



REPORTING DROUGHT IMPACTS

A Guide to Reporting



REPORTING DROUGHT IMPACTS

Welcome to our short tutorial on
“Reporting Drought Impacts”.

This short slide show will help you understand the importance of drought and its impacts, as well as how to report ‘how drought is impacting you’ via the CoCoRaHS Website.

Things that you will learn:

- What is drought?
- The importance of drought
- Impacts of drought
- How to report drought impacts via CoCoRaHS



What is DROUGHT ?

The American Meteorological Society's Glossary of Meteorology states that "*drought is a period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance.*"

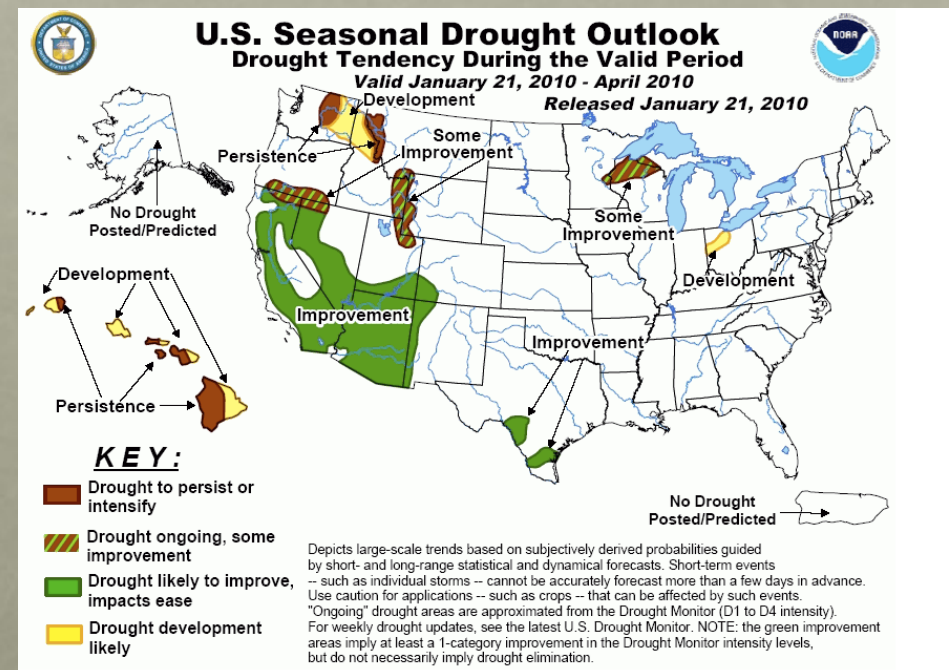
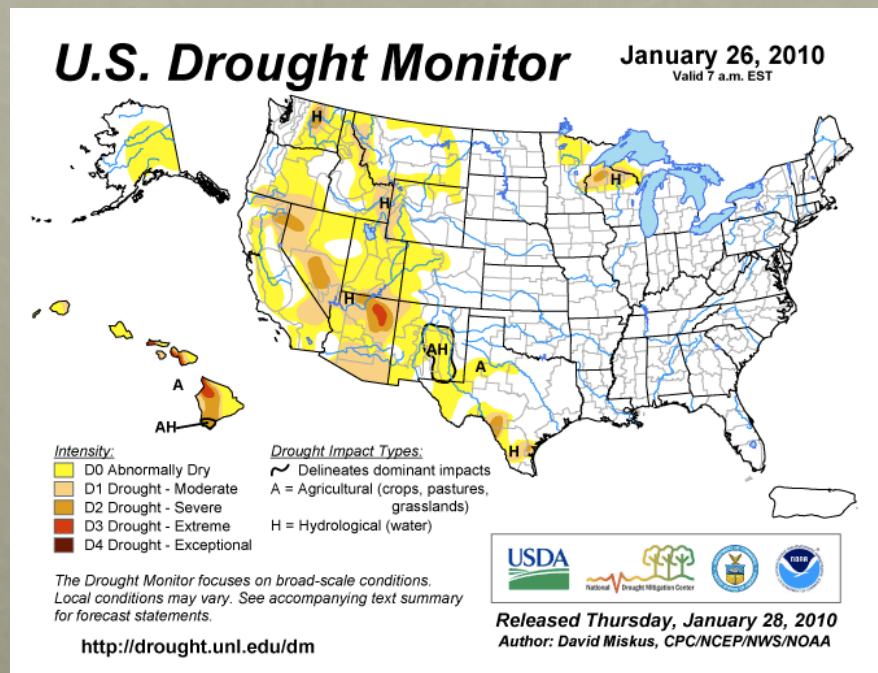
DROUGHT – “A NAGGING PROBLEM”

“Drought is a normal, recurrent feature of climate. It occurs almost everywhere, although its features vary from region to region. Defining drought is therefore difficult; it depends on differences in regions, needs, and disciplinary perspectives. Based on the many definitions that have appeared in the literature, for example, we might define drought in Libya as occurring when annual rainfall is less than 7.09”, but in Bali, drought might be considered to occur after a period of only six days without rain! In the most general sense, drought originates from a deficiency of precipitation over an extended period of time, resulting in a water shortage for some activity, group, or environmental sector. Whatever the definition, it is clear that drought cannot be viewed solely as a physical phenomenon.” -NDMC

- Year in and year out, drought is one of the most costly natural disasters that we experience in the U.S. and across the world.
- Because drought develops slowly and is almost always present somewhere in our country, it often does not get the type of attention that other natural disasters get.

