



Leveling Up Drought Plans to Build Resiliency in the Great Plains

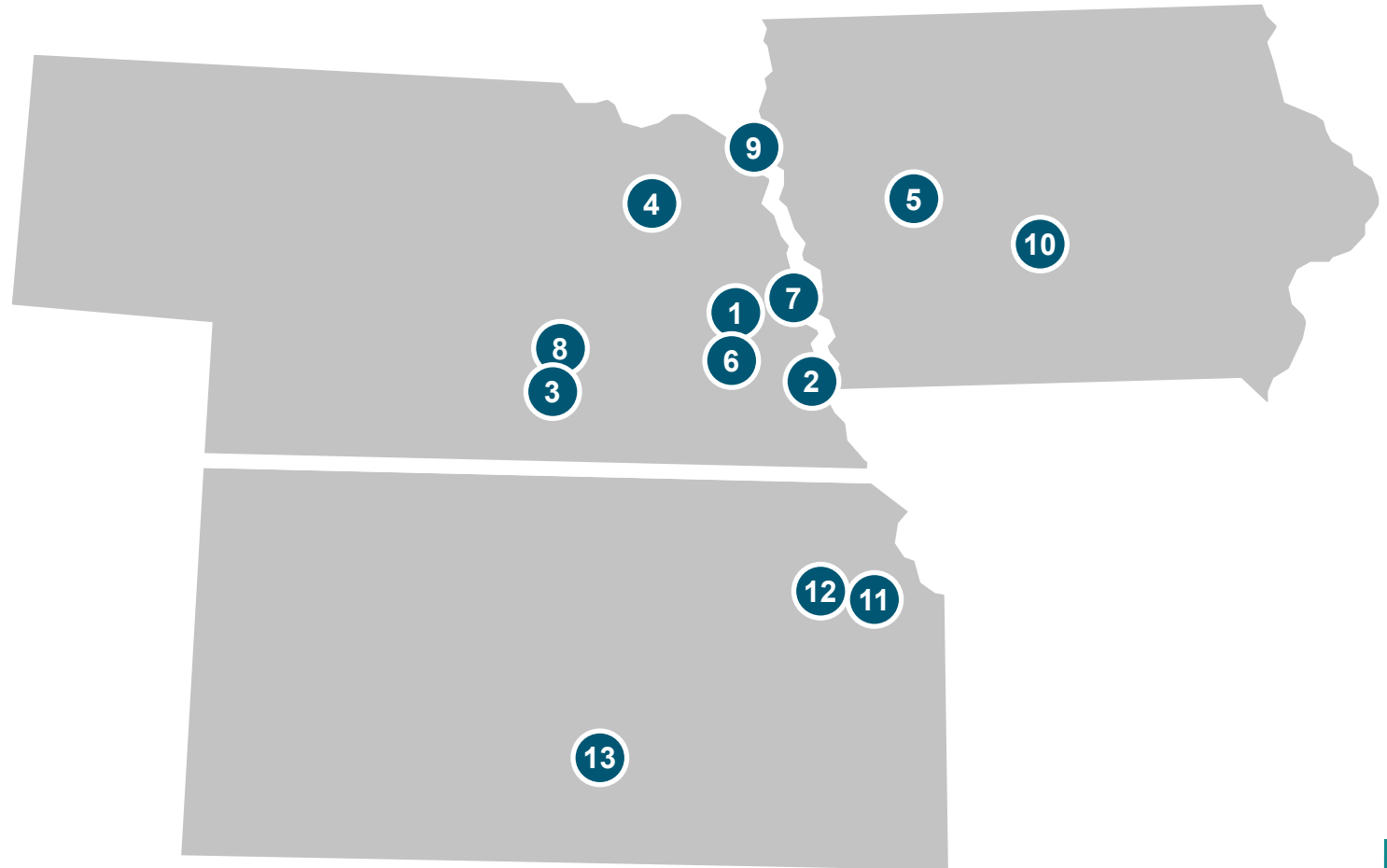
JEO Consulting Group
Nicole Wall & Becky Appleford

Hello!



JEO Locations

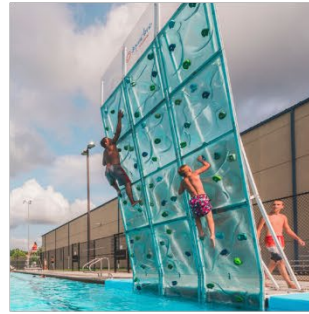
- 1 Wahoo, NE • 1937
- 2 Nebraska City, NE • 1981
- 3 Hastings, NE • 1986
- 4 Norfolk, NE • 1987
- 5 Carroll, IA • 1996
- 6 Lincoln, NE • 2001
- 7 Omaha, NE • 2006
- 8 Grand Island, NE • 2006
- 9 South Sioux City, NE • 2009
- 10 Ankeny, IA • 2013
- 11 Lawrence, KS • 2019
- 12 Topeka, KS • 2020
- 13 Wichita, KS • 2020



