

Kansas Drought Plan

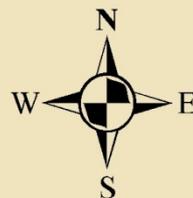
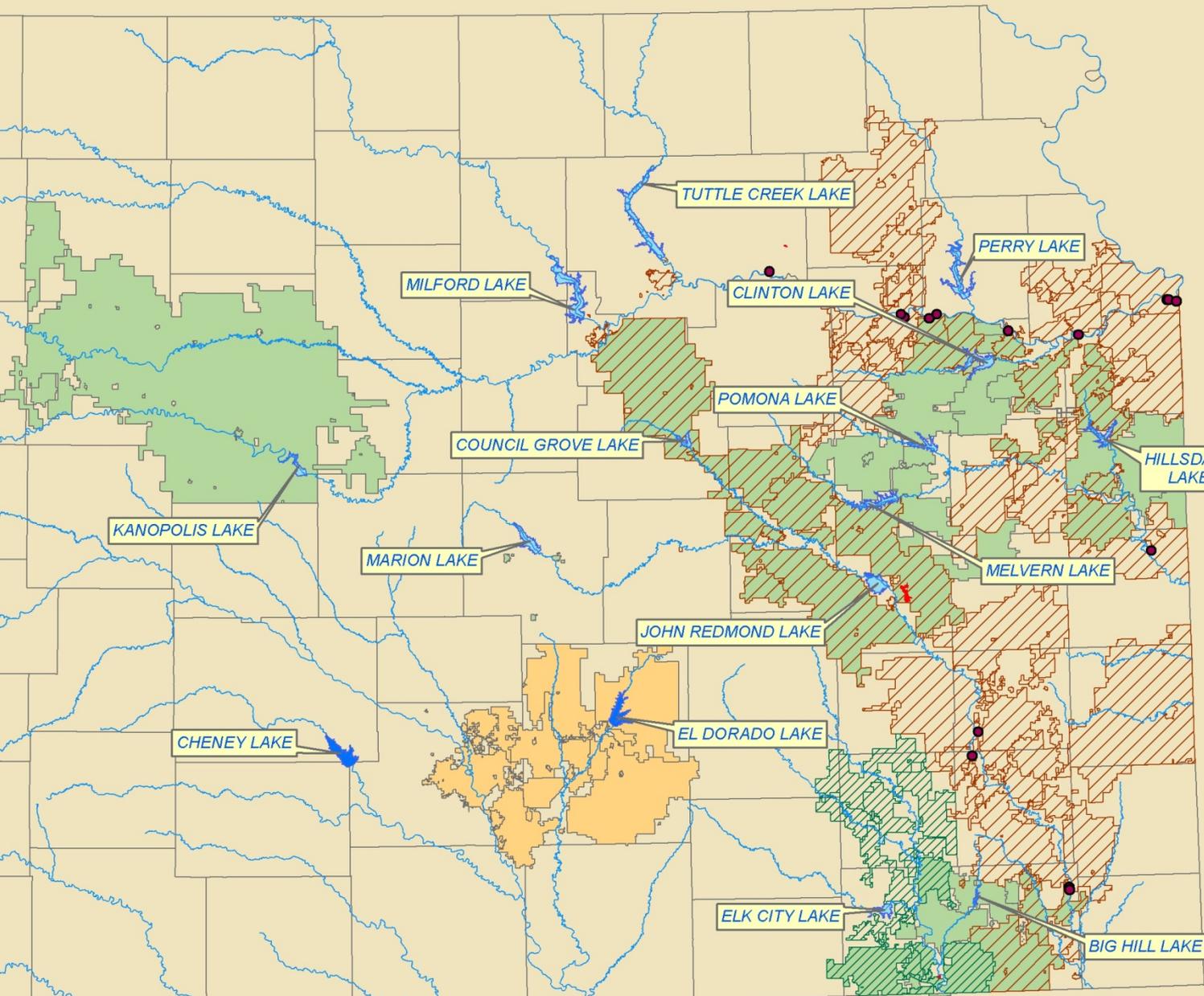


Kansas Water Office: 4 Key Statutory Duties

- Collect and compile information pertaining to water resources of the state
- State Water Plan
- Guidelines for water conservation plans and technical assistance to PWS
- Guidelines as to when conditions indicative of drought exist; advise the governor to assemble the governor's drought response team



