

Building a Climate Services Partnership

Mark Shafer

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Oklahoma Climatological Survey

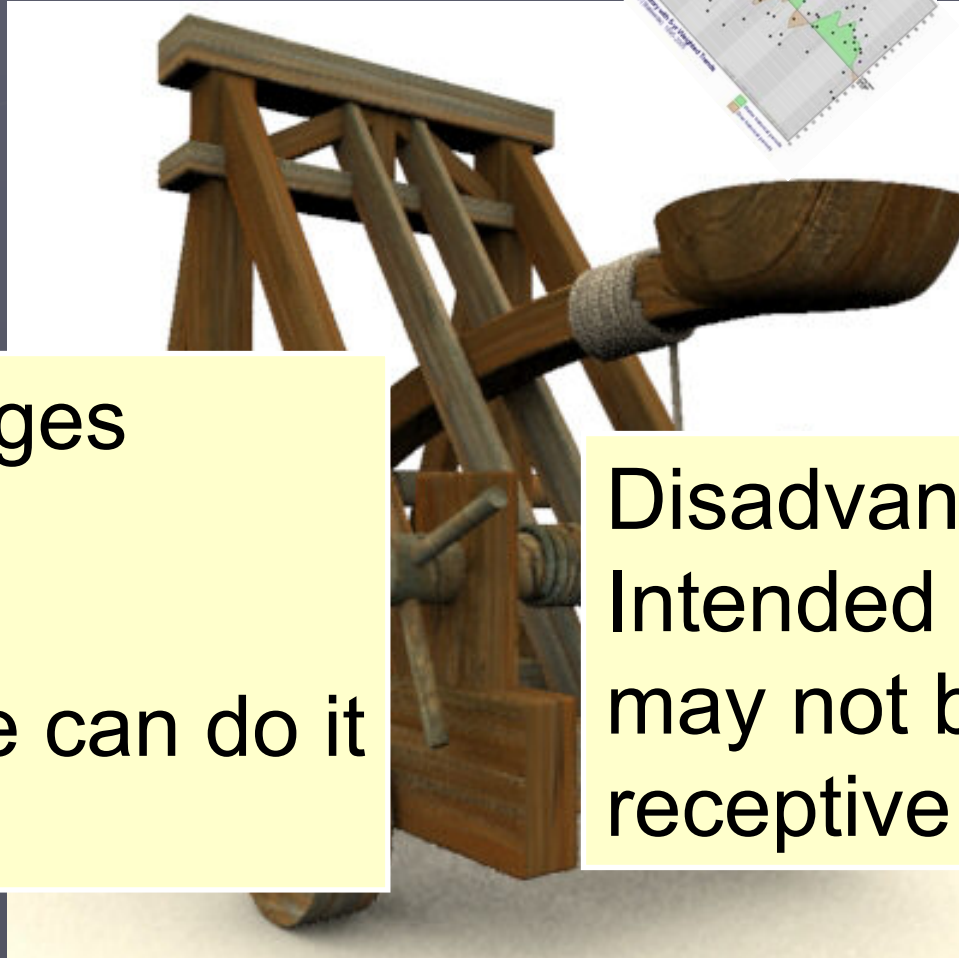
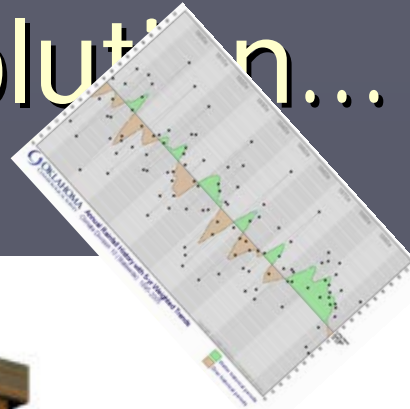
The Chasm Between Us

Users



Scientists

One Solution...