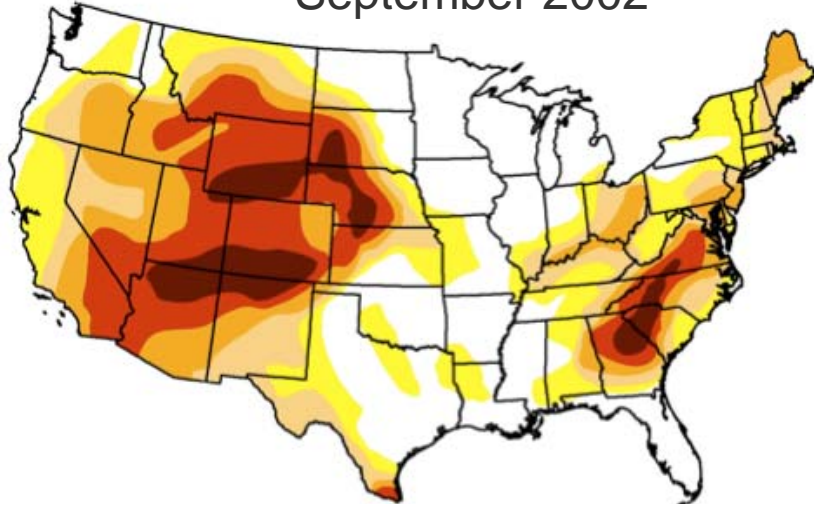
TRACKING DROUGHT

Scientists are constantly tracking drought and trying to learn how to better anticipate and predict it.

