

IRRIGATION DISTRICTS PROFILE

**North Platte NRD
Hazard Mitigation Plan 2021**

District Planning Teams

Table ID.1: District Planning Team Members

| PARTICIPATING IRRIGATION DISTRICTS | NAME | TITLE |
|---|-----------------|---------------------|
| ALLIANCE IRRIGATION DISTRICT | Amanda Kepler | Secretary-Treasurer |
| ALLIANCE IRRIGATION DISTRICT | Bill Pierce | Chairman |
| *BEERLINE CANAL COMPANY | Laurie Haack | Secretary-Treasurer |
| BRIDGEPORT IRRIGATION DISTRICT | Kay Anderson | Secretary |
| *BROWNS CREEK IRRIGATION DISTRICT | Phil Amateis | President |
| CASTLE ROCK IRRIGATION DISTRICT | Steve Jobman | Chairman |
| CASTLE ROCK IRRIGATION DISTRICT | Jody Fiscus | Vice President |
| *CHIMNEY ROCK IRRIGATION DISTRICT | Frank Nerud | Vice President |
| *CHIMNEY ROCK IRRIGATION DISTRICT | Roger Eirich | President |
| *CHIMNEY ROCK IRRIGATION DISTRICT | Joe Essay | Director |
| *EMPIRE CANAL COMPANY | Tim Riggs | President |
| ENTERPRISE IRRIGATION DISTRICT | Scott Hort | Assistant Manager |
| ENTERPRISE IRRIGATION DISTRICT | Rick Preston | Manager |
| FARMERS IRRIGATION DISTRICT | Kevin Adams | Manager |
| *GERING IRRIGATION DISTRICT | Rita Barnes | Secretary |
| *GERING IRRIGATION DISTRICT | Ted Roth | Treasurer |
| GERING-FORT LARAMIE IRRIGATION DISTRICT | Scott Hort | Assistant Manager |
| HOOPER IRRIGATION DISTRICT | Bruce Burdick | Member |
| LISCO IRRIGATION DISTRICT | Craig Shaffer | President |
| MIDLAND-OVERLAND CANAL COMPANY | Joe Van Newkirk | Director |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | Gary Lofing | Manager-President |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

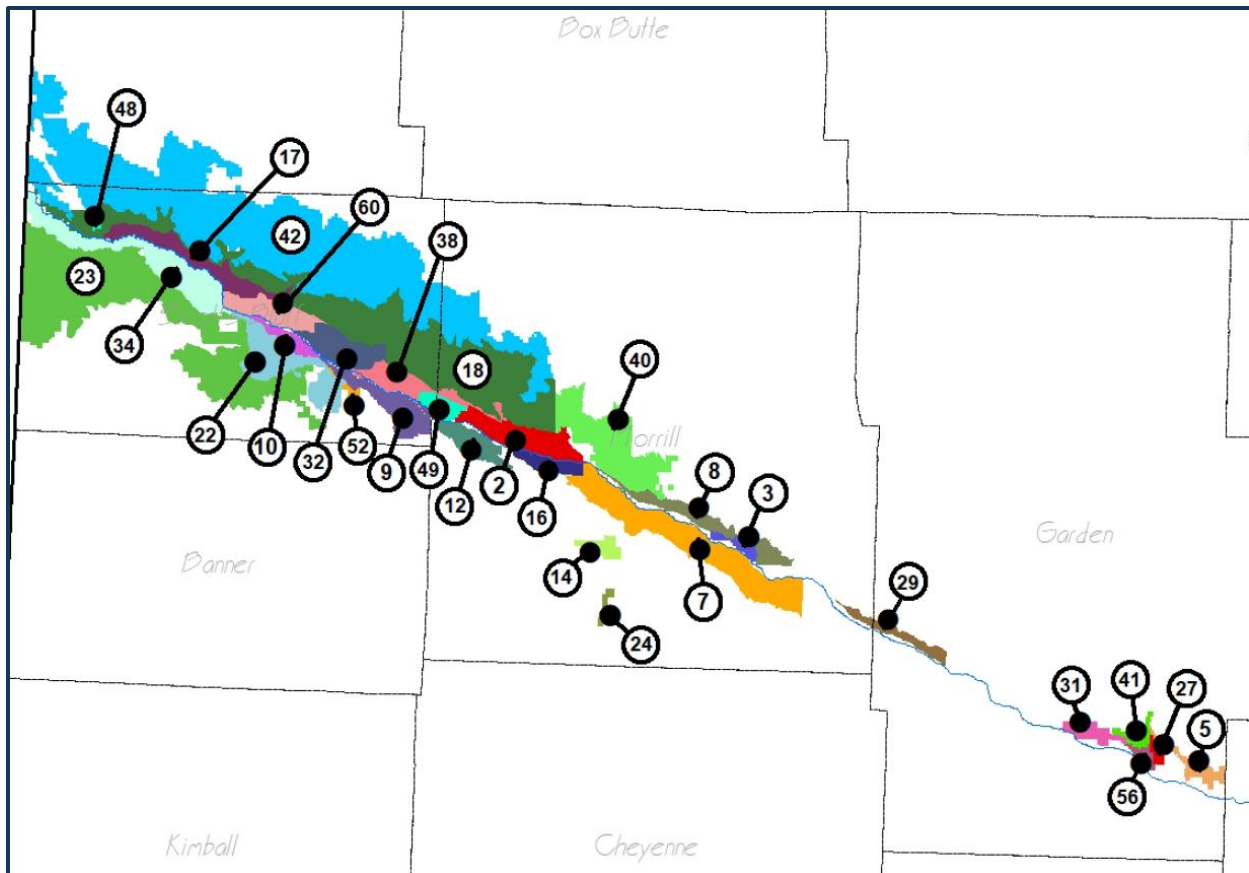
| | | |
|---|------------------|---------------------|
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | Val Baker | Secretary |
| MITCHELL IRRIGATION DISTRICT | Pete Unrein | President |
| MITCHELL IRRIGATION DISTRICT | Nick Lara | Secretary/Treasurer |
| *NINE MILE IRRIGATION DISTRICT | Jim Mai | Director |
| *NINE MILE IRRIGATION DISTRICT | Barry Stuart | Director |
| *NINE MILE IRRIGATION DISTRICT | Byron Miller | Director |
| NORTHPORT IRRIGATION DISTRICT | Robert Landrigan | Vice-President |
| PATHFINDER IRRIGATION DISTRICT | Rick Miller | Assistant Manager |
| *SHORT LINE IRRIGATION DISTRICT | Vince Rafferty | President |
| *WINTERS CREEK CANAL COMPANY | Rodney Adams | President |

**Irrigation Districts added to the plan in 2023*

Location

Figure ID.1 shows the location of all the irrigation districts in the planning area.