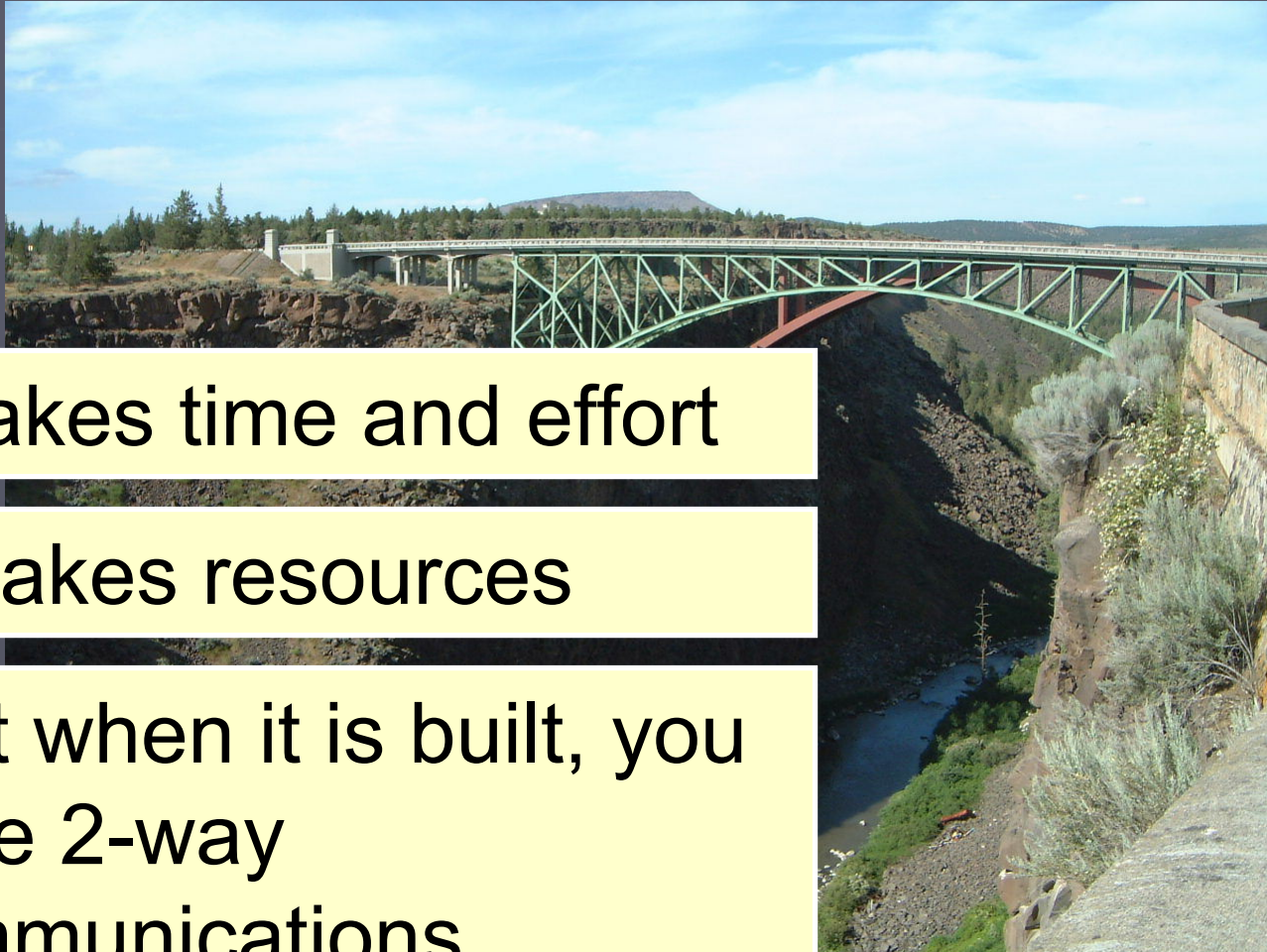


Advantages

- Quick
- Cheap
- Anyone can do it

Disadvantage:
Intended targets
may not be so
receptive

...A Better Solution?



- It takes time and effort

- It takes resources

- But when it is built, you have 2-way communications

Methods of Communication

(The Role of Scientists and Scientific Information in Public Policy Decisions: The Case of Drought Planning, Shafer 2005)

- ▶ **Direct Contact**
 - Most effective
- ▶ **Meetings**
 - Scientific, public presentations
- ▶ **Collaborative Activities**
 - Boards, planning activities
- ▶ **Written Communication**
 - Journals, reports, books
- ▶ **Indirect Communication**
 - Websites, media, e-mail

Direct Contact

- ▶ Inquiries for information, personal conversations, briefings
- ▶ Establishes communication channels
- ▶ Allows for elaboration

“You get a feel for how they view things, can have a lot of feedback, kind of know what the other side of the coin is thinking about. We’re on the science side, they’re on whatever side, whatever the agency’s role is. I think that’s very useful.”

Meetings

- ▶ Scientific conferences, internal seminars, public presentations, tours
- ▶ Interchange of ideas among colleagues
- ▶ Generating awareness and follow-up opportunities

“From the policy standpoint, I would say that you don’t necessarily meet policy-makers at scientific conferences, but conferences are very important in terms of sharing information that may be very valuable ultimately to policy-makers in our own area. So if we know of research that helps people out, that’s important.”

Collaborative Activities

- ▶ Program reviews, professional societies, local organizations, panels & boards
- ▶ Transitioning basic research to applications
- ▶ Assessments, technical assistance
- ▶ Closer, sustained relationships
- ▶ "A scientist often gets to hear what might be termed the political reality of the policy-maker, the constraints they are faced with because of law, because of financial means, because of the responsibilities they have or don't have in their position. We can say things that are more useful to them by understanding what their restrictions are, what their capabilities are."

Written Communication

- ▶ Journals, reports & newsletters, books
- ▶ Development of shared knowledge
- ▶ Synthesis of information
- ▶ Drawback: published information is static
- ▶ Difficulty in locating relevant reports
- ▶ “How do I get my professional findings across to the people which are peer-reviewed and looked at – it’s the professional environment so there scientific journals are important. But if I go to customers or people who are actually going to use and apply some of the work I have, they don’t get it out of scientific journals, they get it out of contact.”

