DROUGHT IMPACT REPORTER COLLABORATION POSSIBILITIES

March 2013

National Drought Mitigation Center

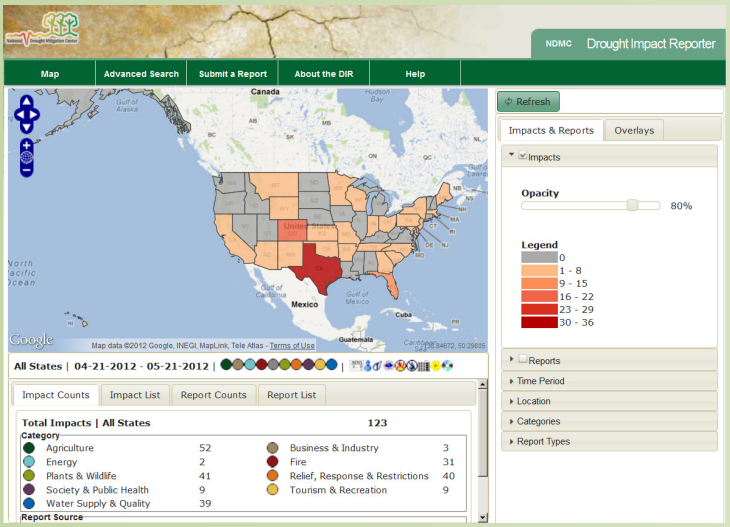
1. Why have a Drought Impact Reporter?

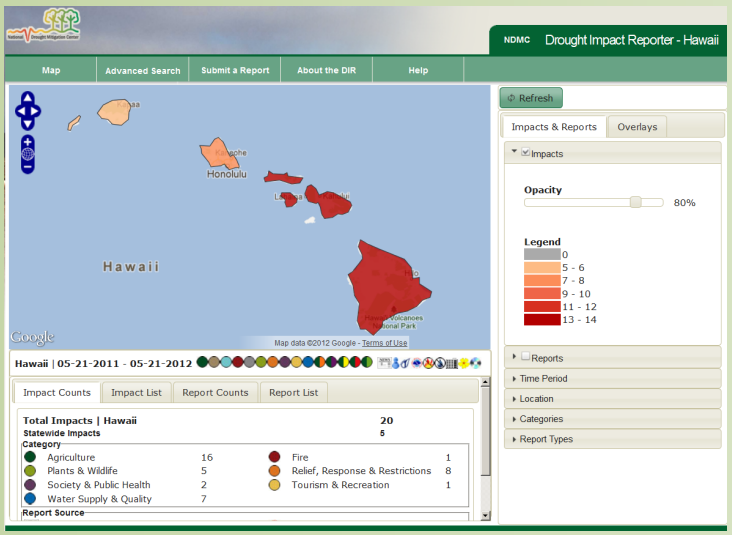
The U.S. Drought Impact Reporter (DIR) serves many purposes:

- It helps U.S. Drought Monitor authors decide where to draw lines on maps that can affect distribution of federal relief funds.
- It's a way for people on farms and ranches to provide information about how drought is affecting them. There aren't enough rain gauges to cover every part of the United States, media coverage of drought impacts isn't consistent, and numeric descriptions alone don't tell the whole story.
- It is an archive of drought impacts. Knowing drought's past impacts helps planners and policy makers prioritize resources for mitigation.
- It can be a vital source of data for historians and climate impacts researchers.
- It builds awareness of drought impacts, both locally and remotely. No one is required to use the Drought Impact Reporter, but consistent reporting efforts over time by a network of drought observers can help build a good case for how drought is affecting an area. The National Drought Mitigation Center encourages groups and individuals to report regularly on the effects of drought.

The U.S. Drought Impact Reporter is not intended to supplant local drought and climate reporting efforts. We hope that it can provide a structure for collecting drought impact information where no other data infrastructure exists. It may also be possible to import data from local collection efforts into the Drought Impact Reporter when a separate database exists.

Data from the U.S. Drought Impact Reporter can be delivered via a web service, so that others wishing to map it may do so.





The Hawaii Drought Impact Reporter, developed under contract with the Hawaii Commission on Water Resource Management, is tailored to the needs of the Hawaiian Islands, with a default first view centered on the islands, and additional agricultural categories. It is online at http://hawaii.droughtreporter.unl.edu

Mulitiple information sources cast a wide net 2.