Figure ID.1: Irrigation Districts in the Planning Area



Source: Nebraska Department of Natural Resources

Table ID.2: Irrigation Districts in the Planning Area

| MAP # | IRRIGATION DISTRICT | MAP # | IRRIGATION DISTRICT |
|-------|---|-------|---|
| 2 | Alliance Irrigation District | 27 | Hooper Irrigation District |
| 3 | Beerline Canal Company | 29 | Lisco Irrigation District |
| 5 | Blue Creek Irrigation District | 31 | Midland-Overland Canal Company |
| 7 | Bridgeport Irrigation District | 32 | Minatare Mutual Canal and Irrigation District |
| 8 | Browns Creek Irrigation District | 34 | Mitchell Irrigation District |
| 9 | Castle Rock Irrigation District | 38 | Nine Mile Irrigation District |
| 10 | Central Irrigation District | 40 | Northport Irrigation District |
| 12 | Chimney Rock Irrigation District | 41 | Paisley Irrigation District |
| 14* | Court House Rock Company | 42 | Pathfinder Irrigation District |
| 16 | Empire Canal Company | 48 | Sheep Creek Lateral Company |
| 17 | Enterprise Irrigation District | 49 | Short Line Irrigation District |
| 18 | Farmers Irrigation District | 52 | Steamboat Irrigation District |
| 22 | Gering Irrigation District | 52 | Union Irrigation District |
| 23 | Gering-Fort Laramie Irrigation District | 56 | Winters Creek Canal Company |
| 24* | Greenwood Creek Mutual Irrigation Company | 60 | Midland-Overland Canal Company |

*Inactive

Services

The primary role of irrigation districts is to serve farmers in the area with surface water irrigation. Irrigation districts within the North Platte Natural Resources District maintain canals in both Nebraska and eastern Wyoming. The table below shows the acres covered and population served by each participating irrigation district.

Table ID.3: Acres Covered and Population Served

| PARTICIPATING IRRIGATION DISTRICT | ACRES COVERED | POPULATION SERVED |
|---|----------------------|--------------------------|
| ALLIANCE IRRIGATION DISTRICT | 5,500 acres | 25 landowners |
| BEERLINE CANAL COMPANY | 1,057 acres | 13 landowners |
| BRIDGEPORT IRRIGATION DISTRICT | 6,580 acres | 40 landowners |
| BROWNS CREEK IRRIGATION DISTRICT | 4,673.46 acres | 33 landowners |
| CASTLE ROCK IRRIGATION DISTRICT | 6,000 acres | 50 landowners |
| CHIMNEY ROCK IRRIGATION DISTRICT | 5,800 acres | 60 landowners |
| EMPIRE CANAL COMPANY | 2,000 acres | 4 landowners |
| ENTERPRISE IRRIGATION DISTRICT | 4,362 acres | 175 landowners |
| FARMERS IRRIGATION DISTRICT | 61,000 acres | 450 landowners |
| GERING IRRIGATION DISTRICT | 13,000 acres | 208 landowners |
| GERING-FORT LARAMIE IRRIGATION DISTRICT | 54,841 acres | 300 landowners |
| HOOPER IRRIGATION DISTRICT | 832 acres | 10 landowners |
| LISCO IRRIGATION DISTRICT | 2,629.3 acres | 18 landowners |
| MIDLAND-OVERLAND CANAL COMPANY | 1,640 acres | 3 landowners |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | 6,720 acres | 27 landowners |
| MITCHELL IRRIGATION DISTRICT | 13,300 acres | 70 landowners |
| NINE MILE IRRIGATION DISTRICT | 5,000 acres | 35 landowners |
| NORTHPORT IRRIGATION DISTRICT | 16,169.1 acres | 93 landowners |
| PATHFINDER IRRIGATION DISTRICT | 102,800 acres | 865 landowners |
| SHORT LINE IRRIGATION DISTRICT | 2,940 acres | 12 landowners |
| WINTERS CREEK CANAL COMPANY | 4,000 acres | 25 landowners |

Future Development Trends

Alliance Irrigation District

There have been no changes for the irrigation district in the past five years. In the next five years, there are plans to install new head gates at the point of withdrawal from the creek. Along with new headgates, high water warning electronics will be installed to prevent washout and safety rails will be added on catwalks. These updates will make the district more resilient to flooding, dam failure, and severe thunderstorm events.

Beerline Canal Company

Over the past five years, an existing headgate was replaced with a high-capacity structure that can divert a large amount of water to the river if necessary. This structure is upstream of the Village of Broadwater and could minimize the impact of flooding on residents of Broadwater and others downstream. A new spill diversion is planned for when funds can be raised.

Bridgeport Irrigation District

Over the past five years, continual maintenance has been done on the main canal, ditches, dam, and diversion boxes. This will continue in the next five years. No other developments are planned at this time.

Browns Creek Irrigation District

Over the past five years, there have been no changes within the irrigation district. The district hopes to build a diversion and spillway.

Castle Rock Irrigation District

Over the past five years, the district made repairs to the dirt section of the diversion dam due to flooding. There are no planned developments in the next five years at this time.

Chimney Rock Irrigation District

Over the past five years, the district replaced checks and delivery headgates. The district is planning to replace the main diversion structure.

Empire Canal Company

Over the past five years, the district replaced a headgate. The district plans to install more headgates and a new flume in the future.

Enterprise Irrigation District

Over the past five years, there have been no changes within the irrigation district. No developments are planned for at this time.

Farmers Irrigation District

Over the past five years, the district has been replacing open laterals with pvc pipe and replacing old structures. These updates make the district more resilient to flooding, dam failure, chemical spills, and severe thunderstorm events. There are currently no planned developments at this time.

Gering Irrigation District

Over the past five years, the district has cleaned and dug out the main canal and installed several buried pipelines. In the future, the district plans to install automated gates at the Mathers Spill,

Sandhills Spill, and Sandberg Spill. It also plans to install a manual gate at D Street to make the Ehrman Flume larger.

Gering-Fort Laramie Irrigation District

Every year the district maintains its open ditches and tries to install at least one mile of underground pipe to conserve water. These measures help the district to become more resilient to flooding, dam failure, severe thunderstorms, tornadoes and high winds, and drought.

Hooper Irrigation District

There have been no changes over the past five years. In the next five years, the district would like to start replacing the dirt canal with pipeline.

Lisco Irrigation District

There have been no changes over the past five years. In the next five years, the district would like to make substantial repairs to the diversion dam or replace it entirely. This would help the district become more resilient to dam failure and flooding.

Midland-Overland Canal Company

Over the past five years, there have been no changes within the irrigation district. No developments are planned for at this time.

Minatare Mutual Canal and Irrigation Company

Over the past five years, infrastructure has been maintained. This includes cleaning the canal, new headgates, and new concrete for headgates. In addition, repairs to the sand diversion dam have been made. In the next five years, sand dam work with natural rock for the control structure is planned. Total Cost is estimated at \$207,400.

Mitchell Irrigation District

The irrigation district was damaged, and the floor of the drain had to be repaired. In addition, the canal is maintained every winter and issues are fixed. The district is currently in the process of a re-sloping project.

Nine Mile Irrigation District

The irrigation district develops sand dam structures in the river on an annual basis and recently rebuilt its headgate structure at its North Platte River diversion. The district also straightened out a weak spot on the main canal just east of Bayard that was restricting flow and causing water to back up through town. Future development plans include a complete rebuilt of the district's creek diversion, re-lining a siphon, and reinforcing a spillway.

Northport Irrigation District

There have been no changes over the past five years. In the next five years, there are plans to bury lateral lines for more water efficiency. This will help the district become more resilient to drought.

Pathfinder Irrigation District

Over the past five years, the district has installed underground pipelines to help eliminate some of the loss of water due to the open laterals. In addition, canals and structures are continually maintained and repaired to lengthen life expectancy. All of these activities will continue to be done in the next five years. In 2020, the district repaired the Spring Canyon Flume by sandblasting and recoating cracks in the structure.

Short Line Irrigation District

Over the past five years, there have been no changes within the irrigation district. No developments are planned for at this time.

