Appendix A: MLS-TRIAD: Tribal Drought Resilience Plan Checklist

Background and purpose

This checklist was developed in response to a drought survey completed by MLS-TRIAD Workshop participants indicating that a checklist for developing a drought mitigation plan would be a useful resource to support their Tribe's drought resilience.

This checklist draws from the California Department of Water Resources' "County Drought Resilience Plan Guidebook", [Guidebook], which helps counties support small water suppliers and rural communities in reducing water shortage risks.

Tribes may use or adapt this checklist to mitigate the impacts of drought, including impacts on drinking water, local food sources, ecosystems, and cultural water uses.

How to use this checklist

This checklist outlines actions that can help users in developing a Drought Mitigation Plan or be included in a plan. The checklist is intended to be simple to understand and adaptable, so that Tribes can select and scale activities that best suit their needs, resources, and time. The checklist references the Guidebook for further details or examples.

Checklist overview

The checklist is divided into the following sections:



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1. Develop a Tribal Drought Task Force

Purpose: Lead the preparedness planning for Tribal water systems, domestic wells, ecological health, and cultural resources against water shortages caused by droughts, wildfires, or water quality issues.

Recommended actions:

- [ ] Establish the purpose and goals of the Task Force (include water security, food sovereignty, ecological resilience, and cultural protection).
- [ ] Plan and initiate membership (include Tribal leaders, water system managers, cultural practitioners, fisheries/wildlife experts, and community members). As needed, identify external technical support (e.g., engineers, hydrologists, ecologists).
- [ ] Determine group and individual roles and responsibilities.
- [ ] Schedule meeting plan for development and implementation of Drought Resilience/Management Plan.
- [ ] Initiate process and establish methods of communication with the community.

2. Perform Risk Assessment

Purpose: Establish where and who is most at risk from drought. Use this assessment as a roadmap for what risks should be addressed in the Drought Resilience/Management Plan.

Recommended actions:

- [ ] Map water system(s), domestic wells, springs, streams, wetlands, and culturally important water sources.
- [ ] Map and review water supplies for all critical facilities (clinics, schools, emergency shelters, cultural centers).
- [ ] Identify drought risks and local vulnerabilities. Use local knowledge, traditional ecological knowledge, and data tools (p. 3–5 of Guidebook).
- [ ] Determine which risks to include in the Plan.

Consider 3 categories of risk management:

1. Develop a strategy to mitigate risks that are well-understood and need action
2. Gather information on risks that need more evaluation or data before deciding an action.
3. Continue monitoring risks that are lower priority or that are already managed, but should be tracked in case they become more serious.

How to Identify Drought Risks and Local Vulnerabilities

Describe Hazards

- Such as groundwater levels; water use; water quality; cyanobacteria/harmful algal blooms; climate projections/hazards
- Potential data sources:
  - US Drought Monitor
  - California WATER WATCH
  - California Groundwater Live
  - Cal Adapt

Define Scope of Community Hazards

- Potential data sources:
  - DWR Water Shortage Vulnerability Explorer
  - DWR Well Completion Report Website
  - DWR Water Shortage Vulnerability Tool
  - Water Board state small water system and domestic well data

Assess Vulnerabilities

- **Physical**: domestic wells, water infrastructure, spring flows (see Guidebook checklist, p. 3-11)
- **Social:** health impacts, low-income households, elders, and those with limited transportation (see Guidebook checklist, p. 3-14)
- **Ecological:** reduced streamflow, drying wetlands, fish die-offs, habitat loss, invasive species
- **Food system:** loss of access to fish, game, native plants, acorns, basket-weaving plants, and other subsistence resources
- **Cultural:** impacts on sacred springs, ceremonial water uses, and land-based practices

Analyze Risks

Possible method:

- Matrix of likelihood vs magnitude of consequence/event (see Guidebook, p. 3-19)

3. Develop Short-Term Response Actions

Purpose: Reduce community risks (as identified in step 2) during water shortages by planning for both drinking water and non-drinking water impacts.

Recommended actions:

- **General actions**

  ☐ Define triggers/thresholds for the activation of short-term response actions:
  - State or local drought emergency declarations.
  - Critical shortages in domestic wells or community water systems.
  - Ecological/cultural emergencies (e.g., fish kills, drying of culturally important springs, loss of wetland habitat).