The DIR accommodates information from a growing number of sources. In the lingo of the tool, there are currently eight different "source types," with varying amounts of time and energy invested in each.

Media Reports

We use a daily electronic media search – the equivalent of what used to be called a clipping service – to scan thousands of U.S. media outlets for drought-related news stories. Our moderator logs the relevant clippings as media reports. Because of the sheer volume of news stories and the dedicated effort of the moderator, most reports in the Drought Impact Reporter are from media. The NDMC stores but does not publish the full text of media reports, in order to comply with copyright law.

User Reports

Anyone can submit a user report. We moderate user reports, so it may take a business day or two for them to show up.

Hawaii Reports

Drought observers in Hawaii have a special report form that creates a Hawaii Report, similar to a user report, but with five agricultural subcategories. You can get to the Submit a Report form via the main navigation bar above the map.

CoCoRaHS Reports

The Community Collaborative Rain, Hail and Snow network now provides an option for observers to submit drought impact reports. CoCoRaHS reports appear on the reports layer, and, like other reports, they can be made into impacts by our moderators. CoCoRaHS is a nationwide network of thousands of volunteer citizen scientists who submit regular measurements and observations of rain, hail, snow and drought for their location. For more information please visit http://www.cocorahs.org

Agency and Organization Reports

Some states issue regular reports during times of drought and make them publicly available. Time permitting, our moderators add them to the DIR as reports and scan them for impact information. This is also where we have entered information such as reports by non-profit organizations.

Agency personnel can also be ganted access to enter their own reports.

Burn Bans

Some states gather information on burn bans and make it publicly available. DIR moderators incorporate that information into the DIR as time permits, especially when burn bans are known to have been issued because of drought.

Agency personnel can also be ganted access to enter burn bans.

Water Restrictions

Some states gather information on water restrictions and make it publicly available. Moderators incorporate that information into the DIR as time permits, especially when restrictions are known to have been issued because of drought.

Agency personnel can also be ganted access to enter water restrictions.

Legacy Reports

In searching the DIR, you may notice the Legacy report type. That allows your search to include impacts from our original database, which did not have associated reports.

National Weather Service Drought Information Statements

When an area is in Severe Drought (D2) or worse on the U.S. Drought Monitor, the Weather Forecast Office for that area issues a Drought Information Statement, detailing conditions and impacts. We manually archive those reports and scan them for impacts as time permits. (We hope to have the resources to automate this process in the future.)

3. Reports vs. Impacts

The Drought Impact Reporter distinguishes between **Reports** and **Impacts**. All information comes into the Drought Impact Reporter as a report. Some reports contain information that meets our definition of a drought impact:

An observable loss or change that occurred at a specific place and time because of drought.

Anyone can submit a report, but only our moderators can create impacts, because we work to maintain a consistent definition of what a drought impact is across multiple sectors. All impacts are attributed to one or more reports.

Impacts tend to lag behind drought, particularly economic losses to the agricultural sector, which may not be fully tallied until months after harvests are complete.

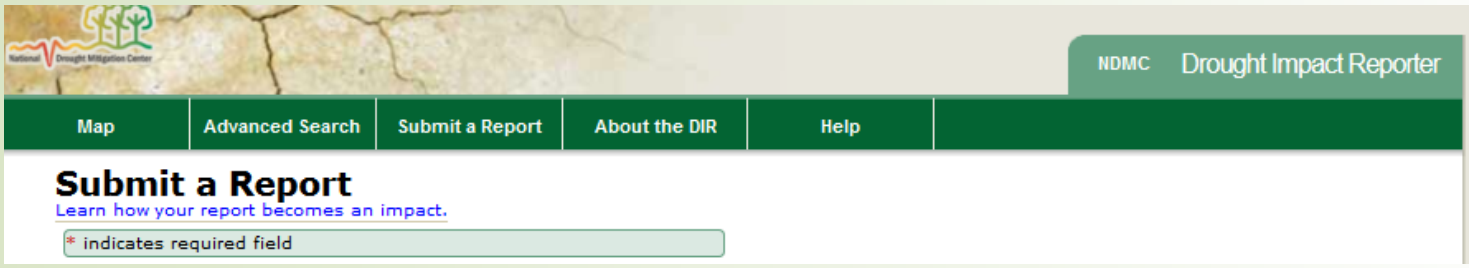
Reports can be much more timely, describing conditions that are likely to lead to an impact, and providing some advance warning of impacts.