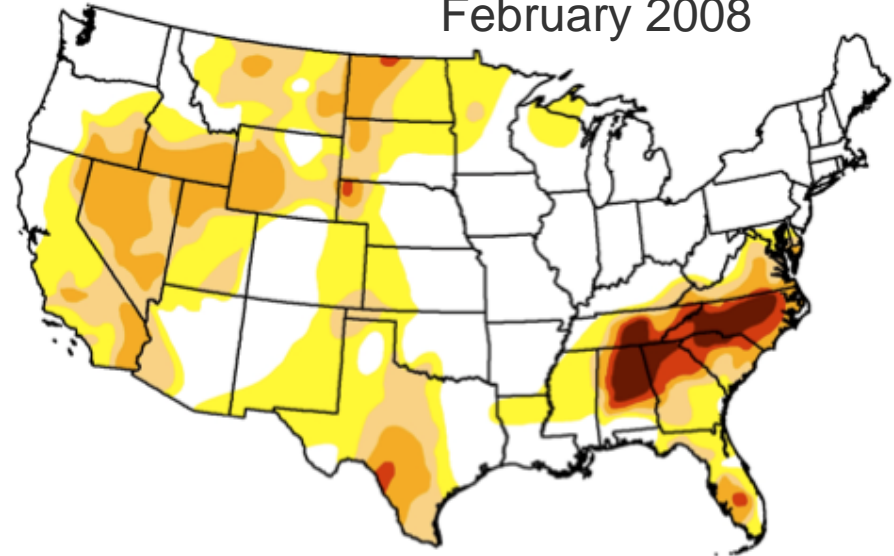


Drought in the United States: Recent Examples

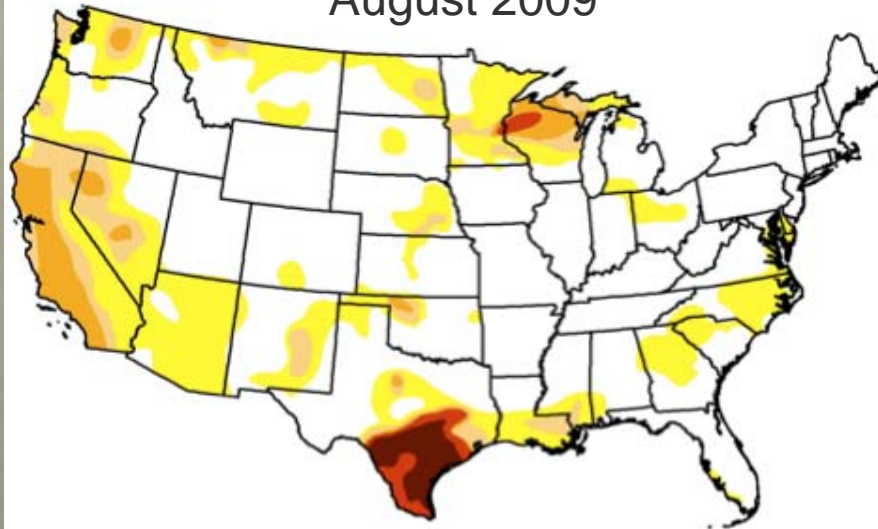
September 2002



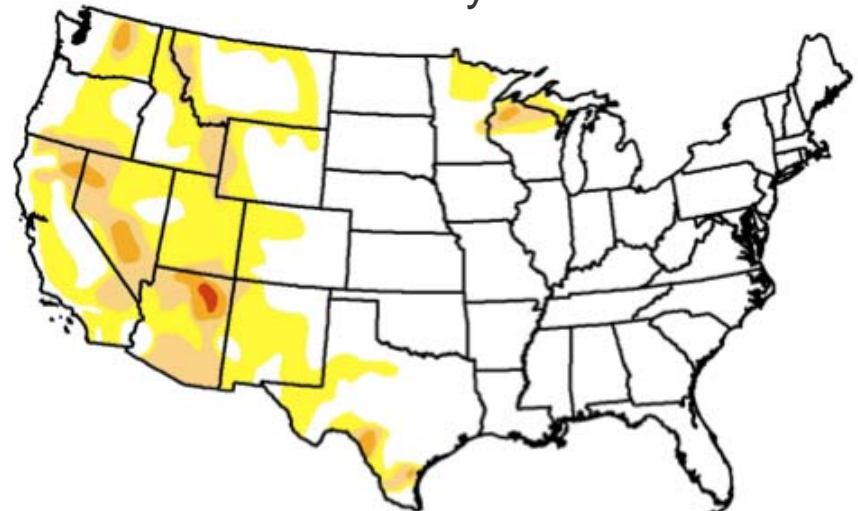
February 2008



August 2009



January 2010

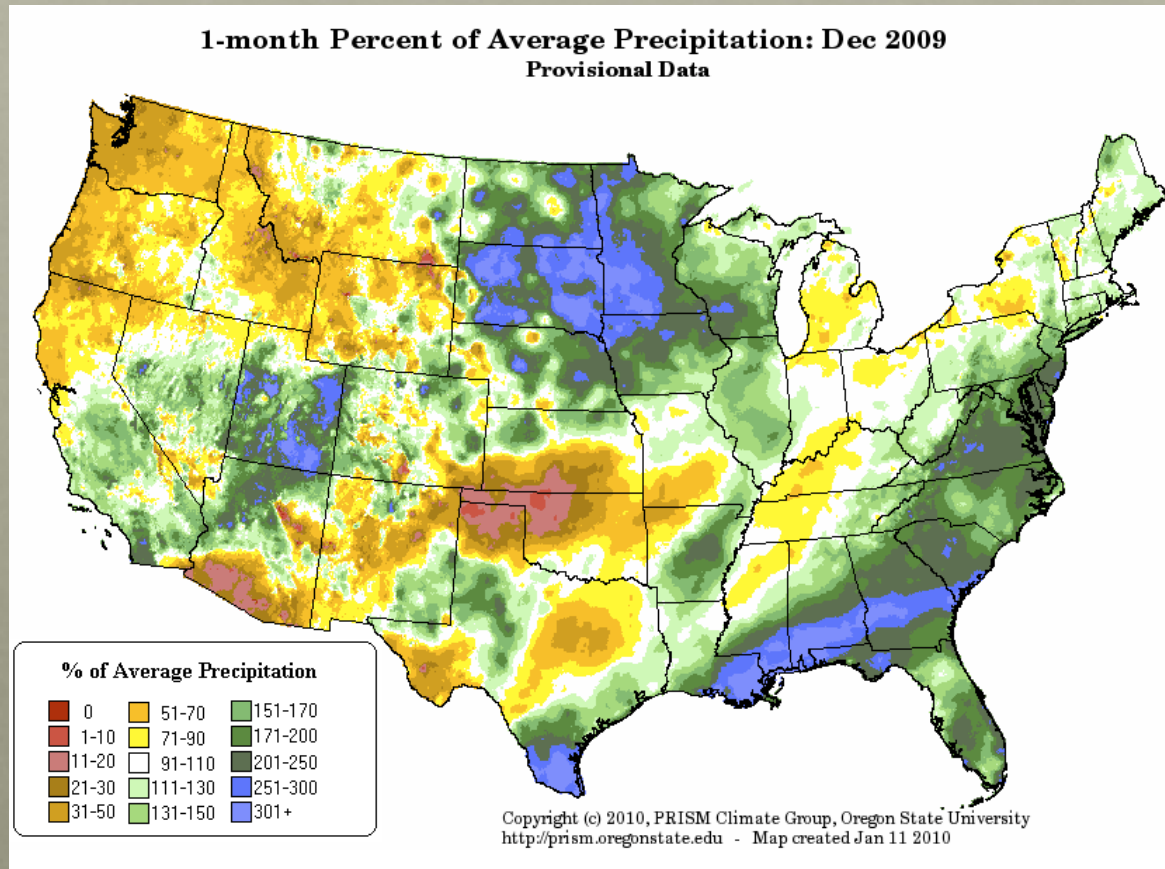


Drought Severity

D0 Abnormally Dry D1 Drought - Moderate D2 Drought - Severe D3 Drought - Extreme D4 Drought - Exceptional

