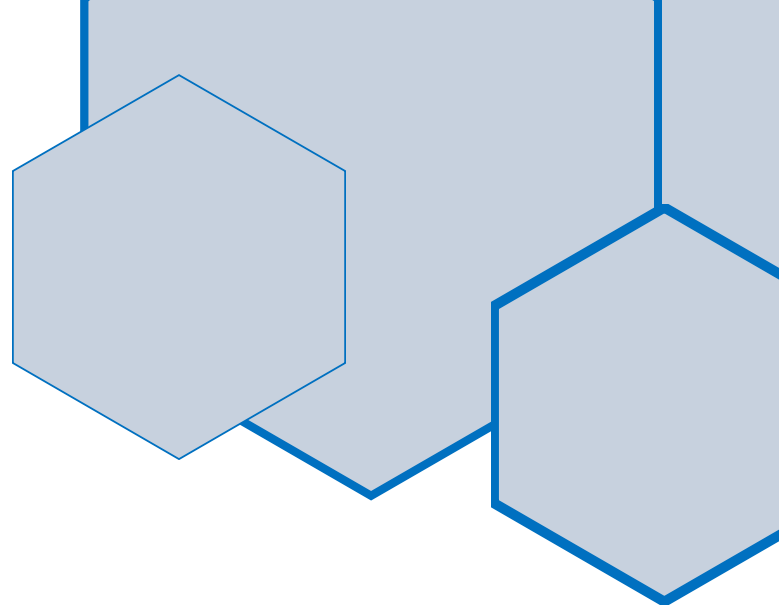
**g. Community Development Block Grant, Disaster Recovery Funds.** Susan Nickerson, Jenny Mason, and Steve Charleston with the Nebraska Department of Economic Development (NDED) explained NDED's role with CDBG funds and a possible opportunity to apply for planning grant.

14. **Other grants.** Smith reported that Dodge County is working with 9 applicants that are interested in potentially using grants funds to help elevate their home out of the floodplain. Jha reported that FEMA just released information about Building Resilient Infrastructure and Communities (BRIC) grant funds for flood mitigation and planning. He will email the information out to everyone.

15. **Member Updates.** Vlach reported that FEMA denied SID #5's (Timberwood) request for permanent repairs, despite the fact that emergency repairs had already been approved.

16. **Public Comments.** none

17. **Adjournment.** A motion was made by Vlach and seconded by Nielsen to adjourn the meeting at 10:05 am. By roll call vote, the motion was approved 8-0.



# Dodge County Flood Mitigation

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## Disaster 4420 Flood Mitigation Projects

This document summarizes flood mitigation projects identified following the 2019 Floods. The document proposes a project strategy to implement flood mitigation within Dodge County.



# Dodge County Flood Mitigation

## Disaster 4420 Flood Mitigation Projects

### Mitigation

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. Mitigation is taking action now—before the next disaster—to reduce human and financial consequences later.

Mitigation is any action “determined to be cost-effective which substantially reduces the risk of future damage, hardship, loss, or suffering in any area affected by a major disaster” (Stafford Act, P.L. 93-288, as amended, Sec 404)

Hazard mitigation planning is a process in which natural and human-caused hazards are evaluated; at-risk facilities and vulnerable people are assessed for threats and potential vulnerabilities; and strategies and mitigation measures are identified. Hazard mitigation planning increases the ability to effectively function in the face of natural and human-caused disasters. The goal of the process is to reduce risk and vulnerability of hazard events to people, property, and infrastructure.

According to a FEMA 2017 Interim Report, every \$1 dollar spent on mitigation saves \$6 dollars in response and recovery costs. In Nebraska, this ratio is calculated as \$1 dollar spent on mitigation to \$13 dollars saved in response and recovery costs.

### County Emergency Management Program

Mitigation is the foundation of an all hazards, risk-based emergency management program. It saves lives, reduces property damage, and helps to preserve the economy in the disaster area. Through the Dodge County Emergency Management Agency, the county government develops and maintains an ongoing program of mitigation, preparedness, response, and recovery. County Emergency Management supports local jurisdiction’s mitigation efforts.

## Joint Water Management Advisory Board

In an effort to identify solutions to the 2019 Flood devastation and to reduce future impacts of flooding, twelve political subdivisions have come together and formed the Joint Water Management Advisory Board (JWMAB). The Board includes representatives from improvement districts, levee districts, drainage districts, municipalities, townships, county, and a natural resource district. All of these political subdivisions have infrastructure within the floodplain. Members of the Board make recommendations on water management solutions to the governing body of each partner. The Dodge County Board Chairman chairs the JWMAB.

Open to the public, these Board meetings have engaged community members, allowing them to voice concerns on flood issues.



## Projects

A variety of flood mitigation projects have been pursued beginning in July 2019. The list below summarizes the projects that have taken place since July 2019 involving County Emergency Management.

### 1. Nonstructural-Planning

#### 1.1. Rawhide Creek Watershed Plan and Environmental Assessment (Plan-EA) for flood prevention

This planning initiative will result in a Plan-EA that will identify and prioritize specific structural actions to accomplish the flood prevention purpose along the Platte River. It will assist the JWMAB in identifying the most cost-effective locations to site bridge/culvert/channel improvements, berms, dams, and detention structures.

- Estimated Project Costs- \$745,000.00
- Project Applicant-Dodge County
- Core Partners-JWMAB

#### 1.2. Hazard Mitigation Plans

Hazard Mitigation Plans identify risks, projects, and strategies aimed at enhancing community resilience and preparedness for specific hazards. Jurisdictions must participate and adopt a hazard mitigation plan to be eligible for Federal mitigation dollars. Both the Lower Plate North Natural Resource District (LPNNRD) and Lower Elkhorn Natural Resources District (LENRD) plans were developed in 2019-2020 and approved in 2020.

- Project Applicant-Natural Resource Districts

### 2. Structural-New Projects Structure

#### 2.1. Elkhorn Township/East Fremont

Develop a drainage project to be readily implemented in the Elkhorn Township area (East Fremont). A project study will be completed to assess Fremont's internal drainage needs and examine the out-letting drainage ditch system in the Elkhorn Township area east of Fremont. This project will assess the holistic situation and propose project alternatives to be pursued and a finalized design to submit with a hazard mitigation application to State and Federal partners. Drainage strategies to be explored include establishing wells in the Fremont area to pump groundwater to help dewater high water table where development is located or planned, detention basins/ponds to be developed into wetlands, and widening, rerouting, or straightening existing drainage ditches or a combination of aforementioned strategies.

- Estimated Project Costs- \$800,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD



## 2.2. Platte Township/West Fremont

The project will identify and scope a flood mitigation solution to incorporate into the existing synergistic infrastructure network of ditches, culverts, levees, and dams that protect Dodge County from flash flooding and river/stream flooding. This Project's overall goal will be to develop a flood mitigation project to be readily implemented in the Platte Township area (West Fremont).

- Estimated Project Costs- \$250,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD

## 3. Structural-Existing

### 3.1. North Bend Cutoff Ditch

The goal of the project is to increase the 4.2-mile North Bend Cutoff Ditch's capacity to convey flood waters (250 yr event) into the Platte River. To accomplish the goal, the project will be conducted in a phased approach.

- Estimated Project Costs- \$1,633,357.47
- Project Applicant-North Bend Drainage District (NBDD)-Dodge County Support
- Core Partners-Dodge County, NBDD, City of Fremont, LPNNRD, City of North Bend  
\*Interlocal Signed -NBDD .5% other partners 6.1% of local cost share

### 3.2. Rod and Gun Club-Breach Lake

The project will repair the 2019 flood damaged levee at the Rod and Gun Club and obtain easement for the levee. As a private entity, the club was not eligible for federal dollars to make the repairs. This levee was further damaged during 2020 flooding. The City of Fremont will obtain the easement for the levee, therefore making the levee eligible for future federal assistance and ensuring proper maintenance.

- Estimated Project Costs- \$485,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD, Rod and Gun Club \*Interlocal Signed -Club \$12,380.00 other partners \$50,000

### 3.3. North Bend Levee

The LPNNRD has 4420DR Public Assistance funds available through the 428 Alternate Project program. Project eligibility will be determined for repairs to the levee south of North Bend.

- Funding available- \$1,000,000.00
- Project Applicant-LPNNRD
- Core Partners-LPNNRD, City of North Bend



### **3.4. City of Fremont, Railroad, Farmland Levee**

The City of Fremont is seeking to include the levee in the USACE PL 84 program. This project requires repairing and maintaining the levee to meet the standards under the USACE program. FEMA obligated \$507,830.00 for permanent repairs to the breached areas of the levee.

- Funding available- City secured CDBG-EM for \$450,000 for tree removal and study extending the levee on the northern end.
- Project Applicant-City of Fremont
- Core Partners- City of Fremont, Nebraska Department of Economic Development, FEMA, NEMA, USACE

## **4. Structural-Individual Flood Proofing**

### **4.1. Dodge County Elevations**

This project includes nine voluntary parcel owners who want to elevate their first-floor living area to above the required BFE elevations plus freeboard. None of these homes were substantially damaged in the 2019 flooding and all have completed repairs to their structures since the 2019 Flood.

- Estimated Project Costs- \$388,060.00
- Project Applicant-Dodge County
- Core Partners-Dodge County and homeowners \*Homeowners responsible for local cost share

### **4.2. Fremont Elevations**

Similar to the Dodge County Project, this project includes two voluntary parcel owners within the City of Fremont's ETJ who want to elevate their first floor living area to above the required BFE elevations plus freeboard.

- Estimated Project Costs- \$204,650.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont and homeowners

### **4.3. Fremont USACE 205**

USACE Section 205 Flood Risk Management Program report recommends the elevation of 60 structures, dry floodproofing of 65 structures, and wet floodproofing of 2 structures.

- Estimated Project Costs- \$11,313,053.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE, and homeowners



#### 4.4. Winslow Acquisitions

This project includes fifty-three voluntary parcel owners who are wanting to sell their properties located within the floodplain.