JEO Services

- Multi-disciplinary firm
- Over 300 employees
- Serving:
 - Municipalities
 - Counties
 - Large Utilities
 - State DOTs and Agencies
 - Natural Resources Districts and Watersheds
 - Others

Hazard Mitigation and
Emergency Planning Services



Aquatics & Recreation



Architecture



Community Engagement



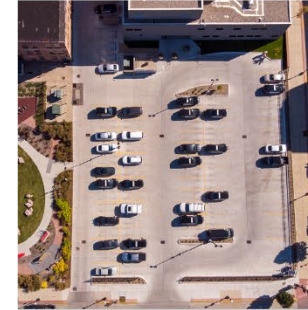
Construction Inspection



Electrical



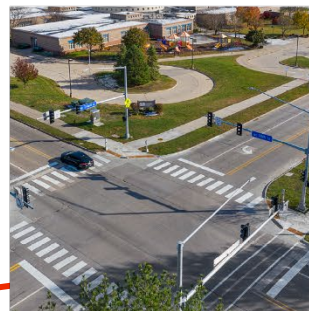
Environmental



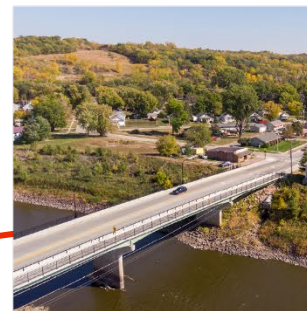
Land/Site Development



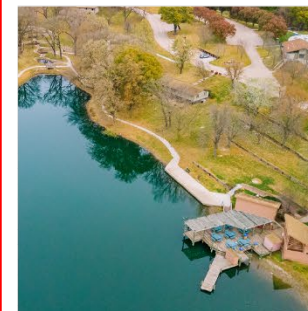
Survey



Traffic and Technology



Transportation



Water Resources



Water/Wastewater



Water Resources

Hazard Mitigation and Emergency Planning



Our Services

Planning

- Hazard Mitigation Plans
- **Drought Management Plans**
- Threat and Hazard Identification and Risk Assessment
- **Continuity of Operations Plans**
- Community Wildfire Protection Plans
- Benefit Cost Analysis
- Community Rating System

- **Debris Management Plans**
- Floodplain Management
- **Emergency Preparedness Plans**
- Emergency Action Plans
- Evacuation Route Mapping/ Planning
- **Parcel-Level Flood Analysis**
- Mitigation Grant Assistance

Exercises

- **Drought Tournaments**
- Wildfire Planning Tournaments
- Evacuation Planning Exercises
- **Levee and Dam Failure Exercises**

Geographic Service Areas:

- 1st - Colorado, Nebraska, Iowa, Kansas
- 2nd - South Dakota, Montana, Wisconsin, others

Service Types:

- Municipalities
- Natural Resources Districts
- Tribal Nations

Leveling Up from HMP to DMP



- HMP development and updates since 2008
 - Multi-Jurisdictional Participation
 - 1 Representative/Jurisdiction
 - Multi-Hazard
 - Risk Assessments
 - Mitigation Strategy
 - Plan Maintenance
- Drought tournaments and planning since 2015
 - Single Jurisdiction
 - **Multiple stakeholders engaged***
 - Drought focused
 - **Robust risk and vulnerability assessment**
 - **Monitoring**
 - **Response Protocols**
 - **Mitigation and Management**
 - Plan Maintenance

Challenges to Leveling Up

- How do we help our communities understand the benefits of drought planning? Many are “flood-focused”
- Communities have limited resources – time, funding, staff
- Lack of public awareness
- Implementing drought mitigation projects
- Authority vs. willingness to enforce restrictions
- Addressing rapid transitions





