

# **District Profile**

## **Upper Republican Natural Resources District**

**Perkins, Chase, and Dundy Counties Multi-Jurisdictional  
Hazard Mitigation Plan Update**

**2020**

## Local Planning Team

**Table NRD.1: Upper Republican NRD Local Planning Team**

Name	Title	Jurisdiction
Julia Strand	Water Program Specialist	Upper Republican NRD

## Location and Geography

The Upper Republican Natural Resources District (NRD) is located in the southwestern corner of Nebraska and is comprised of Perkins, Chase, and Dundy Counties. The Republican River runs west to east along the southern edge of the NRD. Other important waterways include Arikaree River, Spring Creek, Buffalo Creek, Frenchman Creek, Enders Reservoir, and Stinking Water Creek. The NRD spans 1,729,280 acres and thirteen communities.

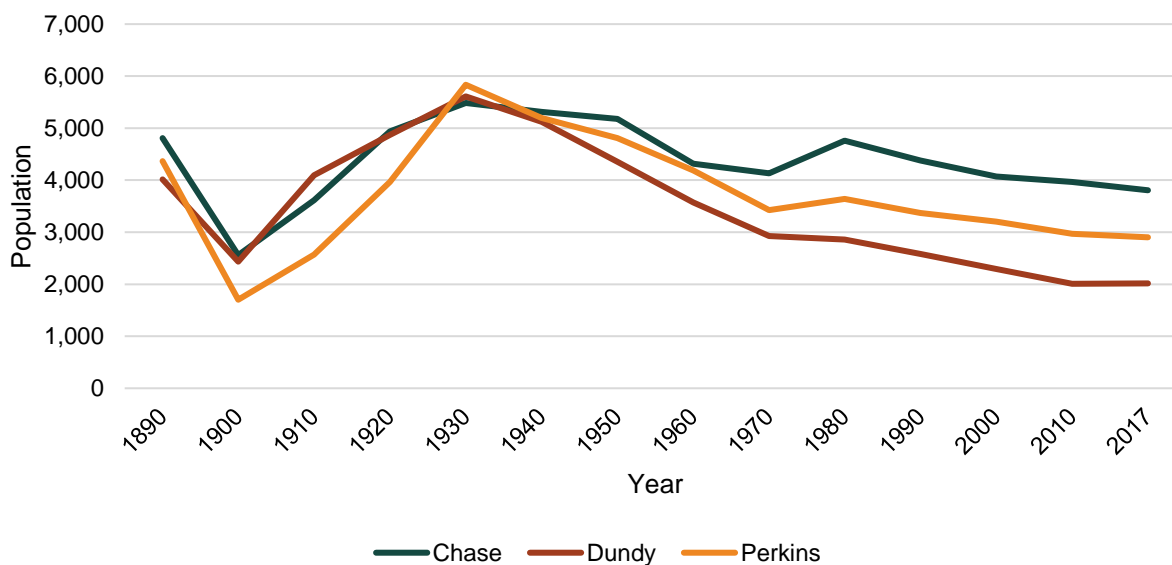
## Transportation

Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community and areas more at risk of transportation incidents. The NRD’s major transportation corridors include US Highways 6 and 34 and Nebraska State Highways 23 and 61. Amtrak, Burlington Northern Santa Fe Railway, and Nebraska Kansas Colorado Railway all own rail lines that travel through the NRD. There are two municipal airports located in the NRD at Grant and Imperial.

