



The B.F.E.*

* Base Flood Elevation

OKLAHOMA FLOODPLAIN MANAGERS ASSOCIATION NEWSLETTER

Volume 8

Spring 2006

Number 2

OFMA Spring Technical Conference Wrap Up

2006 has started off with an exceptional bang for members of the Oklahoma Floodplain Managers Association! OFMA's Spring Technical Workshop took a new approach this year and was met with great enthusiasm. *Diverting Disasters in Oklahoma: Dams, Levees, and Floodwaters* was this year's Spring Workshop theme. The workshop theme was fashioned after communities around the nation began revisiting potential hazards associated with structural flood protection measures following the enormous flooding damages from the New Orleans levee system failures. OFMA brought together an extensive knowledge base for the workshop. Presenters were affiliated with various agencies involved with flood protection around the State including Oklahoma Emergency Management, the Natural Resource Conservation Service, the Oklahoma Conservation Commission, the Oklahoma Water Resources Board and the Federal Emergency Management Agency. Municipalities, non-profit agencies and consultants were also on hand to provide insights and actual case examples related to floodplain management and development in Special Flood Hazard Areas.



The first half of the single day workshop was held inside the conference center of the Tulsa Technology Center near the west bank of the Arkansas River. An optional meeting was held in the morning for first time attendees to get better acquainted with OFMA and its membership base. The opening plenary session included presentations from invited guests and a video documenting the series of flood events that motivated the revitalization of Tulsa's Floodplain Management Program. The Keynote Speaker during lunch was Dr. David Neal, a nationally renowned disaster aftermath specialist from Oklahoma State University. After lunch, workshop participants boarded two full size buses to visit some of northeastern Oklahoma's most extensive flood protection areas along the Arkansas River. Each bus toured

the extensive levee system along the Arkansas River while following separate routes to the Keystone Dam. Each tour bus was occupied with a group of presenters who sided with different viewpoints on the issue of development behind flood control structures. With the opposing viewpoints separated between the two buses, participants were offered a chance to hear both sides independently from the other. At the Keystone Dam, both buses were unloaded and presented with a brief description of the history and functionality of the Keystone Dam. After the discussion, participants switched buses to experience the other route and the alternate viewpoint from the bus moderators. The field trip was very insightful for the participants and discussions encompassing various viewpoints from both sides of floodplain development issues were well received.

IN THIS ISSUE

SPRING WORKSHOP WRAP UP	1
MEMBERSHIP COMMITTEE	1
ANNUAL CONFERENCE.....	2
LEVEE REBUILDING UPDATE	3
OFMA REGION 4 REPRESENTATIVE.....	4
REGION 4 NFIP PARTICIPANTS MAP	5
FEMA GUIDE ON LOCAL FLOODING	5
ACCREDITATION DEADLINES	6
MITIGATION MAKES CENTS!	7
QUESTION/ANSWER COLUMN	7
WEBSITES/EDUCATION OPPORTUNITIES	8
OFMA GENERAL STORE.....	8
ELEVATION CERTIFICATE UPDATE	9
OFMA'S VISION AND MISSION	9
OFMA MEMBERSHIP INVITATION	9
STATE NFIP COORDINATOR NOTES ...	10
MITIGATION MAKES CENTS! (CONT.)	10
OFMA'S CORPORATE PARTNERS	11
2005-2006 BOARD OF DIRECTORS.....	12

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OFMA has a New Membership Committee

OFMA, as a non-profit organization, is dependant on a stable and skillful base of members to enhance the programming, fellowship and variety of resources that all contribute to the organizations mission. In order to achieve this, OFMA has decided to create a new committee to oversee the membership aspects of the organization. This all new Membership Committee has been charged with 3 basic tasks:

- Membership Recruitment • Mentoring of New Members • Retention of Existing Members

The Board believes that these 3 tasks are vital to keep members enthusiastic and appreciative of OFMA's dedicated role in assisting our State's floodplain management programs. The new committee has been delegated the task of overseeing the planning and operation of all social activities at OFMA events including events like the golf tournament, 'First Timer Meetings' and the vendor socials. The committee will help to see that our membership base remains stable with continued growth and that current members are satisfied with the organization. The more members we have, the more legitimate we are to our employers, our legislators, and the general public.

Nancy Wade from the City of Bartlesville has agreed to serve as the Chair of the new Membership Committee and she already has five committee members signed up! Thanks to Gavin Brady, Ken Morris, Sara Nieves, Joe Remondini and Neil Robinson for joining! This a fantastic start, but we're hoping YOU might consider joining us too!

A Committee focused on membership obviously needs some cheerleaders and event planners, but we also need people with ideas, people with experience, and people who are simply eager to serve an organization that they believe in. So, if you have a passion for OFMA and might be interested in joining this new and exciting committee, please send Nancy Wade an email at newade@cityofbartlesville.org or give her a call at (918) 338-4243.



May is FLOOD AWARENESS Month

Spring marks the unofficial beginning of the state's flood season, and to make citizens aware of flooding problems and solutions, Governor Brad Henry has designated the month of May as "Flood Awareness Month" in Oklahoma.

Historically, the greatest numbers of flood disasters in Oklahoma have occurred during the month of May. Floods are the most common and widespread of all natural disasters, with the exception of fire. Most communities in the country can experience some kind of flooding after spring rains, heavy thunderstorms, or winter snow thaws. Flooding causes more than \$2 billion in property damage and numerous deaths each year. To add to the

woes, losses due to flooding are generally not covered under most homeowners or business policies.

Floodwaters can be extremely dangerous. The force of six inches of swiftly moving water can knock people off their feet. The best protection during a flood is to leave the area and go to shelter on higher ground. Flash flood waters move at very fast speeds and can roll boulders, tear out trees, destroy buildings, and obliterate bridges. Walls of water can reach heights of 10 to 20 feet and generally are accompanied by a deadly cargo of debris.

Each year, several Oklahomans lose their lives by driving into dangerous floodwaters. If floodwaters rise around a car, it should be abandoned. Drivers need to learn to never drive into moving water, especially if the water is deep enough to cover the wheel rims of the car. Depth can be deceptive and cars can easily be swept away in just two feet of moving water. This May, let's work to keep our communities well informed of the dangers of floodwaters and the commitment we as floodplain managers have made to keep our citizens and their property safe from flood hazards.

Gearing Up for the OFMA 16th Annual Conference!!!



The time is approaching for this year's Annual Conference to be held at the University of Oklahoma campus in Norman, Oklahoma, September 17th through the 20th. Rooms for the conference at the Sooner Hotel are filling up fast so be sure and get your reservations made early, see more information on the OFMA Website at www.okflood.org. Once the Hotel is booked, rooms will have to be reserved off campus so don't wait too long! The conference will be held within walking distance from Sooner Hotel at the Oklahoma Center for Continuing Education .

The OFMA Annual Conference is regarded as the best opportunity to network with your fellow floodplain managers and receive vital information concerning floodplain management updates and policy changes from the national to the local level. With the hurricane disasters experienced this past year, significant changes could be implemented by the Department of Homeland Security. By attending this conference you will learn how DHS and FEMA could be changing some basic program elements.

The Annual Conference will have a golf tournament planned for Sunday the 17th and the always exciting Awards Banquet will follow the Tuesday training sessions. Tuesday evening's entertainment will be provided by the Cimarron Circuit Company Opera. Now is the time for nominations for the Awards Banquet, so if you know someone who should be recognized as a leader of floodplain management in our State, make sure and get your nomination form downloaded from the OFMA website.

Monday evenings Vendor's Social will be held in the Sam Noble Oklahoma Museum of Natural History from 6 p.m. to 9:30 p.m. This museum was renovated in May of 2000 to encompass 195,000 square feet of exhibit space and contains a fascinating collection of natural and cultural history of Oklahoma. Entertainment for the event will be the sensational jazz group Shortt Dogg.

The Opening Plenary Session will be Monday, the 18th. Four break out sessions are planned including the 101 Workshop. The Conference will come to a close on Wednesday at 4:00 p.m. with the door prize giveaway. If you would like to sponsor a break or an event, please contact Laureen Gilroy at (918) 596-2859. We look forward to seeing each of you there so plan for the 16th Annual Conference and make your reservations now!



New Orleans Levee Improvement and Rebuilding Update



It doesn't seem long since Tropical Storm Zeta fizzled out in the first week of January 2006 ending the 2005 Atlantic hurricane season with a record number of 28 named storms in the Atlantic. And it won't be long before June 1st opens the 2006 Atlantic Ocean hurricane season. This is also the date that the U.S. Army Corps of Engineers (USACE) has set as a goal for construction of three proposed floodgates as well as the complete development of a plan detailing the potential impacts of a Category 5 hurricane for the entire coastline.

Due to the extensive length of levees damaged by Hurricane Katrina (169 miles) and the ballooning cost estimates to rebuild the levees, the USACE has decided to proceed with proposed floodgates as a way to prevent storm surges from building up in three of the city's major drainage canals.