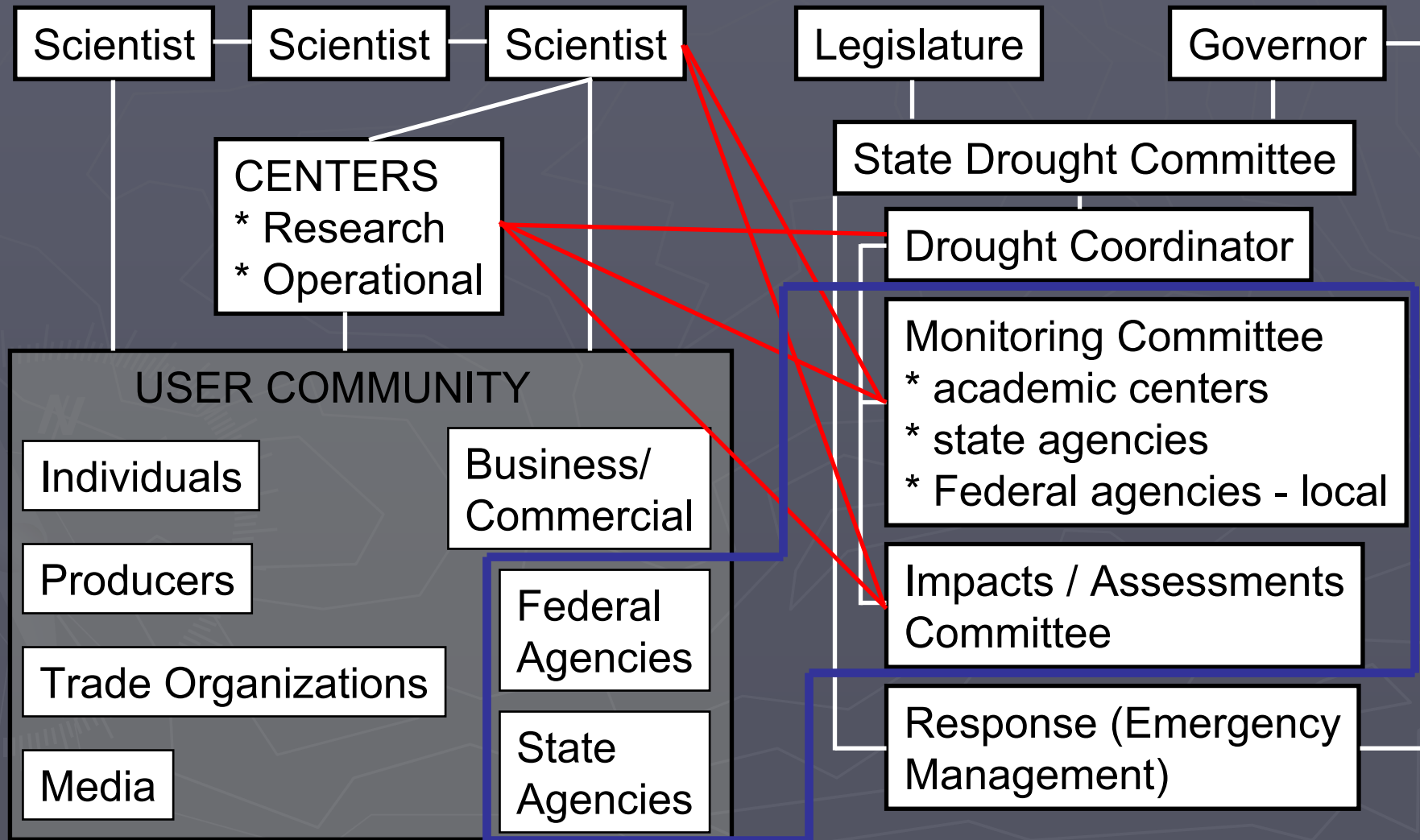
Indirect Communication

- ▶ Websites, media, e-mail, direct mail
- ▶ Increases visibility, draws attention, “highlighter”
- ▶ Difficult to sort out good from bad information
- ▶ Difficult to locate information (volume)
- ▶ “If you can’t get it with Google or something like that, then how do you even know it’s there, unless you’ve got good links from other sites.”
- ▶ “[It] shortcuts the entire system of checks and balances of your information. It may be highly effective, but I don’t like it.”

Preferred Methods of Communication

	Producers	Intermediaries
Communication with other Scientists	<ul style="list-style-type: none"> Peer-Reviewed Articles (10) Conference Presentations (7) Reports (2) Personal Communication (2) Meetings / Workshops (1) 	<ul style="list-style-type: none"> E-mail (6) Peer-Reviewed Articles (5) Conference Presentations (4) Websites (3) Personal Communication (3) Public Presentations (2) Media (1)
Communication with Decision-Makers	<ul style="list-style-type: none"> Meetings / Workshops (7) Personal Communication (5) Reports (3) Conference Presentations (2) Direct Mail / Letter (2) Brochure (1) Peer-Reviewed Articles (1) 	<ul style="list-style-type: none"> Websites (6) E-mail (5) Personal Communication (4) Public Presentations (3) Media (2) Conference Presentations (1) Briefings (1) Via Other Organizations (1) Reports (1)
Communication with the general public	<ul style="list-style-type: none"> Media (5) Websites (4) Meetings / Workshops (4) Personal Communication (3) Open House Events (3) Civic Groups (1) Extension (1) Reports (1) 	<ul style="list-style-type: none"> Websites (7) Media (5) Meetings / Workshops (3) E-mail (3) Public Presentations (2) Personal Communication (1) Via Other Organizations (1)

Communication Between Scientists and Policy-Makers



Climate Services

- ▶ “the timely production and delivery of useful climate data, information, and knowledge to decision-makers” (NRC 2001)
- ▶ Shift from historical emphasis on statistical analyses to understanding and forecasting variables and change
- ▶ Production and delivery requires research, data stewardship, product development, and education / outreach programs

5 Guiding Principles

(from A Climate Services Vision, NRC 2001)

- ▶ User-centric
- ▶ Supported by active research
- ▶ Variety of space and time scales
 - In the context of historical experience
- ▶ Active stewardship
- ▶ Well-defined participation
 - Government, business, academe

NRC Recommendations

1. Promote more effective use of the nation's weather and climate observing systems
 - Existing networks, multi-purpose
 - User-centric functions within agencies
2. Improve the capability to serve the climate information needs of the nation
 - Research, technology, modeling
3. Interdisciplinary studies and capabilities are needed to address societal needs
 - Regional enterprises
 - Climate policy education

Climate Services Partners

- ▶ State climate offices
 - local perspectives and expertise, access
- ▶ Regional Climate Centers
 - Data integration and management, tools for query and access, reports
- ▶ National Climatic Data Center
 - National repository (library), summaries and assessments
- ▶ National Weather Service
 - Forecast office focal points, local presence 24/7, regional climate services program managers

Climate Services Partners

- ▶ **Natural Resources Conservation Service**
 - Local offices, National Water & Climate Center, additional networks, stream flow forecasts
- ▶ **Regional Integrated Sciences & Assessments**
 - Research across a range of social, natural & physical science disciplines; knowledge of how information is communicated and used
- ▶ **Cooperative Extension Service**
 - Connection to local stakeholders in primarily agricultural-based activities, climate is a key consideration in many activities
- ▶ **Private-Sector**
 - 550+ consultants, ~250 private firms listed on AMS website, consultants & services

Climate Services Partners

- ▶ National Centers for Environmental Prediction
 - Seasonal and longer-term forecasting, guidance, research
- ▶ NASA
 - Satellite-based information
- ▶ NSF, Department of Energy, EPA, USGS, ...