  ☐ Establish method to collect reports from residents on drinking water and ecological/cultural impacts.

  ☐ Develop a communications plan to alert and direct residents during water shortages.

- **Drinking water response** (see Guidebook p. 4–14).
  If your water comes from a public water system, collaborate with them to understand their plans for providing drinking water during drought or emergencies.

  If your water comes from private wells or other sources (or if you operate your own public water system), you will need to do more planning, such as:

  ☐ Coordinate with large water systems for water filling stations.

  ☐ Explore feasibility of treating non-typical water supplies.

  ☐ Establish vendor agreements for packaged/bottled water.

  ☐ Engage with water hauling services for bulk water delivery (hospitals, clinics).

  ☐ Explore emergency mutual aid agreements with neighboring water systems.

  ☐ Explore physical “interties” (connections between water systems) that can be activated to provide backup during drought emergencies.

- **Non-drinking water response**
  - ☐ Identify food distribution support if traditional or subsistence food sources are disrupted.
  - ☐ Develop monitoring and reporting protocols for ecosystem distress (fish runs, drying creeks, reduced habiat).
  - ☐ Support cultural continuity by ensuring emergency access to springs or ceremonial water supplies.

4. Develop Long-Term Mitigation Strategies

Purpose: Create solutions that increase resilience of drinking water, ecosystems, food systems, and cultural practices.

Recommended actions:
Select the actions most relevant to your community's situation.

- **Domestic wells.** If you source any drinking water from private wells:
  - ☐ Create an inventory of wells.
  - ☐ Plan for testing and monitoring water levels and quality.
  - ☐ Develop mitigation strategies (e.g., deepen wells, filtration, pump replacement, consolidation).
  - ☐ Identify funding resources for well owners.
- **Drinking water system consolidation.** If your drinking water comes from one or more public water systems, work with the water system(s) to confirm that they are prepared for drought. Actions **they** should take include:
  - Assess physical, economic, legal, and socio-cultural barriers.
  - Gather input from the community.
  - Explore service agreements with potential suppliers.
  - Contact the Division of Drinking Water SAFER (Safe and Affordable Funding for Equity and Resilience) Engagement Unit and the State Water Board to discuss opportunities for consolidation and available funding.

- **Non-drinking water response**
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- **Ecological and food sovereignty strategies**
  - ☐ Protect and restore wetlands, riparian areas, and groundwater-dependent ecosystems.
  - ☐ Support traditional food systems by planting drought-resilient native species, restoring fish populations, and protecting gathering grounds.
  - ☐ Incorporate traditional ecological knowledge in drought planning and land management.
- **Cultural resilience strategies**
  - ☐ Identify and protect sacred springs, ceremonial water sources, and other cultural resources vulnerable to drought.
  - ☐ Collaborate with Tribal elders and cultural leaders to ensure that resilience strategies protect ceremonial practices, traditional food systems, and culturally significant species and places.
  - ☐ Coordinate with neighboring Tribes and land managers on watershed-scale solutions.
- **Data needs**
  - ☐ Identify missing datasets (e.g., fish counts, habitat extent, ecological health indicators).
  - ☐ Identify county, local, state, and federal agencies for data assistance.
  - ☐ Secure funding for ecological monitoring alongside water supply data.

5. Implement Plan

Purpose: Ensure the Drought Mitigation Plan is actionable, funded, and regularly updated.

Recommended actions:

- Assess opportunities to integrate drought planning with existing Tribal emergency management or climate adaptation plans.
- Assign responsibilities and deadlines for each step.
- Gauge resources needed and research funding options (water infrastructure, ecosystem restoration, food sovereignty, cultural heritage).

- [ ] Set intervals for regular evaluation and updating of the Plan.
- [ ] Continue Tribal Drought Task Force meetings to oversee implementation.
- [ ] Monitor progress across three domains:
    - Drinking water security.
    - Ecological health indicators (streamflow, wetland condition, fish/wildlife).
    - Cultural/food system health (access to subsistence foods, ceremonial water).

Drought conditions and community needs can change over time, and no plan needs to be perfect from the start. Revisiting and updating this checklist regularly is an important part of building drought resilience.