The fabrication and installation of temporary closure gates at the mouths of three outfall drainage canals by June 1st will isolate the outfall canals and their levee walls from potential Lake Pontchartrain storm surges during the upcoming hurricane season. The gates will only be closed when the canals are potentially threatened by storm surges from Lake Pontchartrain. Normally, canals in New Orleans drain rainwater from New Orleans streets into Lake Pontchartrain. However, during Hurricane Katrina this flow reversed, pushing storm surges from the lake into the canals, ultimately causing levees that were not even overtopped to break open from the unusual pressure.

The new floodgates will remain open to allow rainwater to drain out of the canals unless a major storm begins to reverse the flow of water from the lake into the canals. In that case, the gates would close to prevent water from coming into the canals while temporary pumps would continue to move rainwater out.

Many engineers studying the system see the best long-term solution as building new, permanent pumping stations at the mouths of the canals, which would allow drainage pumping to continue at full capacity while the gates were closed. However, in order to pursue such a plan, the Corps must first get authorization from Congress.

Maj. Gen. Don Riley, USACE director of Civil Works, has called the rebuilding effort "one of the largest and most ambitious civil works projects ever undertaken in the United States". The Corps has doubled the standard amount of quality control and quality assurance inspections to ensure the soil and other materials meet the highest standards. Additionally, the USACE New Orleans District and the National Geodetic Survey are cooperating in the establishment of a new, more reliable vertical reference datum for the region. The vertical reference datum will be critical to accurately benchmark and measure the heights of vertical protective structures in the area. This is essential for an area that has lost to subsidence as much as 1,900 square miles of wetlands since the 1930's, much of which is due to the geologic slumping effect of the Michoud fault, located in eastern New Orleans.

With much of the rebuilding effort underway, the project is faced with some new and tough policy decisions. Most notably, the estimated costs originally anticipated as \$3.1 billion in December, has since tripled to \$10 billion, leaving some to question if there are sufficient funds to protect all areas in the region. Due to the rising costs, those overseeing reconstruction in the region predict some areas of New Orleans may not be fully protected after reconstruction. The idea of not rebuilding levees in portions of New Orleans will likely stifle growth as structures would not be eligible for insurance.

By the end of the summer, FEMA should be able to submit preliminary maps for a public review and comment period. Once those maps become approved and effective, they become the base flood elevations that dictate requirements for NFIP participation (currently, the effective FIRM maps are dated 1984). Residents who have more than 50 percent damage and whose home is below the base flood elevation set 20 years ago will have to raise their house to rebuild.

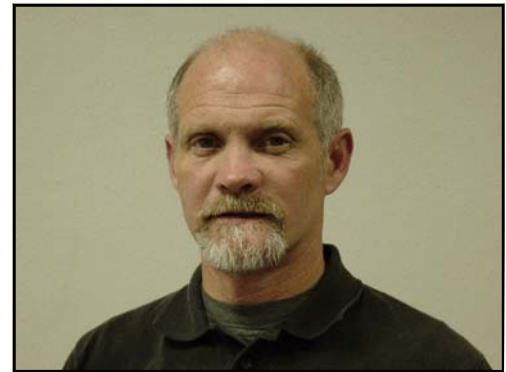
Due to the map modernization process, the 100-yr floodplain will now incorporate elevations from Katrina, Rita and other storms of the past 155 years, which is something the administration requested and funded before Katrina hit. During a March 30th press conference, one Department of Homeland Security speaker said it was possible that some homes would be required to build 30 feet above sea level (three stories high) to obtain flood insurance, but FEMA has since restated its requirements. Now, any home that was substantially damaged must rebuild only 3 feet above ground no matter what the effective BFE. Homeowners who get building permits under the current rules will not have to worry about being charged higher flood insurance rates when the new maps are issued next year. The news will surely spur development, but at what cost in the future? Will taxpayers continue to subsidize unwise construction after disasters and will FEMA continue to allow lenient requirements where life and property are knowingly at risk? Only time will tell.

OFMA Region 4: About the Region and the Representative

OFMA is proud of each of the Regional Representatives for the hard work each volunteer commits to. Without their dedication, OFMA would not be the successful association it is today. Each Representative works very hard to promote sound floodplain management within their region by keeping Floodplain Administrators updated with current events and program issues. They provide an important point of contact for floodplain managers in each region and are here to help each of you with any support they can. OFMA would like to thank Region 4 Representative Phillip Beauchamp for providing some insight to his background and the goals he has set for the region.

Phillip W. Beauchamp, CFM, is the current Engineering Department Head holding the position of Engineer Technician. Phillip has worked with the City of Altus for the past 26 years.

Phillip began his career, and spent his first 11 years working with the Street Department. With this assignment, he conducted typical street department tasks such as construction and maintenance of streets, alleys and drainage ways. As his experience, judgment, and a keen eye for grade developed, he quickly rose through the ranks to a leadership position where he was involved in project planning, development and inspection. He recalls his first exposure to floodplain involvement was overseeing and maintenance of the city storm water drainage system, which included many miles of open ditch and enclosed underground systems.



**OFMA Region IV Representative
Phillip Beauchamp, CFM.**

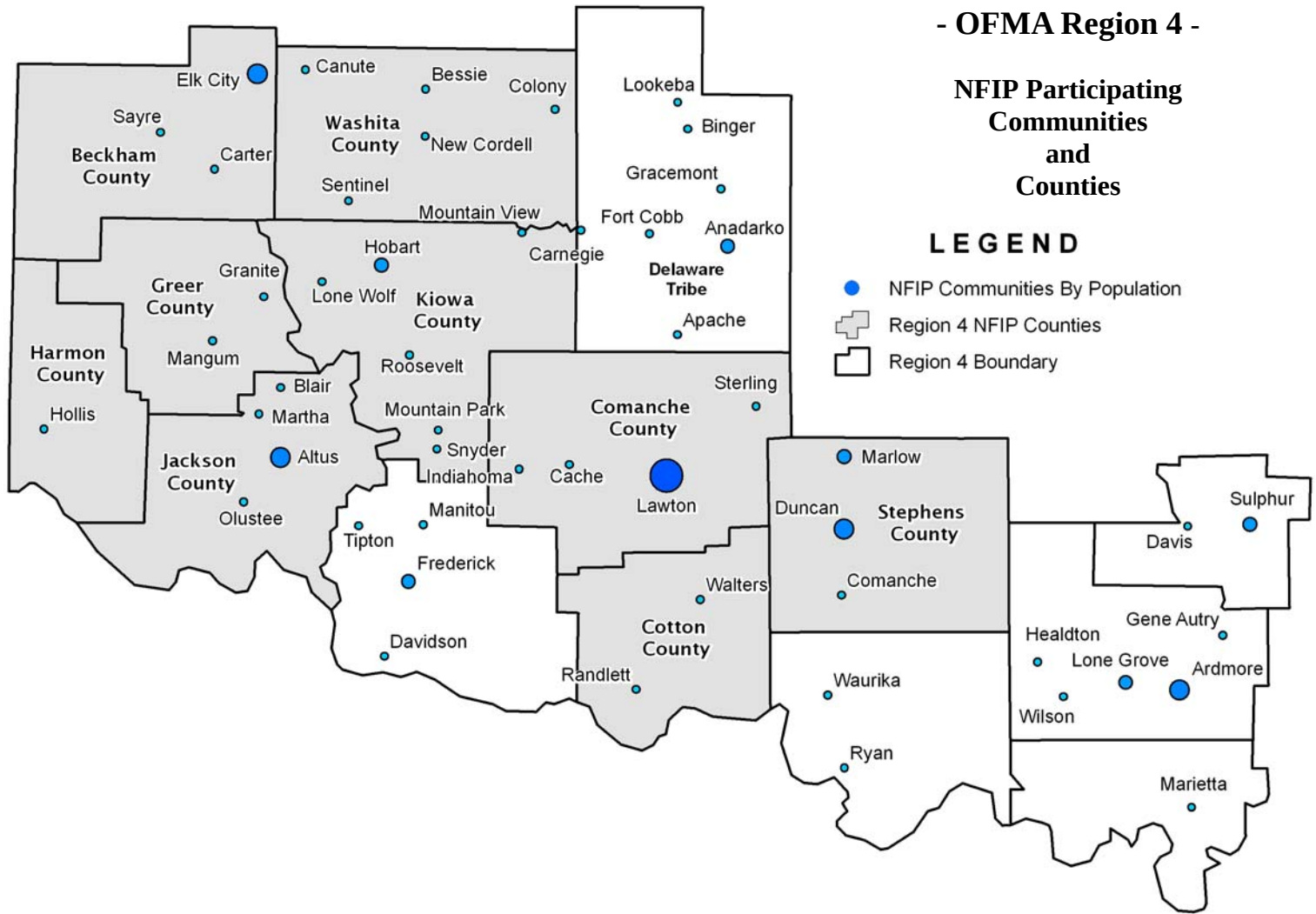
As with any town or city, the City of Altus has areas of localized flooding during given amounts of rainfall and back as early as the mid 1980's, Phillip worked closely with the City Engineer and a local engineering firm to construct one of the first major storm detention ponds in the City of Altus. It was through this close working exposure with the City Engineer that he was asked to join the Engineering Department.

Phillip was elected to the OFMA Board of Directors as the OFMA Region 4 Representative in September of 2005 and has worked closely with Vice-Chair Gilroy as a conference committee member. For recreation Phillip regularly enjoys extreme sports such as white water rafting, technical climbing and the IPSC / IDPA shooting sports.