Net Contribution Today

- ▶ Data collection and stewardship
- ▶ Specialized products and services
- ▶ Communications capabilities
- ▶ Educating stakeholders
- ▶ Active outreach programs
- ▶ Applied and basic research
- ▶ Liaison to external decision-makers

Paradigm Shift



- ▶ Must transform perspective from one of organizations to one of functions

Climate Services Functions

► Data Analysis & Quality Assurance

- Common archive that addresses proprietary concerns, site and sensor standards, required metadata, raw and adjusted datasets, and uniform quality-assurance procedures
- ACIS is the framework but must include non-NOAA networks and additional variables
- State & Regional Climate Centers, NCDC, NRCS, private-sector

Climate Services Functions

► Products

- Each provider has own set of products
- Two similar products may have very different results
- Find common suite of products to be produced by the Regional Climate Centers / NCDC
- Retain ability for all partners to develop new products off common data – leads to innovation
- State & Regional Climate Centers, NCDC, NWS, NCEP, NRCS, RISA teams, CEES, private-sector

Climate Services Functions

► Forecasts and Outlooks

- Anticipating seasonal and longer-term climate
- Capitalize on limited skill for shifting market strategies (hedging)
- Use of downscaling techniques to transform probability distribution shifts to actual variables
- Statements of odds, scenarios (analogous)
- NCEP, NWS, NRCS, RISA teams, private-sector

Climate Services Functions

► Stakeholder Services

- Utilize existing infrastructure to reach a target audience
- NCDC – State Climate Offices – Cooperative Extension: translates national products and information to local decision-makers
- Collaborative development of training materials
- State & Regional Climate Centers, NCDC, NWS, NRCS, RISA teams, CEES, private-sector

An Example: Building Partnerships in Oklahoma

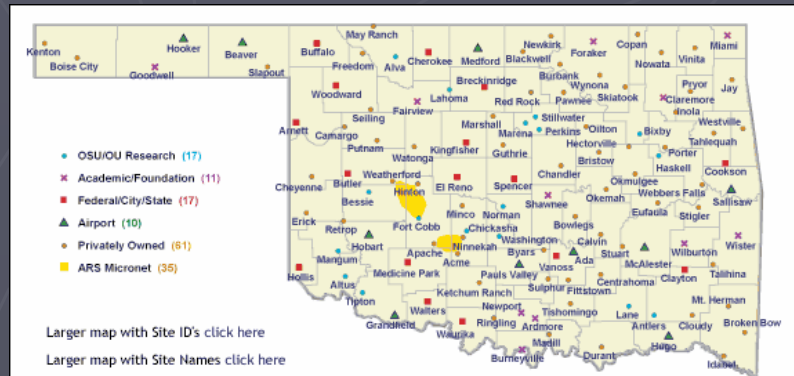


A Brief History of OCS

- ▶ State Climate Office established in 1980
- ▶ Activities and Mission set by statute
 - “to acquire, archive, process, and disseminate, in the most cost-effective way possible, all climate and weather information of value to policy and decision-makers in the state ”
- ▶ Climate Services: public presentations, information requests

The Oklahoma Mesonet

- ▶ Statewide weather & climate network
- ▶ Commissioned in 1994
- ▶ Air and soil measurements, 5-minute resolution



Types of Activities

- ▶ Workshops (formal outreach)
- ▶ Public events
- ▶ Publications
- ▶ Press releases
- ▶ Website
- ▶ Information requests
- ▶ Public Presentations (invited)
- ▶ Hallway interactions

Outreach Programs

OK-FIRST

Home | Contact Us | News | About Us

CURRENT WEATHER
LATEST NEWS
PARTICIPANT SERVICES
ABOUT OK-FIRST
PARTICIPANTS & STAFF
CONTACT OK-FIRST

Upcoming Refresher Course
Learn More

OK1 Enters Summer Operations

Well, the weather knows it's still springtime, but the OK-FIRST spring course schedule is complete. We managed a full course, four recertification courses and two assistants' courses in twelve weeks! We'd like to thank the people at the Technology Centers in Chickasha, Ponca City, McAlester, Ada and Lawton for putting up with us. Also, special thanks to the Warning Decision Training Branch for accommodating us in February.

- K-12 (EarthStorm, NSF 1992)
- Public Safety (OK-First, TIAAP 1996)
- Electric Utilities (OAEC, 1999)
- Agriculture (AgWeather, OSU 2002)

For Teachers | For Students | Materials | Data | Forums

EARTHSTORM

Norman, OK

90°F

Heat Index 91°F

Dewpoint: 64°F
Humidity: 42%
Rainfall: 0.00 in.
Wind: from the S
Speed: 13 mph

• [Choose Station](#)

Class Activities

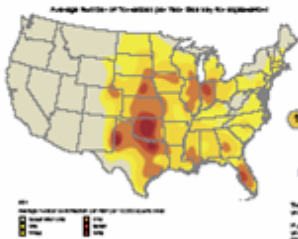
What can EarthStorm Do for You?

Welcome to the EarthStorm educational outreach pages of the [Oklahoma Climatological Survey](#). We want to hear how you use this site and any ideas you have for additional materials. Email us at earthstorm@mesonet.org

EarthStorm 2006

The EarthStorm 2006 Summer Teacher Workshop will be held in Enid, OK on July 18-21. [Click here](#) for more information.