Winters Creek Canal Company

Over the past five years, there have been no changes within the canal company. The company plans to replace the North Platte River diversion, the Winter Creek diversion, and the check structure automation in the future.

Staffing

Each irrigation district is supervised by a board of directors who will oversee the implementation of hazard mitigation projects. The number of staff in each participating district is listed below.

Table ID.4: Staffing

| PARTICIPATING IRRIGATION DISTRICT | NUMBER OF STAFF |
|--|-----------------|
| ALLIANCE IRRIGATION DISTRICT | 5 staff |
| BEERLINE CANAL COMPANY | 2 staff |
| BRIDGEPORT IRRIGATION DISTRICT | 3 staff |
| BROWNS CREEK IRRIGATION DISTRICT | 2 staff |
| CASTLE ROCK IRRIGATION DISTRICT | 3 staff |
| CHIMNEY ROCK IRRIGATION DISTRICT | 2 staff |
| EMPIRE CANAL COMPANY | 3 staff |
| ENTERPRISE IRRIGATION DISTRICT | 7 staff |
| FARMERS IRRIGATION DISTRICT | 26 staff |
| GERING IRRIGATION DISTRICT | 3 staff |
| GERING-FORT LARAMIE IRRIGATION DISTRICT | 22 staff |
| HOOPER IRRIGATION DISTRICT | 3 staff |
| LISCO IRRIGATION DISTRICT | 4 staff |
| MIDLAND-OVERLAND CANAL COMPANY | 2 staff |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | 7 staff |
| MITCHELL IRRIGATION DISTRICT | 5 staff |
| NINE MILE IRRIGATION DISTRICT | 2 staff |
| NORTHPORT IRRIGATION DISTRICT | 10 staff |
| PATHFINDER IRRIGATION DISTRICT | 29 staff |
| SHORT LINE IRRIGATION DISTRICT | 1 staff |
| WINTERS CREEK CANAL COMPANY | 4 staff |

Capability Assessment

Due to the unique structure of irrigation districts, the typical capability assessment table was not used. The following table summarizes each district's overall capability.

Table ID.5: Overall Capability

| PARTICIPATING IRRIGATION DISTRICT | FINANCIAL RESOURCES TO IMPLEMENT MITIGATION PROJECTS | STAFF/EXPERTISE TO IMPLEMENT PROJECTS | PUBLIC SUPPORT TO IMPLEMENT PROJECTS | TIME TO DEVOTE TO HAZARD MITIGATION |
|---|---|--|---|--|
| ALLIANCE IRRIGATION DISTRICT | Limited | Limited | High | Moderate |
| BEERLINE CANAL COMPANY | Limited | Limited | Limited | Limited |
| BRIDGEPORT IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| BROWNS CREEK IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| CASTLE ROCK IRRIGATION DISTRICT | Limited | Moderate | Moderate | Moderate |
| CHIMNEY ROCK IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| EMPIRE CANAL COMPANY | Limited | Moderate | Limited | Limited |
| ENTERPRISE IRRIGATION DISTRICT | Limited | Moderate | Moderate | Limited |
| FARMERS IRRIGATION DISTRICT | Limited | High | Limited | Moderate |
| GERING IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| GERING-FORT LARAMIE IRRIGATION DISTRICT | Moderate | High | Moderate | Moderate |
| HOOPER IRRIGATION DISTRICT | Limited | Limited | High | Moderate |
| LISCO IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| MIDLAND-OVERLAND CANAL COMPANY | Moderate | Moderate | Moderate | Moderate |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | Limited | Limited | Moderate | Limited |
| MITCHELL IRRIGATION DISTRICT | Moderate | Moderate | Moderate | Moderate |
| NINE MILE IRRIGATION DISTRICT | Limited | Limited | Limited | Moderate |
| NORTHPORT IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| PARTICIPATING IRRIGATION DISTRICT | FINANCIAL RESOURCES TO IMPLEMENT MITIGATION PROJECTS | STAFF/EXPERTISE TO IMPLEMENT PROJECTS | PUBLIC SUPPORT TO IMPLEMENT PROJECTS | TIME TO DEVOTE TO HAZARD MITIGATION |
|--|---|--|---|--|
| PATHFINDER IRRIGATION DISTRICT | Limited | Limited | Moderate | Limited |
| SHORT LINE IRRIGATION DISTRICT | Limited | Limited | Limited | Limited |
| WINTERS CREEK CANAL COMPANY | Limited | Limited | Limited | Limited |

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside planning documents (e.g., annual budget), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The table below shows who will be responsible for reviewing the profile, the frequency of review, and how the public will be involved.

Table ID.6: Plan Maintenance

| PARTICIPATING IRRIGATION DISTRICT | REVIEWERS | FREQUENCY | PUBLIC INVOLVEMENT |
|--|---|------------------|--|
| ALLIANCE IRRIGATION DISTRICT | Board Members | Annually | Board meeting |
| BEERLINE CANAL COMPANY | President, Secretary, Manager | Bi-Annually | Local newspaper, Public notice board, Social media |
| BRIDGEPORT IRRIGATION DISTRICT | Board Members | Annually | Local newspaper, Letters to residents |
| BROWNS CREEK IRRIGATION DISTRICT | Board Members | Bi-annually | None |
| CASTLE ROCK IRRIGATION DISTRICT | Board Members | Bi-annually | None |
| CHIMNEY ROCK IRRIGATION DISTRICT | Board Members | Bi-annually | Board meetings |
| EMPIRE CANAL COMPANY | President | Bi-annually | Social media |
| ENTERPRISE IRRIGATION DISTRICT | Manager, Assistant Manager, Board Members | Annually | Board meetings, Letters to landowners |
| FARMERS IRRIGATION DISTRICT | Manager, Assistant Manager, Board Members | Annually | Board meeting |
| GERING IRRIGATION DISTRICT | Board Members | Annually | Board meetings, Letters to residents |

| PARTICIPATING IRRIGATION DISTRICT | REVIEWERS | FREQUENCY | PUBLIC INVOLVEMENT |
|---|---|------------------|--|
| GERING-FORT LARAMIE IRRIGATION DISTRICT | Manager, Assistant Manager, Board Members | Annually | Board meetings, Letters to landowners |
| HOOPER IRRIGATION DISTRICT | Board Members | Bi-annually | Board meeting |
| LISCO IRRIGATION DISTRICT | Board, Ditch Rider, Landowners | Annually | Board meeting |
| MIDLAND-OVERLAND CANAL COMPANY | President, Secretary-Treasurer | Annually | None |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | President, Vice President, Secretary, Board Members | Annually | Local newspaper, Letters to residents, Board Meeting |
| MITCHELL IRRIGATION DISTRICT | Board Members | Bi-annually | Board meeting |
| NINE MILE IRRIGATION DISTRICT | Board Directors, Secretary/Treasurer | Bi-annually | Board meetings |
| NORTHPORT IRRIGATION DISTRICT | Vice President | Annually | Local newspaper, Letters to residents |
| PATHFINDER IRRIGATION DISTRICT | Management | Annually | Website and text notifications |
| SHORT LINE IRRIGATION DISTRICT | Directors | Annually | Board meetings |
| WINTERS CREEK CANAL COMPANY | President, Vice President, Secretary/Ditch Rider | Annually | Letter to residents |

Plan Integration

Most irrigation districts within the planning area do not have any formal response plans for emergency situations or plans that discuss hazards. However, districts can open or close their diversion dam during an emergency. In any future planning mechanisms, the irrigation districts will work to integrate the goals and objectives of the hazard mitigation plan within them as appropriate.