As the OFMA Region 4 Representative, Phillip has set goals of:

- 01) Keeping fellow Floodplain Managers motivated. He knows that most Floodplain Managers take on this very important task as an additional duty to their every day jobs and being a good FPM can seem overwhelming at times.
- 02) Working to keep our Floodplain Managers well educated and knowledgeable. We are a professional organization with a formidable task ahead of us and our greatest asset is knowing our job.
- 03) And last but certainly not least, educating the people of our great State about the best way to use, live with and protect the floodplain. Our jobs as FPM's are much easier when the people that we deal with understand the value and importance of the floodplain.

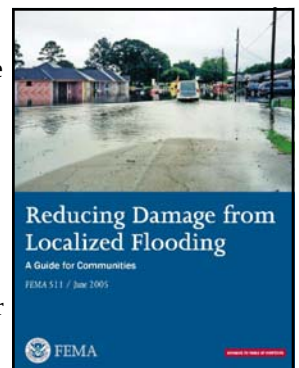
If you're a Floodplain Administrator in Region IV, Phillip would like to hear from you! Thank you Phillip for all your hard work!



FEMA Issues New Guidebook for Localized Flood Mitigation

Localized flood problems sometimes do not get the remedial attention they need, partly because they are not the subject of dramatic headlines or stories on the nightly news, and partly because they fall outside the scope of many local flood protection ordinances, which are geared toward the Special Flood Hazard Area (SFHA) depicted on the community's Flood Insurance Rate Map (FIRM). However, as local officials, floodplain managers, and residents of those areas know, this flooding is a significant and usually recurring problem. Localized flooding can result from even minor storms. Runoff overloads the drainage ways and flows into the streets and low-lying areas. Sewers back up; yards are inundated; homes and businesses are flooded, especially basements and the lower part of first floors. Localized flooding poses most of the same problems caused by larger floods, but because it typically has an impact on fewer people and affects smaller areas, it tends to bring less State or Federal involvement such as funding, technical help, or disaster assistance. As a result, the community and the affected residents or business owners are left to cope with the problems on their own. Finally, flooding of this type tends to recur; small impacts accumulated over time can become major problems.

Reducing Damage from Localized Flooding: A Guide for Communities is a 180 page guide intended to help local officials in cities, towns, villages, tribes and counties in the United States understand what they can do to reduce the damage, disruption, and public and private costs that result from the shallow, localized flooding which all too often escapes the attention received by larger floods or those that are clearly mapped and are subject to floodplain development regulations. Specifically, the guide outlines the types of actions that can be taken, explains why they are important and what their potential benefits are, and provides resources for more information and assistance. The guide is free and available from the Federal Emergency Management Agency Distribution Center at PO Box 2013, Jessup, MD 20794. Call 1-(800)-480-2520.



Deadlines approaching for State Accreditation Requirements

Fulfilling the duties of Floodplain Administrators can often be a difficult task. In addition to the minimum requirements each NFIP participating community is mandated to enforce, there can also be added Stormwater Regulations and Criteria defined in local statutes that must also be addressed and monitored closely. OFMA takes these requirements seriously and is committed to the success of each and every one of its members when it comes to managing Special Flood Hazard Areas. The OFMA Board continues to assist Floodplain Managers across the State in accomplishing their duties and remaining compliant in the National Flood Insurance Program. Regional Representatives are selected each year to act as a point of contact whenever they are needed. Each representative volunteers their time and knowledge to promoting sound floodplain management activities within their region. If you have not contacted your OFMA Regional Representative lately, please do so. They are constantly updating contact information and seeing that your community remains compliant in the National Flood Insurance Program.

One activity that is regularly occurring is the Floodplain Managers 101 Workshop. This workshop, administered by the Oklahoma Water Resources Board and held each month, is continuing to accredit Floodplain Administrators with the continuing education credits now required by state law. Currently 153 FPA's have been accredited this year, but there are 225 FPA's to go before June 30, 2006. This means there are 225 communities with Floodplain Administrators that may not meet the required annual training outlined by State Law. If these requirements are not met, FEMA can and will hold those communities accountable by putting their program on probation or possible suspension. If you have not attended a Floodplain 101 workshop this year or you are unsure whether you have obtained your required CEC's to satisfy your community's membership in the NFIP, then contact your Regional Representative now! They can help you. Workshops are held each month in Oklahoma City at the OWRB office at 3800 N. Classen.



Floodplain 101 Workshop instructors Ken Morris (top left) and Gavin Brady (bottom right) assist participants through exercises related to floodplain management during the March 8th class. Activities include permitting application and review, FEMA elevation certificates, understanding FIRM maps and determining Base Flood Elevations as well as covering the main duties of a Floodplain Administrator. Students work in pairs of two throughout the daylong workshop. Six continuing education credits are obtained by attending this workshop and each Floodplain Administrator that attends a workshop complies with the state law for annual training, administered by the OWRB.

Mitigation Makes Cents!

A study, released by the Multihazard Mitigation Council of the National Institute of Building Sciences, representing the most comprehensive quantitative analysis of hazard mitigation activities to date has found that money spent on reducing the risk of natural hazards is a sound investment. On average, a dollar spent by FEMA on hazard mitigation saves the nation about \$4 in future losses. In addition, FEMA grants to mitigate the effects of floods, hurricanes, tornados, and earthquakes, from 1993 to 2003, are expected to save more than 220 lives and prevent almost 4,700 injuries over approximately 50 years.



The study examined 10-years of mitigation grants (1993-2003) in eight communities around the nation. *Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities* is the culmination of a three-year, congressionally mandated independent study. In general, key findings of the study included the identification that net benefits of FEMA's hazard mitigation program to society as a whole are positive. In addition to savings to society, the federal treasury can redirect on average, \$3.65 for each dollar spent on mitigation as a result of disaster relief costs and tax losses avoided. Furthermore, it was found that additional loss reduction activities occur in communities that have institutionalized their hazard mitigation programs.

(Continued on page 10)

OFMA is dedicated to assisting Floodplain Administrators with solving problems related to their floodplain management responsibilities. In order to achieve this, OFMA is announcing a new column in *The BFE* called "Q & A" devoted to resolving question you have. Information contained in this column should be informative for other Floodplain Administrators around the State and serve as a forum for improving the knowledge base of our OFMA members. If you have a question that needs to be answered or want to highlight lesser known aspects of Floodplain Management, submit your question to *The BFE* Editor so that it may be shared for the benefit of others facing similar challenges.



- **Does your community have an EPA Waiver Requirement on your community's Flood Damage Prevention Ordinance?**
- **Has your community received federal funds from the EPA since 1982 to upgrade your community's sewage treatment plant?**

If so, this could be your hammer in protecting your floodplains natural and beneficial functions. Let's explain a bit further... Executive Order 11988 states that federal dollars can not encourage development in the Special Flood Hazard Area. More specifically, "federal agencies must avoid the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development where ever there is a practicable alternative". In order to adhere to this, the EPA required any community that has received federal funds to improve, upgrade or construct a sewage treatment plant since 1982 agree that "wastewater generated by development located in the 100 year floodplain shall not be transported or treated by the project facilities for a period of 50 years." In short, if your community received federal funds to improve a sewage treatment plant after 1982, any development in your FEMA regulatory floodplains can not be serviced by that water treatment plant for 50 years. By receiving these funds, this requirement is in your regulations. This is known as an EPA Waiver requirement and it is in your community's flood damage prevention ordinance (FDPO). It was mandated in 1982 under the Guidelines for the Construction Grants Program as a grant condition in the community's grant agreement. A waiver can be granted, only if the owner/developer can sufficiently show that the natural environment in the 100-year floodplain would be preserved. So, does your community's FDPO contain a U.S. EPA Waiver Requirement? If so, this could be your hammer in protecting your floodplains natural and beneficial functions and not violate Executive Order 11988.