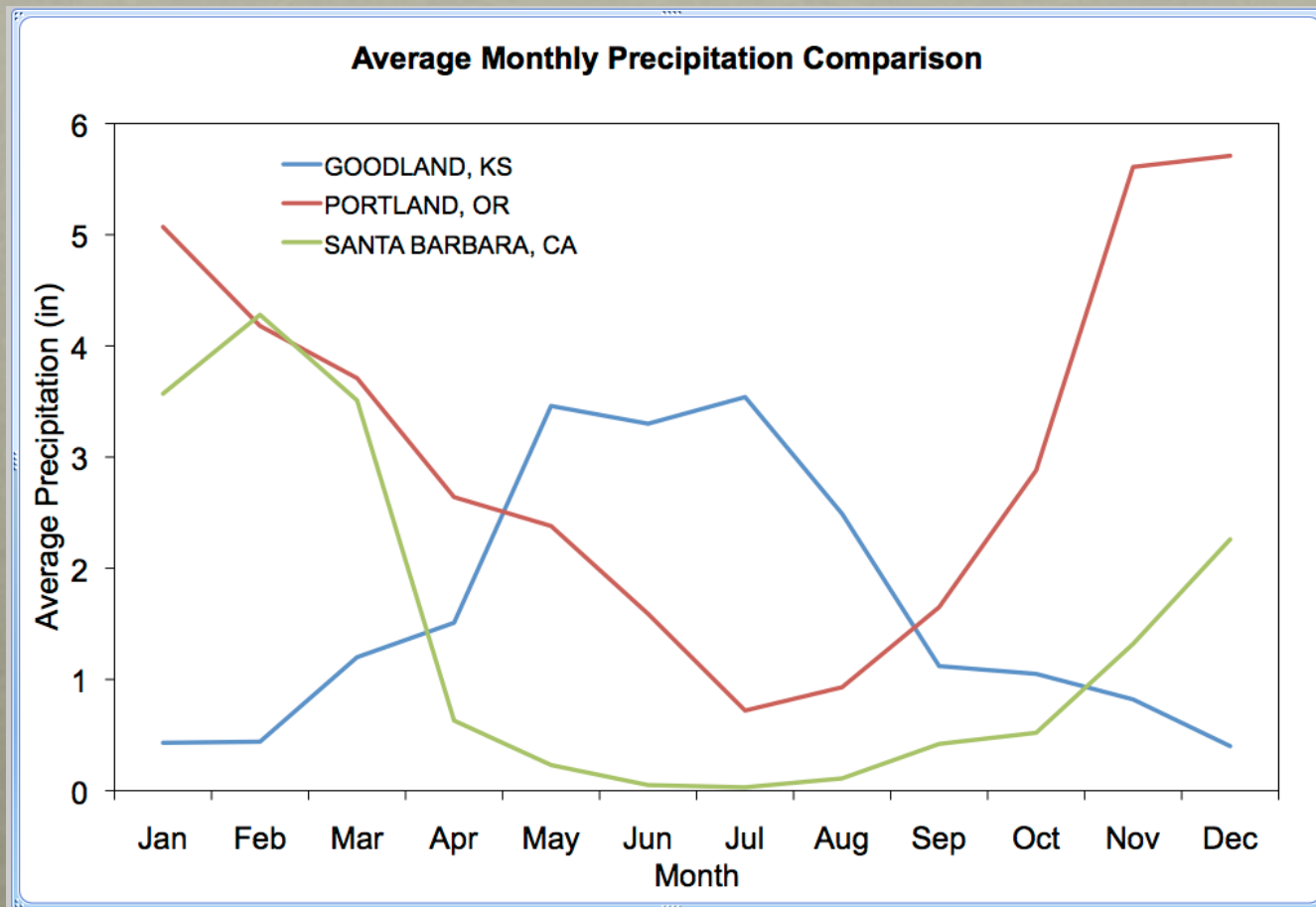
HOW DRY IS IT?

It is important and helpful to know just how much wetter or drier than average it is.



IS IT DROUGHT?

Several regions across the country go through “normal dry periods” each year. This is not considered drought.



“DROUGHT IMPACTS”

It is even more important to know what consequences are resulting from abnormally dry weather. Consequences from abnormally dry conditions are called “*Drought Impacts*”.



DROUGHT IMPACTS



Drought develops gradually over time. The impacts from drought may also appear gradually. Simple examples of minor early impacts may be vegetation showing signs of unusual dryness, rivers and streams that are flowing lower and slower than usual or reservoirs that are dropping below their normal levels.

DROUGHT IMPACTS

As drought continues, the impacts expand and become more severe.



DROUGHT CAN HAVE “DIRECT” IMPACTS ON US

Direct impacts from drought vary depending on the location and time of year.

Impacts from drought are often felt first by farmers and ranchers: Common agricultural impacts are poor crop conditions, reduced crop yield, poor rangeland and forage conditions. Fish and wildlife are also directly affected by drought.

Increased threat of wildfire is also a direct impact from drought.



John McColgan, BLM

“DIRECT” IMPACTS

Water levels in lakes, streams, rivers, reservoirs and also ground water levels are all directly impacted by drought.

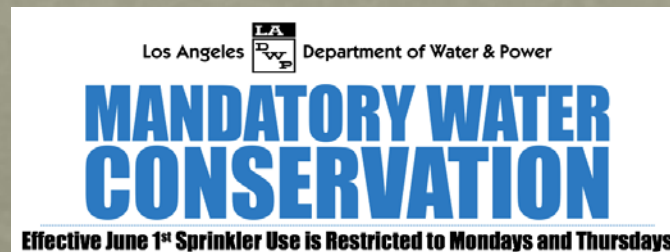
Winter drought impacts may come as a result of less than average snowfall in normally snowy locations. Winter sports opportunities can be adversely impacted by winter drought.



. . . AS WELL AS SIGNIFICANT “INDIRECT” IMPACTS

Direct impacts from drought lead to indirect but sometimes even more significant impacts

- Low reservoir levels may mean water use restrictions that may affect homes and businesses.
- Reduction in crop, rangeland, and forest productivity may result in reduced income in those industries
- For farmers, agribusiness and other drought sensitive businesses, drought can lead to increased prices for food and timber, foreclosures on bank loans, and unemployment



“INDIRECT” IMPACTS

- Extreme and/or long lasting drought can result in reduced tax revenues for local and/or state governments.
- When drought affects the economy, further impacts may appear in the form of psychological stress and/or increased crime.
- Drought can trigger disaster relief programs.



2010 | Drought Relief Program
West Texas, Kansas, Oklahoma, New Mexico

TRACKING IMPACTS – UNDERSTANDING DROUGHT



We understand drought best by understanding its impacts.

Therefore, while we measure and report precipitation, we can also keep our “eyes and ears” open to catch early signs of drought.