## Demographics

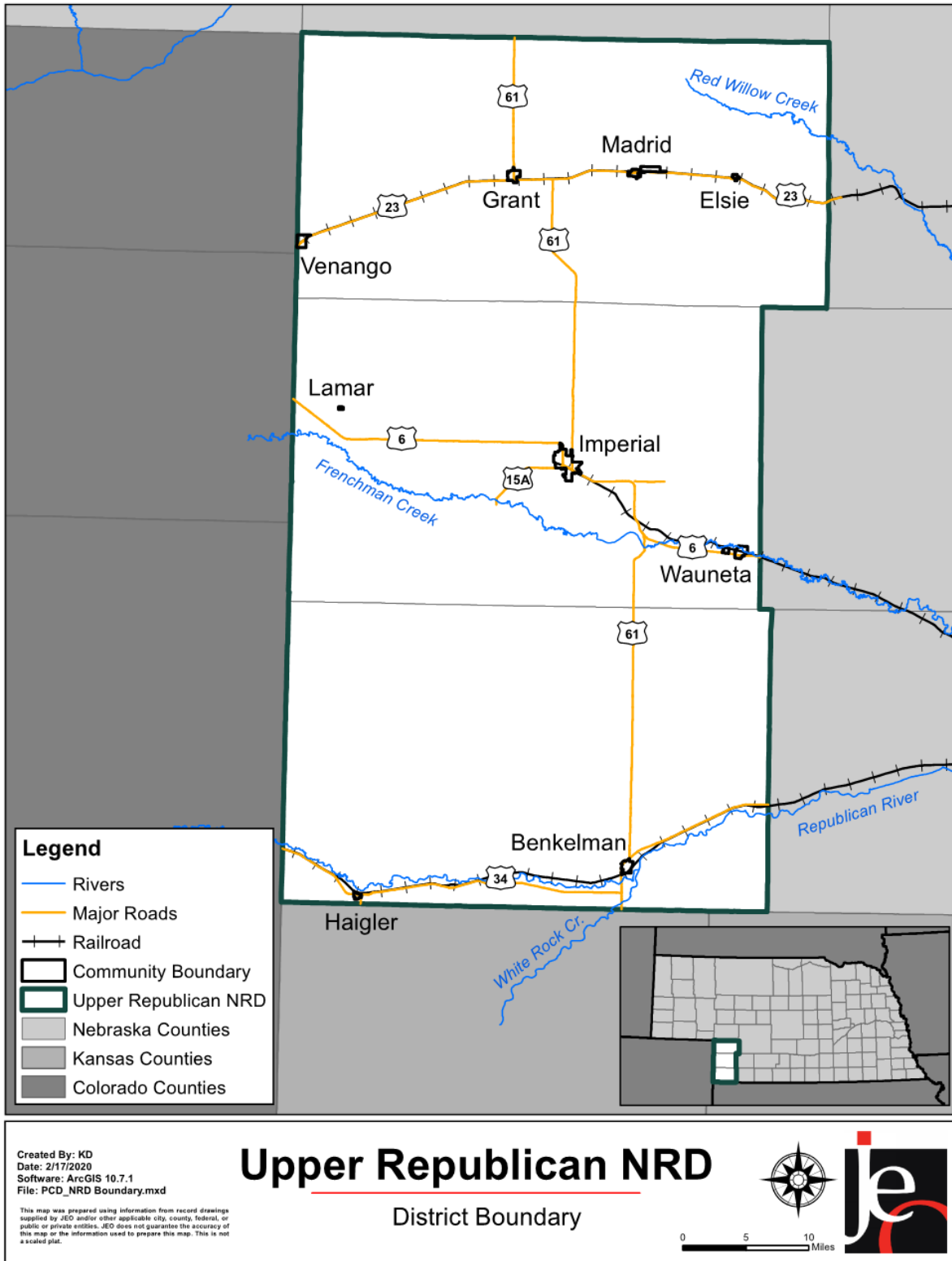
The NRD does not collect demographic information of their population. However, the boundary for the Upper Republican NRD covers all of Perkins, Chase, and Dundy Counties, so the U.S. Census Bureau can be used to estimate the population. In 2017 the NRD serves an estimated population of 8,724.<sup>1</sup> The population in all three counties has been declining since 1980. For more detailed demographic, housing, and economic information, please refer to specific community and county profiles or to *Section Three: Planning Area Profile*.

**Figure NRD.1: NRD Population by County**



<sup>1</sup> United States Census Bureau. "American Fact Finder: S0101: Age and Sex." [database file]. <https://factfinder.census.gov/>.