OKLAHOMA CLIMATOLOGICAL SURVEY
Oklahoma Mesonet
SEVERE WEATHER SAFETY



weather
from Coast-to-Coast, including data from:
• National Weather Service's Storm Prediction Center
• National Weather Service's National Hurricane Center
• National Weather Service's National River Forecast Center

tornadoes
TAKING SAFETY TO HEAVY AS 1-0-3
Get Down—That's the safest place to be during a tornado. Stay low and flat on the ground. If you are in a building, get under a sturdy desk or table. If you are outdoors, lie flat on the ground. If you are in a car, stay in the car and brace for impact. Do not use elevators during a tornado.

thunderstorms & lightning
the third day

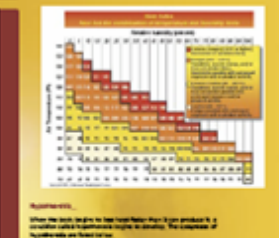
USE THIS TIP
If you see dark, heavy clouds, a lot of rain, and a lot of lightning, it's time to get out of there. If you are outdoors, find a low-lying area and crouch down. Do not touch anything metal. If you are in a car, stay in the car and brace for impact. Do not use elevators during a thunderstorm.

heat safety & hypothermia
important safety tips

Heat safety tips:
• Drink plenty of water.
• Wear light-colored, loose-fitting clothing.
• Avoid alcohol and caffeine.
• Take regular breaks in the shade.
• Use sunscreen.
• Do not overexpose your skin to the sun.

flooding
turn around, don't drown

When you see a flooded road, turn around, don't drown. Do not attempt to drive through floodwaters. Floodwaters can be very deep and fast-moving. They can sweep away your car and take you with them. If you are stuck in a car, stay in the car and wait for help. Do not attempt to walk through floodwaters.



stay aware
carry a NOAA weather radio

Stay aware of the weather. Carry a NOAA weather radio. NOAA weather radios provide the most accurate and timely weather information. They are also portable and easy to use. Make sure your NOAA weather radio has a battery and is fully charged.



Classroom Lessons

Weather Wise

Tornadoes

Oklahoma is in the middle of the most active tornado region of the United States. Tornadoes can occur at any time of the day and during every month of the year. In Oklahoma, our peak time for severe weather is from April to June.

It is important to have a severe weather safety plan. First, know the name of your county. The National Weather Service issues watches and warnings using county names to indicate where storms are expected or are currently located. Follow these three steps to find safe shelter.
Get In—Find a sturdy building. **Get Down**—Move to the center part of the building on the lowest level away from windows.
Cover Up—Protect yourself with blankets or a mattress. Put on your shoes and wear either a bike or football helmet.

Number of tornadoes by County 1950-2005

32	55	45	20	44	40	56	88	68	25	28	39	25
60	41	35	60	36	24	55	68	34	20	14		
32	53	40	61	43	44	55	68	34	20	14		
58	46	96	60	39	53	52	34	26				
24	65	60	34	54	46	46	19	19	21	44		
			52	54	29	46	25	31	29			
			60	34	29	19	24	29	18	41		

Note: Tornadoes that cross county lines are counted once for each county. Therefore, the sum of events by county exceeds the actual number of tornadoes.
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Activity

Use the information above to answer these questions.

- Shade in red each county that reported 56 or more tornadoes during the 56-year period. These counties experienced, on average, at least one tornado per year. Using a map of Oklahoma, list these counties.
- Based on the shaded areas in Question 1, where have the most tornadoes been observed? The Panhandle, Western Oklahoma, Central Oklahoma, or Eastern Oklahoma?
- What factors might influence the number of tornado reports? (Teachers Note: Consider factors such as population and county size.)

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Oklahoma Mesonet **EARTHSTORM** **OKLAHOMA CLIMATOLOGICAL SURVEY**

Weather Wise

Floods

Floods and flash floods might not capture your attention like tornadoes, lightning, or large hail, but they claim more lives than any other storm-related hazard. Just a few inches of moving water—even slow-moving water—can knock you off your feet!

Many floods are caused when rain falls too quickly for waterways to carry away the runoff. Small waterways, such as creeks and small streams, can be overwhelmed within hours or even minutes by heavy rainfall from slow-moving thunderstorms. These events are called "flash floods." Other floods are caused when rain falls nearly continuously for many days or weeks, saturating the soil or from spring snowmelt. Either situation is very dangerous!

In Oklahoma, many floods and flash floods occur at night, making them especially dangerous. You can stay safe by monitoring your favorite news source or NOAA Weather Radio. If you are caught outside in a flooding situation, get to higher ground. In a car, avoid flooded roads, especially if the water is moving. Remember: it only takes one foot of water to float a vehicle. Turn Around, Don't Drown!

Turn Around Don't Drown

www.srh.weather.gov

Activity: Use the information above to answer these questions.

- Thunderstorms dumped three inches of rainfall during one day into two separate stream basins—one is a local creek and another is a major river. Which waterway is more likely to flood more quickly? Why?
- Slow-moving thunderstorms or "training" thunderstorms (they line up and follow each other like boxcars on a train) can drop too much rain in a small area. Why do you think "training" thunderstorms pose such a flood threat?
- Weather hazards—especially floods—are extremely tough to recognize at night. What are some ways to monitor nighttime flooding and other hazardous weather situations?
- Describe why a foot of water moving at 2 mph can displace people and cars while 40 mph winds cannot? Think about the differences in density between these two fluids (water and air).

This educational program brought to you by:
THE OKLAHOMAN
Oklahoma Mesonet **EARTHSTORM** **OKLAHOMA CLIMATOLOGICAL SURVEY**

Public Events

- ▶ ScienceFest: 5,000 students at the Oklahoma City Zoo
- ▶ WeatherFest: 3,000 general public at NWC demonstration of weather technology
- ▶ Girl Scouts weather badges
- ▶ Classroom visits – both to NWC and OCS visiting classrooms
- ▶ Outdoor classrooms



OCS Publications

Monthly Summaries

OKLAHOMA MONTHLY CLIMATE SUMMARY APRIL 2005



Concern turned to alarm for parts of the state as significant precipitation deficits continued for the second consecutive month. A swath extending from south central through north central Oklahoma received only 20 percent of normal April precipitation, with less severe deficits radiating outward from that area. The dry weather contributed to the 6th driest April on record for the state. The statewide-averaged temperature provided the state with more pleasant news, finishing exactly normal for the month. The lack of precipitation provided one pleasant side effect: a paucity of severe weather. Preliminary records indicate six tornadoes touched down during April, although all were of the weak (F0-F1) category. Otherwise, thunderstorm activity was spotty at best, with only a few instances of widespread hail and high winds reported.