Community Lifelines

Critical Facilities

Each participating district identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster, per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for each irrigation district.

Table ID.7: Critical Facilities

| CF # | NAME | COMMUNITY SHELTER (Y/N) | GENERATOR (Y/N) | FLOODPLAIN (Y/N) |
|------|--|-------------------------|-----------------|------------------|
| 1 | Alliance Irrigation District – Diversion Dam | N | N | Y |
| 2 | Bridgeport Irrigation District – Shop | N | N | N |
| 3 | Castle Rock Irrigation District – Diversion Dam | N | N | Y |
| 4 | Enterprise Irrigation District – Shop | N | N | N |
| 5 | Farmers Irrigation District – Headgates | N | Y | Y |
| 6 | Farmers Irrigation District – Mitchell Shop | N | N | N |
| 7 | Farmers Irrigation District – Minatare Shop | N | N | N |
| 8 | Farmers Irrigation District – Office | N | N | N |
| 9 | Farmers Irrigation District – Bayard Shop | N | N | N |
| 10 | Farmers Irrigation District – Red Willow Spillway | N | N | N |
| 11 | Farmers Irrigation District – Winter Creek Spillway | N | N | Y |
| 12 | Gering-Fort Laramie Irrigation District – Main Office/Shop | N | N | N |
| 13 | Gering-Fort Laramie Irrigation District – Shop | N | N | N |
| 14 | Hooper Irrigation District – Diversion Dam | N | N | Y |
| 15 | Lisco Irrigation District – Diversion Dam | N | N | Y |
| 16 | Midland-Overland Canal Company – Diversion Dam | N | N | Y |
| 17 | Minatare Mutual Canal and Irrigation Company – Diversion Dam | N | N | Y |
| 18 | Mitchell Irrigation District – Office | N | N | Y |
| 19 | Mitchell Irrigation District – Diversion Dam House | N | N | Y |

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| CF # | NAME | COMMUNITY SHELTER (Y/N) | GENERATOR (Y/N) | FLOODPLAIN (Y/N) |
|------|--|-------------------------|-----------------|------------------|
| 20 | Northport Irrigation District – Main Office | N | N | N |
| 21 | Northport Irrigation District – Shop Building | N | N | N |
| 22 | Pathfinder Irrigation District – Lake Minatare Dam | N | N | Y |
| 23 | Pathfinder Irrigation District – Lake Alice Dam 1 | N | N | Y |
| 24 | Pathfinder Irrigation District – Lake Alice Dam 1.5 | N | N | Y |
| 25 | Pathfinder Irrigation District – Automated Equipment at Diversion at High Line | N | N | N |
| *26 | Beerline Irrigation District – Spillway | N | N | N |
| ** | Browns Creek Irrigation District – Canal/Diversion Infrastructure (Unmapped) | N | N | N/A |
| ** | Chimney Rock Irrigation District – Canal/Diversion Infrastructure (Unmapped) | N | N | N/A |
| ** | Empire Canal Company – Canal/Diversion Infrastructure (Unmapped) | N | N | N/A |
| ** | Gering Irrigation District – Mathers Spill (Unmapped) | N | N | N/A |
| ** | Gering Irrigation District – Sandhill Spill (Unmapped) | N | N | N/A |
| ** | Gering Irrigation District – Ehrman Flume (Unmapped) | N | N | N/A |
| ** | Gering Irrigation District – Sandberg Spill (Unmapped) | N | N | N/A |
| ** | Gering Irrigation District – D St (Unmapped) | N | N | N/A |
| ** | Nine Mile Irrigation District – North Platte River Diversion (Unmapped) | N | N | N/A |
| ** | Nine Mile Irrigation District – Nine Mile Creek Diversion (Unmapped) | N | N | N/A |
| ** | Nine Mile Irrigation District – Spillways (6) (Unmapped) | N | N | N/A |
| ** | Nine Mile Irrigation District – Siphon (Bayard Drain/Wildhorse Creek) (Unmapped) | N | N | N/A |
| ** | Nine Mile Irrigation District – Main Canal (Unmapped) | N | N | N/A |

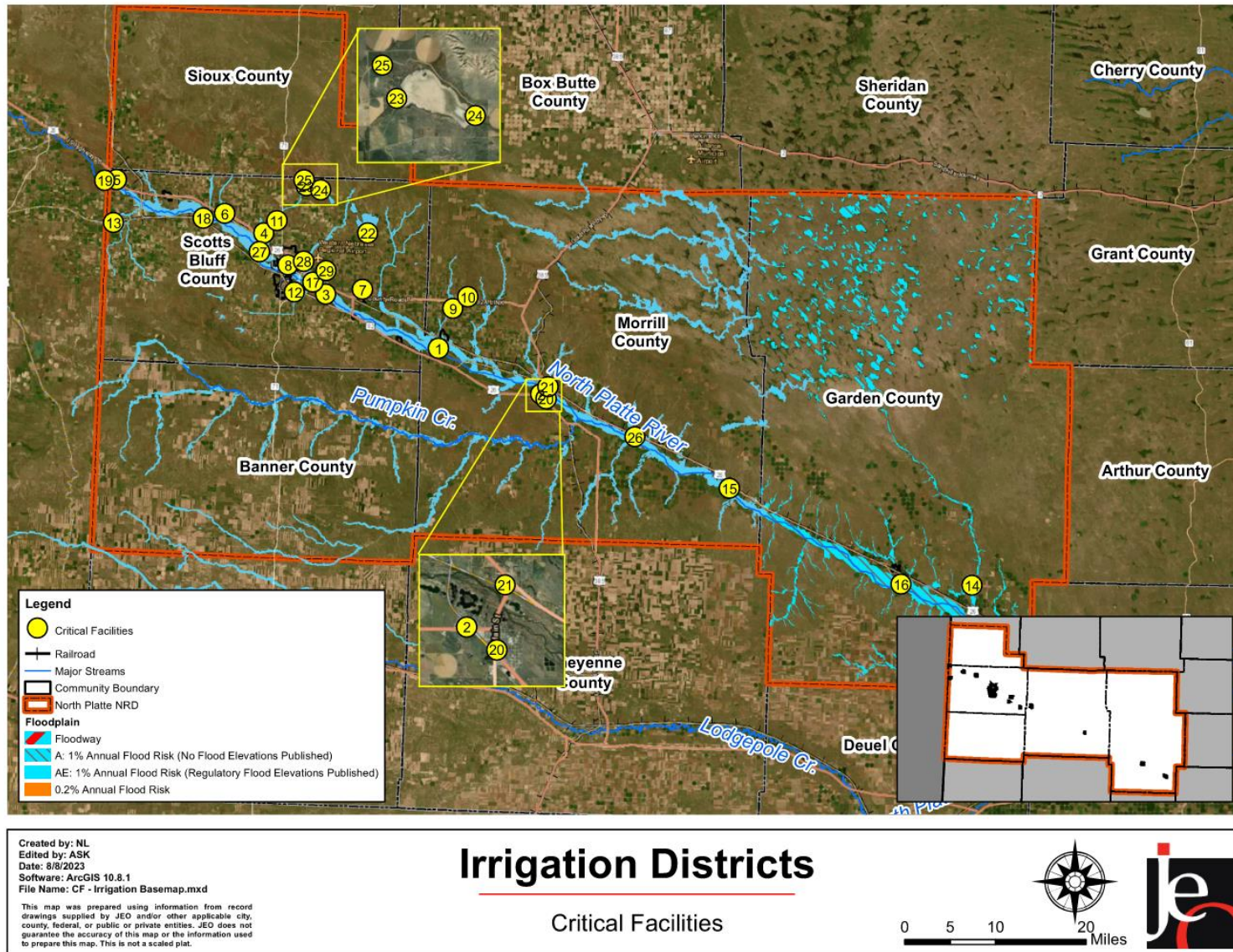
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| CF # | NAME | COMMUNITY SHELTER (Y/N) | GENERATOR (Y/N) | FLOODPLAIN (Y/N) |
|------------|--|-------------------------|-----------------|------------------|
| ** | Nine Mile Irrigation District – Lateral Canals (Unmapped) | N | N | N/A |
| ** | Short Line Irrigation District – Canal/Diversion Infrastructure (Unmapped) | N | N | N/A |
| *27 | Winters Creek Canal Company – North Platte River Diversion | N | N | Y |
| *28 | Winters Creek Canal Company – Winters Creek Diversion | N | N | Y |
| *29 | Winters Creek Canal Company – Check Structure Automation | N | N | N |