Reports are analogous to raw data, and impacts, to quality-controlled data. Impacts may contain more analysis and synthesis than reports.

For purposes of the Drought Impact Reporter, a low water level in a river or reservoir is not in and of itself a drought impact, but it would be a valuable report, as it is leading up to an impact. But some of the effects of low water levels would be drought impacts, such as municipal water suppliers needing to lower their intake pipes, fish dying, and curtailed tourism.

How to submit User Reports to the DIR

4.



From the Drought Impact Reporter, *http://droughtreporter.unl.edu*, select **Submit a Report** from the navigation bar over the map. It will take you to the **Submit User Report** page, *http://public.droughtreporter.unl.edu/submitreport/*

A. Description

The first step is to provide a **Description** of the drought conditions you are observing, being as specific as possible. Although the form lets you submit a link to more information such as a news story, we especially value original or additional observations or information. We have a separate process for media reports. It's also helpful when users add to the information in a media report to help us determine whether or not an event such as wildfire is related to drought.

B. Related link

Put a URL in the **Related Link** box if you would like to call our attention to information from the media, another organization, or another source. Please note: The **Related Link** is less important than the **Description**. If your report doesn't include information other than what is in the link, we may enter it as a media report or an agency report.

C. Baseline Report

Check **Baseline Report** if you're reporting on a particular drought indicator at regular intervals, such as the characteristics of a patch of pasture, regardless of drought conditions. Baseline reports establish a basis for comparison between drought and non-drought conditions.

Although we can collect baseline reports, the process for searching for and displaying baseline reports is not yet developed.

D. Categories

Choose one or more **Categories** that best describe your impacts. Please refer to Appendix B for detailed descriptions of categories.

E. Dollar value

You can enter a **Value** associated with each category that applies to your drought impact. This is optional.

F. Dates

A **Start Date** is required and is understood to be approximate. **End Dates** are optional.

Practical tip: Your report will show up in more searches if you provide a longer time span.

To choose a date, click on the calendar icon, navigate to the date you want to select, and click on it. You can also manually enter a date in MM/DD/YYYY format.