Precipitation

While nearly all areas of the state experienced dry conditions, central Oklahoma fared the worst. At nearly three inches below normal for the month, April ranked as the 3rd driest such period on record for that region, where the average precipitation narrowly exceeded one-half of an inch. South central Oklahoma was also particularly hard hit with a deficit of over three inches; the 6th driest April on record for that area. Ironically, the Panhandle – normally the driest region in Oklahoma – approached closest to normal rainfall for the month with a deficit of just over one-half of an inch. Other than the Panhandle, no area of Oklahoma ranked worse than the 17th driest April on record. The rainfall deficits worsen when combined with the dry weather of March. South central Oklahoma experienced its driest March-April period on record, dating back to 1895. Similarly, the central region finished with the 2nd driest such period on record. The statewide-averaged precipitation for March-April reflects those arid readings, it ranking as the 5th driest on record.

Temperature

Fortunately, the lack of precipitation was not accompanied by extreme heat. Accordingly, all areas of the state were relatively close to normal. The January-April statewide-averaged temperature remained on the warm side at just over two degrees above normal, the 15th warmest such period on record.

April 2005 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	91°F	Bearw. Slapout/ (Buffalo, Slapout)	April 4th/ (April 20th)
Low Temperature	25°F	Boise City	April 1st
High Precipitation	3.60 in.	Miami	
Low Precipitation	0.11 in.	Pauls Valley	

April Daily Highlights

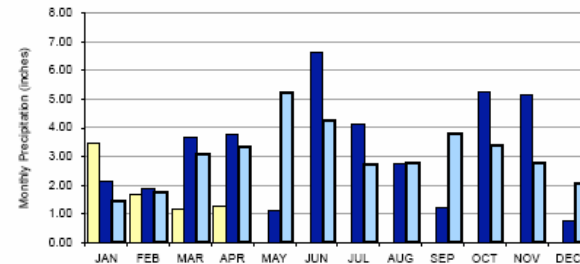
April 1-4: A bit of rain generated from an upper-level storm started the month off on the right foot. Eastern Oklahoma was the main target of these wayward showers in a month that ended so dry. Even so, the precipitation totals failed to reach three-quarters of an inch. Pleasant weather was in store throughout this period otherwise, if not a bit windy. By the 4th, surface low pressure in the Panhandle kicked up winds from the south with gusts of over 30 mph. Dangerous fire conditions were exacerbated by unusually high temperatures. The Mesonet sites at Bearw. and Slapout recorded the month's high temperature of 91 degrees.

April 5-6: Rain and cooler weather descended on the state for the next two days, in addition to some fairly stout severe weather. Showers and storms formed along a dryline in east central Oklahoma on the 5th, with some of those storms quickly becoming severe. Three weak tornadoes touched down in Latimer and Sequoyah counties, with no official reports of damage. Tescup size hail was reported in Tulsa, and winds of over 80 mph damaged out buildings in the Kinta area. The cold front associated with the dryline moved across the state on the 6th. Winds gusted from the northwest at over 30 mph behind the front, and highs reached only the mid-50s. Winds increased to over 40 mph in the afternoon.

April 2005 Mesonet Precipitation Comparison

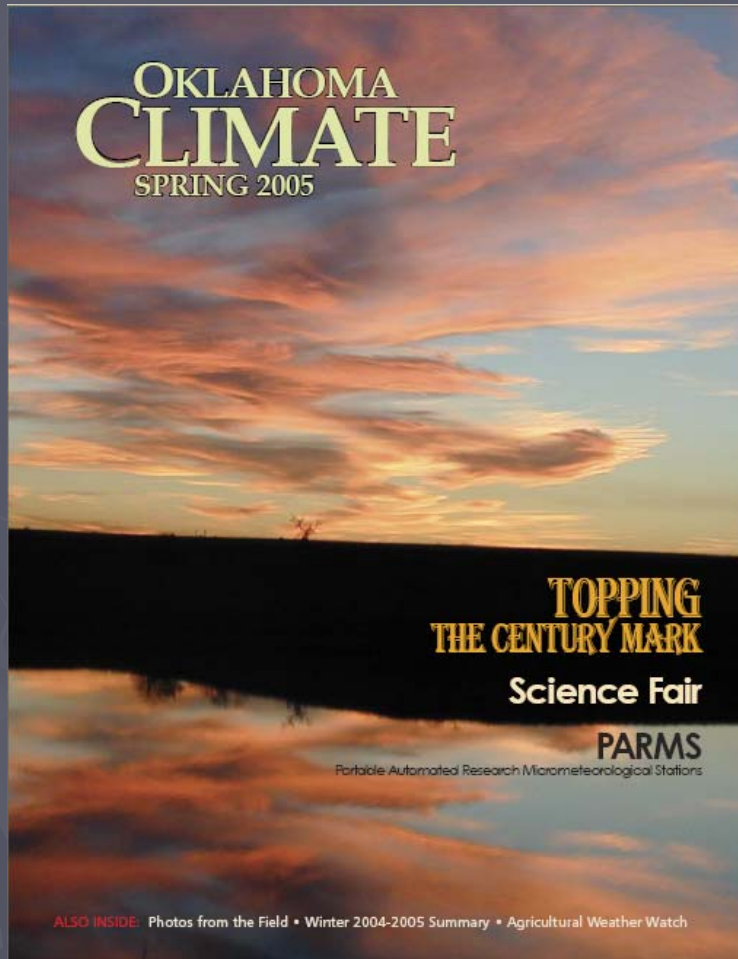
Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Apr-04
Panhandle	1.23	-0.62	47th Driest	5.28 (1942)	0.00 (1909)	2.41
North Central	0.85	-2.11	10th Driest	7.43 (1999)	0.55 (1989)	3.77
Northeast	2.06	-1.94	16th Driest	9.67 (1942)	0.17 (1989)	4.30
West Central	0.82	-1.78	11th Driest	8.73 (1997)	0.15 (1996)	2.45
Central	0.65	-2.88	3rd Driest	9.49 (1942)	0.24 (1989)	2.88
East Central	2.47	-1.86	17th Driest	11.82 (1937)	0.75 (1989)	6.76
Southwest	0.76	-1.91	9th Driest	7.30 (1997)	0.14 (1989)	2.76
South Central	0.73	-3.03	6th Driest	11.43 (1942)	0.53 (1989)	4.12
Southeast	2.06	-2.43	9th Driest	12.79 (1937)	0.53 (1987)	4.53
Statewide	1.26	-2.10	6th Driest	8.50 (1942)	0.58 (1989)	3.75