Web Sites

OFMA www.okflood.org
ASFP www.floods.org
OWRB www.owrb.state.ok.us
FEMA www.fema.gov
OEM www.ok.gov/oem
Corps of Engineers (USACE)
www.swt.usace.army.mil
U.S. Geological Survey (USGS)
ok.water.usgs.gov
Advanced Study Institute
web.uccs.edu/geogenvs/natoasi
CLOMR/LOMR Forms:
www.fema.gov/fhm/frm_form.shtm
EPA NPDES Phase II site:
www.epa.gov/npdes/
SMRC Stormwater Mgr Resource Center:
www.stormwatercenter.net
FEMA Official NFIP Site:
www.floodsmart.gov
Link to: 44 CFR Ch. I (10-1-02 Edition)
http://www.access.gpo.gov/nara/fr/waisidx_02/44cfrv1_02.html
Webmaster: Tinna Song-Wallis
stsong@cox.net

Calendar of Educational Opportunities

- **Floodplain 101;** May 2, 2006. OWRB 3800 N. Classen Blvd. Oklahoma City, OK. Contact Rhonda Bowers (405) 530-8800; website www.owrb.state.ok.us
- **Floodplain 202;** May 3 (Bartlesville), May 16th (McAlester), May 18th (OKC), May 23rd (Woodward), May 25th (Lawton) Contact Rhonda Bowers (405) 530-8800; website www.owrb.state.ok.us
- **AFMA Spring Workshop;** April 27-28, 2006; Jacksonville, AR. Contact <http://www.arkansasflood.com/>
- **2006 National Flood Conference;** May 7-10, 2006. Wyndham Philadelphia at Franklin Plaza; Philadelphia, PA. Contact: Catherine King FEMA Mitigation Division. Website: www.fema.gov
- **AWRA - GIS and Water Resources IV;** May 8-10, 2006 Contact: Patricia A. Reid (540) 687-8390 American Water Resources Association website: www.awra.org/meetings/Houston2006/
- **World Environmental and Water Resources Congress;** May 21-25, 2006 Omaha, NE. Hosted by the Environmental Water and Resources Institute of the American Society of Civil Engineers (ASCE). Contact jdailey@asce.org
- **ASFP Annual Conference; Floodplain Management Crossroads;** June 11-16, 2006; Albuquerque, NM. www.floods.org
- **Advanced Floodplain Management Concepts (E194);** Emergency Management Institute, Emmitsburg, MD. Contact (800) 238-3358 or www.training.fema.gov/EMIweb/.
- **OFMA 16th Annual Conference;** September 18-20, 2006, University of Oklahoma Conference Center, Norman, OK. Contact: OFMA, P.O. Box 8101, Tulsa, OK 74101-8101; website: www.okflood.org.

OFMA General Store

Oklahoma Floodplain Managers Association gifts are now available. The attractive OFMA articles are of the highest quality. You will be proud to wear and display them.

To Order: OFMA
P.O. Box 8101
Tulsa, OK 74101

Or call Carolyn Schultz (918) 669-4919



OFMA Golf Shirt (S, M, L, X-L)	35.00
Briefcase	25.00
Baseball Cap (One size fits all)	15.00
Insulated Mug	10.00
Umbrella	20.00
Portfolio	25.00
Lapel Pin	3.00
CFM Lapel Pin	5.00

Shipping and handling \$4.95 per order.

New Elevation Certificate Approved

On August 18, 2005, the Federal Emergency Management Agency published a notice inviting the general public and other Federal agencies to present comments on the proposed revised Elevation Certificate (EC). Comments were allowed for 60 days from the date of the notice. OFMA Mapping Committee members met at the 2005 Annual Conference to review the proposed changes and offered comments, published in *The BFE* Fall 2005 newsletter, regarding the requirement of photographs and the area calculations below the first finished floor.

FEMA's new Elevation Certificate was approved for use, effective February 13, 2006, through February 28, 2009. The new form has been revised and now requires the certifier to provide the square footage of the enclosed area below the elevated floor and at least two photographs of the building, if the EC is being used to obtain flood insurance.

The new EC will be phased in on a voluntary basis until December 31, 2006. Although the old version of the form is no longer available for distribution, existing copies may be used until the end of 2006. Elevations certified on or after January 1, 2007, must be submitted on the new form and must include photographs. Changes include:

- The format of the EC has been modified slightly to include all building description related items in Section A, dedicating Section C to building elevation information.
- The instructions of the new form have been modified to reflect the changes and to provide better guidance for completing the form.
- Two pages have been added for attaching two or more color photographs of the building. Photographs must be a minimum of 3" x 5" and may be digital or analog.

An electronic version of the form and instructions are available on the FEMA website at http://www.fema.gov/doc/nfip/elevcert_template.dot.

Oklahoma Floodplain Managers Association

Vision

The Oklahoma Floodplain Managers Association advocates the protection of the natural functions of the floodplain through education, training, and service to Oklahomans.

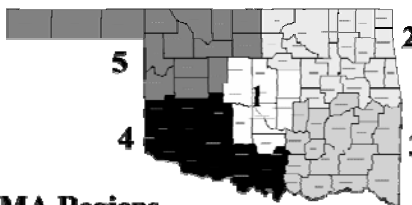
Mission

We encourage and support, with our partners, flood-safe development and flood mitigation. We promote sound floodplain management practices and the natural and cultural benefits of the floodplain. We support the floodplain management profession through education and certification.

Saving lives from floods and reducing property loss from floods are paramount to us.

An Invitation to Join OFMA

The Oklahoma Floodplain Managers Association is a non-profit organization primarily dedicated to providing information and education to the public about reduction of loss of life and property due to flooding.



OFMA Regions

The best investment that \$30.00 can buy in the future of your state is a membership in the Oklahoma Floodplain Managers Association.

OFMA Membership Application

Name: _____

Company/Organization: _____

Title: _____

Address: _____

Work Phone: _____

City/Town: _____ State: _____ Zip: _____

Fax: _____

E-Mail: _____

Detach and Mail to:

OFMA

P.O. Box 8101

Tulsa, OK 74101-8101

New Member: ☐

Renewal: ☐

Region (see map): 1 2 3 4 5

Committees:

☐ Mitigation

☐ Mapping and Engineering

☐ Education/Legislative

☐ Certification

☐ Conference

Dues Schedule:

First-Year dues for joining OFMA are listed below. The fiscal year for membership starts October 1st and ends September 30th.

Full Membership	\$ 30.00
Student Membership	15.00
Associate Membership	20.00
Agency Membership	50.00
(Plus \$10.00 per employee designated by the Agency)	
Corporate Sponsor	100.00



Notes from the State NFIP Coordinator

Mike Mathis, Oklahoma Water Resources Board, NFIP State Coordinator

I want to thank the Oklahoma Floodplain Managers Training Cadre. In particular, Bill Smith has been invaluable to the OWRB and our accreditation program. With Jack Graham, of FEMA, still on disaster duty in Texas, Bill has been helping us teach the Floodplain Management 101 workshops this past year. Bill is also developing a short two-hour special workshop that will be offered later this year through each of the five OFMA Regions. For more information about this opportunity, contact your OFMA Regional Representative.

I also want to encourage all Oklahoma communities participating in the NFIP to become accredited prior to June 2006. The first accreditation year is quickly coming to a close and, already, 153 administrators have become accredited; only 225 to go. This new accreditation law has created an opportunity for community officials to gain a clear understanding of their role and the responsibility of NFIP participation. This educational effort also allows our community leaders to learn how they play a key role in reducing future flood losses through implementation of a sound permitting system.

However, these workshops are not just for local floodplain administrators. Training staff has trained city council members, county commissioners, state legislators, insurance agents, floodplain boards, reporters, and concerned citizens. Monthly floodplain workshops in Oklahoma City have far-reaching benefits beyond just accreditation. These training workshops lead to improved local programs and they help integrate the No Adverse Impact approach to daily floodplain management.

In May, our training staff will take Floodplain Management 101 and 202 on the road in Bartlesville on May 4, McAlester on May 16, Oklahoma City on May 18, Woodward on May 23, and Lawton on May 25. Specific workshop locations, as well as easy enrollment, are available on the OWRB's Web site at www.owrb.state.ok.us. And I remind you that these workshops are free. Joe Remondini, of the Tulsa Corps of Engineers, is facilitating each of the 202 Workshops, all featuring the Map Modernization Program. The 202 Workshops will also provide a valuable advanced program for CFMs to earn CECs and will provide training in NAI, mitigation, master drainage planning and OWRB "hot topics."

Last but not least, it is time to begin planning for the Sixteenth Annual OFMA Conference, September 18-20 in Norman. The conference planning committee, chaired by Laureen Gilroy, has some preliminary information posted on the OFMA web site. So please check out what is in store for the premier annual OFMA event and mark your calendars. Thanks and I look forward to seeing you in the near future.



(Continued from page 7)

The analysis distinguished between project and process mitigation activities. Project activities being "brick-and-mortar" style actions and process activities being institutional capital improvements such as code enhancement and community awareness campaigns. Process mitigation activities, particularly over the short term, tend to be difficult to predict and quantify, but with sensitivity analyses, can be validated. Overall, the study estimated that societal benefits from FEMA mitigation grants during the period studied had a discounted present value of \$14 billion compared to the \$3.5 billion value of the resources employed for an overall benefit-cost ratio of 4:1. The study also found that additional mitigation activities percolated throughout the communities in the form of synergistic activities, which were ultimately attributable to FEMA grants. The study found the average benefit-cost ratio for all FEMA flood-related grants is 5:1. Wind related grants resulted in an average cost-benefit ratio of 3.9:1 and earthquake related grants at 1.5:1.

Overall, the study concluded mitigation is sufficiently cost-effective to warrant federal funding on an ongoing basis both before disasters and during post-disaster recovery; mitigation is most effective when carried out on a comprehensive, communitywide, and long-term basis and continuing analysis of the effectiveness of mitigation activities is essential for building resilient communities. Let's hope Congress takes this study to heart and restores the Hazard Mitigation Grant Program back to 15% from 7.5% when it reviews a Stafford Act Modification bill later this year. The two-volume study report is available for free download at <http://www.nibs.org/MMC/mmchome.html>.