Figure NRD.2: Upper Republican NRD



## Future Development Trends

Over the past five years, the NRD has not made any significant changes to buildings or recreation areas. In the next five years, no new projects are planned for the NRD.

## Parcel Improvements and Valuation

Please refer to specific county and community profiles for information regarding parcel improvements and valuations across the NRD.

## Critical Infrastructure/Key Resources

### Chemical Storage Fixed Sites

Chemical sites are located throughout the NRD. Chemical storage sites in each county and community may be found in their profile.

### Critical Facilities

The planning team identified critical facilities necessary for the NRD’s disaster response and continuity of operations. The following table and figure provide a summary of the critical facilities for the NRD.

**Table NRD.2: Critical Facilities**

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	In Floodplain (Y/N)
1	Imperial Office Building	N	N	N

## Historical Occurrences

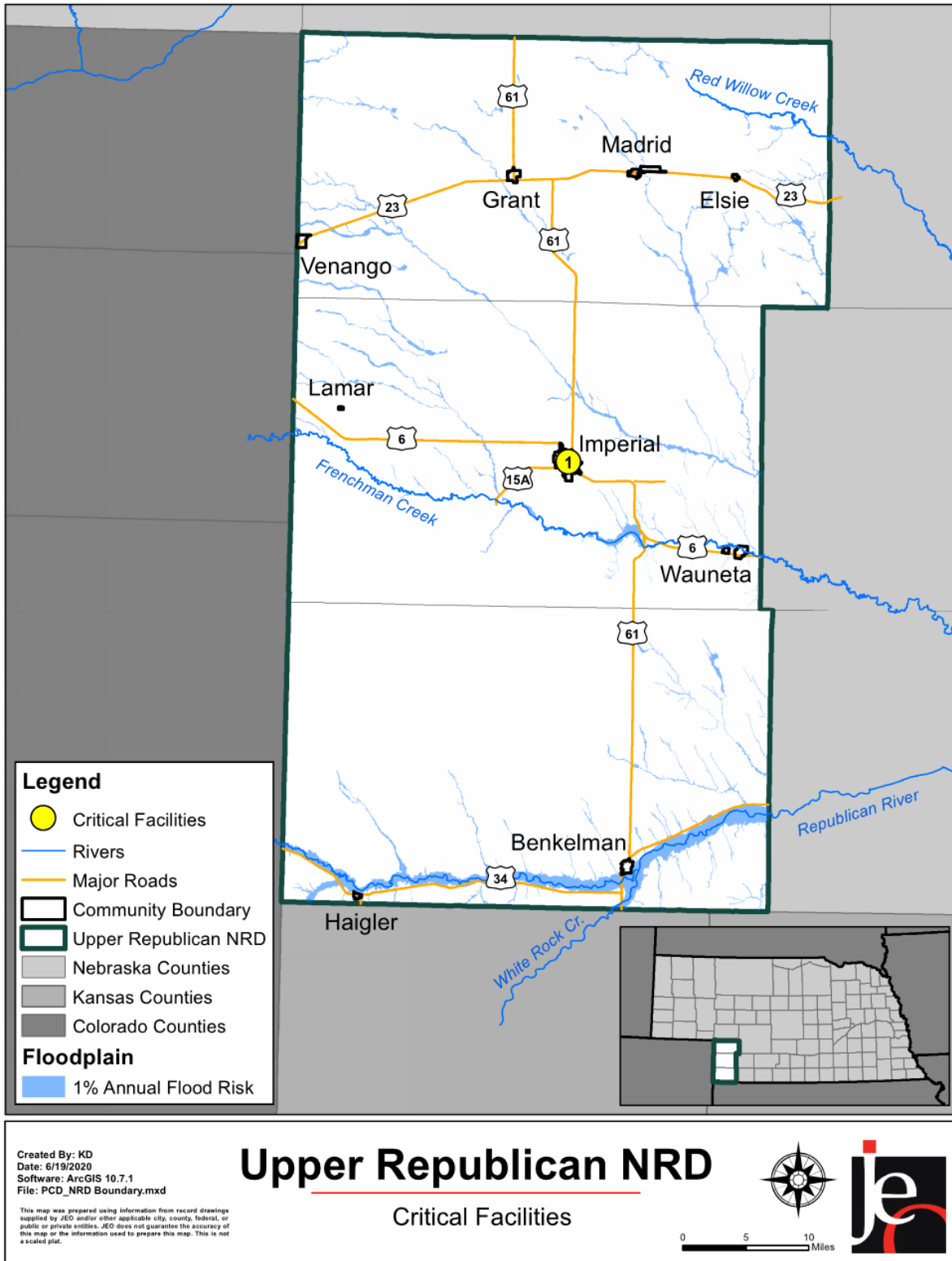
For a complete discussion on historical occurrences, please refer to *Section 4: Risk Assessment*.