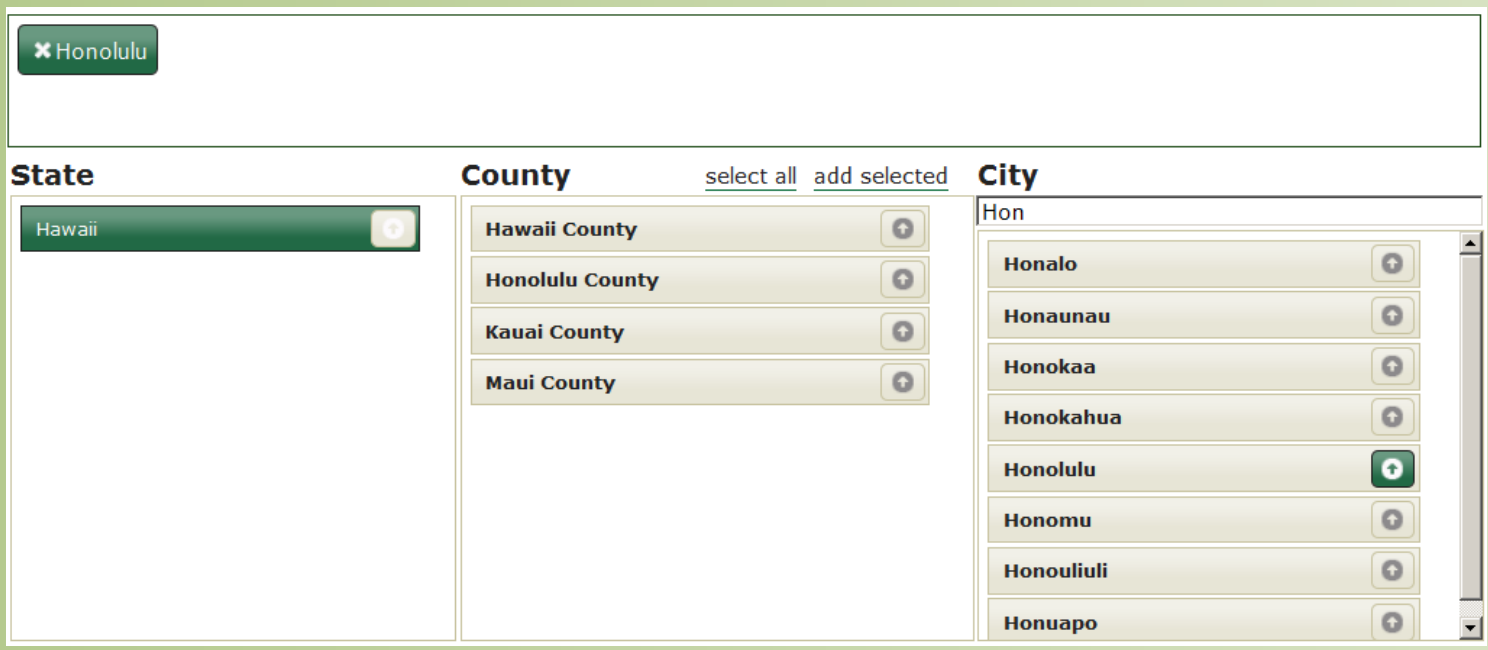
G. Choose the affected location

To select the entire state, click on the arrow to the right of **the state. It** should appear in the **Affected Places** box above.

To report on an impact in a specific location, first click on the bar with **the state** in it. Then it should be highlighted, but should not appear in the **Affected Places** box. A list of counties in the state will appear. To select one or more counties, click on the arrow to the right of the name the county. The counties you selected will appear in the **Affected Places** box.

To select a city, first click on **its state**. Then it should be highlighted, but should not appear in the **Affected Places** box. Then begin typing the name of the city in the box below the word City, and select the city you want when it appears by clicking on the arrow to the right of its name. To unselect the state, a county or a city, click on the x to the left of its name in the **Affected Places** field.

Affected Places



H. Photos

By submitting images, you agree that the National Drought Mitigation Center may publish them in the Drought Impact Reporter, on NDMC websites, or via social media. You also agree that you are the photographer or that you have the photographer's permission to submit the photo.

Photo [ ] Browse...
Credit
Date
Location
Caption

0 characters | 300 remaining | 300 maximum

add another image

The Drought Impact Reporter User Report form allows you to upload photos as part of your report. "Before" and "during" photos that allow people to compare drought and non-drought conditions are very helpful.

Photos and the supporting information that you submit will appear with your report on the DIR map and in advanced search results, and may also appear in the NDMC's Drought Photo Gallery and on other NDMC websites or social media. Copyright law requires that you only submit photos if you are the photographer or if you have the photographer's permission to do so.

To upload photos, browse to the photo you would like to submit. Attach up to five gif/jpg/jpeg/png image files smaller than 10 MB.

Fill in the supporting information fields:

Please enter the photographer's name and organization, if applicable, as it should appear in the **Credit**.
Enter the date when the photo was taken.
Enter the location where the photo was taken.

Please provide up to 300 characters of **Caption** information that helps people understand what effect of drought the photo shows. If you need to contribute more text for a full explanation, please use the description field of your report.

I. Contact Information

Finally, please provide your contact information.

Please provide your **First Name** and **Last Name**. Please select the **Observer Type** that best describes you from the drop-down list. If you are submitting a report on behalf of an organization, agency, or business, please let us know. Please provide your **State** and the nearest **City**. Please provide an **Email** address and a **Phone** number in case our moderators need to contact you to verify information.

As the last step, please let us know whether it is OK to publish your name and organization along with your report. If not, the information you submit will appear with your city and state, but not your name or organization.

* First Name
* Last Name
* Observer Type **Please Select**
Organization
Address 1
Address 2
* State **Please Select**
* City
Zip
* Phone 1
Phone 2
* Email

If it is OK for us to publish your name and organization, please select **Yes**. **No** is the default, so if you leave it unchanged, the information you submit will appear with your city and state, but not your name or organization.