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The B.F.E.*

* Base Flood Elevation

OKLAHOMA FLOODPLAIN MANAGERS ASSOCIATION NEWSLETTER

Volume 8

Summer 2006

Number 3

OFMA's 16th Annual Conference

The summer is here, the heat is on, and members of the Oklahoma Floodplain Managers Association are gearing up for this year's 16th Annual Conference. Now viewed as the essential event of the year for Floodplain Administrators from around the State, this year's conference, entitled *Building a New Era of Floodplain Management*, will be held at the Oklahoma Center for Continuing Education on the grounds of the University of Oklahoma's Main Campus in Norman, Oklahoma.



Following such a successful event last year at scenic Quartz Mountain, OFMA Board members elected a more centralized, urban setting for this year's conference. The Annual Conference was last held in the Oklahoma City area in 2003. From there, the conference was held at Western Hills Lodge near Wagoner in 2004 and at Quartz Mountain Resort near Lone Wolf in 2005.

This year's Annual Conference will kick-off Sunday, September 17th with the annual OFMA Golf Tournament and the pre-conference Board Meeting. If you haven't participated in the annual tournament, be sure and sign up this year. Past participants are always enthusiastically returning.

On Monday, *Building a New Era of Floodplain Management* formally begins with a 'First Timers' meeting where Officers, Regional Representatives and Committee Chairs will be on hand to meet with and provide a sense of comradery to new OFMA members. Providing a sense of belonging to members has become a central theme since the conception of the OFMA Membership Committee.

(Continued on page 2)

IN THIS ISSUE

I
N
S
I
D
E

OFMA ANNUAL CONFERENCE.....	1
HEAT & DROUGHT UPDATE	1
ANNUAL CONFERENCE (CONT.).....	2
GUTHERIE'S CHANNEL IMPROVEMENTS	3
FEMA PREPARES FOR HURRICANES	3
REGION 5 REPRESENTATIVE	4
REGION 5 NFIP PARTICIPANTS MAP ...	5
NFIP LEGISLATIVE UPDATES	6
OFMA'S TRAINING CADRE	6
OKLAHOMA JOINS CoCoRAHS.....	7
QUESTION/ANSWER COLUMN.....	7
WEBSITES/EDUCATION OPPORTUNITIES	8
OFMA GENERAL STORE.....	8
OFMA'S VISION AND MISSION	9
OFMA MEMBERSHIP INVITATION	9
STATE NFIP COORDINATOR NOTES ...	10
OFMA'S CORPORATE PARTNERS.....	11
2005-2006 BOARD OF DIRECTORS	12

Oklahoma's Heat Wave and Drought Continue

What is worse? The Heat or the Drought? Oklahoma, along with the rest of the nation is struggling to keep its population safe and cool during these exhaustingly hot summer months. Already, more than 150 people in the United States have died as a direct result of heat including at least 10 in Oklahoma. In fact, data from the Oklahoma Mesonet's more than 115 stations across the State show 100-degree temperatures have occurred a reported 1,130 times through July 24. Unfortunately, history reveals a larger percentage of 100-degree days occur after July 24, which means there are more extreme temperatures to come. Grandfield and Tipton, both in southwest Oklahoma's Tillman County, have reached 100-degrees or hotter 25 and 23 days respectively. So far 6 communities have hit 109 degrees to tie for the State's highest record temperature this summer.

But not only is the heat making headlines, the current drought is beginning to truly reveal itself. Data from the Oklahoma Mesonet and from the Oklahoma Climatological Survey archives indicate that the state is undergoing drought on multiple timescales. In recent months, the drought took on two faces: a short-term event, with a timescale of months, that is worst in the western half of the

(Continued on page 9)

(Continued from page 1)

The Opening Plenary Session will begin at 9:30 a.m. Monday morning and will include early nominations for Tuesday's election of officers. OWRB representatives will also discuss what is new at the State Level regarding Floodplain Management. During the provided lunch, Nancy Wade will discuss the upcoming Membership Drive and Mickey Douglas will discuss Oklahoma's Tribal Governments. Following lunch, three separate break-out sessions, each a half hour in length will be available from 1:00 – 3:00 p.m. Along side the breakout sessions will be Floodplain 101, where Floodplain Administrators can gain first hand knowledge of their responsibilities and duties or brush up on NFIP basics. One of the Monday break-out sessions include a walking tour, which will be repeated from 1-1:30 p.m. and 2-2:30 p.m. The campus tour will highlight the previous reconstruction of a large storm sewer pipe starting at the Student Union building. The pipe, which was put in place to mitigate localized flooding at the Student Union, winds through campus past Oklahoma Memorial Stadium and Owen Field to its outfall at Duck Pond. Other Monday break-out sessions topics will include the Flood Mitigation Assistance Program, Pre-Disaster Mitigation Program, Repetitive Flood Claims Program and Case Studies for each topic including a discussion of smart development in hazardous areas.

Monday evening will be the Vendor's Social held at the Sam Noble Oklahoma Museum of Natural History from 6 p.m. to 9:30 p.m. The museum was renovated in May of 2000 and contains a fascinating and unique collection of natural and cultural history pertaining to Oklahoma. Entertainment for the event will be the sensational jazz group Shortt Dogg. A Hospitality Suite will be available after the Vendor Social at the Sooner Hotel.

Tuesday begins early for some participants. Hydrology 101 will be available as an Early Bird Session from 7 a.m. to 8:30 a.m. for participants interested in hydrology concepts and software basics. The Plenary Session will begin at 8:30 a.m. and will focus on what is new at the Federal level. FEMA, NFIP and Map Modernization and its effects on LOMR's and PMR's will all be discussed. A Panel Discussion detailing DFIRMs will follow the 10 a.m. break and 10:30 a.m. presentation on the Mapping Information Platform utilized in the DFIRM map production process. At 11 a.m., speeches from candidates and additional nominations for OFMA Officers will be heard. The OFMA Business Luncheon will be held from noon to 2 p.m. where the Board election of the 2006-07 Officers will be held.

Beginning at 2:30 p.m. the break-out sessions will continue. One session will include the continuation of Floodplain 101 from Monday. The other three sessions will include topics on Stormwater Review of Development plans, Public Outreach, the NFIP after Katrina, Input Parameters for HEC Models and 3 USDA papers on Dams and Spillway Capacities.

Tuesday evening, the Exhibits Hall will be open for viewing and the Awards Banquet will be held. This years Awards Banquet will feature entertainment from the Cimarron Circuit Company Opera. Award Nominations can still be made, so if you know someone who should be recognized as a leader of floodplain management in our State, make sure and participate by getting your nomination form downloaded from the OFMA website and turned in.

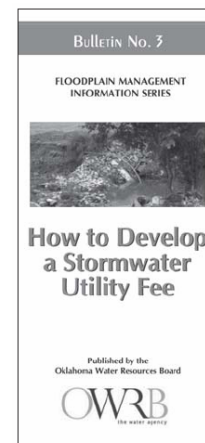
Wednesday morning will again feature an Early Bird Session. Hydraulics 101 will compliment Tuesdays session by giving those participating a well-rounded instruction on software and conceptual aspects of hydraulics. Wednesdays Closing Plenary Session will start at 10 a.m. and will include a presentation on an Award Winning Project, which will be followed by a Panel Discussion and the Passing of the Gavel. Door Prizes will be drawn following the Passing of the Gavel.

For those wishing to learn more on HEC-RAS, including fundamentals of open channel hydraulics, assessments of bridge, culvert and levee impacts and basics of the software, a half-day training event will be held following the Conference on Wednesday afternoon. The training will cost an additional \$100 to cover the technology expenses for the room and must be included with the Conference registration. The HEC-RAS training will be concurrent with the CFM Exam following the conference, so those wishing to take the CFM exam will not be able to attend the HEC-RAS course.

Everyone attending the entire conference including Floodplain Managers who are CFM's will be eligible to receive 12 CEC's to help maintain their State required certification. If you or your company are interested in being a conference sponsor or have a display in the exhibit hall, download an exhibitor reservation form with dates and booth set up times at the OFMA website: www.okflood.org.

Improving Drainage through Channel Maintenance

Guthrie citizens and officials are fed up with dirty creeks, streams, and floodways. Concerns about one particular creek surfaced last summer when brush, garbage, and other large debris created a major impediment to the flood-carrying capacity of both the stream channel of Snake Creek, an important drainage outlet for area homeowners and businesses, and the surrounding floodplain. In some locations, Snake Creek was found to be almost totally blocked, causing its waters to occasionally spill over into adjacent areas. Alerted to the problem, city leaders have commissioned a large-scale channel restoration project, which is about halfway complete. "When we entered the stream channel, we not only found a good deal of both dead and live vegetation, we discovered a virtual junkyard containing hot water tanks, tires, refrigerators, bathtubs, grocery carts, and a host of other discarded items," says Darryl Hughes, Director of Municipal Services. "Snake Creek is somewhat isolated," he adds, "making it easy for illegal dumping to occur. But in the future, the city's commitment to increased monitoring and enforcement will all but eliminate this unsightly and potentially hazardous problem." Hughes and his staff have also rediscovered "lost" sanitary sewer manholes and have since inspected the area's sewer system to identify much-needed improvements in how Guthrie, a participant in the National Flood Insurance Program, handles runoff from storm events. Historically, the community has experienced frequent flooding problems. Local officials have received valuable assistance from the OWRB in establishing a channel maintenance program. "We strongly encourage other Oklahoma communities to follow Guthrie's example and provide required attention to maintaining the natural benefits of creeks, streams and channels," says the OWRB's Planning and Management Division Chief, Mike Mathis, who also serves as State NFIP Coordinator. He reminds local floodplain administrators that a stormwater utility fee can provide invaluable financial assistance to communities in offsetting costs associated with annual channel maintenance. Contact the OWRB at (405) 530-8800 for a free copy of the informational bulletin, "How to Develop a Stormwater Utility Fee."