2004 and 2005 Statewide Precipitation Monthly Totals vs. Normal



OCS Publications

Seasonal Summaries



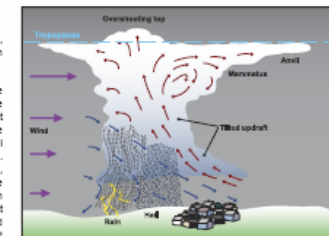
INTERPRETATION ARTICLE

The new lab manual, *Explorations in Meteorology*, written by staff at the Oklahoma Climatological Survey, provides students with an opportunity to learn meteorological concepts using data from real-world events. In this Interpretation article, we will focus on a supercell thunderstorm from Lab 11 of this manual. For help with terminology, please consult our weather glossary located at <http://earthstorm.ocs.ou.edu/materials/glossary.php>.

Thunderstorm Classification

Thunderstorms are classified into four types: single-cell, multi-cell, supercell, and squall line. We will focus on supercell storms.

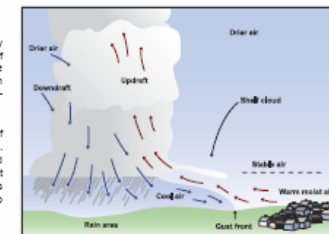
Although single-cell and multi-cell storms can produce severe weather, supercell storms almost always produce severe weather. These prolific severe storms often persist for several hours and travel several hundred miles. The supercell develops in an environment with strong vertical wind shear (e.g., stronger winds aloft than at the surface). As a result, the updrafts of supercells are tilted with height, physically separating the updraft regions (Figure 1). The separation of the updraft and downdraft allows precipitation to fall without destroying the storm or its updraft. Most supercells also rotate as a result of the vertical wind shear being deflected into the horizontal. Most violent and damaging tornadoes are associated with supercells.



The Environment of Thunderstorms

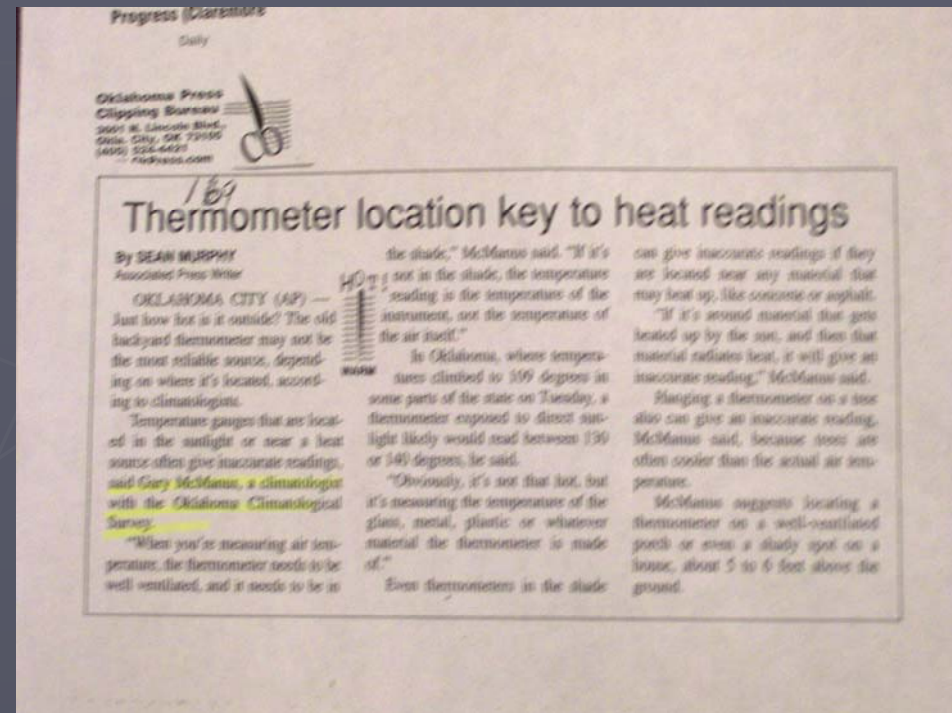
Thunderstorms require a supply of unstable air (usually warm and moist) for fuel. They also require a source of lift, allowing deep clouds to initiate in the unstable air. The lifting mechanism can originate at the surface (e.g., from orography, a front, or a dryline) or aloft (e.g., from an upper-level storm system or jet stream).

In their wake, thunderstorms normally leave a footprint of more stable air (usually cooler and drier) from the downdraft. The boundary between the warm, humid environment and the cool, dry thunderstorm outflow is called a gust front (see Figure 2). As the gust front moves away from its parent thunderstorm, it can act as a lifting mechanism to help generate additional storms.