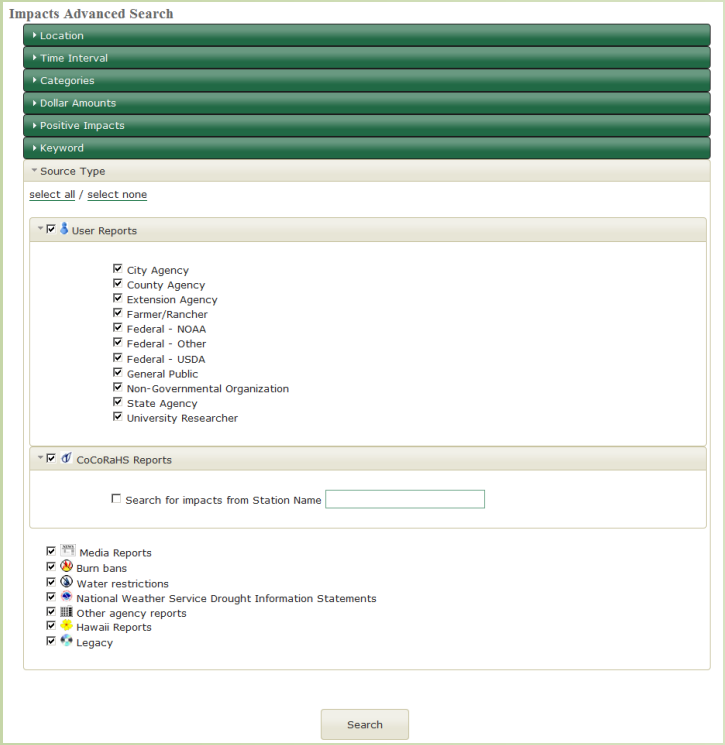
○ Yes ◉ **No**

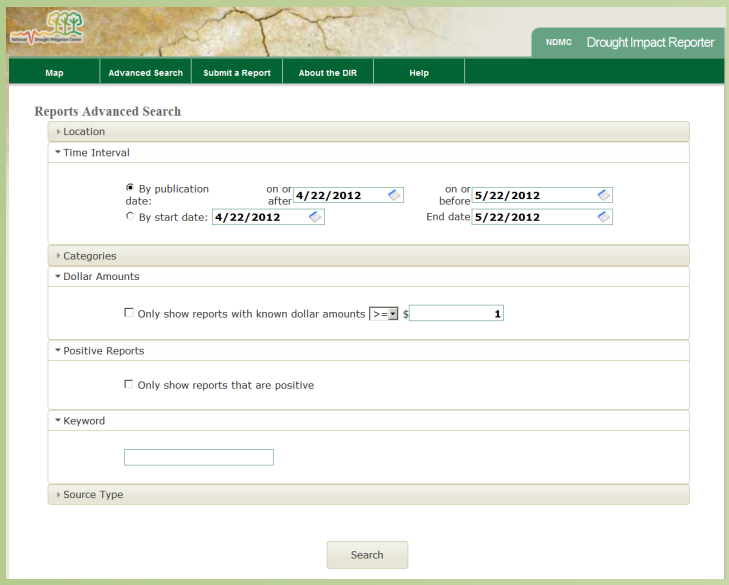
5. How to see what's in the Drought Impact Reporter

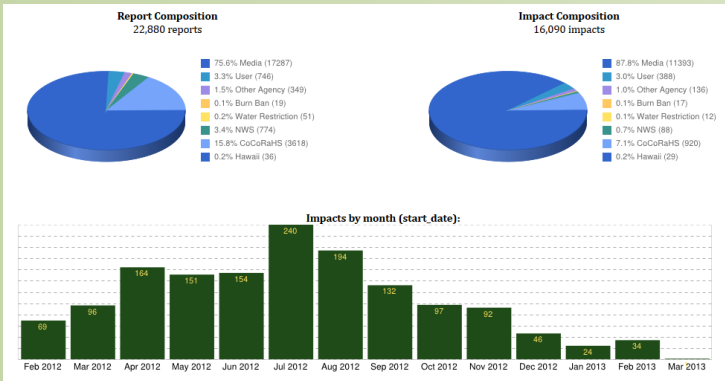
There are two main ways on the web to view information from the Drought Impact Reporter: via the map, or via the Advanced Search, which is accessible from the navigation bar above the map.

The map is a search with a visual display of spatial information, with detail accessible by clicking on the tabs below the map, or by drilling down through the points on the map that show where reports originated.

The Advanced Search is text-based and has certain options that the map doesn't, such as the ability to search by dollar amount of losses, by positive impacts, by keyword, and by publication date, for reports. It also lets you refine searches to observer type within user reports, and to a specific CoCoRaHS station.