HOW CAN YOU HELP?

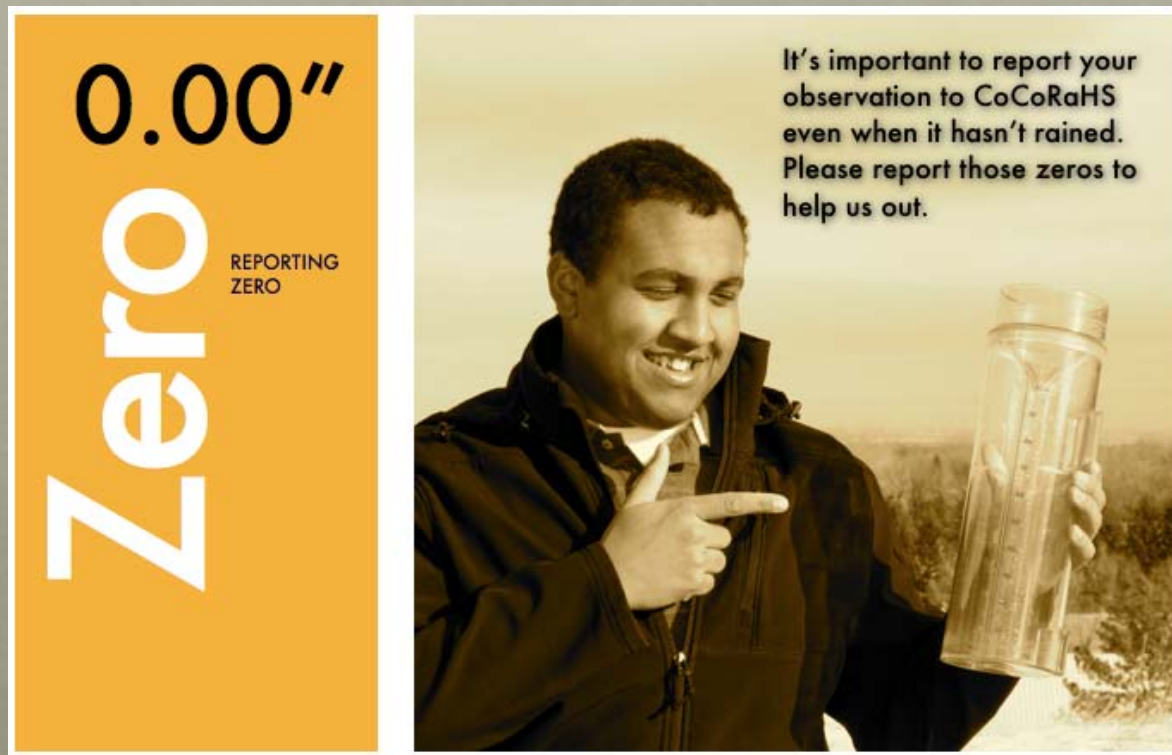
As a CoCoRaHS Observer we are asking you to learn about drought. When dry conditions exist in your area take a few minutes and think about how they are currently impacting you and your local community.



Then, from time to time, as you report your daily precipitation observations take the extra step to file a “*Drought Impact Report*”. Your doing so is truly appreciated. It’s simple to fill out and it will provide valuable information to the nation that might otherwise go unnoticed.

REPORTING ZERO'S

Another important way to let us know that drought may be developing in your area is to make sure that you report “zero” on your daily precipitation observation when it has not rained. Zero’s provide us with extremely valuable information.



WHO WILL USE MY IMPACT REPORTS ?

They will be used by the National Drought Mitigation Center as part of the “Drought Impact Reporter”



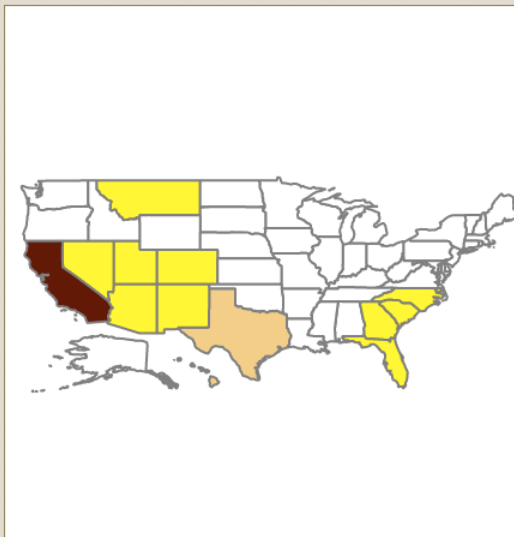
The National Drought Mitigation Center (NDMC) helps people and institutions develop and implement measures to reduce societal vulnerability to drought. The NDMC, based at the University of Nebraska-Lincoln, stresses preparation and risk management rather than crisis management.