- Estimated Project Costs- \$4,756,563.58
- Project Applicant-Village of Winslow
- Core Partners-Village of Winslow, State of Nebraska, LENRD,

### 5. Nonstructural-Warning Systems

#### 5.1. Project River Monitoring

The project will be implemented in 2 phases; Phase 1, install two river gauges and five up-river facing cameras. The Five cameras will work in conjunction with the stream gauges at five critical sites: Highway 15 Bridge, Highway 77 Bridge, Highway 64 Bridge, near Burlington Railroad Bridge, and Highway 79 Bridge. Phase 2, install an additional five cameras facing down-stream opposite the camera's installed in Phase 1. The additional cameras provide additional coverage of downstream. This is significant for situational awareness of the obstructions that often occur around the bridge structure itself.

- Estimated Project Costs- \$27,364.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD, Papio-Missouri Natural Resource District \*Interlocal Signed LPNNRD-14.5% other partners 3.5% of local cost share

#### 5.2. Fremont Public Warning Project

The project explores the necessity of increasing flood warning capabilities for residents of Fremont. The Nebraska Silver jackets is conducting an analysis to help the city prepare to submit grants to purchase outdoor warning sirens or public warning devices.

- Estimated Project Costs-UNK
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE-Silver jackets

### Federal Funding

Multiple sources of funding have been identified to support mitigation projects.

- [FEMA Mitigation 404 Program](#)- As the result of a Presidential Disaster Declaration, FEMA's Hazard Mitigation Grant Program (HMGP) funds plans and projects that reduce the effects of future natural disasters.
  - Cost Share 75% Federal, 25% local

## Mitigation Projects



- **FEMA Mitigation BRIC Program**- The Building Resilient Infrastructure and Communities (BRIC) program makes federal funds available for pre-disaster mitigation activities.
  - Cost Share 75% Federal, 25% local
- **FEMA Public Assistance 428 Program**- 4420 DR funding that pertains to repair, restoration, and replacement of disaster-damaged public facilities (permanent work) not otherwise directly funded by Public Assistance dollars.
  - Cost Share 75% Federal, 25% local
- **Community Development Block Grants (CDBG)-Emergency Threat (EM)**-Through the Department of Economic Development, local governments can apply for up to \$450,000 to respond to emergent threats to public health, safety or welfare in the wake of disasters such as flooding, fire, tornados or other natural or man-made events.
  - Matching funds are not required.
- **Community Development Block Grants (CDBG)-Disaster Recovery (DR)**-Through the Department of Economic Development, local governments can apply for funding of unmet needs. Unmet needs, as defined by HUD, are needs that are not covered by other funding sources and can be covered by CDBG-DR funds. This includes 25% costs share (25%) for Public Assistance and Mitigation projects. The State will receive a \$108.9 million grant, with \$87 million set aside for Dodge, Douglas, and Sarpy Counties.
  - Matching funds are not required.
- **Natural Resources Conservation Service (NRCS)-Emergency Watershed Protection (EWP) program**- designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, wind-storms, and other natural occurrences. EWP is an emergency recovery program.
  - Cost Share-Planning 100%, Construction 75% Federal, 25% local
- **USACE 205**-Under Section 205, the U.S. Army Corps of Engineers (USACE) is authorized to study and construct projects to reduce the risks of flooding, loss of life, and property damage in partnership with state and local governments. The Feasibility Cost Share Agreement (FCSA) was executed in March 2005 between the Lower Platte North Natural Resource District (LPNNRD) and the USACE Omaha District to analyze potential solutions to reduce flood risks within the City of Fremont and surrounding areas.
  - Cost Share 65% Federal, 35% local

## Project Status Report-Updated 02/09/2021

Core Strategy	Projects	Project Sponsor/Applicant	Federal Funding	Activities			
				Documented	Federal Approval	Implementation	Project Closed
1. Non-Structural Planning	1.1 Rawhide Creek Watershed Plan-EA	Dodge County	NRCS-EWP				12/2022
	1.2 LPNNRD Multi-jurisdictional Hazard Mitigation Plan	LPNNRD	FEMA Mitigation				
	1.2 LENRD Multi-jurisdictional Hazard Mitigation Plan	LENRD	FEMA Mitigation				
2. Structural-New Projects Structure	2.1 Elkhorn Township/East Fremont	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
	2.2 Platte Township/West Fremont	Dodge County	FEMA Mitigation-BRIC Program				9/1/2024
3. Structural-Existing	3.1 North Bend Cutoff Ditch	North Bend Drainage Ditch-Dodge County	FEMA Mitigation-4420 404 program		PHASE 1		9/1/2023
	3.2 Rod and Gun Club-Breach Lake	Dodge County	CDBG-EM				n.d.
	3.3 North Bend Levee	LPNNRD	FEMA 4420 428 Program Funds				9/1/2021
	3.4 City of Fremont, Railroad, Farmland Levee	City of Fremont	FEMA 4420 428 Program Funds and CDBG-EM				n.d.
4. Structural-Individual Flood Proofing	4.1 Dodge County Elevations	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
	4.2 Fremont Elevations-FEMA	City of Fremont	FEMA Mitigation-4420 404 program				9/1/2023
	4.3 Fremont Flood Proofing-USACE	City of Fremont	USACE-205				n.d.
	4.4 Winslow Acquisitions	Village of Winslow	FEMA Mitigation-4420 404 program				9/1/2023
5. Non-Structural-Warning Systems	5.1 Platte River Monitoring	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
	5.2 Fremont Sirens-Silver Jackets	City of Fremont	Not Determined				n.d.

The table below is the status report for mitigation projects as of December 29<sup>th</sup>, 2020. FEMA projects have a period of performance date by which to complete projects.



In progress  
Phased Project Approval  
Complete



## Key elements of mitigation projects-Project Sponsor Dodge County

The table below outlines assumptions and concerns for mitigation projects.

### 1.1 Rawhide Creek Watershed Plan-EA

<i>Assumptions</i>	This plan drives flood mitigation activities. This planning initiative will result in a Plan-EA that will identify and prioritize specific structural actions to accomplish the flood prevention purpose.
<i>Key Concern</i>	The primary alternatives will not include projects along the Platte or Elkhorn Rivers that fall under U.S. Army Corps of Engineers (USACE) federal jurisdiction.
	<b>Timing</b> -Ideal if project began prior to Elkhorn Township/East Fremont and Platte Township/West Fremont projects. The recommended Plan-EA will most likely include a combination of structural and non-structural actions. The JWMAB could leverage local funding with NRCS engineering and construction funding to expand the Plan-EA benefits for projects approved within NRCS scope.

### 2.1 Elkhorn Township/East Fremont

<i>Assumptions</i>	It is anticipated this will be the first project with federal approval.
<i>Key Concern</i>	<b>Project Construction</b> -Federal funding covers cost for studies, cost and environmental analysis, final designs, and complete project application. Does not fund actual construction of determined project. Project application will be submitted for another grant.

### 2.2 Platte Township/West Fremont

<i>Assumptions</i>	This project will be supported by local partners similar to the Elkhorn Township/East Fremont Project.
<i>Key Concern</i>	<b>New Program</b> -The BRIC program is a new program which may be prolonged due to State unfamiliarity. Like

## Mitigation Projects



the Elkhorn Township project, this project does not fund actual construction.

### *3.1 North Bend Cutoff Ditch*

#### *Assumptions*

It is anticipated this will be one of the first projects with federal approval.

#### *Key Concern*

**Period of Performance-**FEMA 4420DR Mitigation projects are to be completed by 9/2023. This is a phased project: phase 1 includes project scoping then technical review by FEMA, phase 2 is the actual construction. COVID-19 has impacted FEMA and State's ability to review projects. If not approved soon and phase 1 FEMA's technical review takes another three months, the project may not be closed by 9/2023

### *3.2 Rod and Gun Club-Breach Lake*

#### *Assumptions*

This project will be complete by summer 2021.

#### *Key Concern*

**Management-** A lot of items to be completed by multiple partners-City of Fremont securing easements, private partnership involvement, economic development grant submission, and reporting.

### *4.1 Dodge County Elevations*

#### *Assumptions*

City and County projects to run parallel. City and County work together to create pool of qualified contractors for homeowners.

#### *Key Concern*

**Social Tenor and Finances;** Homeowner fatigue and economic impact from disasters (flooding and COVID-19). As with multiple projects, the process for federal and state approval has exceeded normal timelines for project turnaround.

# Mitigation Projects



## 5.1 Platte River Monitoring

Assumptions

Phase 1 equipment will be in place by ice jam season (Feb 2021)

Key Concern

**Timing**-Partners are ready to implement. Mitigation projects cannot begin construction without federal approval of mitigation application. Otherwise we risk losing federal funding for the project.