RSS Feeds

You can subscribe to the Drought Impacts RSS feed – http://moderator.droughtreporter.unl.edu/rssfeed/ – to see impacts as they are created, using whatever RSS feed reader you prefer. Add the two-letter postal abbreviation at the end of the URL to receive a feed for a specific state. For example: http://moderator.droughtreporter.unl.edu/rssfeed/NM

Additional reporting functions are in development. We welcome your ideas.

Appendix A – Samples of Impacts and Reports

Some Indiana fireworks distributors experienced a loss of 90 percent of their income during the 2012 Fourth of July season

2/27/2013 4:20:04 PM

6/29/2012 - 7/4/2012

Some Indiana fireworks distributors experienced a loss of 90 percent of their income during the 2012 Fourth of July season after local fire officials banned the personal use of fireworks given the drought and increased fire danger. A 2006 law prevents local governments from banning personal use of fireworks from June 29 through July 9, but local officials chose to protect public safety in spite of the law. Indianapolis Star (Ind.), Feb. 26, 2013

CATEGORIES:
Fire
Relief, Response & Restrictions
Tourism & Recreation

AFFECTED AREAS:
Indiana

Sources

- Indianapolis Star. Emergency fireworks ban fizzles in legislature - Indianapolis Star (IN). http://www.indystar.com/article/20130226/NEWS/302260060/Emergency-fireworks-ban-fizzles-legislature.

impact made from media report

Trees stressed, dust a problem in Santa Fe County, New Mexico

2/25/2013 5:01:59 PM

2/20/2013 - 2/20/2013

I am noticing that my small piñon and juniper trees are showing signs of extreme drought stress, even to the point of possibly dying. The soil under them is like very finely milled powder, it has been so long since significant precipitation. Vehicles driving on dirt are now aerosolizing that very fine soil, which can't be good for air quality in those areas. CoCoRaHS Report from Station #Santa Fe 7.7 WNW on 2/20/2013

CATEGORIES:
Plants & Wildlife
Society & Public Health

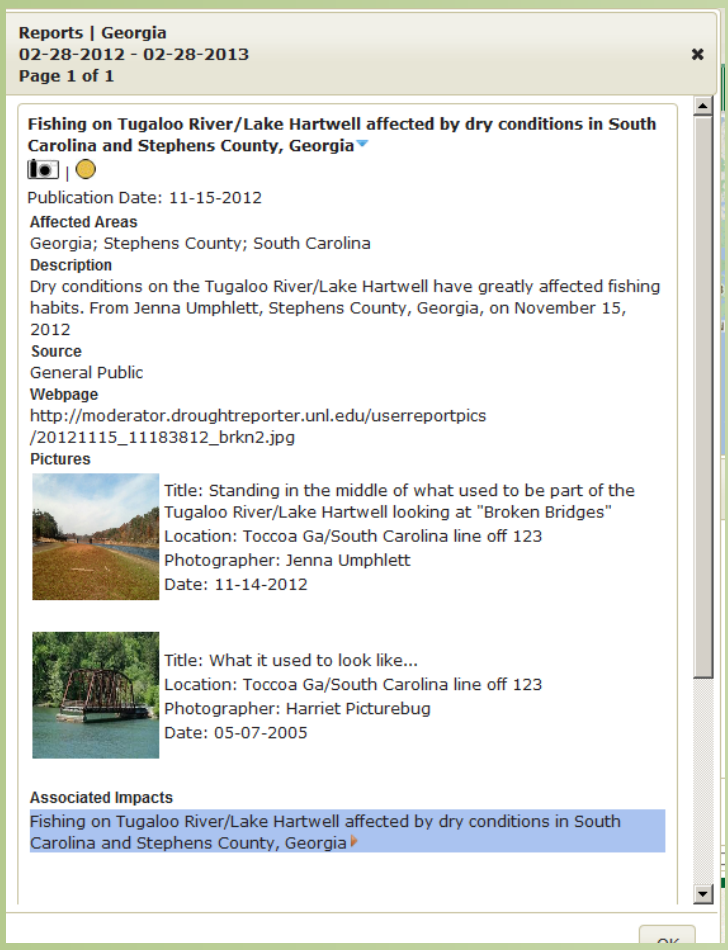
AFFECTED AREAS:
Santa Fe County, NM

Sources

- Santa Fe 7.7 WNW. CoCoRaHS Report from Station #Santa Fe 7.7 WNW on 2/20/2013.