*Critical Facilities from Irrigation Districts added in 2023

** Unmapped

Figure ID.2: Critical Facilities



*Floodplains in Banner County and Morrill County are based off a HAZUS created floodplain.

Historical Occurrences

See the county profiles for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the district's capabilities. Table ID.8 shows the hazards prioritized by each irrigation district.

Dam Failure

Irrigation districts operate diversion dams that divert water into their canals. Failure of the diversion dams would lead to damages to the canal and the irrigation district's consumers. The district would also lose the ability to divert water, which would impact irrigation and cause crop loss. Failure of any upstream dams could also lead to major flooding and potentially damage the diversion dam. Lisco Irrigation District indicated that their diversion dam is already in a weakened condition. Without it they would have to hire heavy machinery and an operator in order to get water into the ditch. Minatare Mutual Canal and Irrigation Company has had their sand diversion dam wash out for the last eight years due to high water levels on the North Platte River. As the river channel continues to get deeper, it is becoming more expensive to replace any washouts. To help reduce this from happening the company has moved to a different location in the right of way and building the dam to the tallest regulations allowed. Nine Mile Irrigation District has experienced sand dam washouts when neighboring irrigation districts had canal breaches and excess water.

Drought

Drought can be very impactful for irrigation districts. During periods of drought, there is likely to be less surface water that is able to be diverted and provided to irrigators. This would cause crop loss across the districts. Past drought affected irrigation districts in 2002, 2003, 2004, 2012, 2021, and 2022.

Extreme Heat

Extreme heat can impact the efficiency of a district's ability to deliver water. Heat directly impacts delivery to loss ratio that the districts are forced to absorb. This can affect the availability of water to the consumers and can potentially cause crop loss.

Flooding

Flooding can cause erosion of canal sides which causes flow restrictions or lead to flooding of surrounding fields if not repaired. In addition, flooding can damage diversion dams and equipment housed there. Alliance Irrigation District identified a flooding event in July 2014 that washed out part of the canal. Flooding caused \$200,000 in damages to the dirt section of the Castle Rock Irrigation District diversion dam. In 1987 eight inches of rain washed out part of the Farmers Irrigation District canal near Minatare. Gering Irrigation District experienced an overflow of its main canal in 2022. Northport Irrigation District has several siphon tubes in the canal. Flooding in 1997, 2007, and 2010 caused top damage to on the siphon tubes. If one of the siphon tubes were to fail

it would compromise the entire district and could cause damage to homes, Highway 385, and railroad bridges. Replacement of one tube could cost up to \$1,000,000.

Grass/Wildfire

During a nearby grass/wildfire, water from the irrigation district may be used to help in fire response and suppression. This could cause there to be less water for irrigators leading to crop loss.

Hazardous Materials – Fixed Site

If hazardous materials enter the canal system from a chemical spill, it could contaminate the water causing damage to crops. This would likely cause the irrigation district to shut down until the contaminant could be removed.

Levee Failure

Failure of any upstream levee could lead to major flooding and potentially damage the diversion dams for the irrigation districts.

Public Health Emergency

The recent Covid-19 pandemic brought this hazard to the forefront for irrigation districts. District staff can be considered essential workers and therefore required to continue their normal duties in order to provide irrigation water to consumers. An outbreak within the staff could make it difficult for a district to provide typical services. Pathfinder Irrigation District experienced some infections and had to implement social distancing and other protections for staff. Beerline Canal Company expressed concern for this hazard due to the possibility for drinking water sources to be contaminated during flooding.

Severe Thunderstorms

Severe thunderstorms can include heavy rain which could cause flooding issues and erosion of canal sides. This erosion can restrict flows or cause flooding of surrounding fields and property if not repaired. High winds during severe thunderstorms can also cause debris to get into the canal.

Severe Winter Storms

Severe winter storms include blizzards, ice accumulation, heavy snow, and winter storms. These storms can cause power outages during bitterly cold temperatures, road closures, and economic impacts. Irrigation District infrastructure can be damaged as a result of severe winter storms and the repeated freeze-thaw cycle.

Tornadoes and High Winds

High winds can blow trees or other debris into the canal. This can cause flow restrictions and possibly lead to flooding of surrounding fields. In 2017 high winds caused debris to go into the Farmers Irrigation District canal and plugged up bridges. This caused the district to shut down until the debris was removed.