The following table provides a summary of hazards that have affected or have the potential to affect the Upper Republican NRD. The district was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 12 hazards profiled in this plan. The evaluation process was based on data collected; previous impacts or the potential for impacts to infrastructure, critical facilities, people, and the economy; and the proximity to certain hazards such as dams.

**Table NRD.3: Upper Republican NRD Hazard Matrix**

Hazard	Upper Republican NRD
Ag. Disease	X
Dam Failure	X
Drought	X
Extreme Heat	X
Flooding	X
Hazardous Materials Release	X
Severe Thunderstorms	X
Severe Winter Storms	X
Terrorism	X
Tornadoes and High Winds	X
Transportation Incidents	X
Wildfires	X

Figure NRD.3: Critical Facilities



## Hazard Prioritization

The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the district. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the district's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

### Drought

The primary concern related to drought is increased irrigation water use during drought conditions. This increase in water use can deplete groundwater supplies and impact municipal wells used for drinking water. The most recent drought event occurred in 2012 and resulted in increased water use and decreased groundwater levels. Groundwater irrigators get their water from the Ogallala Aquifer. The NRD monitors yearly use with meters and monitors groundwater levels by measuring distance to water at wells throughout the district every year. Most areas of the district do not have issues with pollutant or nitrates, but some areas do have high nitrates. A drought plan for the Republican Basin is currently underway and will likely be completed in 2022. The NRD also has a water conservation plan in the Master Plan and Integrated Management Plan.

### Severe Thunderstorms

The primary concern related to severe thunderstorms are field technicians working out of the office being caught in a severe thunderstorm. In the spring/summer of 2019, several thunderstorms occurred throughout the district. These storms caused hail which damaged structures and crops. The office building was not damaged. If damages were to occur, the office is insured against hail damage. Some important records are backed up and the NRD is planning to continue to back up all files electronically. Notification of severe weather is received through websites, television, and CodeRED text alerts from the Chase County Emergency Management.

### Tornadoes and High Winds

In June 2020, a tornado was spotted near Imperial but never touched down. High winds have occurred throughout the district in 2020. In May 2019 multiple tornadoes touched down in Chase County. However, none of these events caused damage to NRD-owned structures. The NRD does not own any warning sirens but the City of Imperial does. The Imperial office building does not have a safe room, but interior rooms and bathrooms can be used for shelter. Currently the NRD does not conduct education or mitigation for tornadoes or high winds.

## Governance

The Upper Republican NRD is governed by an 11-member board of directors, entrusted with a broad range of responsibilities to protect and enhance Nebraska's many natural resources. It has the capability to financially and administratively assist villages, cities, counties, drainage and levee districts, and other special districts with mitigation actions, most commonly water quality management, forestry and range management, flood control, and drainage improvements. The NRD employs personnel in the following offices and roles.