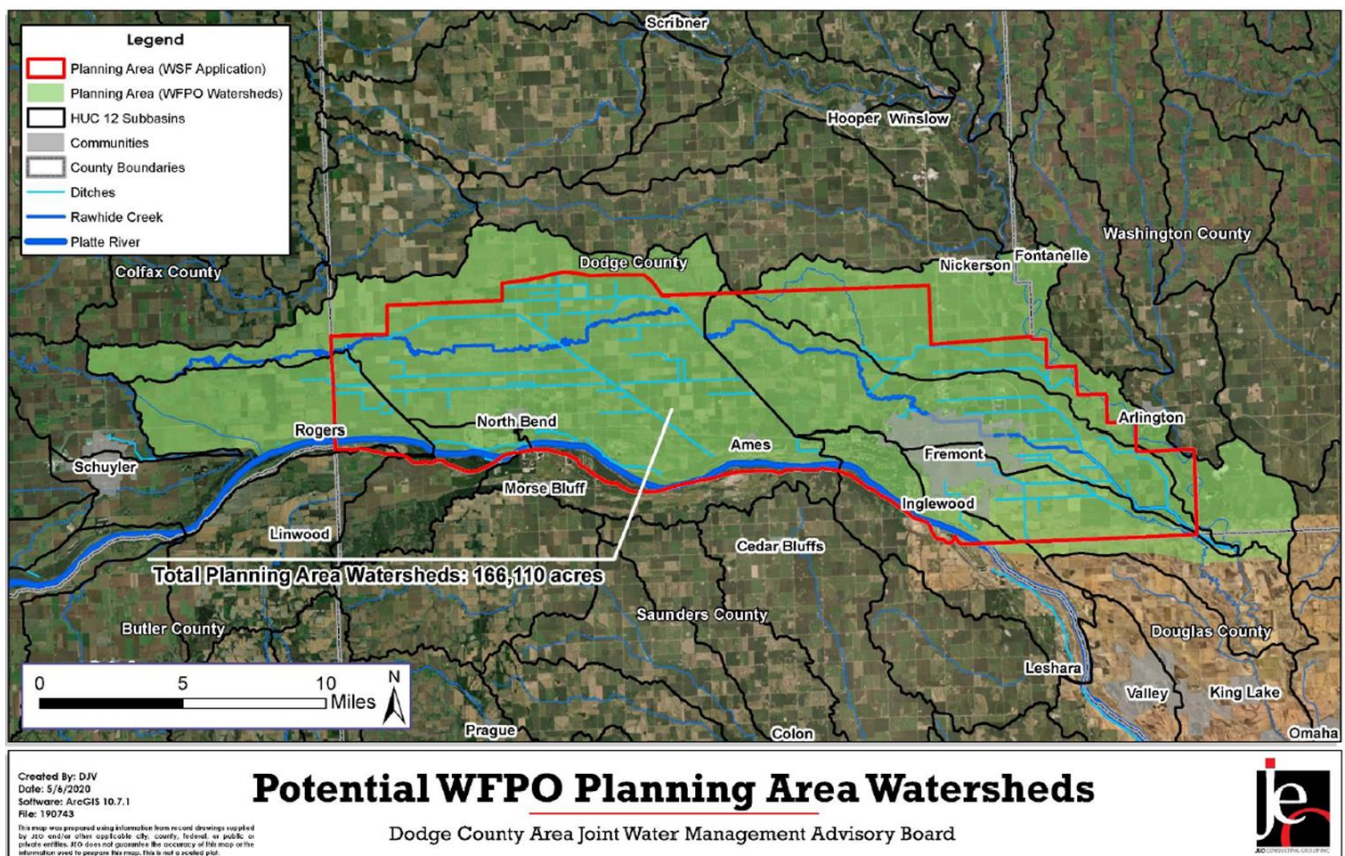


Figure 1: Rawhide Creek Watershed Plan and EA Planning Area

# Mitigation Projects



## Strategy

Following the 2019 flood, multiple jurisdictions/taxing authorities in Dodge County pursued mitigation project funding. Collaboration between members of the Joint Water Management Advisory Board focused mitigation efforts within the County. In 2021 it is anticipated many of the aforementioned mitigation projects outlined in this document will be approved to be funded. Each project supports the strategy to increase the flood resilience within Dodge County. The Rawhide Creek and Watershed Plan and EA will help identify alternative projects supporting the strategy of flood mitigation. The plan and EA will need to be considered while scoping the Elkhorn and Platte Township projects. This plan may identify NRCS eligible projects that may present a better cost share than offered by FEMA. Therefore, it would be strategically beneficial to allow the Rawhide Creek Watershed Plan and EA process to move forward in development prior to implementing Elkhorn Township Project and Platte Township Project or new project development. Additionally, Dodge County should pursue CDBG-DR funding to reimburse local cost share for projects.

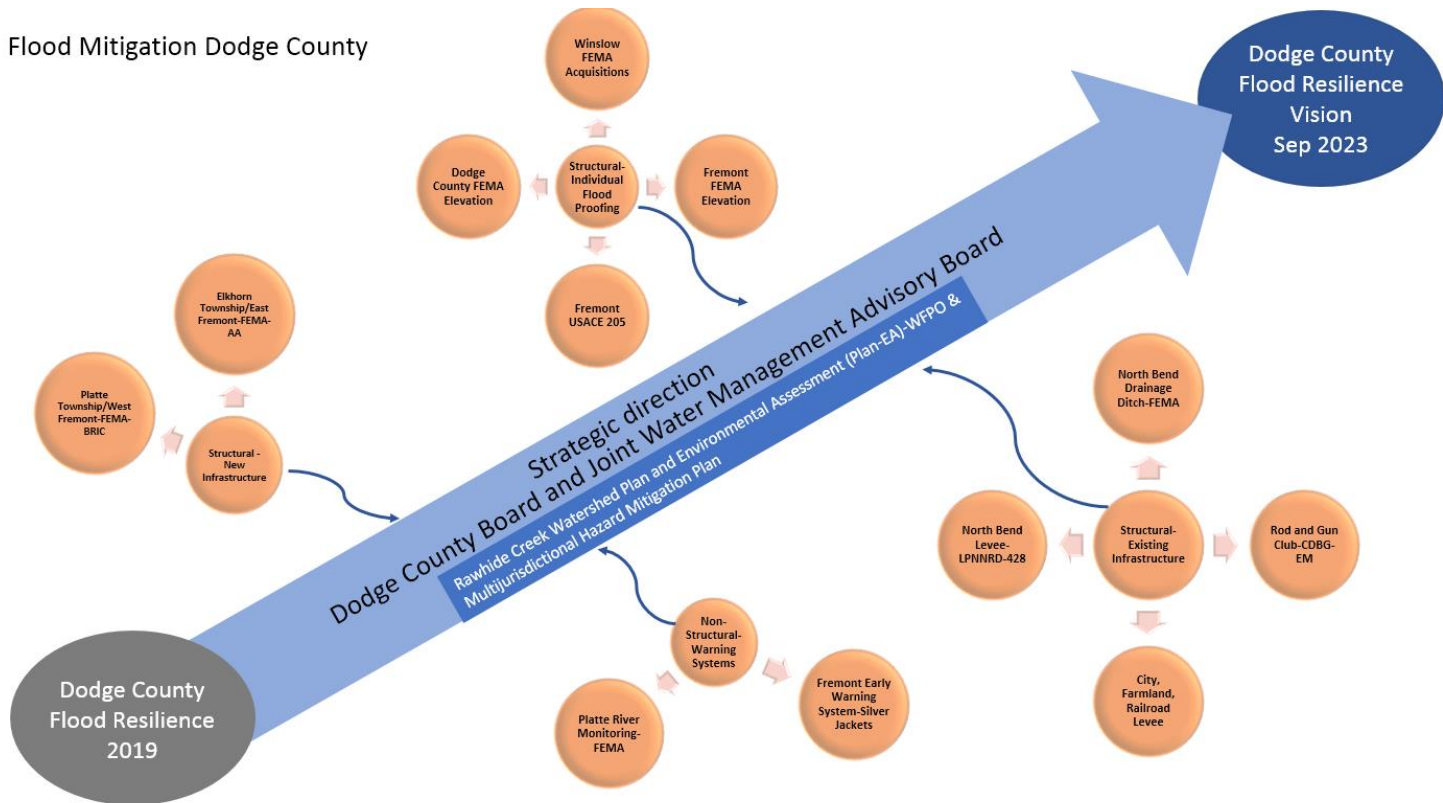
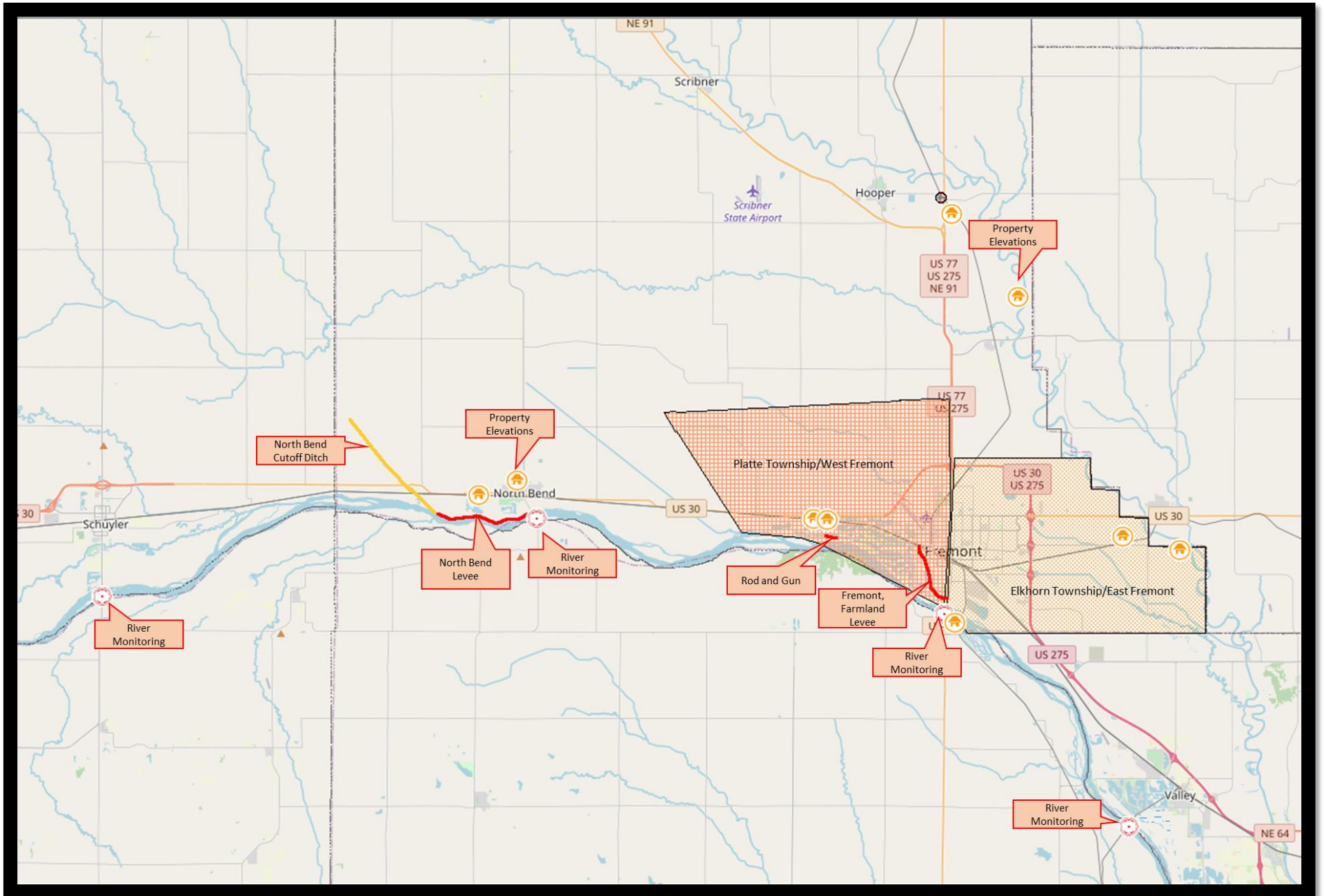


Figure 2: Flood Resilience Strategic Direction

# Mitigation Projects





# Dodge County Flood Mitigation

## Disaster 4420 Flood Mitigation Projects

### Mitigation

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. Mitigation is taking action now—before the next disaster—to reduce human and financial consequences later.