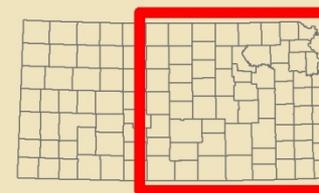
Federal Lake Water Supply Storage Customers



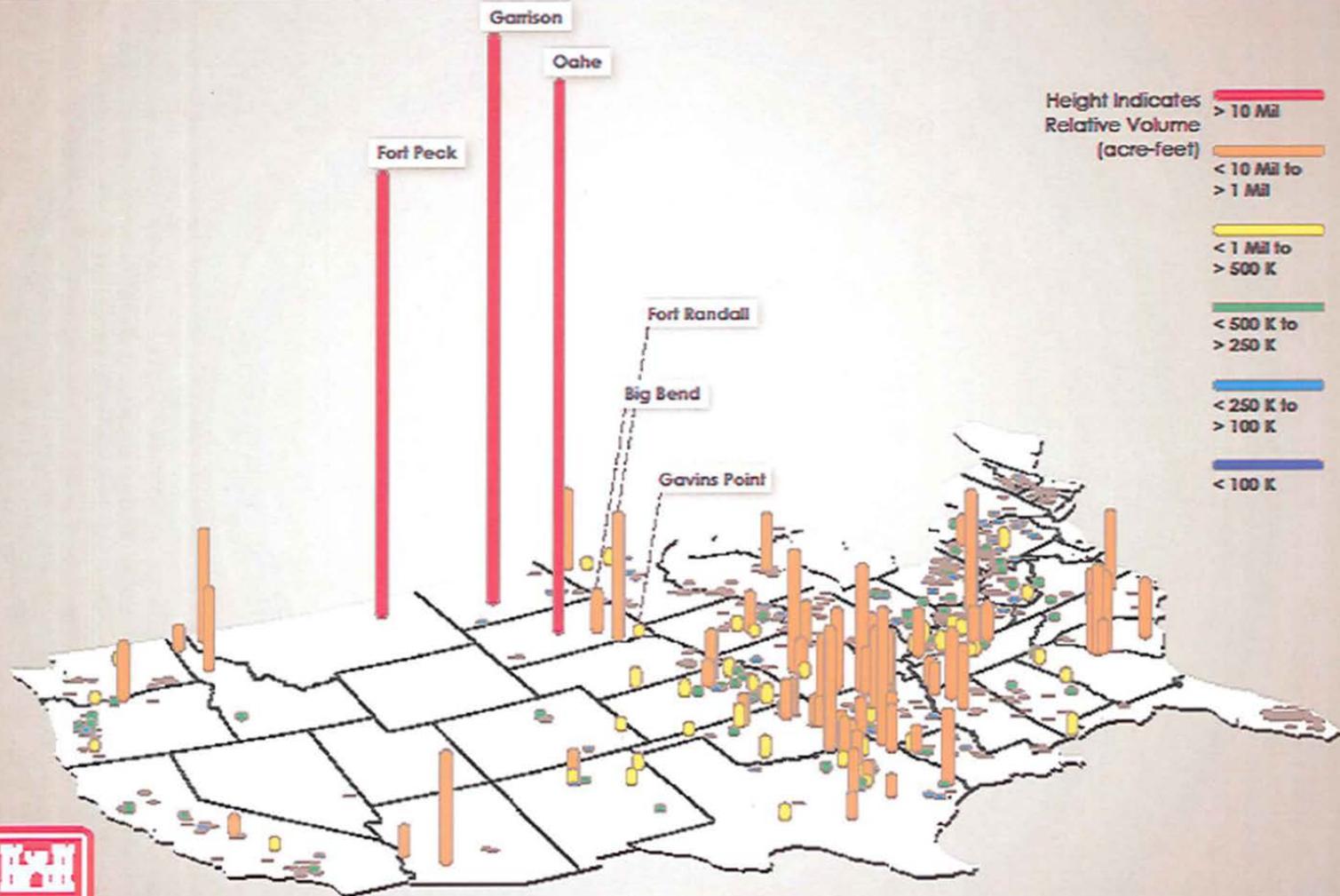
Legend

- AD Industry
- ~ Stream
- Market/AD Lake
- Other Contract Lake
- Verdigris MOA
- Water Assurance District
- Water Marketing
- Water Marketing Ind
- Other Contracts
- County