Press Releases

- ▶ Monitor the media
 - What are they talking about?
 - How does your information filter through?
- ▶ Even if they do not get picked up, they are still worth writing
 - Helps you think through an issue
 - Creates a repository of information for later use



*Claremore Daily Progress
July 19, 2006*

Informal Activities

- ▶ Public Lectures (invited)
 - The “local” talks get your organization’s name known
- ▶ Information Requests
 - Responding to a request may lead to a new product
- ▶ Hallway Interactions
 - Learn about what others are doing
- ▶ Website / Publications / Press Releases
 - A strong web presence opens door for phone calls
- ▶ *Most people get their information indirectly*

The Keys to Our Success

- National Research Council 2001

The blue ribbon panel believed the Oklahoma Mesonet's success was built upon five pillars:

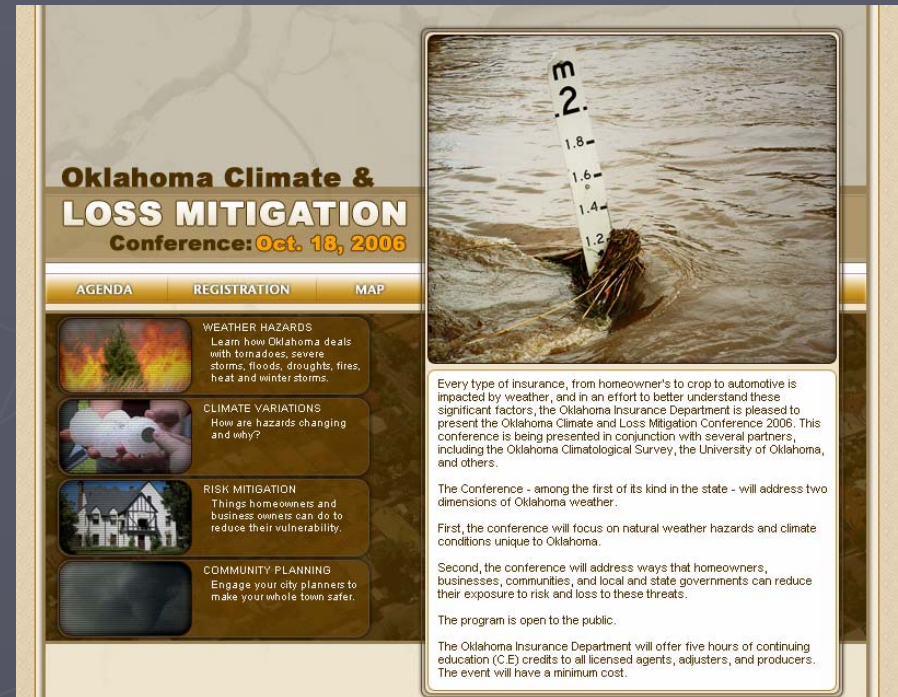
1. Users were involved from day one.
2. Products were developed in direct partnership with users.
3. Strong partnerships existed with mission agencies and with research elements.
4. Information was accessible.
5. Education of users and potential users was an important element of the program.

The Oklahoma Insurance Department

- ▶ Oklahoma 3rd most expensive in base property insurance
 - Commissioner wanted to motivate action / examine steps to reduce losses, lower rates
 - Decided to host a climate conference
- ▶ The problem: the Oklahoma Insurance Department knew nothing about weather or climate
 - No local staff resources
 - Never had hosted a conference of any type before
- ▶ The solution: Google!
 - OID Googled "Oklahoma climate", which led them to OCS
 - Had it not been for an active web presence, they would not have found us

The Oklahoma Insurance Department

- ▶ The result: Co-sponsored “Climate and Loss Mitigation” conference
 - ½ of agenda focused on weather
 - ½ of agenda focused on hazard mitigation
 - ~100 attendees, mostly insurance agents & adjusters
 - Follow-up conference planned for April 18



Oklahoma Climate & LOSS MITIGATION
Conference: Oct. 18, 2006

AGENDA REGISTRATION MAP

WEATHER HAZARDS
Learn how Oklahoma deals with tornadoes, severe storms, floods, droughts, fires, heat and winter storms.

CLIMATE VARIATIONS
How are hazards changing and why?

RISK MITIGATION
Things homeowners and business owners can do to reduce their vulnerability.

COMMUNITY PLANNING
Engage your city planners to make your whole town safer.

Every type of insurance, from homeowner's to crop to automotive is impacted by weather, and in an effort to better understand these significant factors, the Oklahoma Insurance Department is pleased to present the Oklahoma Climate and Loss Mitigation Conference 2006. This conference is being presented in conjunction with several partners, including the Oklahoma Climatological Survey, the University of Oklahoma, and others.

The Conference - among the first of its kind in the state - will address two dimensions of Oklahoma weather.

First, the conference will focus on natural weather hazards and climate conditions unique to Oklahoma.

Second, the conference will address ways that homeowners, businesses, communities, and local and state governments can reduce their exposure to risk and loss to these threats.

The program is open to the public.

The Oklahoma Insurance Department will offer five hours of continuing education (C E) credits to all licensed agents, adjusters, and producers. The event will have a minimum cost.

Multiple Methods

Formal

Workshops,
Publications,
Website

Joint Conference

Press Releases

Public Events

Public Lectures

Ad Hoc

???

Hallway
Interactions

Information
Requests

Initiated by
Producer

Initiated by
User

What Does This Tell Us?

- ▶ Importance of multiple methods of communication
 - Never know what will develop
- ▶ Formal and Informal activities
 - Formal activities help build a constituency that can be turned into resources
 - Informal inquiries can lead to new constituencies
- ▶ Be versatile – adapt your information to their needs
- ▶ Danger of over-commitment
 - The more people are aware of what you can do, the more they will ask
 - Don't want to say no, so have to be creative
- ▶ It's about empowerment, not credit

What Have We Learned?

“If you build it, they will come”

...maybe

“If you build it, train them, and continue to interact with them, they will come”

Final Thoughts

- ▶ It's the process, not the content
- ▶ Established Connections provides conduit for transfer of information
- ▶ Plenty of interaction among experts and stakeholders, but lacks coordination
- ▶ Need an effective means of communication and something to bring people to the community

Thank You!

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