JEO Drought Planning Examples



**As we
know...**

Drought is not just “cracked” earth





All Drought is Local

... well most of the time

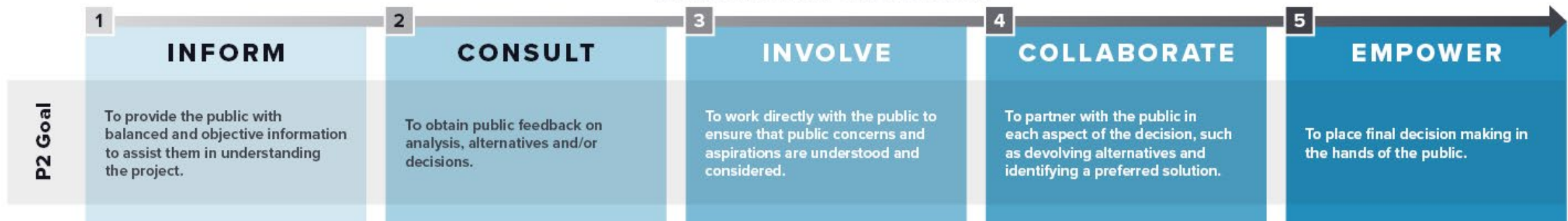


The Role of Public Engagement

International Association of Public Participation (IAP2) Spectrum

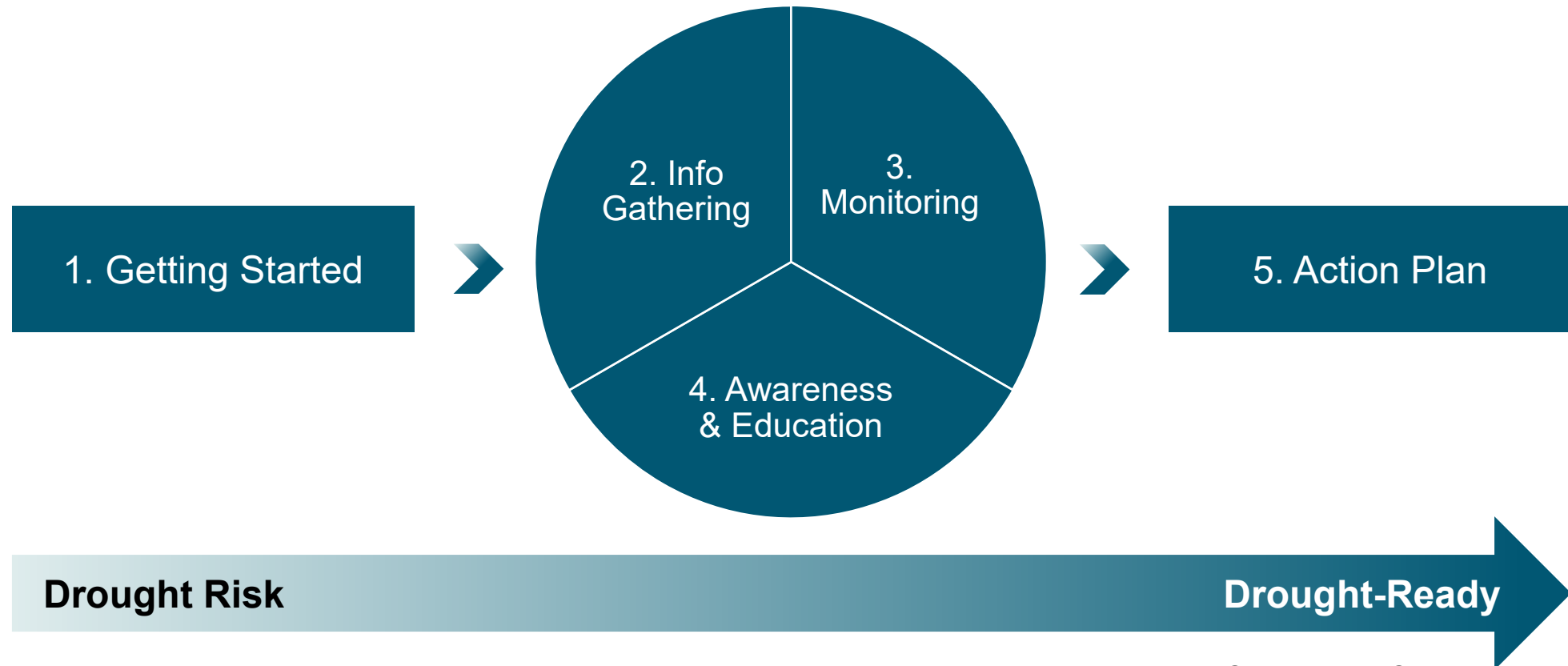
Each project is different – need to assess the engagement goal and/or risks to choose the best path forward