Mitigation is any action “determined to be cost-effective which substantially reduces the risk of future damage, hardship, loss, or suffering in any area affected by a major disaster” (Stafford Act, P.L. 93-288, as amended, Sec 404)

Hazard mitigation planning is a process in which natural and human-caused hazards are evaluated; at-risk facilities and vulnerable people are assessed for threats and potential vulnerabilities; and strategies and mitigation measures are identified. Hazard mitigation planning increases the ability to effectively function in the face of natural and human-caused disasters. The goal of the process is to reduce risk and vulnerability of hazard events to people, property, and infrastructure.

According to a FEMA 2017 Interim Report, every \$1 dollar spent on mitigation saves \$6 dollars in response and recovery costs. In Nebraska, this ratio is calculated as \$1 dollar spent on mitigation to \$13 dollars saved in response and recovery costs.

### County Emergency Management Program

Mitigation is the foundation of an all hazards, risk-based emergency management program. It saves lives, reduces property damage, and helps to preserve the economy in the disaster area. Through the Dodge County Emergency Management Agency, the county government develops and maintains an ongoing program of mitigation, preparedness, response, and recovery. County Emergency Management supports local jurisdiction’s mitigation efforts.

## Joint Water Management Advisory Board

In an effort to identify solutions to the 2019 Flood devastation and to reduce future impacts of flooding, twelve political subdivisions have come together and formed the Joint Water Management Advisory Board (JWMAB). The Board includes representatives from improvement districts, levee districts, drainage districts, municipalities, townships, county, and a natural resource district. All of these political subdivisions have infrastructure within the floodplain. Members of the Board make recommendations on water management solutions to the governing body of each partner. The Dodge County Board Chairman chairs the JWMAB.

Open to the public, these Board meetings have engaged community members, allowing them to voice concerns on flood issues.



## Projects

A variety of flood mitigation projects have been pursued beginning in July 2019. The list below summarizes the projects that have taken place since July 2019 involving County Emergency Management.

### 1. Nonstructural-Planning

#### 1.1. Rawhide Creek Watershed Plan and Environmental Assessment (Plan-EA) for flood prevention

This planning initiative will result in a Plan-EA that will identify and prioritize specific structural actions to accomplish the flood prevention purpose along the Platte River. It will assist the JWMAB in identifying the most cost-effective locations to site bridge/culvert/channel improvements, berms, dams, and detention structures.

- Estimated Project Costs- \$745,000.00
- Project Applicant-Dodge County
- Core Partners-JWMAB

#### 1.2. Hazard Mitigation Plans

Hazard Mitigation Plans identify risks, projects, and strategies aimed at enhancing community resilience and preparedness for specific hazards. Jurisdictions must participate and adopt a hazard mitigation plan to be eligible for Federal mitigation dollars. Both the Lower Plate North Natural Resource District (LPNNRD) and Lower Elkhorn Natural Resources District (LENRD) plans were developed in 2019-2020 and approved in 2020.

- Project Applicant-Natural Resource Districts

### 2. Structural-New Projects Structure

#### 2.1. Elkhorn Township/East Fremont

Develop a drainage project to be readily implemented in the Elkhorn Township area (East Fremont). A project study will be completed to assess Fremont's internal drainage needs and examine the out-letting drainage ditch system in the Elkhorn Township area east of Fremont. This project will assess the holistic situation and propose project alternatives to be pursued and a finalized design to submit with a hazard mitigation application to State and Federal partners. Drainage strategies to be explored include establishing wells in the Fremont area to pump groundwater to help dewater high water table where development is located or planned, detention basins/ponds to be developed into wetlands, and widening, rerouting, or straightening existing drainage ditches or a combination of aforementioned strategies.

- Estimated Project Costs- \$800,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD



## **2.2. Platte Township/West Fremont**

The project will identify and scope a flood mitigation solution to incorporate into the existing synergistic infrastructure network of ditches, culverts, levees, and dams that protect Dodge County from flash flooding and river/stream flooding. This Project's overall goal will be to develop a flood mitigation project to be readily implemented in the Platte Township area (West Fremont).

- Estimated Project Costs- \$250,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD

## **3. Structural-Existing**

### **3.1. North Bend Cutoff Ditch**

The goal of the project is to increase the 4.2-mile North Bend Cutoff Ditch's capacity to convey flood waters (250 yr event) into the Platte River. To accomplish the goal, the project will be conducted in a phased approach.

- Estimated Project Costs- \$1,633,357.47
- Project Applicant-North Bend Drainage District (NBDD)-Dodge County Support
- Core Partners-Dodge County, NBDD, City of Fremont, LPNNRD, City of North Bend  
\*Interlocal Signed -NBDD .5% other partners 6.1% of local cost share

### **3.2. Rod and Gun Club-Breach Lake**

The project will repair the 2019 flood damaged levee at the Rod and Gun Club and obtain easement for the levee. As a private entity, the club was not eligible for federal dollars to make the repairs. This levee was further damaged during 2020 flooding. The City of Fremont will obtain the easement for the levee, therefore making the levee eligible for future federal assistance and ensuring proper maintenance.

- Estimated Project Costs- \$485,000.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD, Rod and Gun Club \*Interlocal Signed -Club \$12,380.00 other partners \$50,000

### **3.3. North Bend Levee**

The LPNNRD has 4420DR Public Assistance funds available through the 428 Alternate Project program. Project eligibility will be determined for repairs to the levee south of North Bend.

- Funding available- \$1,000,000.00
- Project Applicant-LPNNRD
- Core Partners-LPNNRD, City of North Bend



### **3.4. City of Fremont, Railroad, Farmland Levee**

The City of Fremont is seeking to include the levee in the USACE PL 84 program. This project requires repairing and maintaining the levee to meet the standards under the USACE program. FEMA obligated \$507,830.00 for permanent repairs to the breached areas of the levee.

- Funding available- City secured CDBG-EM for \$450,000 for tree removal and study extending the levee on the northern end.
- Project Applicant-City of Fremont
- Core Partners- City of Fremont, Nebraska Department of Economic Development, FEMA, NEMA, USACE

## **4. Structural-Individual Flood Proofing**

### **4.1. Dodge County Elevations**

This project includes nine voluntary parcel owners who want to elevate their first-floor living area to above the required BFE elevations plus freeboard. None of these homes were substantially damaged in the 2019 flooding and all have completed repairs to their structures since the 2019 Flood.

- Estimated Project Costs- \$388,060.00
- Project Applicant-Dodge County
- Core Partners-Dodge County and homeowners \*Homeowners responsible for local cost share

### **4.2. Fremont Elevations**

Similar to the Dodge County Project, this project includes two voluntary parcel owners within the City of Fremont's ETJ who want to elevate their first floor living area to above the required BFE elevations plus freeboard.

- Estimated Project Costs- \$204,650.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont and homeowners

### **4.3. Fremont USACE 205**

USACE Section 205 Flood Risk Management Program report recommends the elevation of 60 structures, dry floodproofing of 65 structures, and wet floodproofing of 2 structures.

- Estimated Project Costs- \$11,313,053.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE, and homeowners



#### 4.4. Winslow Acquisitions

This project includes fifty-three voluntary parcel owners who are wanting to sell their properties located within the floodplain.

- Estimated Project Costs- \$4,756,563.58
- Project Applicant-Village of Winslow
- Core Partners-Village of Winslow, State of Nebraska, LENRD,

### 5. Nonstructural-Warning Systems

#### 5.1. Project River Monitoring

The project will be implemented in 2 phases; Phase 1, install two river gauges and five up-river facing cameras. The Five cameras will work in conjunction with the stream gauges at five critical sites: Highway 15 Bridge, Highway 77 Bridge, Highway 64 Bridge, near Burlington Railroad Bridge, and Highway 79 Bridge. Phase 2, install an additional five cameras facing down-stream opposite the camera's installed in Phase 1. The additional cameras provide additional coverage of downstream. This is significant for situational awareness of the obstructions that often occur around the bridge structure itself.

- Estimated Project Costs- \$27,364.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNDRD, Papio-Missouri Natural Resource District \*Interlocal Signed LPNDRD-14.5% other partners 3.5% of local cost share

#### 5.2. Fremont Public Warning Project

The project explores the necessity of increasing flood warning capabilities for residents of Fremont. The Nebraska Silver jackets is conducting an analysis to help the city prepare to submit grants to purchase outdoor warning sirens or public warning devices.

- Estimated Project Costs-UNK
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE-Silver jackets

### Federal Funding

Multiple sources of funding have been identified to support mitigation projects.