Table ID.8: Hazard Prioritization

| PARTICIPATING IRRIGATION DISTRICT | ANIMAL AND PLANT DISEASE | DAM FAILURE | DROUGHT | EARTHQUAKES | EXTREME HEAT | FLOODING | GRASS/WILDFIRE | HAZARDOUS MATERIALS – FIXED SITES | HAZARDOUS MATERIALS - TRANSPORTATION | LEVEE FAILURE | PUBLIC HEALTH EMERGENCY | SEVERE THUNDERSTORMS | SEVERE WINTER STORMS | TERRORISM | TORNADOES AND HIGH WINDS |
|-----------------------------------|--------------------------|-------------|---------|-------------|--------------|----------|----------------|-----------------------------------|--------------------------------------|---------------|-------------------------|----------------------|----------------------|-----------|--------------------------|
| ALLIANCE IRRIGATION DISTRICT | | | X | | | X | X | | | | | X | | | |
| BEERLINE CANAL COMPANY | | | X | | X | X | | | | | X | | | | |
| BRIDGEPORT IRRIGATION DISTRICT | | X | X | | | X | | | | | | X | | | X |
| BROWNS CREEK IRRIGATION DISTRICT | | X | X | | | X | | | | | | X | | | |
| CASTLE ROCK IRRIGATION DISTRICT | | X | X | | | X | | | | X | | X | | | |
| CHIMNEY ROCK IRRIGATION DISTRICT | | X | X | | | X | | | | | | X | | | |
| EMPIRE CANAL COMPANY | | X | X | | X | X | X | | | X | | X | X | | X |
| ENTERPRISE IRRIGATION DISTRICT | | X | | | | X | | | | X | | X | | | X |
| FARMERS IRRIGATION DISTRICT | | X | X | | | X | | X | | | | X | | | X |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| PARTICIPATING IRRIGATION DISTRICT | ANIMAL AND PLANT DISEASE | DAM FAILURE | DROUGHT | EARTHQUAKES | EXTREME HEAT | FLOODING | GRASS/WILDFIRE | HAZARDOUS MATERIALS – FIXED SITES | HAZARDOUS MATERIALS - TRANSPORTATION | LEVEE FAILURE | PUBLIC HEALTH EMERGENCY | SEVERE THUNDERSTORMS | SEVERE WINTER STORMS | TERRORISM | TORNADOES AND HIGH WINDS |
|--|--------------------------|-------------|---------|-------------|--------------|----------|----------------|-----------------------------------|--------------------------------------|---------------|-------------------------|----------------------|----------------------|-----------|--------------------------|
| GERING IRRIGATION DISTRICT | | | X | | X | X | X | | | | | X | X | | X |
| GERING-FORT LARAMIE IRRIGATION DISTRICT | | X | | | | X | | | | | | X | | | X |
| HOOPER IRRIGATION DISTRICT | | | X | | | | | | | | | X | | | |
| LISCO IRRIGATION DISTRICT | | X | | | | X | | | | | | X | | | |
| MIDLAND-OVERLAND CANAL COMPANY | | X | | | | | | | | | | X | | | X |
| MINATARE MUTUAL CANAL AND IRRIGATION COMPANY | | X | | | | X | | | | | | X | | | |
| MITCHELL IRRIGATION DISTRICT | | | X | | | X | | | | | | X | | | X |
| NINE MILE IRRIGATION DISTRICT | | X | X | | | X | | | | | | X | | | |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| PARTICIPATING IRRIGATION DISTRICT | ANIMAL AND PLANT DISEASE | DAM FAILURE | DROUGHT | EARTHQUAKES | EXTREME HEAT | FLOODING | GRASS/WILDFIRE | HAZARDOUS MATERIALS – FIXED SITES | HAZARDOUS MATERIALS - TRANSPORTATION | LEVEE FAILURE | PUBLIC HEALTH EMERGENCY | SEVERE THUNDERSTORMS | SEVERE WINTER STORMS | TERRORISM | TORNADOES AND HIGH WINDS |
|---------------------------------------|--------------------------|-------------|---------|-------------|--------------|----------|----------------|-----------------------------------|--------------------------------------|---------------|-------------------------|----------------------|----------------------|-----------|--------------------------|
| NORTHPORT IRRIGATION DISTRICT | | X | X | | | X | | | | | | X | | | X |
| PATHFINDER IRRIGATION DISTRICT | | X | X | | X | X | | | | | X | X | | | |
| SHORT LINE IRRIGATION DISTRICT | | | X | | | X | | | | | | X | | | |
| WINTERS CREEK CANAL COMPANY | | X | X | | | X | | | | | | | | | |

Mitigation Strategy

Most irrigation districts have limited financial resources with annual budgets limited to maintaining current facilities and equipment. As such, each district will continue to leverage existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects.

Mitigation and Strategic Actions

Alliance Irrigation District

| MITIGATION ACTION | HEADGATE/FLOOD CONTROL |
|----------------------------|---|
| DESCRIPTION | Purchase and install one or more headgates to provide improved flood control. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Alliance Irrigation District |
| ESTIMATED COST | \$52,000 for one/\$100,000 for two |
| FUNDING | North Platte NRD |
| TIMELINE | 1 year |
| PRIORITY | High |
| LEAD AGENCY | Alliance Irrigation District Board, North Platte NRD |
| STATUS | Not Started |

Beerline Canal Company

| MITIGATION ACTION | HEADGATE/RETURN STRUCTURE |
|----------------------------|--|
| DESCRIPTION | Replace headgate and return structure to provide improved flood control, safety, and water management. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Beerline Irrigation District |
| ESTIMATED COST | \$247,500 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Beerline Irrigation District Board, North Platte NRD |
| STATUS | Not Started |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

Bridgeport Irrigation District

| MITIGATION ACTION | BANK STABILIZATION |
|---------------------|--|
| DESCRIPTION | Stabilize banks along streams and rivers. This may include, but is not limited to: reducing bank slope, addition of riprap, installation of erosion control materials/fabrics. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Bridgeport Irrigation District |
| ESTIMATED COST | \$15,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ years |
| PRIORITY | High |
| LEAD AGENCY | Bridgeport Irrigation District Board |
| STATUS | The district routinely performs maintenance on the diversion dam. |

Browns Creek Irrigation District

| MITIGATION ACTION | DIVERSION STRUCTURE |
|---------------------|--|
| DESCRIPTION | Construct a river diversion structure |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Browns Creek Irrigation District |
| ESTIMATED COST | \$5,000,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Browns Creek Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | SPILLWAY IMPROVEMENTS |
|---------------------|--|
| DESCRIPTION | Improve spillway structure |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Browns Creek Irrigation District |
| ESTIMATED COST | \$300,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Browns Creek Irrigation District Board |
| STATUS | Not Started |

Castle Rock Irrigation District

| MITIGATION ACTION | REDESIGN DIVERSION STRUCTURE AND INSTALL AUTOMATED DIVERSION AND SPILL GATES |
|---------------------|--|
| DESCRIPTION | Redesign diversion structure and install automated diversion and spill gates |
| HAZARD(S) | Dam Failure, Flooding |
| IRRIGATION DISTRICT | Castle Rock Irrigation District |
| ESTIMATED COST | \$900,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 1 year |
| PRIORITY | High |
| LEAD AGENCY | Castle Rock Irrigation District Board, North Platte NRD |
| STATUS | Not Started |

Chimney Rock Irrigation District

| MITIGATION ACTION | NILLEY LATERAL |
|---------------------|--|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$120,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | DURNALL LATERAL |
|---------------------|--|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$120,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | SETTELER LATERAL |
|---------------------|----------------------------------|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$120,000 |
| FUNDING | Irrigation District General Fund |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| | |
|--------------------|--|
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | EIRICH LATERAL |
|----------------------------|--|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$237,600 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | NERUD LATERAL |
|----------------------------|--|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$240,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | CLARK LATERAL |
|----------------------------|--|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$81,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | AMB LATERAL |
|----------------------------|----------------------------------|
| DESCRIPTION | Construct a new lateral |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Chimney Rock Irrigation District |
| ESTIMATED COST | \$237,600 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| | |
|--------------------|--|
| PRIORITY | Medium |
| LEAD AGENCY | Chimney Rock Irrigation District Board |
| STATUS | Not Started |

Empire Canal Company

| MITIGATION ACTION | HEADGATE/FLOOD CONTROL |
|----------------------------|---|
| DESCRIPTION | Purchase and install one or more headgates to provide improved flood control. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Empire Canal Company |
| ESTIMATED COST | To be determined |
| FUNDING | Canal Company General Fund |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Empire Canal Company Board, North Platte NRD |
| STATUS | Not Started |

| MITIGATION ACTION | NEW FLUME |
|----------------------------|--|
| DESCRIPTION | Construct a new flume |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Empire Canal Company |
| ESTIMATED COST | To be determined |
| FUNDING | Canal Company General Fund |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Empire Canal Company Board, North Platte NRD |
| STATUS | Not Started |