impact made from CoCoRaHS report

Appendix A - Reports and Impacts, continued



Reports | Georgia
02-28-2012 - 02-28-2013
Page 1 of 1

Fishing on Tugaloo River/Lake Hartwell affected by dry conditions in South Carolina and Stephens County, Georgia

Publication Date: 11-15-2012

Affected Areas
Georgia; Stephens County; South Carolina

Description
Dry conditions on the Tugaloo River/Lake Hartwell have greatly affected fishing habits. From Jenna Umphlett, Stephens County, Georgia, on November 15, 2012

Source
General Public

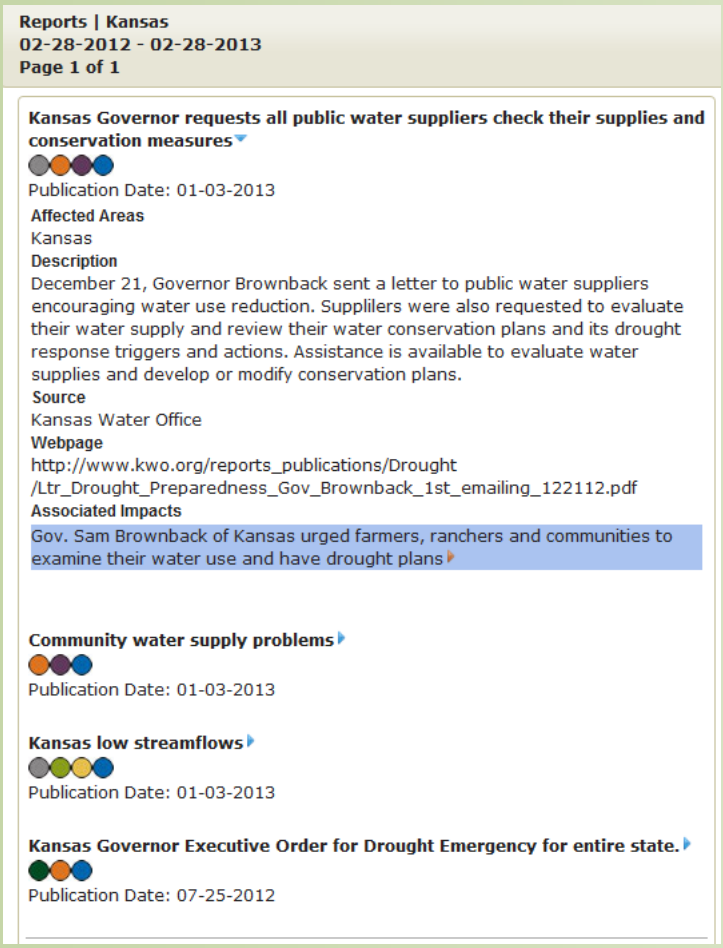
Webpage
http://moderator.droughtreporter.unl.edu/userreportpics/20121115_11183812_brkn2.jpg

Pictures
Title: Standing in the middle of what used to be part of the Tugaloo River/Lake Hartwell looking at "Broken Bridges"
Location: Toccoa Ga/South Carolina line off 123
Photographer: Jenna Umphlett
Date: 11-14-2012

Title: What it used to look like...
Location: Toccoa Ga/South Carolina line off 123
Photographer: Harriet Picturebug
Date: 05-07-2005

Associated Impacts
Fishing on Tugaloo River/Lake Hartwell affected by dry conditions in South Carolina and Stephens County, Georgia

user report with before and after photos



Reports | Kansas
02-28-2012 - 02-28-2013
Page 1 of 1

Kansas Governor requests all public water suppliers check their supplies and conservation measures

Publication Date: 01-03-2013

Affected Areas
Kansas

Description
December 21, Governor Brownback sent a letter to public water suppliers encouraging water use reduction. Supplilers were also requested to evaluate their water supply and review their water conservation plans and its drought response triggers and actions. Assistance is available to evaluate water supplies and develop or modify conservation plans.