- [FEMA Mitigation 404 Program](#)- As the result of a Presidential Disaster Declaration, FEMA's Hazard Mitigation Grant Program (HMGP) funds plans and projects that reduce the effects of future natural disasters.
  - Cost Share 75% Federal, 25% local

## Mitigation Projects



- **FEMA Mitigation BRIC Program**- The Building Resilient Infrastructure and Communities (BRIC) program makes federal funds available for pre-disaster mitigation activities.
  - Cost Share 75% Federal, 25% local
- **FEMA Public Assistance 428 Program**- 4420 DR funding that pertains to repair, restoration, and replacement of disaster-damaged public facilities (permanent work) not otherwise directly funded by Public Assistance dollars.
  - Cost Share 75% Federal, 25% local
- **Community Development Block Grants (CDBG)-Emergency Threat (EM)**-Through the Department of Economic Development, local governments can apply for up to \$450,000 to respond to emergent threats to public health, safety or welfare in the wake of disasters such as flooding, fire, tornados or other natural or man-made events.
  - Matching funds are not required.
- **Community Development Block Grants (CDBG)-Disaster Recovery (DR)**-Through the Department of Economic Development, local governments can apply for funding of unmet needs. Unmet needs, as defined by HUD, are needs that are not covered by other funding sources and can be covered by CDBG-DR funds. This includes 25% costs share (25%) for Public Assistance and Mitigation projects. The State will receive a \$108.9 million grant, with \$87 million set aside for Dodge, Douglas, and Sarpy Counties.
  - Matching funds are not required.
- **Natural Resources Conservation Service (NRCS)-Emergency Watershed Protection (EWP) program**- designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, wind-storms, and other natural occurrences. EWP is an emergency recovery program.
  - Cost Share-Planning 100%, Construction 75% Federal, 25% local
- **USACE 205**-Under Section 205, the U.S. Army Corps of Engineers (USACE) is authorized to study and construct projects to reduce the risks of flooding, loss of life, and property damage in partnership with state and local governments. The Feasibility Cost Share Agreement (FCSA) was executed in March 2005 between the Lower Platte North Natural Resource District (LPNNRD) and the USACE Omaha District to analyze potential solutions to reduce flood risks within the City of Fremont and surrounding areas.
  - Cost Share 65% Federal, 35% local

## Project Status Report-Updated 02/09/2021

Core Strategy	Projects	Project Sponsor/Applicant	Federal Funding	Activities			
				Documented	Federal Approval	Implementation	Project Closed
1. Non-Structural Planning	1.1 Rawhide Creek Watershed Plan-EA	Dodge County	NRCS-EWP				12/2022
	1.2 LPNNRD Multi-jurisdictional Hazard Mitigation Plan	LPNNRD	FEMA Mitigation				
	1.2 LENRD Multi-jurisdictional Hazard Mitigation Plan	LENRD	FEMA Mitigation				
2. Structural-New Projects Structure	2.1 Elkhorn Township/East Fremont	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
	2.2 Platte Township/West Fremont	Dodge County	FEMA Mitigation-BRIC Program				9/1/2024
3. Structural-Existing	3.1 North Bend Cutoff Ditch	North Bend Drainage Ditch-Dodge County	FEMA Mitigation-4420 404 program		PHASE 1		9/1/2023
	3.2 Rod and Gun Club-Breach Lake	Dodge County	CDBG-EM				n.d.
	3.3 North Bend Levee	LPNNRD	FEMA 4420 428 Program Funds				9/1/2021
	3.4 City of Fremont, Railroad, Farmland Levee	City of Fremont	FEMA 4420 428 Program Funds and CDBG-EM				n.d.
4. Structural-Individual Flood Proofing	4.1 Dodge County Elevations	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
	4.2 Fremont Elevations-FEMA	City of Fremont	FEMA Mitigation-4420 404 program				9/1/2023
	4.3 Fremont Flood Proofing-USACE	City of Fremont	USACE-205				n.d.
	4.4 Winslow Acquisitions	Village of Winslow	FEMA Mitigation-4420 404 program				9/1/2023
5. Non-Structural-Warning Systems	5.1 Platte River Monitoring	Dodge County	FEMA Mitigation-4420 404 program				9/1/2023
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The table below is the status report for mitigation projects as of December 29<sup>th</sup>, 2020. FEMA projects have a period of performance date by which to complete projects.

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## Key elements of mitigation projects-Project Sponsor Dodge County

The table below outlines assumptions and concerns for mitigation projects.

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<i>Assumptions</i>	This plan drives flood mitigation activities. This planning initiative will result in a Plan-EA that will identify and prioritize specific structural actions to accomplish the flood prevention purpose.
<i>Key Concern</i>	The primary alternatives will not include projects along the Platte or Elkhorn Rivers that fall under U.S. Army Corps of Engineers (USACE) federal jurisdiction.
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<i>Assumptions</i>	It is anticipated this will be the first project with federal approval.
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<i>Assumptions</i>	This project will be supported by local partners similar to the Elkhorn Township/East Fremont Project.
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## Mitigation Projects



the Elkhorn Township project, this project does not fund actual construction.

### *3.1 North Bend Cutoff Ditch*

#### *Assumptions*

It is anticipated this will be one of the first projects with federal approval.

#### *Key Concern*

**Period of Performance-**FEMA 4420DR Mitigation projects are to be completed by 9/2023. This is a phased project: phase 1 includes project scoping then technical review by FEMA, phase 2 is the actual construction. COVID-19 has impacted FEMA and State's ability to review projects. If not approved soon and phase 1 FEMA's technical review takes another three months, the project may not be closed by 9/2023

### *3.2 Rod and Gun Club-Breach Lake*

#### *Assumptions*

This project will be complete by summer 2021.

#### *Key Concern*

**Management-** A lot of items to be completed by multiple partners-City of Fremont securing easements, private partnership involvement, economic development grant submission, and reporting.

### *4.1 Dodge County Elevations*

#### *Assumptions*

City and County projects to run parallel. City and County work together to create pool of qualified contractors for homeowners.

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# Mitigation Projects



## 5.1 Platte River Monitoring

Assumptions

Phase 1 equipment will be in place by ice jam season (Feb 2021)

Key Concern

**Timing**-Partners are ready to implement. Mitigation projects cannot begin construction without federal approval of mitigation application. Otherwise we risk losing federal funding for the project.

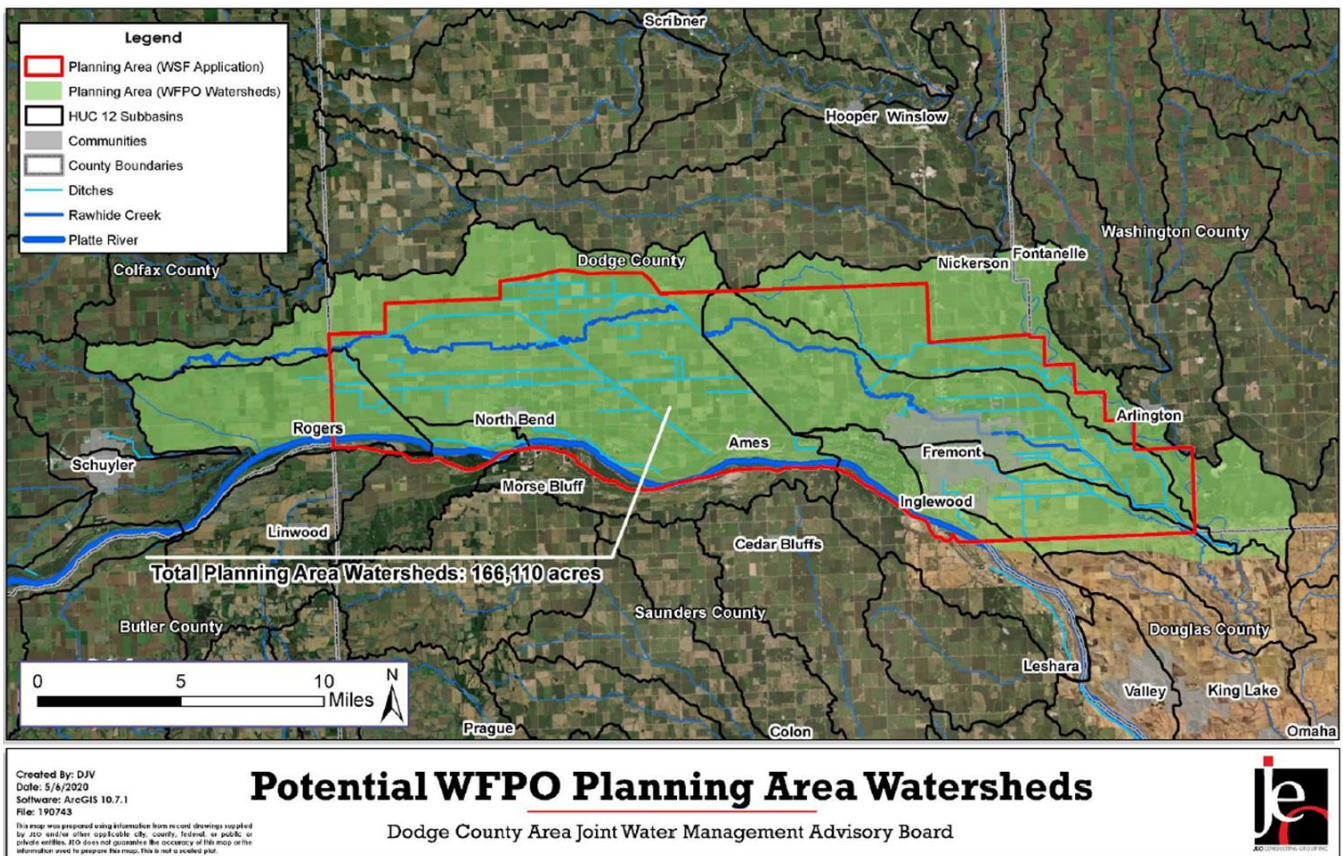


Figure 1: Rawhide Creek Watershed Plan and EA Planning Area

# Mitigation Projects



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Following the 2019 flood, multiple jurisdictions/taxing authorities in Dodge County pursued mitigation project funding. Collaboration between members of the Joint Water Management Advisory Board focused mitigation efforts within the County. In 2021 it is anticipated many of the aforementioned mitigation projects outlined in this document will be approved to be funded. Each project supports the strategy to increase the flood resilience within Dodge County. The Rawhide Creek and Watershed Plan and EA will help identify alternative projects supporting the strategy of flood mitigation. The plan and EA will need to be considered while scoping the Elkhorn and Platte Township projects. This plan may identify NRCS eligible projects that may present a better cost share than offered by FEMA. Therefore, it would be strategically beneficial to allow the Rawhide Creek Watershed Plan and EA process to move forward in development prior to implementing Elkhorn Township Project and Platte Township Project or new project development. Additionally, Dodge County should pursue CDBG-DR funding to reimburse local cost share for projects.