*Elk City, John Redmond and Milford Lakes



Storage Capacity of Corps Reservoirs



US Army Corps of Engineers
BUILDING STRONG

- Kansas Water Office (Chair)
- Governor's Office
- Adjutant General – Division of Emergency Mgmt
- KS Dept of Agriculture
- KS Dept of Administration
- KS Dept of Health and Environment
- KS Dept of Wildlife, Parks and Tourism
- Kansas State Fire Marshal
- Kansas State University – Research & Extension
- US Army Corps of Engineers
- USDA – Farm Service Agency

Governor's Drought Response Team

Drought Monitoring

- Precipitation
- Streamflow Conditions
- Reservoir levels and storage
- Vegetative Health
- Soil Moisture
- U.S. Drought Monitor
- Future Outlook
- Other: PWS Conservation Measures, Wildfire, Burn Bans



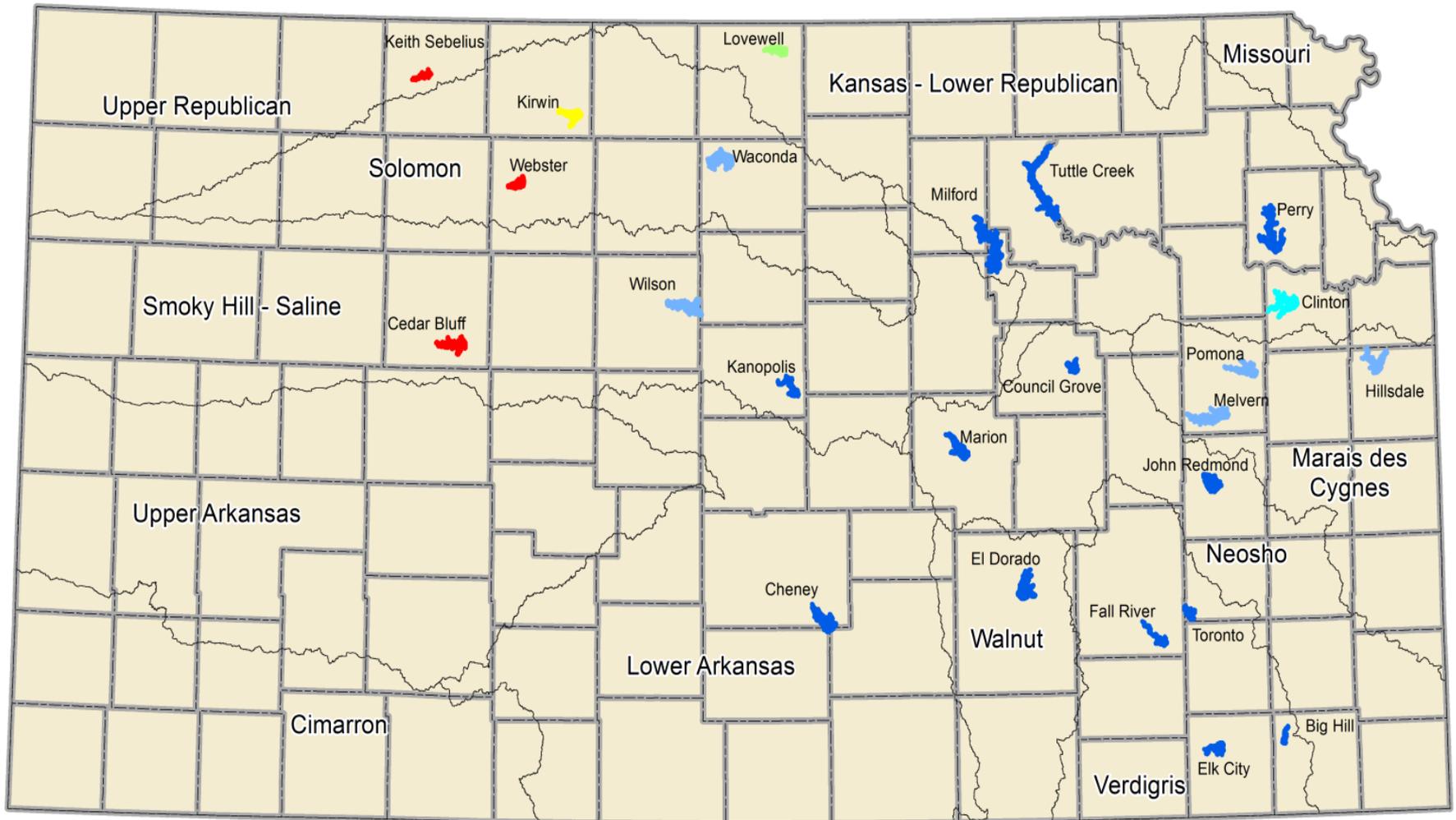
County Drought Stages

- Drought Watch: Moderate Drought.
- Drought Warning: Severe Drought.
- Drought Emergency: Extreme or Exceptional Drought.

- Issued by Governor's Executive Order
- These stages do not by themselves trigger specific response
- Are indications to local and state responders

Federal Reservoir Status

February 20, 2014



Kansas Water Office

Percent of Conservation Pool



Municipal Water Conservation Plan

- 💧 Introduction
- 💧 Long-term Water Use Efficiency
- 💧 **Drought (and Emergency) Response**
- 💧 Revision, Monitoring & Evaluation

Drought Response

Progressive Stages

Goals

Triggers

Actions

Stage 3: Water Emergency

Goals

The goals of this stage are to reduce peak demands by 50 percent and weekly consumption by 25 percent.

Triggers:

This stage is triggered by any one of the following conditions:

1. The District's storage has fallen below 50 percent capacity;
2. Groundwater levels have fallen 15 feet below the normal seasonal level;
3. Demand for one day is in excess of .50 million gallons per day;
4. Provider of purchased water has issued a Stage 3 Water Emergency;
5. Emergency conditions related to repairs or water quality.

Education Actions

1. The District will make daily news releases to the local media describing conditions and indicating the water supply outlook for the next day.
2. Previous days summaries of precipitation, temperature, water levels and storage will be made public each day.
3. The District will hold public meetings to discuss the emergency, the status of the water supply and further actions, which need to be taken.

Management Actions

1. The District water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. The District will seek additional emergency supplies from other users or the federal government.