Enterprise Irrigation District

| MITIGATION ACTION | INSTALL UNDERGROUND PIPELINES |
|----------------------------|--------------------------------------|
| DESCRIPTION | Install underground pipelines |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Enterprise Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Loan from local bank |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Enterprise Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | REPLACE DIVERSION DAM |
|--------------------|-----------------------|
| DESCRIPTION | Replace Diversion Dam |
| HAZARD(S) | Dam Failure, Flooding |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| | |
|----------------------------|--------------------------------------|
| IRRIGATION DISTRICT | Enterprise Irrigation District |
| ESTIMATED COST | \$3 million |
| FUNDING | Loan from local bank |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Enterprise Irrigation District Board |
| STATUS | Not Started |

Farmers Irrigation District

| MITIGATION ACTION | EMERGENCY SPILLWAY |
|----------------------------|---|
| DESCRIPTION | Build a new emergency spillway |
| HAZARD(S) | Flooding, Drought |
| IRRIGATION DISTRICT | Farmers Irrigation District |
| ESTIMATED COST | \$250,000 |
| FUNDING | Irrigation District General Fund, Bureau of Reclamation |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Farmers Irrigation District Board |
| STATUS | Not started |

Gering Irrigation District

| MITIGATION ACTION | AUTOMATED HEADGATE AT MATHERS SPILLWAY |
|----------------------------|---|
| DESCRIPTION | Purchase and install an automated headgate to provide improved flood control. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Gering Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 1 year |
| PRIORITY | High |
| LEAD AGENCY | Gering Irrigation District, North Platte NRD |
| STATUS | Applying for funding |

| MITIGATION ACTION | AUTOMATED HEADGATE AT SANDHILLS SPILLWAY |
|----------------------------|---|
| DESCRIPTION | Purchase and install an automated headgate to provide improved flood control. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Gering Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Gering Irrigation District, North Platte NRD |
| STATUS | Applying for funding |

| MITIGATION ACTION | IMPROVE EHRMAN FLUME |
|---------------------|---|
| DESCRIPTION | Enlarge and make improvements to the Ehrman Flume to handle additional water. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Gering Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ years |
| PRIORITY | Low |
| LEAD AGENCY | Gering Irrigation District, North Platte NRD |
| STATUS | Applying for funding |

Gering-Fort Laramie Irrigation District

| MITIGATION ACTION | INSTALL UNDERGROUND PIPELINES |
|---------------------|---|
| DESCRIPTION | Install underground pipelines |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Gering-Fort Laramie Irrigation District |
| ESTIMATED COST | \$20,000-\$100,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Gering-Fort Laramie Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | MAINTAIN AND REHAB DISTRICT SIPHONS |
|---------------------|---|
| DESCRIPTION | Maintain and Rehabilitate district siphons |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Gering-Fort Laramie Irrigation District |
| ESTIMATED COST | \$100,000-\$300,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Gering-Fort Laramie Irrigation District Board |
| STATUS | Not Started |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| MITIGATION ACTION | TOTAL SYSTEM MAINTENANCE |
|---------------------|---|
| DESCRIPTION | Perform maintenance on the entire irrigation ditch system |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Gering-Fort Laramie Irrigation District |
| ESTIMATED COST | \$20,000-\$50,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Gering-Fort Laramie Irrigation District Board |
| STATUS | Not Started |

Hooper Irrigation District

| MITIGATION ACTION | INSTALL UNDERGROUND PIPELINES |
|---------------------|----------------------------------|
| DESCRIPTION | Install underground pipelines |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Hooper Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Tax Levies |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Hooper Irrigation District Board |
| STATUS | Not Started |

Lisco Irrigation District

| MITIGATION ACTION | REPAIR/REPLACE DIVERSION DAM |
|---------------------|--|
| DESCRIPTION | Repair/Replace Diversion Dam |
| HAZARD(S) | Dam Failure, Flooding |
| IRRIGATION DISTRICT | Lisco Irrigation District |
| ESTIMATED COST | \$75,000 |
| FUNDING | Tax collected from landowners in irrigation district |
| TIMELINE | 5+ years |
| PRIORITY | High |
| LEAD AGENCY | Lisco Irrigation District Board |
| STATUS | Not Started |

Midland-Overland Canal Company

| MITIGATION ACTION | HEADGATE |
|----------------------------|--|
| DESCRIPTION | Purchase and install a headgate to provide improved flood control. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Midland-Overland Canal Company |
| ESTIMATED COST | \$35,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ years |
| PRIORITY | High |
| LEAD AGENCY | Midland-Overland Canal Company, North Platte NRD |
| STATUS | Not Started |

Minatare Mutual Canal and Irrigation Company

| MITIGATION ACTION | DIVERSION DAM IMPROVEMENTS |
|----------------------------|---|
| DESCRIPTION | Perform improvements to the diversion dam such as adding natural rock, cleaning channel to headgate, breaking up sand, etc. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Minatare Mutual Canal and Irrigation Company |
| ESTIMATED COST | \$207,401 |
| FUNDING | Farmers' operation and maintenance fees |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Minatare Mutual Canal and Irrigation Company, Paul Reed Construction |
| STATUS | Channel has been cleaned and sand was bulldozed in May 2021. |

Mitchell Irrigation District

| MITIGATION ACTION | CANAL RE-SLOPING |
|----------------------------|--|
| DESCRIPTION | Perform canal re-sloping to provide better flow |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Mitchell Irrigation District |
| ESTIMATED COST | \$10,000+ |
| FUNDING | Irrigation District General Fund |
| TIMELINE | Ongoing |
| PRIORITY | Medium |
| LEAD AGENCY | Mitchell Irrigation District Board |
| STATUS | The project has begun and is performed annually during the winter. |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| MITIGATION ACTION | DIVERSION DAM AND HEADGATE IMPROVEMENTS |
|---------------------|--|
| DESCRIPTION | Perform improvements on the diversion dam and headgates when they experience damage. |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Mitchell Irrigation District |
| ESTIMATED COST | \$20,000+ |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Mitchell Irrigation District Board |
| STATUS | Not started. |

Nine Mile Irrigation District

| MITIGATION ACTION | SUPPLEMENT SWIFF FUNDING |
|---------------------|---|
| DESCRIPTION | Supplement SWIFF funding to increase safety for employees |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Nine Mile Irrigation District |
| ESTIMATED COST | \$65,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Nine Mile Irrigation District Board, NeDNR |
| STATUS | Not started. |

| MITIGATION ACTION | REBUILD CREEK DIVERSION |
|---------------------|--|
| DESCRIPTION | Completely rebuild the district's creek diversion. |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Nine Mile Irrigation District |
| ESTIMATED COST | TBD |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ |
| PRIORITY | Low |
| LEAD AGENCY | Nine Mile Irrigation District Board |
| STATUS | Not started. |

| MITIGATION ACTION | SIPHON RE-LINING |
|---------------------|-------------------------------------|
| DESCRIPTION | Re-line siphon(s) |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Nine Mile Irrigation District |
| ESTIMATED COST | TBD |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ |
| PRIORITY | Low |
| LEAD AGENCY | Nine Mile Irrigation District Board |

| | |
|---------------|--------------|
| STATUS | Not started. |
|---------------|--------------|

| MITIGATION ACTION | SPILLWAY REINFORCEMENT |
|----------------------------|-------------------------------------|
| DESCRIPTION | Reinforce spillway(s) |
| HAZARD(S) | Drought/Flooding |
| IRRIGATION DISTRICT | Nine Mile Irrigation District |
| ESTIMATED COST | TBD |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 5+ |
| PRIORITY | Low |
| LEAD AGENCY | Nine Mile Irrigation District Board |
| STATUS | Not started. |