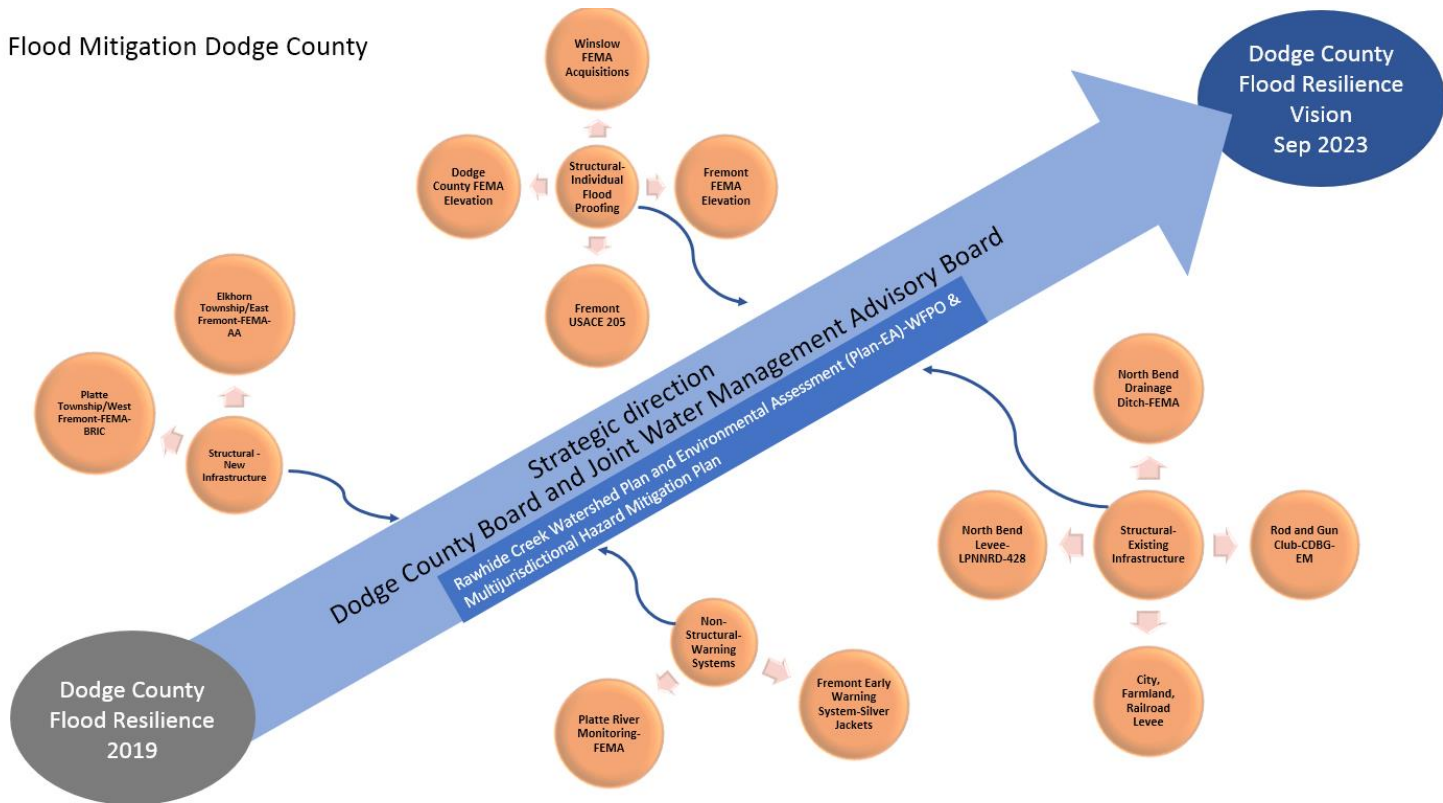
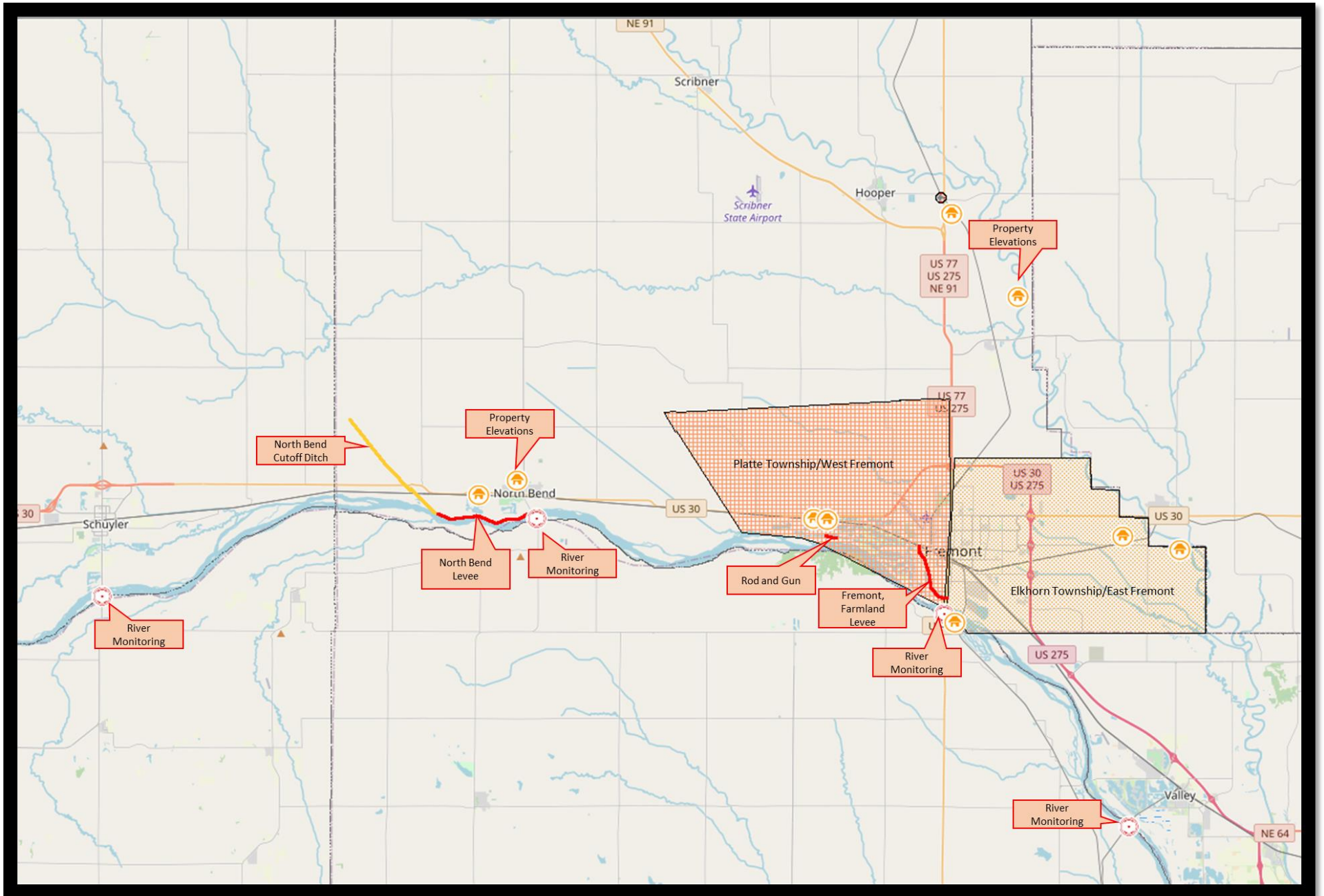
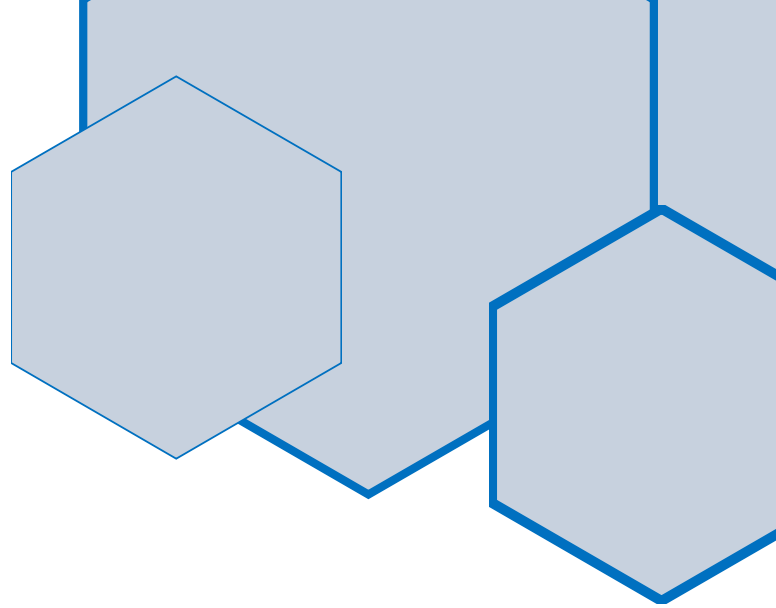


Figure 2: Flood Resilience Strategic Direction

# Mitigation Projects





# Dodge County Flood Mitigation

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## Disaster 4420 Flood Mitigation Projects

This document summarizes flood mitigation projects identified following the 2019 Floods. The document proposes a project strategy to implement flood mitigation within Dodge County.