DROUGHT IMPACT REPORTER

Drought Impact Reporter National Drought Mitigation Center



[View Drought Impacts](#) | [Add A Drought Impact](#) | [Time-Lapse Animation](#) | [About](#) | [Help](#) | [User Login](#)



Map Options

Impact Categories:

- Agriculture
- Fire
- Water/Energy
- Social
- Environment
- Other

Source: All Sources

Time Period: Last Month

Submit

[Show Drought Monitor Layers](#)

Legend

- No reported impacts
- 1 - 6 reported impacts
- 7 - 11 reported impacts
- 12 - 17 reported impacts
- 18 - 22 reported impacts
- 23 - 28 reported impacts

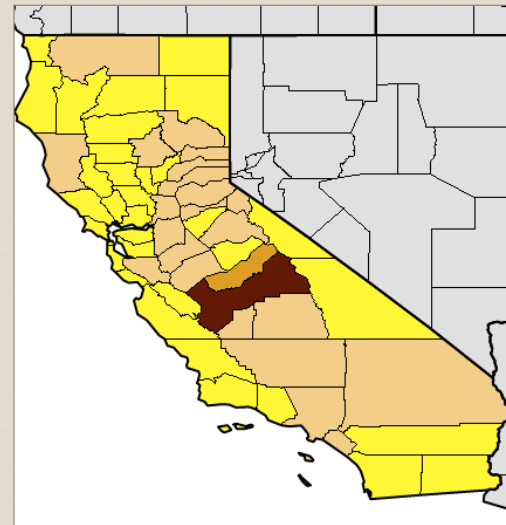
Instructions: Click on a state to see the reported drought impacts that affect that state.



Drought Impact Reporter National Drought Mitigation Center



[View Drought Impacts](#) | [Add A Drought Impact](#) | [Time-Lapse Animation](#) | [About](#) | [Help](#) | [User Login](#)



Map Options

Impact Categories:

- Agriculture
- Fire
- Water/Energy
- Social
- Environment
- Other

Source: All Sources

Time Period: Last Month

Submit

[Show Drought Monitor Layers](#)

Legend

- No reported impacts
- 1 - 2 reported impacts
- 3 - 4 reported impacts
- 5 - 6 reported impacts
- 7 - 8 reported impacts
- 9 - 11 reported impacts

[Zoom To Entire U.S.](#)

Instructions: Click on a county to list the reported drought impacts that affect it.



<http://droughtreporter.unl.edu/>

WHEN SHOULD I FILE A DROUGHT IMPACT REPORT?

Great Question!

When you notice conditions in your area becoming abnormally dry, be aware of developing impacts and report them.

As drought worsens additional or more severe impacts may occur and these should be reported as well.



HOW DO I FILE A “DROUGHT IMPACT REPORT” ?

First click on “My Data” from the menu at the top of the CoCoRaHS Web page



COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK

“Because every drop counts”

[Home](#) | [States](#) | [View Data](#) | [Maps](#)

[My Data](#) | [My Account](#) | [Admin](#) | [Logout](#)

Welcome to CoCoRaHS! “Volunteers working together to measure precipitation across the nation.”

Main Menu

- [Home](#)
- [About Us](#)
- [Join Cocorahs](#)
- [Contact Us](#)
- [Donate](#)

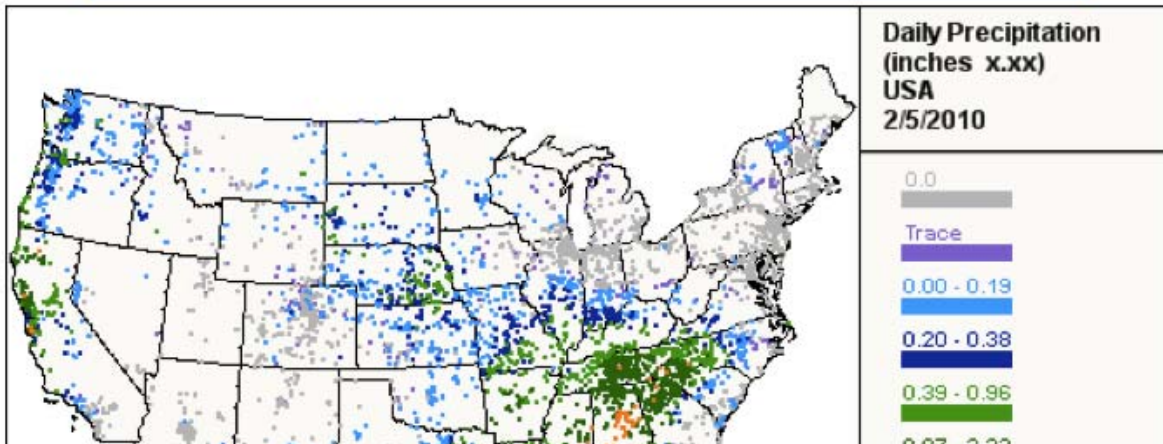
Resources

- [FAQ / Help](#)
- [Education](#)
- [Training Slide-Shows](#)

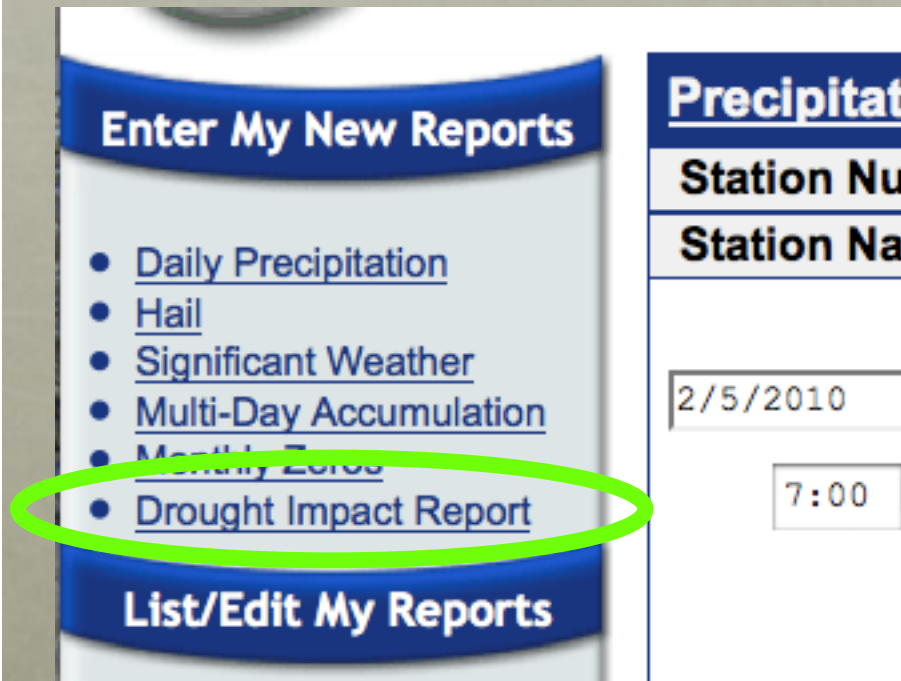
- [Volunteer Coordinators](#)
- [Hail Pad](#)