- Oklahoma Water News (Bimonthly Newsletter of the Oklahoma Water Resources Board)
June 2006

FEMA Prepares for the 2006 Hurricane Season



Hurricane season 2006 is here and the U.S. Department of Homeland Security (DHS) and its Federal Emergency Management Agency (FEMA) have taken strides to increase the nation's preparedness for catastrophic events and smaller-scale disasters.

New and improved disaster response plans include enhanced communication and hi-tech systems for tracking relief supplies. Included in those hi-tech systems are 20,000 global-positioning units to help monitor and track tractor-trailers carrying relief supplies. "When they leave our warehouses, we'll know where they are, and we can tell the state very clearly what location they're in

and when they're going to arrive at their location," FEMA chief David Paulison said.

"One of our biggest concerns was the evacuation plans in the state of Louisiana," Paulison said. He said FEMA has worked with parishes, the emergency managers of the state and of New Orleans to create "solid evacuation plans. We've gone through those, we've rehearsed them, we're very comfortable that those are going to work," Paulison said.

He added that at one point, he and Homeland Security Secretary Michael Chertoff "got on the bus, went to the evacuation site, went to the Convention Center, got registered and walked through that whole process to make sure it's in good shape."

Paulison acknowledged that logistics and communications were significant problems during Hurricane Katrina and its aftermath, which killed more than 1,500 people and caused an estimated \$100 billion in damage in Florida, Louisiana, Mississippi and Alabama, when it slammed into the Gulf Coast in August. It is expected to go into the record books as the most expensive natural disaster in American history.

This year FEMA is working with the Louisiana National Guard to place communication equipment in each parish, Paulison said. "We will have satellite communications, we have thousands of handheld radios that we can pass out to first responders if we need to,

(Continued on page 5)

OFMA Region 5: About the Region and the Representative

OFMA is proud of each of the Regional Representatives for the hard work each volunteer commits to. Without their dedication, OFMA would not be the successful association it is today. Each Representative works very hard to promote sound floodplain management within their region by keeping Floodplain Administrators updated with current events and program issues. They provide an important point of contact for floodplain managers in each region and are here to help each of you with any support they can. OFMA would like to thank Region 5 Representative Cindy Tubbs for providing some insight to her background and the goals she has set for the region.

Cindy Tubbs has been working with the City of Enid since 2002. She began her career there as an Administrative Assistant to the Code Office. Within nine months she was promoted to Permit Technician. She is now actively involved with reviewing, preparing and issuing permits for all construction activities as well as any activities performed in public right of ways and floodways. She also addresses questions concerning zoning, addresses and city codes including floodplain regulatory codes. She is often in contact with architects, engineers, property owners and contractors to make sure all code enforcement is recognized and followed.



**OFMA Region V Representative
Cindy Tubbs, CFM.**

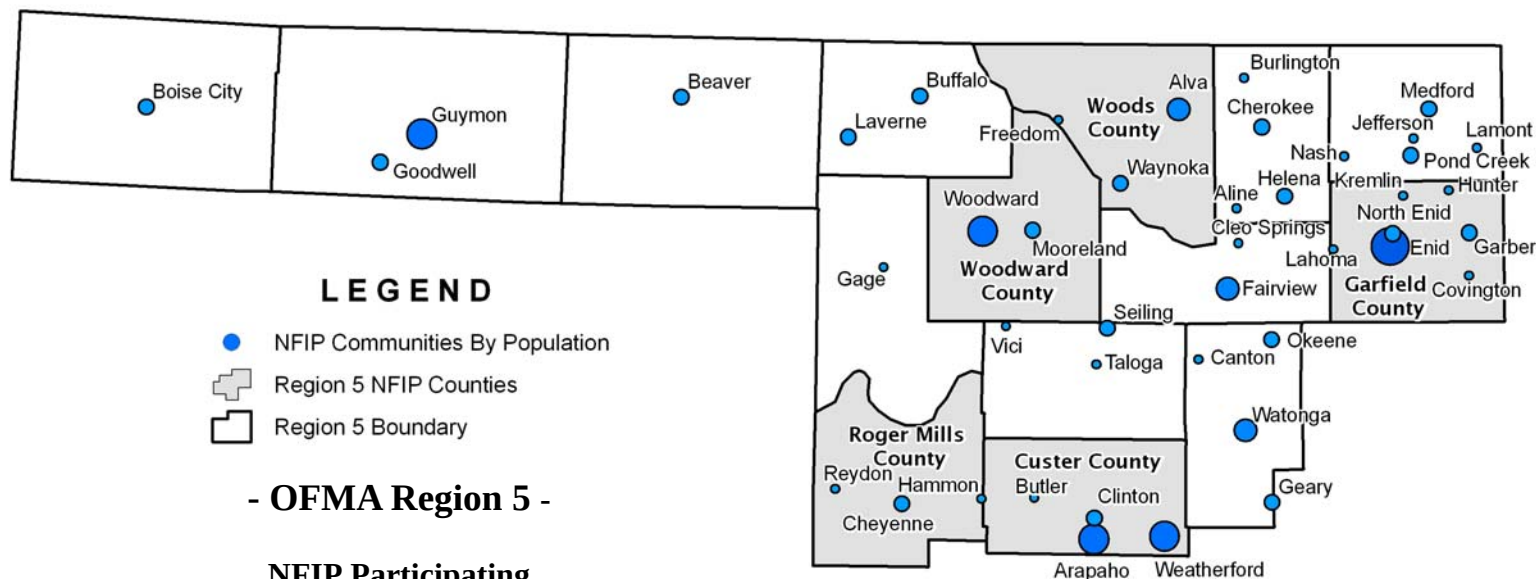
Cindy became a CFM in 2004 and took over the OFMA Regional Representative position all in the same year. When it comes to stormwater, Cindy has other responsibilities besides regulatory concerns for activities in the floodplains. Cindy is also in charge of determining stormwater fees on residential, commercial and industrial developments as part of Enid's Stormwater Utility Fee Program. Cindy has played a large role in the development of the City's Hazard Mitigation Plan, which she says should be ready for adoption in 2007.

Cindy recently had a son, Brendon who is now five months old. She lives in Enid with her husband Quent and their new baby. She enjoys spending time at home with the family as well as fishing, hiking, reading and shopping. She graduated from Northern Oklahoma College in 1999 with a degree in Broadcast Journalism.

As the OFMA Region 5 Representative, Cindy has set goals of:

- 01) Travel to the different cities in my region to meet with city officials and visit with them about their floodplain regulations
- 02) Visit local radio stations and TV stations to do Public Service Announcements informing of flood insurance and the dangers of floods.

If you're a Floodplain Administrator in Region V, Cindy would like to hear from you! Thank you Cindy for all your hard work!



(Continued from page 3)

and also, we're going to have our satellite cell phones." Most important, he noted, was establishing a unified command post "where everybody is in the same room, planning out our strategies and our 12-hour blocks," Paulison said. "That did not happen last year, and I think that was one of the biggest breakdowns in communication."

FEMA has also multiplied the number of supplies, he said. For instance, while 160 truckloads of emergency food were available last year, this year 770 truckloads of MREs (meals ready to eat) are ready to move in. "During Hurricane Katrina, there were simply not enough supplies, and we had no ability to track them. We didn't know where our supplies were."

As for the levees, Paulison said, the Corps is "going to make sure the levees are as good as they were when we had Katrina last year," adding that work was still under way to rebuild floodgates. "Just because June 1st is here does not mean they're going to stop."

Some of the responsibility, however, falls on citizens in the path of the storm, he said. "Those people have to evacuate. They have to pay attention to the local emergency managers and evacuate when they're told to do so."

Among the new measures designed to strengthen FEMA's essential functions for more effective overall response are:

- Placement of a U.S. Department of Defense coordinating officer in each of FEMA's 10 regional offices for ongoing preparedness and response coordination
- Deployment of FEMA liaisons to local, as well as state, emergency operations centers
- Introduction of situational awareness teams
- Augmentation of survivable and interoperable communications capabilities
- Implementation of new systems to procure, track, deliver, and manage commodities
- Expansion of sheltering, registration, home inspection, and temporary housing capabilities and
- Strengthening and increasing of the size of the disaster workforce.