# Dodge County Flood Mitigation

## Disaster 4420 Flood Mitigation Projects

### Mitigation

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- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNNRD, Rod and Gun Club \*Interlocal Signed -Club \$12,380.00 other partners \$50,000

### 3.3. North Bend Levee

The LPNNRD has 4420DR Public Assistance funds available through the 428 Alternate Project program. Project eligibility will be determined for repairs to the levee south of North Bend.

- Funding available- \$1,000,000.00
- Project Applicant-LPNNRD
- Core Partners-LPNNRD, City of North Bend



### **3.4. City of Fremont, Railroad, Farmland Levee**

The City of Fremont is seeking to include the levee in the USACE PL 84 program. This project requires repairing and maintaining the levee to meet the standards under the USACE program. FEMA obligated \$507,830.00 for permanent repairs to the breached areas of the levee.

- Funding available- City secured CDBG-EM for \$450,000 for tree removal and study extending the levee on the northern end.
- Project Applicant-City of Fremont
- Core Partners- City of Fremont, Nebraska Department of Economic Development, FEMA, NEMA, USACE

## **4. Structural-Individual Flood Proofing**

### **4.1. Dodge County Elevations**

This project includes nine voluntary parcel owners who want to elevate their first-floor living area to above the required BFE elevations plus freeboard. None of these homes were substantially damaged in the 2019 flooding and all have completed repairs to their structures since the 2019 Flood.

- Estimated Project Costs- \$388,060.00
- Project Applicant-Dodge County
- Core Partners-Dodge County and homeowners \*Homeowners responsible for local cost share

### **4.2. Fremont Elevations**

Similar to the Dodge County Project, this project includes two voluntary parcel owners within the City of Fremont's ETJ who want to elevate their first floor living area to above the required BFE elevations plus freeboard.

- Estimated Project Costs- \$204,650.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont and homeowners

### **4.3. Fremont USACE 205**

USACE Section 205 Flood Risk Management Program report recommends the elevation of 60 structures, dry floodproofing of 65 structures, and wet floodproofing of 2 structures.

- Estimated Project Costs- \$11,313,053.00
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE, and homeowners



#### 4.4. Winslow Acquisitions

This project includes fifty-three voluntary parcel owners who are wanting to sell their properties located within the floodplain.

- Estimated Project Costs- \$4,756,563.58
- Project Applicant-Village of Winslow
- Core Partners-Village of Winslow, State of Nebraska, LENRD,

### 5. Nonstructural-Warning Systems

#### 5.1. Project River Monitoring

The project will be implemented in 2 phases; Phase 1, install two river gauges and five up-river facing cameras. The Five cameras will work in conjunction with the stream gauges at five critical sites: Highway 15 Bridge, Highway 77 Bridge, Highway 64 Bridge, near Burlington Railroad Bridge, and Highway 79 Bridge. Phase 2, install an additional five cameras facing down-stream opposite the camera's installed in Phase 1. The additional cameras provide additional coverage of downstream. This is significant for situational awareness of the obstructions that often occur around the bridge structure itself.

- Estimated Project Costs- \$27,364.00
- Project Applicant-Dodge County
- Core Partners-Dodge County, City of Fremont, LPNDRD, Papio-Missouri Natural Resource District \*Interlocal Signed LPNDRD-14.5% other partners 3.5% of local cost share

#### 5.2. Fremont Public Warning Project

The project explores the necessity of increasing flood warning capabilities for residents of Fremont. The Nebraska Silver jackets is conducting an analysis to help the city prepare to submit grants to purchase outdoor warning sirens or public warning devices.

- Estimated Project Costs-UNK
- Project Applicant-City of Fremont
- Core Partners-City of Fremont, USACE-Silver jackets

### Federal Funding

Multiple sources of funding have been identified to support mitigation projects.

- [FEMA Mitigation 404 Program](#)- As the result of a Presidential Disaster Declaration, FEMA's Hazard Mitigation Grant Program (HMGP) funds plans and projects that reduce the effects of future natural disasters.
  - Cost Share 75% Federal, 25% local

## Mitigation Projects



- **FEMA Mitigation BRIC Program**- The Building Resilient Infrastructure and Communities (BRIC) program makes federal funds available for pre-disaster mitigation activities.
  - Cost Share 75% Federal, 25% local
- **FEMA Public Assistance 428 Program**- 4420 DR funding that pertains to repair, restoration, and replacement of disaster-damaged public facilities (permanent work) not otherwise directly funded by Public Assistance dollars.
  - Cost Share 75% Federal, 25% local
- **Community Development Block Grants (CDBG)-Emergency Threat (EM)**-Through the Department of Economic Development, local governments can apply for up to \$450,000 to respond to emergent threats to public health, safety or welfare in the wake of disasters such as flooding, fire, tornados or other natural or man-made events.
  - Matching funds are not required.
- **Community Development Block Grants (CDBG)-Disaster Recovery (DR)**-Through the Department of Economic Development, local governments can apply for funding of unmet needs. Unmet needs, as defined by HUD, are needs that are not covered by other funding sources and can be covered by CDBG-DR funds. This includes 25% costs share (25%) for Public Assistance and Mitigation projects. The State will receive a \$108.9 million grant, with \$87 million set aside for Dodge, Douglas, and Sarpy Counties.
  - Matching funds are not required.
- **Natural Resources Conservation Service (NRCS)-Emergency Watershed Protection (EWP) program**- designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, wind-storms, and other natural occurrences. EWP is an emergency recovery program.
  - Cost Share-Planning 100%, Construction 75% Federal, 25% local
- **USACE 205**-Under Section 205, the U.S. Army Corps of Engineers (USACE) is authorized to study and construct projects to reduce the risks of flooding, loss of life, and property damage in partnership with state and local governments. The Feasibility Cost Share Agreement (FCSA) was executed in March 2005 between the Lower Platte North Natural Resource District (LPNNRD) and the USACE Omaha District to analyze potential solutions to reduce flood risks within the City of Fremont and surrounding areas.
  - Cost Share 65% Federal, 35% local

## Project Status Report-Updated 02/09/2021

Core Strategy	Projects	Project Sponsor/Applicant	Federal Funding	Activities			
				Documented	Federal Approval	Implementation	Project Closed
1. Non-Structural Planning	1.1 Rawhide Creek Watershed Plan-EA	Dodge County	NRCS-EWP	Complete	Complete	In progress	12/2022
	1.2 LPNNRD Multi-jurisdictional Hazard Mitigation Plan	LPNNRD	FEMA Mitigation	Complete	Complete	Complete	
	1.2 LENRD Multi-jurisdictional Hazard Mitigation Plan	LENRD	FEMA Mitigation	Complete	Complete	Complete	
2. Structural-New Projects Structure	2.1 Elkhorn Township/East Fremont	Dodge County	FEMA Mitigation-4420 404 program	Complete	In progress		9/1/2023
	2.2 Platte Township/West Fremont	Dodge County	FEMA Mitigation-BRIC Program	Complete			9/1/2024
3. Structural-Existing	3.1 North Bend Cutoff Ditch	North Bend Drainage Ditch-Dodge County	FEMA Mitigation-4420 404 program	Complete	PHASE 1		9/1/2023
	3.2 Rod and Gun Club-Breach Lake	Dodge County	CDBG-EM	Complete	Complete	In progress	n.d.
	3.3 North Bend Levee	LPNNRD	FEMA 4420 428 Program Funds	In progress			9/1/2021
	3.4 City of Fremont, Railroad, Farmland Levee	City of Fremont	FEMA 4420 428 Program Funds and CDBG-EM	Complete	In progress		n.d.
4. Structural-Individual Flood Proofing	4.1 Dodge County Elevations	Dodge County	FEMA Mitigation-4420 404 program	Complete			9/1/2023
	4.2 Fremont Elevations-FEMA	City of Fremont	FEMA Mitigation-4420 404 program	Complete			9/1/2023
	4.3 Fremont Flood Proofing-USACE	City of Fremont	USACE-205	Complete			n.d.
	4.4 Winslow Acquisitions	Village of Winslow	FEMA Mitigation-4420 404 program	In progress			9/1/2023
5. Non-Structural-Warning Systems	5.1 Platte River Monitoring	Dodge County	FEMA Mitigation-4420 404 program	Complete			9/1/2023
	5.2 Fremont Sirens-Silver Jackets	City of Fremont	Not Determined	In progress			n.d.

The table below is the status report for mitigation projects as of December 29<sup>th</sup>, 2020. FEMA projects have a period of performance date by which to complete projects.



In progress  
Phased Project Approval  
Complete



## Key elements of mitigation projects-Project Sponsor Dodge County

The table below outlines assumptions and concerns for mitigation projects.

### 1.1 Rawhide Creek Watershed Plan-EA

<i>Assumptions</i>	This plan drives flood mitigation activities. This planning initiative will result in a Plan-EA that will identify and prioritize specific structural actions to accomplish the flood prevention purpose.
<i>Key Concern</i>	<p>The primary alternatives will not include projects along the Platte or Elkhorn Rivers that fall under U.S. Army Corps of Engineers (USACE) federal jurisdiction.</p> <p><b>Timing</b>-Ideal if project began prior to Elkhorn Township/East Fremont and Platte Township/West Fremont projects. The recommended Plan-EA will most likely include a combination of structural and non-structural actions. The JWMAB could leverage local funding with NRCS engineering and construction funding to expand the Plan-EA benefits for projects approved within NRCS scope.</p>

### 2.1 Elkhorn Township/East Fremont

<i>Assumptions</i>	It is anticipated this will be the first project with federal approval.
<i>Key Concern</i>	<p><b>Project Construction</b>-Federal funding covers cost for studies, cost and environmental analysis, final designs, and complete project application. Does not fund actual construction of determined project. Project application will be submitted for another grant.</p>

### 2.2 Platte Township/West Fremont

<i>Assumptions</i>	This project will be supported by local partners similar to the Elkhorn Township/East Fremont Project.
<i>Key Concern</i>	<p><b>New Program</b>-The BRIC program is a new program which may be prolonged due to State unfamiliarity. Like</p>

## Mitigation Projects



the Elkhorn Township project, this project does not fund actual construction.