Regulation Actions

1. Outdoor water use will be banned.
2. Waste of water will be prohibited.

Stage 2: Water Warning

Goals

The goals of this stage are to reduce peak demands by 20 percent and to reduce overall consumption by 10 percent.

Triggers

This stage is triggered by any one of the following conditions:

1. The District's storage has fallen below 70 percent capacity, and will not recover;
2. Groundwater levels have fallen 10 feet below the normal seasonal level;
3. Demand for one day is in excess of .440 million gallons per day;
4. Provider of purchased water has issued a Stage 2 Water Warning.

Education Actions

1. The District will make weekly news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming week.
2. Previous week summaries of precipitation, temperature, water levels and storage will be made public each week.
3. Water conservation articles will be provided to the local newspaper.
4. Water-saving tips will be included in billings to water utility customers.

Management Actions

1. The District water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. The District will curtail its water usage, including operation of fountains, watering of grounds and washing of vehicles.
4. Intakes will be adapted to operate with low flows.

Regulation Actions

1. An odd/even lawn watering system will be imposed on District residents. Residents in numbered addresses will water on odd days, even addresses will water on even days.
2. Outdoor water use, including lawn watering and car washing will be restricted to before 10:00 am and after 9:00 pm.
3. Golf courses will restrict watering to tees and greens after sunset.
4. Refilling of swimming pools will be allowed one day a week after sunset.
5. Outdoor watering will be restricted to use of a hand-held hose or bucket only.
6. Excess water use charges for usage of water over the amount used in the winter will be considered.
7. Waste of water will be prohibited.

DROUGHT RESPONSE

Jackson County Rural Water District No. 1 addresses its short-term water shortage problems through a series of stages based on conditions of supply and demand with accompanying triggers, goals and actions. Each stage is more stringent in water use than the previous stage since water supply conditions are more deteriorated. The Board of Directors of the District, or, if authorized by the Board, the District Manager shall implement the appropriate conservation measures.