Source
Kansas Water Office

Webpage
http://www.kwo.org/reports_publications/Drought/Ltr_Drought_Preparedness_Gov_Brownback_1st_emailing_122112.pdf

Associated Impacts
Gov. Sam Brownback of Kansas urged farmers, ranchers and communities to examine their water use and have drought plans

Community water supply problems
Publication Date: 01-03-2013

Kansas low streamflows
Publication Date: 01-03-2013

Kansas Governor Executive Order for Drought Emergency for entire state.
Publication Date: 07-25-2012

agency report from the Kansas Water Office

Appendix B – Categories

Business and Industry

This category tracks drought's effects on non-agriculture and non-tourism businesses, such as lawn care, recreational vehicles or gear dealers, and plant nurseries. Typical impacts include reduction or loss of demand for goods or services, reduction in employment, variation in number of calls for service, late opening or early closure for the season, bankruptcy, permanent store closure, and other economic impacts.

Energy

This category concerns drought's effects on power production, rates and revenue, such as:

- production changes for both hydropower and non-hydropower providers
- changes in electricity rates
- revenue shortfalls and/or windfall profits
- purchase of electricity when hydropower generation is down.

Fire

Drought often contributes to forest, range, rural, or urban fires; fire danger; and burning restrictions. Specific impacts include:

- enacting or easing burning restrictions
- fireworks bans, increased fire risk
- occurrence of fire (number of acres burned, number of wildfires compared to average, people displaced, etc.)
- state of emergency during periods of high fire danger
- closure of roads or land due to fire occurrence or risk
- expenses to state and county governments of paying firefighters overtime and paying equipment (helicopter) costs.

Plants and Wildlife

Drought effects associated with unmanaged plants and wildlife, both aquatic and terrestrial, include:

- loss of biodiversity of plants or wildlife
- loss of trees from rural or urban landscapes, shelterbelts, or wooded conservation areas
- reduction and degradation of fish and wildlife habitat
- lack of feed and drinking water
- greater mortality due to increased contact with agricultural producers, as animals seek food from farms and producers are less tolerant of the intrusion
- disease
- increased vulnerability to predation (from species concentrated near water)
- migration and concentration (loss of wildlife in some areas and too much wildlife in others)
- increased stress on endangered species
- salinity levels affecting wildlife; wildlife encroaching into urban areas
- loss of wetlands.

Relief, Response and Restrictions

This category refers to drought effects associated with disaster declarations, aid programs, requests for disaster declaration or aid, water restrictions, or fire restrictions, such as:

- disaster declarations
- aid programs
- USDA Secretarial disaster declarations
- Small Business Association disaster declarations
- government relief and response programs
- state-level water shortage or water emergency declarations
- county-level declarations
- a declared "state of emergency"
- requests for declarations or aid
- non-profit organization-based relief
- water restrictions
- fire restrictions
- National Weather Service Red Flag warnings
- declaration of drought watches or warnings.

(continued on next page)

Society & Public Health

Drought effects associated with human, public and social health include health-related problems related to reduced water quantity and/or quality, such as:

- increased concentration of contaminants
- loss of human life (e.g., from heat stress, suicide)
- increased respiratory ailments
- increased disease caused by wildlife concentrations
- increased human disease caused by changes in insect carrier populations
- population migration (rural to urban areas, migrants into the United States)
- loss of aesthetic values
- change in daily activities (non-recreational, like putting a bucket in the shower to catch water)
- elevated stress levels
- meetings to discuss drought
- communities creating drought plans
- lawmakers altering penalties for violation of water restrictions
- demand for higher water rates
- cultural/historical discoveries from low water levels
- prayer meetings
- cancellation of fundraising events
- cancellation/alteration of festivals or holiday traditions
- stockpiling water
- public service announcements and drought information websites
- protests
- conflicts within the community due to competition for water.

Tourism & Recreation

Drought effects associated with recreational activities and tourism include:

- closure of state hiking trails and hunting areas due to fire danger
- water access or navigation problems for recreation
- bans on recreational activities
- reduced license, permit, or ticket sales (e.g., hunting, fishing, ski lifts, etc.)
- losses related to curtailed activities (e.g., bird watching, hunting and fishing, boating, etc.)
- reduced park visitation
- cancellation or postponement of sporting events.

Water Supply & Quality

Drought effects associated with water supply and water quality include:

- dry wells
- voluntary and mandatory water restrictions
- changes in water rates
- easing of water restrictions
- increases in requests for new well permits
- changes in water use due to water restrictions
- greater water demand, decreases in water allocation or allotments
- installation or alteration of water pumps or water intakes
- changes to allowable water contaminants
- water line damage or repairs due to drought stress
- drinking water turbidity
- change in water color or odor
- declaration of drought watches or warnings
- mitigation activities.