### *3.1 North Bend Cutoff Ditch*

#### *Assumptions*

It is anticipated this will be one of the first projects with federal approval.

#### *Key Concern*

**Period of Performance-**FEMA 4420DR Mitigation projects are to be completed by 9/2023. This is a phased project: phase 1 includes project scoping then technical review by FEMA, phase 2 is the actual construction. COVID-19 has impacted FEMA and State's ability to review projects. If not approved soon and phase 1 FEMA's technical review takes another three months, the project may not be closed by 9/2023

### *3.2 Rod and Gun Club-Breach Lake*

#### *Assumptions*

This project will be complete by summer 2021.

#### *Key Concern*

**Management-** A lot of items to be completed by multiple partners-City of Fremont securing easements, private partnership involvement, economic development grant submission, and reporting.

### *4.1 Dodge County Elevations*

#### *Assumptions*

City and County projects to run parallel. City and County work together to create pool of qualified contractors for homeowners.

#### *Key Concern*

**Social Tenor and Finances;** Homeowner fatigue and economic impact from disasters (flooding and COVID-19). As with multiple projects, the process for federal and state approval has exceeded normal timelines for project turnaround.

# Mitigation Projects



## 5.1 Platte River Monitoring

Assumptions

Phase 1 equipment will be in place by ice jam season (Feb 2021)

Key Concern

**Timing**-Partners are ready to implement. Mitigation projects cannot begin construction without federal approval of mitigation application. Otherwise we risk losing federal funding for the project.

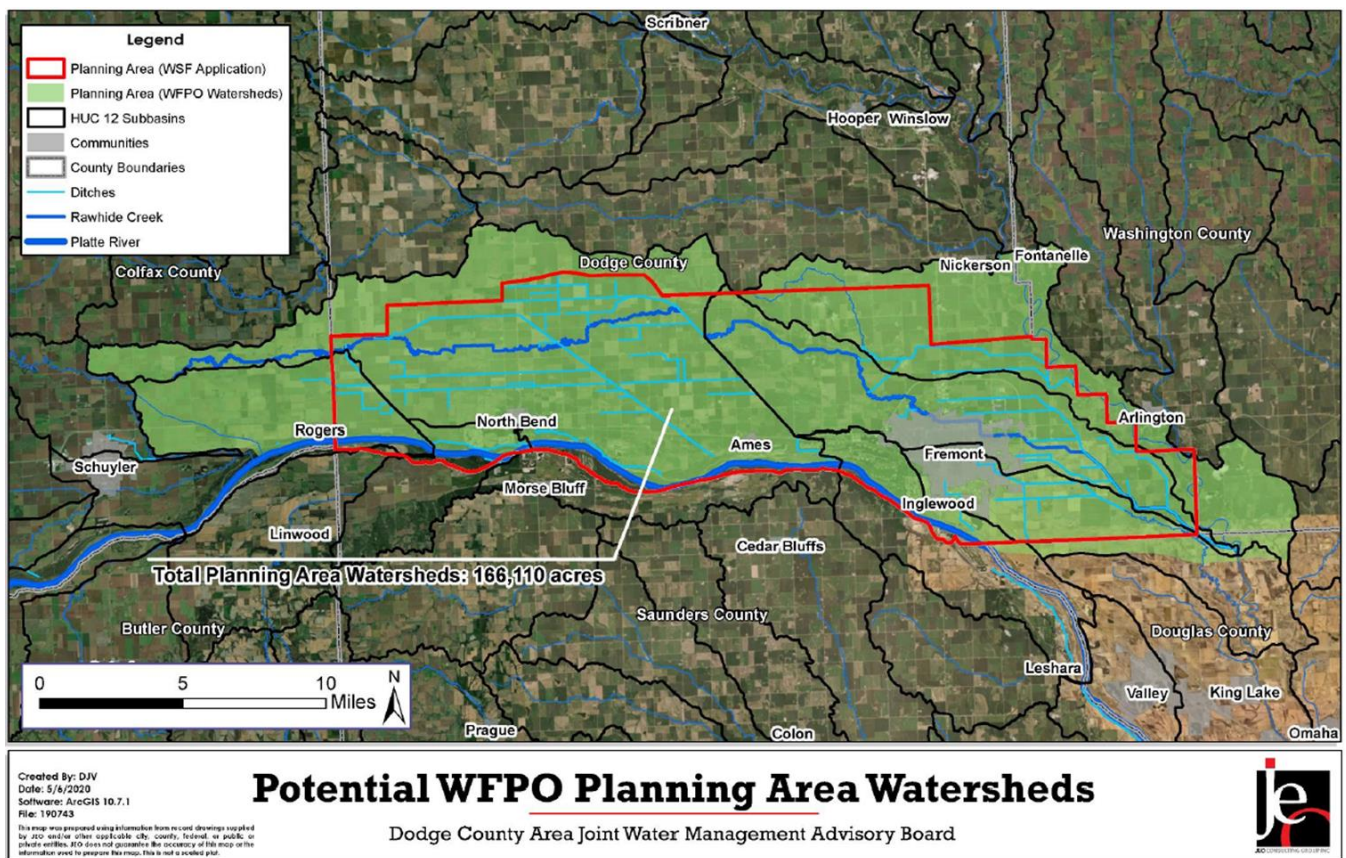


Figure 1: Rawhide Creek Watershed Plan and EA Planning Area

# Mitigation Projects



## Strategy

Following the 2019 flood, multiple jurisdictions/taxing authorities in Dodge County pursued mitigation project funding. Collaboration between members of the Joint Water Management Advisory Board focused mitigation efforts within the County. In 2021 it is anticipated many of the aforementioned mitigation projects outlined in this document will be approved to be funded. Each project supports the strategy to increase the flood resilience within Dodge County. The Rawhide Creek and Watershed Plan and EA will help identify alternative projects supporting the strategy of flood mitigation. The plan and EA will need to be considered while scoping the Elkhorn and Platte Township projects. This plan may identify NRCS eligible projects that may present a better cost share than offered by FEMA. Therefore, it would be strategically beneficial to allow the Rawhide Creek Watershed Plan and EA process to move forward in development prior to implementing Elkhorn Township Project and Platte Township Project or new project development. Additionally, Dodge County should pursue CDBG-DR funding to reimburse local cost share for projects.

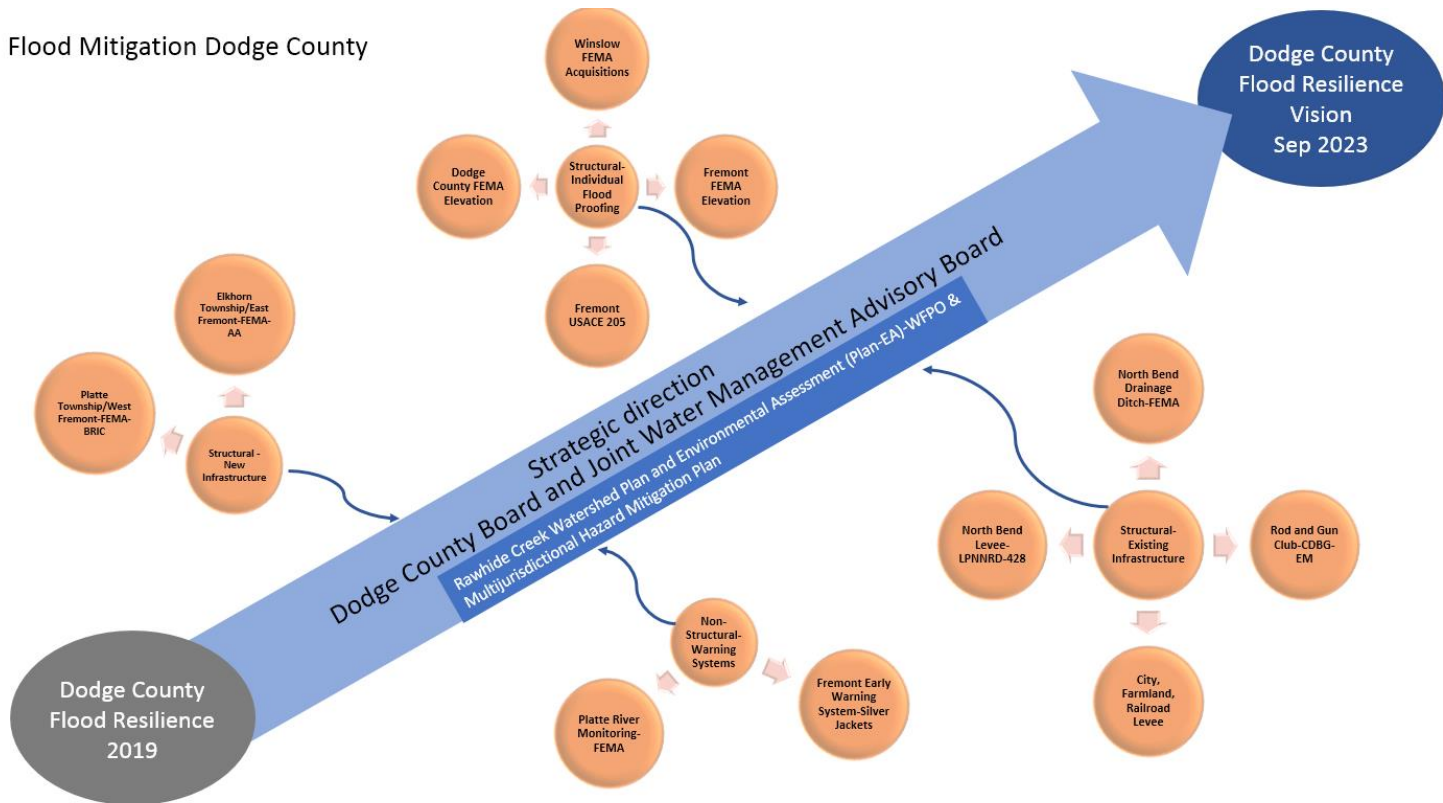


Figure 2: Flood Resilience Strategic Direction

# Mitigation Projects