- General Manager
- Office Manager/Administrative Assistant
- Assistant Managers
- Water Program Specialist
- Conservation Programs Coordinator
- Information and Education Specialist
- Conservation Technicians

- Field Office Secretaries

## Capability Assessment

The NRD has the authority to levy taxes for specific purposes and to issue general obligation bonds to finance certain projects. The NRD also regularly engages in public education programs related to hazard mitigation. The following table summarizes the NRD’s overall capability to implement mitigation projects.

**Table NRD.3: Overall Capability Assessment**

Overall Capability	Limited/Moderate/High
Financial resources needed to implement mitigation projects	Limited
Staff/expertise to implement projects	Moderate
Community support to implement projects	Moderate
Time to devote to hazard mitigation	Moderate

## Plan Integration

The Upper Republican Natural Resources District has several plans which integrate the goals, objectives, and projects identified in this HMP.

### Master Plan – 2019

This plan includes the overall goals and objectives for the NRD, many of which directly relate to the goals of the HMP. For example, groundwater management, pollution control, and prevention of damages from floodwater are all goals of the NRD. The plan also discusses fiscal policy, governance, district history, and natural resource challenges. Updates to the Master Plan occur every ten years, with the next update scheduled for 2029.

### Long Range Implementation Plan – 2019

The purpose of this plan is to “summarize planned district activities and needs” for the next five years. It also is intended to “help guide decisions for the District, inform the public of the district’s plans, and help with budget preparations.” Many of the projects and programs such as well permitting, monitoring groundwater levels, working with entities to implement hazard mitigation projects, and flood prevention and control are consistent with the goals and objectives of the HMP. The Long Range Implementation Plan is updated annually.

### Groundwater Management Plan – 1995

This plan looks at both groundwater quantity and groundwater quality within the district. The goals of the plan are as follows. 1. Conduct a groundwater program that will keep groundwater levels at present level or at a minimum possible decline to ensure future generations an adequate water supply. 2. Improve overall efficiency to plant nutrient and water application management to keep chemicals in the groundwater as low as possible for the benefits of all concerned. These goals directly relate to the goals and objectives in the HMP. At this time, the groundwater management plan is being updated and will likely be completed in early 2022.

### Integrated Management Plan – 2016

The purpose of this plan is to sustain a “balance between water uses and water supplies so that the economic viability, social and environmental health, safety, and welfare of the river basin can be achieved and maintained for both the near term and long term.” Goals and objectives in the

plan are consistent with the goals and objectives outlined in the HMP. The plan specifically evaluates the Republican River Water Supply and addresses required actions that must be taken.

### Republican River Basin-Wide Plan -2019

This plan was jointly developed by the Upper Republican NRD, Middle Republican NRD, Lower-Republican NRD, Tri-Basin NRD, and the Nebraska Department of Natural Resources. The plan’s purpose is to collaboratively manage hydrologically connect water resources within the Republican River basin in order to sustain a balance between water uses and water supplies. Goals include maintaining Nebraska’s compliance with the Republican River Compact, maximize efficient consumptive use of the water supply, and pursue projects that benefit water supplies and uses.

The NRD also has Groundwater Rules and Regulations and assists communities in creating Wellhead Protection Plans. No other examples of plan integration were identified. The district will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates. Specifically, the district plans to update the Long Range Implementation Plan and Master plan. These updates should integrate the goals, objectives, and mitigation actions from the HMP.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup Records
<b>Description</b>	Develop protocol for backing up critical records onto a portable storage device or service. Maintain routine backup of records.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Staff Time
<b>Funding</b>	Staff Time
<b>Timeline</b>	1 Year
<b>Priority</b>	Medium
<b>Lead Agency</b>	Office Manager/Administrative Assistant
<b>Status</b>	New Action. Not Started.

Mitigation Action	Upgrade Communication Systems
<b>Description</b>	Upgrade radio systems and office phone systems to better reach and communicate with employees working out of office, especially in case of emergency.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$5,000
<b>Funding</b>	Yearly Budget
<b>Timeline</b>	1 Year
<b>Priority</b>	High
<b>Lead Agency</b>	General Manager, Office Manager/Administrative Assistant
<b>Status</b>	New Action. Not Started.