INCREASING IMPACT ON THE DECISION



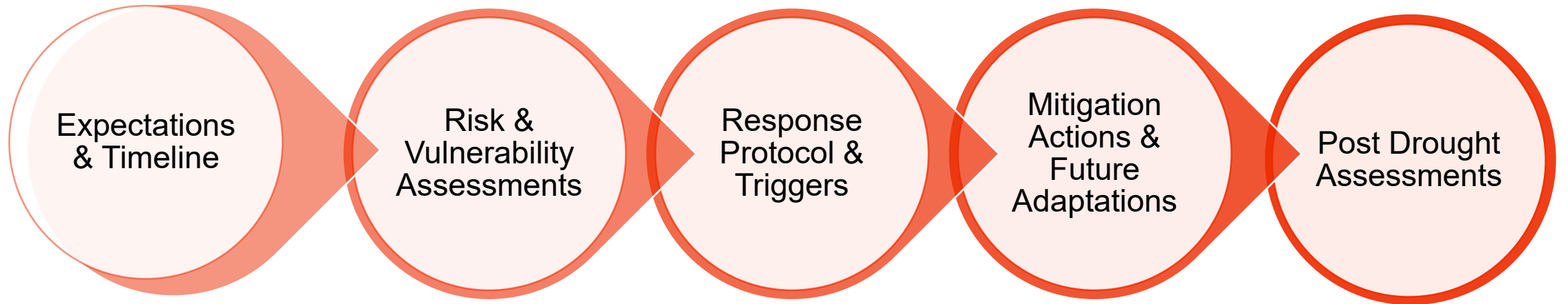
The Importance of Drought Planning & Public Engagement

Be drought ready, not drought proof



Credit: NDMC

JEO Process of Drought Planning



Recent Drought Planning Efforts

- Fort Peck Tribes (Montana)
- Community of Auburn (Nebraska)
- Lower Loup Natural Resources District (Nebraska)

Fort Peck Tribes Drought Planning

- **Purpose:** To update their 2005 Drought Mitigation Plan. Their primary drought indicators (Surface Water Supply Index) used had not been updated since 2018
- **Goals:** Needed a plan that incorporated both regional drought monitors and local tribal observations and data.
- **Outcome:** Still in process.
- **Comments:** COVID-19 Pandemic and Engagement



Community of Auburn, NE

- **Purpose:** Needed a plan that would address current concerns as well as provide the flexibility to address future changes.
- **Goals:** To address and plan for future droughts that have a direct and heavy impact on city water wells. (Little Nemaha River/surface water dependent)
- **Comments:** Neighboring communities may link to the main water provider for Auburn. This would then in turn force the community to link themselves to the Missouri River.



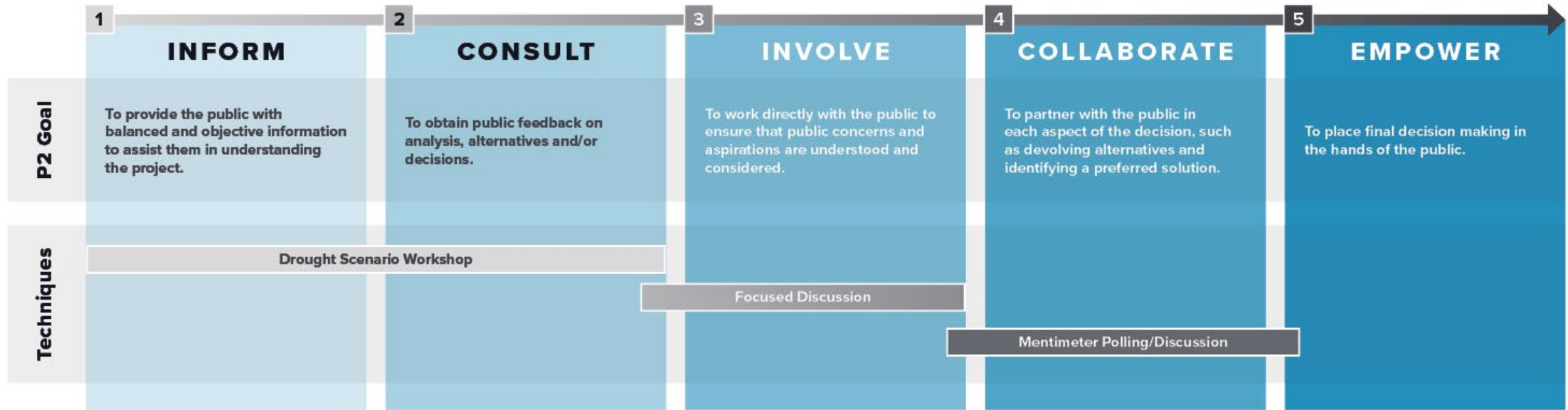
Lower Loup Natural Resources District (NE)

- **Purpose:** To establish a solid drought management plan during the current climate conditions and to plan for future mitigation actions.
- **Goals:** To engage their extensive network of stakeholders for drought and water management decision. Followed the IAP2 framework.
- **Outcome:** Soon to be adopted by the Board of Directors



IAP2 & Drought Mitigation for the Lower Loup NRD

INCREASING IMPACT ON THE DECISION



The above graphic is an adaption of IAP2's Spectrum of Public Participation

Paired Sharing Activity

Based on what you have heard so far, find someone in the room you don't know very well; introduce yourself.

Interview each other based on this question:

- How would you address the needs of drought planning at the local level to compliment and enhance state and federal levels of planning? What kind of engagement techniques would you suggest?

Report out what you have learned from your new colleague.





Contact Us

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