The Flood Insurance Reform and Modernization Act of 2006

Although Congress is currently on a 5 week recess from Washington, a major bill concerning the National Flood Insurance Program (NFIP) is awaiting their attention. The Flood Insurance Reform and Modernization Act of 2006 has several notable provisions. The bill would provide the NFIP with funds to pay remaining valid claims from the 2005 Gulf Coast hurricanes and reform the program, which is currently in an unsustainable financial position. Without a change in law, the NFIP will be unable to pay all flood insurance claims promptly, and faced with a nonfunctional program, those policyholders who are not required to carry flood insurance may abandon it. Enacting the Flood Insurance Reform and Modernization Act of 2006 would improve the financial status of the NFIP and significantly increase the likelihood that the program could continue to offer insurance coverage and pay claims in a timely fashion. By providing funds to pay remaining claims from the 2005 Gulf Coast hurricanes and forgiving the debt incurred to pay previous claims from 2005, the bill would essentially return the NFIP to a financial condition similar to that which existed before Hurricane Katrina.

Enacting the bill would also strengthen the NFIP's financial position in the future. It would direct the Federal Emergency Management Agency (FEMA) to impose rate increases of up to 15 percent per year on all policyholders so as to establish a reserve fund for the insurance program. That reserve fund would be available to pay insurance claims whenever it was needed. The bill also would require some policyholders that do not pay the full cost of their insurance coverage to gradually begin to do so. The bill would make purchase of flood insurance in "residual risk" areas behind levees and below dams mandatory once mapping of these areas is complete. An increase in Map Modernization funding from \$200 million to \$400 million for FY '07 through FY '12 could also be authorized to assist with this "residual risk" mapping.

Finally, it would require some policyholders to carry a larger deductible amount on their insurance policies, and it would end the current practice of offering new policies to some property owners at less than their expected cost. These requirements would increase the cost to policyholders and reduce the net cost of the program to the government. Over the next several years, those changes would improve the chances that the NFIP would have sufficient funds to pay future claims. In addition, the bill would require FEMA to participate in state-sponsored claims mediation programs and would direct the Government Accountability Office (GAO) to conduct multiple studies on the Agency.

OFMA's Training Cadre Allows Floodplain Management Workshops to go Local

The Oklahoma Floodplain Managers Association established a training committee at the 2004 Strategic Planning Retreat. The committee, entitled The OFMA Training Cadre, is responsible for providing floodplain management training at a Regional level. The OFMA Training Cadre has completed the preparation of a new 2-hour "Basic Training for Floodplain Administrators" course that covers the basics of what a local floodplain administrator (FPA) should know to perform their job. This is intended to be a preparatory training presentation for the current 6-hour 101 Floodplain Management Workshop Training that OWRB presents. This workshop is primarily used for the accreditation of the FPA's under the Oklahoma State Statutes. Participants will receive 2 hours of Continuing Education Credits (CECs) for attending the presentation. Training Cadre member and Mitigation Chair OFMA member Bill Smith developed the short two-hour special workshop presentation to indoctrinate the local floodplain administrator in the basics of floodplain management administration and enforcement. The strategy the Training Cadre has proposed starts at the Regional Level. By contacting OFMA Regional Representatives, the Training Cadre hopes to identify communities or entire counties through their Representatives, who would participate and benefit from the two-hour training event. The times and locations are being coordinated by the OFMA five Regional Representatives which cover the entire State of Oklahoma. The training is free and by targeting each community within an entire county at one time, the Training Cadre workshop would help neighboring communities learn from each other. By bringing these communities together, each local Floodplain Administrators can build or strengthen their relationship with other area Floodplain Administrators. The result: networks like this can become a great building block and provide a stable ground for transitioning or enhancing floodplain management regulatory programs.

Regional 3 Representative Mickey Douglas has been working on the Pilot Project for the newly created workshop materials. He has been in touch with Bryan County and it's newly appointed Floodplain Administrator as well as the local Floodplain Administrators within the County. "We just need them to set a date and time when each of the communities can come together. We will bring the workshop to them for free. Our goal is to help educate each community on responsible Floodplain Management within a setting they are comfortable in, somewhere local to them" Douglas said. He also has mentioned if the idea of bringing the workshop to the community doesn't prove worthwhile, then maybe these workshops can be organized like the Floodplain 101 courses, where workshops are set up around the State for communities to attend.

If your county or community would like to invite the OFMA Training Cadre to present the new training material to your area Floodplain Administrators, please contact: Bill Smith, Chairman of the OFMA Mitigation Committee at 918-865-6977 or hisinc@hotmail.com. Bill Smith and the OFMA Training Cadre have worked very hard to create these new presentations and it would be very unfortunate to let such a valuable resource pass your community by.

Oklahoma Joins Network of Volunteer Weather Observers

On June 15, Oklahoma will join eleven other states in the Community Collaborative Rain, Hail and Snow Network (CoCoRaHS). CoCoRaHS is a grassroots volunteer network of backyard weather observers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow) in their local communities. The goal of CoCoRaHS is to provide a high quality rainfall observation network using low-cost measurement tools, education and training, and an interactive web-site. The best feature of this program is that anyone can participate. CoCoRaHS is a community-minded project where everyone can help – young, old, and in-between. The only requirement is an enthusiasm for watching and reporting weather. Observers are asked to take measurements of precipitation each time a rain, hail or snow storm crosses your area. The precipitation reports are recorded on the CoCoRaHS website (www.cocorahs.org). The data are then displayed and organized for many of our end users to analyze and apply to daily situations ranging from water resource analysis and severe storm warnings to neighbors comparing how much rain fell in their backyards.



CoCoRaHS is used by a wide variety of organizations and individuals. The National Weather Service, other meteorologists, hydrologists, emergency managers, city utilities (water supply, water conservation, storm water), insurance adjusters, USDA, engineers, mosquito control, ranchers and farmers, outdoor & recreation interests, teachers, students, and neighbors in the community are just some examples of those who visit the CoCoRaHS website and use the data. What does the program hope to accomplish? CoCoRaHS has several goals: 1) provide accurate high-quality precipitation data for our many end users on a timely basis; 2) increasing the density of precipitation data available throughout the country by encouraging volunteer weather observing; 3) encouraging citizens to have fun participating in meteorological science and heightening their awareness about weather; 4) providing enrichment activities in water and weather resources for teachers, educators and the community at large to name a few. CoCoRaHS has the opportunity to

(Continued on page 10)



Question: An inquiring developer is intending to develop lots for resale to potential new home owners that want to build in a subdivision. One lot is completely in the floodplain and the other two are 3/4th's in the floodplain. All 3 lots are connected and the developer's intentions are to raise half the lots out of the floodplain by placing the fill dirt across all 3 lots. The developer is also considering the development of a pit pond located in the floodway. Will an engineering analysis be required to show no change in BFE elevations upstream or downstream?

Answer: First, floodway development, which includes any proposed development in a designated floodway, is required to be certified by a professional engineer to show no increase in the BFE, or if it would increase the BFE, the developer first has to get a Conditional Letter of Map Revision from FEMA (CFR 44, 65.12). As pointed out, if this is a subdivision in Zone A and they plan to develop 50 lots or develop 5 acres, then the developer has to show the BFE and floodplain boundary on the subdivision plat.

If the developer is going to bring in fill dirt and elevate the lots, it would be to their benefit to get the lots removed from the floodplain to begin with – by requiring a compaction certificate - 95% proctor test, and require the MT-1 and MT-2.

Web Sites

OFMA www.okflood.org
ASFPM www.floods.org
OWRB www.owrb.state.ok.us
FEMA www.fema.gov
OEM www.ok.gov/oem
Corps of Engineers (USACE)
www.swt.usace.army.mil
U.S. Geological Survey (USGS)
ok.water.usgs.gov
Advanced Study Institute
web.uccs.edu/geogenvs/natoasi
CLOMR/LOMR Forms:
www.fema.gov/fhm/frm_form.shtm
EPA NPDES Phase II site:
www.epa.gov/npdes/
SMRC Stormwater Mgr Resource Center:
www.stormwatercenter.net
FEMA Official NFIP Site:
www.floodsmart.gov
Link to: 44 CFR Ch. I (10-1-02 Edition)
http://www.access.gpo.gov/nara/fr/waisidx_02/44cfrv1_02.html
Webmaster: Tinna Song-Wallis
stsong@cox.net

Calendar of Educational Opportunities

- **Floodplain 101;** Aug. 16; Oct. 5; Nov. 28; and Dec 12, 2006. OU Center for Continuing Education; 1704 Asp Ave. Norman, OK. Contact Rhonda Bowers (405) 530-8800; website www.owrb.state.ok.us
- **Managing Floodplain Development Through the NFIP;** Aug. 28—Sept. 1, 2006. Contact Rhonda Bowers (405) 530-8800; website www.owrb.state.ok.us
- **H2Oklahoma Festival;** Sept. 22, 2006; No Contact Info Available
- **Association of State Dam Safety Officials: Dam Safety '06;** Sept. 10-14, 2006. Seaport Hotel and Convention Center; Boston, Mass. Reservations at www.seaportboston.com
- **Arkansas Floodplain Management Association Fall Conference;** Sept. 24-27 2006. Embassy Suites, Hot Springs, AR. Contact: Michael.borengasser@arkansas.gov
- **Texas Floodplain Management Association Fall Conference;** Nov. 7-10, 2006. Inn of the Hills in Kerrville, TX.
- **Governor's Water Conference;** Nov. 13-14, 2006. Cox Business Services Convention Center; Oklahoma City, OK. Online Registration and Info: www.owrb.state.ok.us/news/news2/conferences.php
- **OFMA 16th Annual Conference;** September 18-20, 2006, University of Oklahoma Conference Center, Norman, OK. Contact: OFMA, P.O. Box 8101, Tulsa, OK 74101-8101; website: www.okflood.org.
- **ASFPM Annual Conference;** June 3-7, 2007; Norfolk, VA. www.floods.org
- **FEMA's Annual National Flood Conference;** TBA; Denver, Colorado.

