

# Republican River Drought Scenario Exercise

Republican River Basin-Wide Plan Annual Meeting  
11/15/2020

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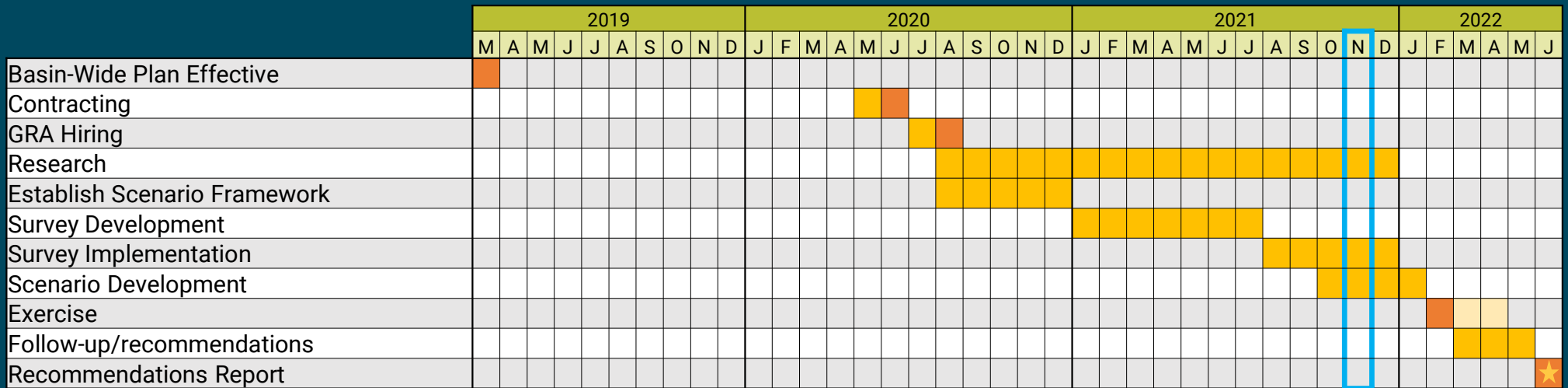
# Basin-Wide Plan Goals and Objectives

- **Action Item 2.8.1:** Organize and participate in a basin-wide drought planning exercise
  - Increasing understanding of the needs for and logistics of storing water for use during a drought
  - Evaluating existing and potential new management actions to determine the long-term availability trends that provide carry-over storage to meet crop-water needs during drought
  - Developing metrics that could be used to evaluate whether conservation of water for future use during a drought is successful.
  
- **Action Item 2.8.2:** Following the drought planning exercise evaluate whether to recommend any changes to the IMPs or this Plan related to conservation of water for future use during a drought.
  
- **Any recommended changes will need to be addressed as part of the 5yr technical analysis.**

# Partners

- Republican River Basin NRDs
  - URNRD, MRNRD, LRNRD, TBNRD
- Nebraska Department of Natural Resources
- National Drought Mitigation Center
  - Graduate Research Assistant, Andrew Mwape

# Project Timeline



# 2020-2021 Progress

## ➤ Exercise Framework

- Hybrid workshop/tabletop exercise
  - Workshop: Identify and prioritize uncertainties in water resource planning
  - Tabletop: Review existing planning documents and apply them to hypothetical scenarios
    - Basin-Wide Plan
    - IMPs
    - Republican River Compact
    - NRD documents
      - ❖ Rules & Regulations
      - ❖ Groundwater Management Plans

## Drought Impacts Survey

- Developed Spring/Summer 2021
- Distributed Fall 2021 (Through 11/30/21)
  - NRDs
  - Municipal water
  - Emergency management
  - NeDNR social media
  - Basin-Wide Plan mailing list
- <https://go.unl.edu/rrbdimpacts>

## ➤ Scenario Development

- Currently ongoing

# Moving Forward

## ➤ December 2021 / January 2022

- Develop scenarios using Basin-Wide forecasting methods
  - Based on historical data
    - 2012 drought (“flash drought” characteristics)
    - “Dust Bowl” (extended drought)
- Schedule exercise
- Identify and invite participants
  - NRDs
  - NeDNR (Surface Water)
  - Irrigation Districts
  - Municipal Water
  - Emergency Management
  - Producers

## ➤ February – April 2022

- Drought Planning Exercise
  - One day event
    - 3-hour morning session
    - Working lunch
    - 3-hour afternoon session
  - Areas of Focus
    - Potential for water storage
    - Communication between water users and regulatory agencies
    - Identify gaps or deficiencies in existing management tools
    - Identify potential points of conflict

## ➤ After Exercise – June 2022

- Exercise recap and recommendations report

NEBRASKA

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# THANK YOU

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