Drought Impacts

Coming this month to CoCoRaHS . . . Stay tuned!



CHOOSE “DROUGHT IMPACT REPORT” FROM THE “ENTER MY NEW REPORTS” PANEL



Enter My New Reports

- [Daily Precipitation](#)
- [Hail](#)
- [Significant Weather](#)
- [Multi-Day Accumulation](#)
- [Monthly Zeros](#)
- [Drought Impact Report](#)

List/Edit My Reports

Precipitation

Station Number

Station Name

2/5/2010

7:00

My Data Entry : Drought Impact Report Form

Drought Impact Report Form

Station Number : CO-LR-610

Station Name : Fort Collins 3.5 SW

The significance of drought is tied directly to the impacts that are being documented as they first appear and as they continue. Please refer to the [CoCoRaHS training](#) for more information on drought monitoring impacts.

** indicates required field*

Duration

Drought is a gradual, slow-moving phenomenon. The start and end dates are not required.

Start Date

2/10/2010

*

End Date

Description

Please provide a description of how drought is affecting you and your community, etc. *

DROUGHT IMPACT REPORT FORM

Enter the approximate date when the impacts you are observing were first noted. If the impacts are ongoing leave the end date blank.

My Data Entry : Drought Impact Report Form

Drought Impact Report Form

Submit Data

Reset

Station Number : CO-LR-610

Station Name : Fort Collins 3.5 SW

The significance of drought is tied directly to the impacts that it causes. Identifying and documenting impacts as they first appear and as they continue is essential for comprehensive drought monitoring. Please refer to the [CoCoRaHS training slide show](#) for reporting drought impacts.

** indicates required field*

Duration

Drought is a gradual, slow-moving phenomenon. The start date is an approximation. End dates are not required.

Start Date

2/10/2010

*

End Date

← Leave end date blank if impact is still ongoing.

DROUGHT IMPACT REPORT FORM

Be sure to enter a description of the effects of drought that you are experiencing.

Description

Please provide a description of how drought is affecting you, your livelihood, your activities, etc. *

Our Farm ponds are almost empty. Corn crop amounts to a few withered stalks. Has rained less than an inch in the past two months. Normal waterfowl have not arrived this summer, must have taken a wetter route.

REPORT CATEGORIES

Report Categories

Please check any and all categories that apply to the report you are submitting. For more information on categories of drought impacts and reports, please click on the blue help icon.

If an amount of money is associated with the impact, please consider providing that information in the box to the right of the category. Including a dollar amount means you agree to allow it to be used as a summary statistic.

| | | |
|---|--|------------|
|  | <input checked="" type="checkbox"/> Agriculture | \$ 150,000 |
|  | <input type="checkbox"/> Business And Industry | \$ |
|  | <input type="checkbox"/> Energy | \$ |
|  | <input type="checkbox"/> Fire | \$ |
|  | <input checked="" type="checkbox"/> Plants And Wildlife | \$ 20,000 |
|  | <input type="checkbox"/> Relief Response | \$ |
|  | <input type="checkbox"/> Society And Public Health | \$ |
|  | <input type="checkbox"/> Tourism And Recreation | \$ |
|  | <input checked="" type="checkbox"/> Water Supply And Quality | \$ 47,000 |

Submit Data

Reset

REPORT CATEGORIES

Please check all the boxes that apply and if possible consider including the dollar amount of the impact.

Report Categories

Please check any and all categories that apply to the report you are submitting. For more information on categories of drought impacts and reports, please click on the blue help icon.

Submit baseline reports when you're not experiencing drought so we can compare your drought reports with them. Please select at least one category along with baseline report.

If an amount of money is associated with the impact, please consider providing that information in the box to the right of the category. Including a dollar amount means you agree to allow it to be used as a summary statistic.

| | | |
|-------------------------------------|---------------------------|------------|
| <input checked="" type="checkbox"/> | Agriculture | \$ 150,000 |
| <input type="checkbox"/> | Business And Industry | \$ |
| <input type="checkbox"/> | Energy | \$ |
| <input type="checkbox"/> | Fire | \$ |
| <input checked="" type="checkbox"/> | Plants And Wildlife | \$ 20,000 |
| <input type="checkbox"/> | Relief Response | \$ |
| <input type="checkbox"/> | Society And Public Health | \$ |
| <input type="checkbox"/> | Tourism And Recreation | \$ |
| <input type="checkbox"/> | Water Supply And Quality | \$ 47,000 |

Submit Data Reset

A more detailed look at each category follows in the slides ahead.