Stage 1: Water Watch

Goals

The goals of this stage are to heighten awareness of the public on water conditions and to maintain the integrity of the water supply system.

Triggers

This stage is triggered by any one of the following conditions:

1. The District's storage has fallen below 85 percent capacity, and will not recover;
2. Groundwater levels have fallen 5 feet below the normal seasonal level;
3. Demand for one day is in excess of .405 million gallons per day;
4. Provider of purchased water has issued a Stage 1 Water Watch.

Education Actions

1. The District will make occasional news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming season.
2. Previous months summaries of precipitation, temperature, water levels and storage will be made public at the beginning of each month.
3. Water-saving tips will be included in billings to water utility customers.

Management Actions

1. Leaks will be repaired within 48 hours of detection.
2. The District will monitor its use of water and will curtail activities such as hydrant flushing and street cleaning.

Regulation Actions

The public will be asked to curtail some outdoor water use and to make efficient use of indoor water, i.e. wash full loads, take short showers, don't let faucets run, etc.

Drought Response

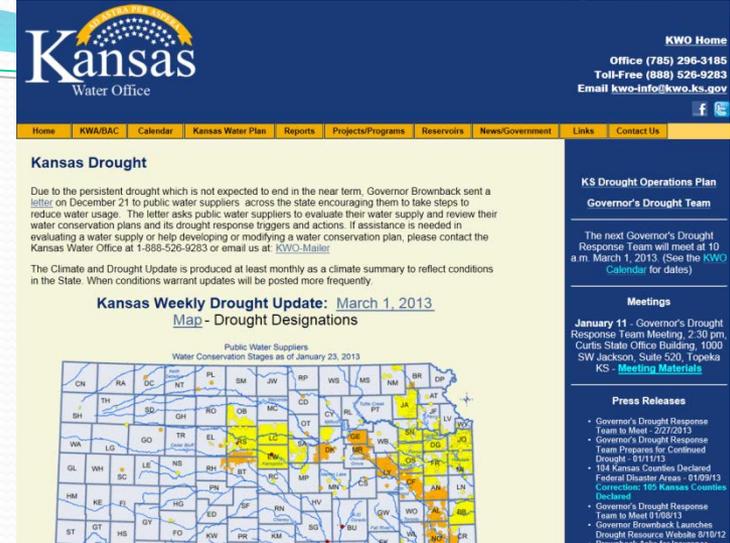
Progressive Stages

- 💧 Stage 1: Water Watch (voluntary)
- 💧 Stage 2: Water Warning (restriction)
- 💧 Stage 3: Water Emergency (prohibition)

Emergency - Water Availability

- Temporary water appropriation permits for emergency use
- Emergency water withdrawals – US Army Corps reservoirs
- Emergency water withdrawals – state fishing lakes
- Bureau of Reclamation Title 1 (mitigation) and Title 2 (planning) funds

Drought Links



The screenshot shows the Kansas Water Office website. At the top left is the logo with the text "Kansas Water Office". To the right, contact information is listed: "KWO Home Office (785) 296-3185 Toll-Free (888) 526-9283 Email kwo-info@kwo.ks.gov". A navigation menu includes "Home", "KWA/BAC", "Calendar", "Kansas Water Plan", "Reports", "Projects/Programs", "Reservoirs", "News/Government", "Links", and "Contact Us". The main content area is titled "Kansas Drought" and contains text about Governor Brownback's letter to public water suppliers. It includes a "Kansas Weekly Drought Update: March 1, 2013" and a "Map - Drought Designations" showing a map of Kansas with color-coded regions. On the right side, there are sections for "KS Drought Operations Plan", "Meetings" (listing a January 11 meeting), and "Press Releases" (listing several recent announcements).

KWO Drought Web page and Drought Report

- http://www.kwo.org/reports_publications/Drought.htm

Governors Web Page

- <http://governor.ks.gov/kansas-drought-resources>



Drought Information and Links

- US Drought Monitor <http://droughtmonitor.unl.edu/>
- High Plains Regional Climate Center
<http://www.hprcc.unl.edu/index.php>
- National Drought Mitigation Center
<http://drought.unl.edu/>
- USGS WaterWatch
<http://waterwatch.usgs.gov/new/index.php?id=ww>
- US Seasonal Drought Outlook
http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

Questions?



785-296-3185