Northport Irrigation District

| MITIGATION ACTION | BURY PIPE FOR PROBLEM LATERALS |
|----------------------------|------------------------------------|
| DESCRIPTION | Bury pipe for problematic laterals |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Northport Irrigation District |
| ESTIMATED COST | To be determined |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Northport Irrigation District |
| STATUS | Not Started |

Pathfinder Irrigation District

| MITIGATION ACTION | CREATE A DISTRICT-WIDE MASTER PLAN TO PRIORITIZE ALL FLOOD RELATED PROJECTS |
|----------------------------|---|
| DESCRIPTION | Identify potential flooding sources and flood-vulnerable areas. Explore solutions and prioritize. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$2,000 |
| FUNDING | North Platte NRD, local counties and communities |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board |
| STATUS | Currently working to identify flood-vulnerable areas, but a formal plan has not been started. |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| MITIGATION ACTION | DEVELOP A DROUGHT MANAGEMENT PLAN |
|----------------------------|--|
| DESCRIPTION | Work with relevant stakeholders to develop a drought management plan. The plan would identify water monitoring protocols, outline drought responses, identify opportunities to reduce water consumption, and establish the jurisdictional management procedures. |
| HAZARD(S) | Drought |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$2,000 |
| FUNDING | North Platte NRD, nearby irrigation districts |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board |
| STATUS | Water monitoring procedures are in place, but a formal drought plan has not yet started. |

| MITIGATION ACTION | DRAINAGE STUDY/ STORM WATER MASTER PLAN |
|----------------------------|---|
| DESCRIPTION | Preliminary drainage ditches and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Storm water master plans can be developed to help identify storm water problem areas and potential drainage improvements. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$5,000 |
| FUNDING | North Platte NRD, local counties |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board |
| STATUS | Currently working to identify flood-vulnerable areas, but a formal plan has not been started. |

| MITIGATION ACTION | EMERGENCY EXERCISE: HAZARDOUS SPILL |
|----------------------------|--|
| DESCRIPTION | Utilize exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place. |
| HAZARD(S) | Hazardous Materials – Transportation |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$3,000 |
| FUNDING | North Platte NRD, Union Pacific/BNSF railroads, nearby irrigation districts |
| TIMELINE | 5+ years |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board |
| STATUS | Not started |

| MITIGATION ACTION | GROUNDWATER/ IRRIGATION/WATER CONSERVATION MANAGEMENT PLAN AND PRACTICES |
|----------------------------|---|
| DESCRIPTION | Develop and implement a plan/ best management practices to conserve water use and reduce total use (high water use to low water use) and consumption of groundwater resources by citizens and irrigators of agricultural land during elongated periods of drought. Identify water saving irrigation projects, such as sprinkler systems with soil moisture sensors. Potential restrictions on water could include limitation on lawn watering, car washing, farm irrigation restrictions, or water sold to outside sources. Implement BMPs through water conservation practices such as changes in irrigation management, education on no-till agriculture and use of xeriscaping in communities. |
| HAZARD(S) | Drought |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$3,000 |
| FUNDING | North Platte NRD |
| TIMELINE | Ongoing |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board, North Platte NRD |
| STATUS | Ongoing |

| MITIGATION ACTION | MONITOR DROUGHT CONDITIONS |
|----------------------------|--|
| DESCRIPTION | Jurisdictions can establish specific drought monitoring protocols. These protocols will serve as triggers for implementing drought response actions. |
| HAZARD(S) | Drought |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$1,000 |
| FUNDING | North Platte NRD, nearby irrigation districts |
| TIMELINE | Ongoing |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board, North Platte NRD |
| STATUS | Ongoing |

SECTION SEVEN: IRRIGATION DISTRICTS PROFILE

| MITIGATION ACTION | REMOTE GATE CONTROLS FOR FLOOD EVENTS |
|---------------------|--|
| DESCRIPTION | Often, during a flood event, the Pathfinder Irrigation District would like to open gates to divert flood waters onto spillways. However, staff members have struggled to gain access to these gates during flooding events due to flood waters on roadways. The district is interested in exploring the possibility of a remote gate control, to control the gates without being physically present. |
| HAZARD(S) | Flooding |
| IRRIGATION DISTRICT | Pathfinder Irrigation District |
| ESTIMATED COST | \$50,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | Ongoing |
| PRIORITY | Medium |
| LEAD AGENCY | Pathfinder Irrigation District Board, North Platte NRD |
| STATUS | Not Started |

Short Line Irrigation District

| MITIGATION ACTION | DIVERSION AND SPILL IMPROVEMENTS |
|---------------------|--------------------------------------|
| DESCRIPTION | Improve diversion and spill. |
| HAZARD(S) | Flooding, Severe Thunderstorms |
| IRRIGATION DISTRICT | Short Line Irrigation District |
| ESTIMATED COST | \$500,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Short Line Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | SPILLWAY AT CURRENT HEADGATES |
|---------------------|---|
| DESCRIPTION | Improve/add spillway at current headgates |
| HAZARD(S) | Flooding, Severe Thunderstorms |
| IRRIGATION DISTRICT | Short Line Irrigation District |
| ESTIMATED COST | \$200,000 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 1 year |
| PRIORITY | High |
| LEAD AGENCY | Short Line Irrigation District Board |
| STATUS | Not Started |

| MITIGATION ACTION | JUNCTION BOX WITH HEADGATES |
|---------------------|---|
| DESCRIPTION | Improve/add junction box with headgates |
| HAZARD(S) | Flooding, Severe Thunderstorms |
| IRRIGATION DISTRICT | Short Line Irrigation District |
| ESTIMATED COST | \$250,000 |
| FUNDING | Irrigation District General Fund |

| | |
|--------------------|--------------------------------------|
| TIMELINE | 2-5 years |
| PRIORITY | Medium |
| LEAD AGENCY | Short Line Irrigation District Board |
| STATUS | Not Started |

Winters Creek Canal Company

| MITIGATION ACTION | NORTH PLATTE RIVER DIVERSION REPLACEMENT |
|----------------------------|--|
| DESCRIPTION | Replace North Platte River Diversion structure |
| HAZARD(S) | Flooding, Dam Failure |
| IRRIGATION DISTRICT | Winters Creek Canal Company |
| ESTIMATED COST | \$1,069,920 |
| FUNDING | Canal Company General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Winters Creek Canal Company Board |
| STATUS | Inquiring about quotes |

| MITIGATION ACTION | WINTERS CREEK DIVERSION REPLACEMENT |
|----------------------------|---|
| DESCRIPTION | Replace Winters Creek Diversion structure |
| HAZARD(S) | Flooding, Dam Failure |
| IRRIGATION DISTRICT | Winters Creek Canal Company |
| ESTIMATED COST | \$660,720 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | High |
| LEAD AGENCY | Winters Creek Canal Company Board |
| STATUS | Inquiring about quotes |

| MITIGATION ACTION | CHECK STRUCTURE AUTOMATION REPLACEMENT |
|----------------------------|--|
| DESCRIPTION | Replace Check Structure Automation |
| HAZARD(S) | Flooding, Dam Failure |
| IRRIGATION DISTRICT | Winters Creek Canal Company |
| ESTIMATED COST | \$83,040 |
| FUNDING | Irrigation District General Fund |
| TIMELINE | 2-5 years |
| PRIORITY | Low |
| LEAD AGENCY | Winters Creek Canal Company Board |
| STATUS | Inquiring about quotes |