AGRICULTURE



Agriculture

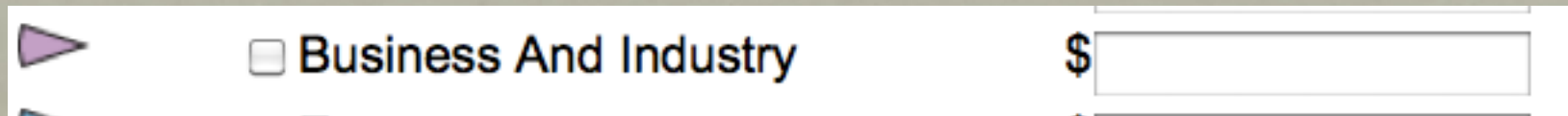
\$

Agriculture-

Drought effects which are associated with agriculture, farming, aquaculture, horticulture, forestry and ranching.

Examples of drought-induced agricultural impacts include: damage to crop quality; income loss for farmers due to reduced crop yields; reduced productivity of cropland; insect infestation; plant disease; increased irrigation costs; cost of new or supplemental water resource development (wells, dams, pipelines); reduced productivity of rangeland; forced reduction of foundation stock; closure/limitation of public lands to grazing; and high cost/unavailability of water for livestock, Christmas tree farms, forestry, raising domesticated horses, bees, fish/shellfish and horticulture.

BUSINESS & INDUSTRY



Business & Industry-

These are drought effects affecting non-ag businesses, lawn care businesses, sales of recreational vehicles/other recreational gear or plant nurseries.

Examples of drought-induced business impacts could include: reduction/loss of employees, change in sales/business, variation in number of calls for service, early closure/late opening for the season, bankruptcy, permanent store closure and economic impacts.

ENERGY

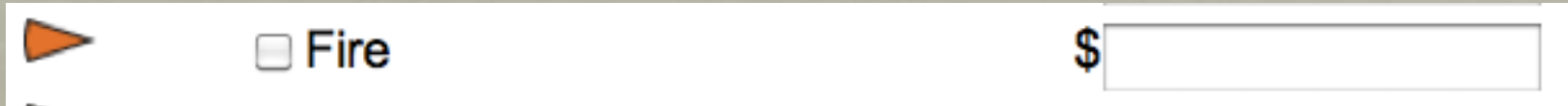


Energy-

Drought effects which are associated with power production, electricity rates, energy revenue, and purchase of alternate sources of energy.

Examples include hydropower and non-hydropower production when affected by drought, electricity rates, revenue shortfalls and/or windfall profits and the purchase of electricity when hydropower generation is down.

FIRE



Fire-

These include drought effects contributing to forest, range, rural, or urban fires, fire danger, and burning restrictions.

Examples of fire impacts include: Enactment/easing of burning restrictions, fireworks ban, increased fire risk, occurrence of fire (# of acres burned, # of wildfires compared to average, people displaced, etc.), increase in fire fighting personnel, state of emergency during periods of high fire danger and the closure of roads land due to fire occurrence or risk.

PLANTS & WILDLIFE



Plants And Wildlife

\$

Plants & Wildlife-

Drought effects which are associated with wildlife, fisheries, forests and other fauna.

Examples of drought-induced environment impacts include: loss of biodiversity of plants or wildlife; loss of trees from rural or urban landscapes, shelterbelts, 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 many wildlife in other areas); increased stress to endangered species; and salinity levels affecting wildlife, wildlife encroaching into urban areas, loss of wetlands.

RELIEF RESPONSE



Relief Response

\$

Relief, Response, & Restrictions-

These are drought effects associated with disaster declarations, aid programs, requests for disaster declaration or aid, water restrictions and fire restrictions.

Impacts include: Disaster declarations, aid programs, USDA Secretarial disaster declarations, SBA disaster declarations, government relief and response programs, state-level declarations or “state of emergency”, county-level declaration or “state of emergency”, requests for declarations or aid, non-profit organization based relief, water restrictions, fire restrictions and declaration of drought watches/warnings.

SOCIETY & PUBLIC HEALTH



Society And Public Health

\$

Society & Public Health-

These are drought effects associated with the public and human health.

Examples of drought-induced social impacts include: health-related low-flow problems, loss of human life (e.g., from heat stress, suicides); increased respiratory ailments; increased disease caused by wildlife concentrations; population migrations (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 info websites, protests.

TOURISM & RECREATION



Tourism And Recreation

\$

Tourism & Recreation-

These are drought effects associated with people's recreational activities and tourism.

Examples of drought-induced tourism and recreation impacts include: 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; delayed opening for ski resorts; increase in artificial snow generation; and cancellation or postponement of sporting events/tournaments.

WATER SUPPLY & QUALITY



Water Supply And Quality

\$

Water Supply & Quality-

These are drought effects associated with water supply and water quality.

Examples of drought-induced water supply and quality impacts include: Dry wells, water restrictions, changes in water rates, easing of water restrictions, increase in requests for new well permits, changes in water use in water use due to water restrictions, greater water demand, decrease in water allocation/allotments, installation/alteration of water pumps or water intakes, changes to allowable water contaminants, water line damage/repairs due to drought stress, drinking water turbidity, change in water color or odor, declaration of drought watches/warnings and mitigation activities.

THANKS FOR YOUR IMPACT REPORT!

With all of our extra “CoCoRaHS eyes and ears” out there we can make a real difference . . . letting the nation know how drought is impacting us!

**CoCoRaHS greatly appreciates
and thanks you for your
“Drought Impact Reports”!**



THE END

Click on your back browser button to return to “Drought Impact Reporting Resources”