OFMA General Store

Oklahoma Floodplain Managers Association gifts are now available. The attractive OFMA articles are of the highest quality. You will be proud to wear and display them.

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Or call Carolyn Schultz (918) 669-4919



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Portfolio	25.00
Lapel Pin	3.00
CFM Lapel Pin	5.00

Shipping and handling \$4.95 per order.

(Continued from page 1 - Heat Wave & Drought)

state; and a historically-severe long-term drought (timescale of seasons to years) in the east. Central and southwest Oklahoma lie in the intersection of both timescales.

The southeast has experienced drought or near-drought conditions since 2002, with a distinct intensification in the Spring 2005. Summer and fall 2005 brought a northward expansion of drought to fill the State's eastern third. Recent months have brought some relief to the region, but the underlying hydrologic issues still remain. Severe drought impacts then advanced westward during the subsequent winter. Precipitation in April eased immediate problems, but a warm, dry May has exacerbated long-term drought conditions in much of Oklahoma.

A general rule-of-thumb for drought impacts is "Longer is Deeper". In other words, the longer a drought lasts, the deeper its impacts are felt. Within weeks of onset, dry surface conditions can lead to enhanced fire danger, much like Oklahoma witnessed during the disastrous winter months of 2005-06. During these months, more than half a million acres were consumed by wildfire in six months. Shortly after enhanced wildfire danger, agricultural impacts are often seen.

Of course, the total impact of a drought on agriculture depends on its timing, and the 2005-06 drought could not have come at a worse time for Oklahoma's winter wheat crop. Dryness took hold in western Oklahoma by October, when young wheat germinates. By crop's end in early summer, an estimated two-thirds of the total yield was wiped out by Mother Nature. The summer harvest, estimated to be at 68 million bushels, should be the state's smallest since the 1950s.

When drought lasts beyond weeks and months and into timescales of seasons and years, drought impacts go subterranean, and major hydrologic problems can develop. As the rainfall deficits surpass a year in the west, and two years in the east, groundwater storage and reservoir storage has suffered. Lake Eufaula in the east and Lake Thunderbird in central Oklahoma sit at about 75% conservation capacity. In other words, a fourth of the intended storage of each lake is gone. In western Oklahoma Altus-Lugert Reservoir sits at an eye-popping 49% of capacity, which does not bode well for cotton growers in the region. Several counties and Rural Water Districts have begun implementing volunteer water rationing, before water reserves reach critical levels. Mixing low water reserves with potential wildfires could result in a devastating combination to rural and urban-fringe areas.

Oklahoma Floodplain Managers Association

Vision

The Oklahoma Floodplain Managers Association advocates the protection of the natural functions of the floodplain through education, training, and service to Oklahomans.

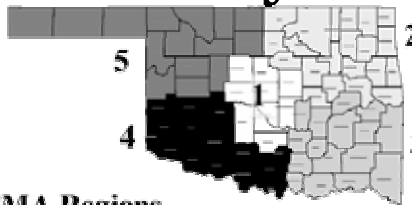
Mission

We encourage and support, with our partners, flood-safe development and flood mitigation. We promote sound floodplain management practices and the natural and cultural benefits of the floodplain. We support the floodplain management profession through education and certification.

Saving lives from floods and reducing property loss from floods are paramount to us.

An Invitation to Join OFMA

The Oklahoma Floodplain Managers Association is a non-profit organization primarily dedicated to providing information and education to the public about reduction of loss of life and property due to flooding.



OFMA Regions

The best investment that \$30.00 can buy in the future of your state is a membership in the Oklahoma Floodplain Managers Association.

OFMA Membership Application

Name: _____ Company/Organization: _____
 Title: _____ Address: _____
 Work Phone: _____ City/Town: _____ State: _____ Zip: _____
 Fax: _____ E-Mail: _____

Detach and Mail to:
OFMA
 P.O. Box 8101
 Tulsa, OK 74101-8101



New Member: ☐ Renewal: ☐
 Region (see map): 1 2 3 4 5
 Committees:
☐ Mitigation
☐ Mapping and Engineering
☐ Education/Legislative
☐ Certification
☐ Conference

Dues Schedule:
 First-Year dues for joining OFMA are listed below. The fiscal year for membership starts October 1st and ends September 30th.

Full Membership	\$ 30.00
Student Membership	15.00
Associate Membership	20.00
Agency Membership	50.00
(Plus \$10.00 per employee designated by the Agency)	
Corporate Sponsor	100.00

Notes from the State NFIP Coordinator

Mike Mathis, Oklahoma Water Resources Board, NFIP State Coordinator

Dear OFMA Members:

To some, it may seem ironic to promote floodplain management in the current setting. As we know all too well, Oklahoma is now experiencing one of the most serious droughts in state history, and it will likely get worse before it gets better. The May-June edition of the OWRB's newsletter, *Oklahoma Water News* (available at www.owrb.state.ok.us), details the seriousness of this natural hazard and the many impacts it could have on the state's economy and the welfare of its citizens. I encourage all Oklahomans to practice wise water conservation, especially during these drought times.



Despite the drought, Oklahoma's floodplain managers and floodplain professionals still have an important job in front of them, which is to ensure that proposed development in our communities is accomplished in a responsible manner that prevents future flood damage. This task becomes increasingly difficult, especially for county floodplain administrators who may be under political pressure to ignore local floodplain regulations during drought episodes. Unfortunately, human nature is greatly influenced by recent events and when we no longer see the flood threat, our community leaders may forget the serious nature of flood events. It pains me to say that the more frequently we experience flood events the easier it is for floodplain officials to do their jobs. Apathy is our constant enemy. My challenge to you is continue to lead the charge, do your job, and become even more resolute about intelligent floodplain development during this dry period. Now is the time to get out there and perform that much-needed channel maintenance. Access to problem creeks and streams has never been better, so roll out your equipment and restore the flood carrying capacity so the next time we experience a significant rainfall event, hopefully soon, damage will be minimal or avoided entirely.

The OFMA Board—under the primary direction of Vice Chair Laureen Gilroy, OFMA's Conference Chair—is planning an outstanding Sixteenth Annual Conference, **“Building A New Era in Floodplain Management.”** Laureen and the Board have developed a fantastic agenda that will undoubtedly produce the best Conference yet in its 16-year history. Visit www.okflood.org and download the registration form and program agenda. Please register as soon as possible. I hope to see each of you there. Thanks again for your dedication to this at times unappreciated profession, but remember the OWRB and OFMA appreciate you and the work that you do every day to make Oklahoma a safer and more enjoyable place to live.

(Continued from page 7 - CoCoRaHS)

thrive in Oklahoma. With the vast amount of weather knowledge our citizens possess, CoCoRaHS is a natural fit for the state. Oklahoma weather is the reason that programs like CoCoRaHS exists. Oklahoma thunderstorms can form and dissipate so quickly, that they may never pass over a Mesonet site or an NWS observation station. CoCoRaHS will help to fill the rainfall observations gaps across the state so that every drop will be recorded. To sign up to become a CoCoRaHS observer, go to www.cocorahs.org and click on “Join CoCoRaHS” or contact: Andrew Reader CoCoRaHS State Coordinator 100 E. Boyd Suite 1210 Norman, OK 73019 areader@mesonet.org 405-325-3230



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Summer 2006

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The B.F.E.*

* Base Flood Elevation

OKLAHOMA FLOODPLAIN MANAGERS ASSOCIATION NEWSLETTER

Volume 8

Winter 2006

Number 1

Spring Technical Conference of the Oklahoma Floodplain Managers Association **Diverting Disasters in Oklahoma: Dams, Levees and Floodwaters**



The OFMA Spring Technical Workshop is fast approaching! With the failure of flood prevention structures making headlines across the nation, this year's workshop has been designed to inform participants on a range of topics concerning flood control measures and floodplain management. *Diverting Disasters in Oklahoma: Dams, Levees, and Floodwaters* will overview National, State and Local attempts at structural solutions while bringing together many top officials involved with structural flood protection programs and floodplain management initiatives. Floodplain managers have long been aware of the false sense of security that prevails in the mentality of residents occupying lands protected by dams and levees. With the devastation inflicted on New Orleans from Hurricane Katrina, many public officials have taken notice of the potential vulnerabilities of flood control structures in their community.

Now is the time to become better informed on the true protection these dams and levees provide, before potential tragedy strikes. Join OFMA members and non-members in Jenks on March 2nd, 2006 at the Spring Technical Workshop for a day full of investigation and commentary on issues regarding floodplain management, economic development, land-use regulation, disaster planning and assistance opportunities in respect to disaster prevention through structural flood control solutions. The workshop will include a keynote speaker, plenary and breakout sessions, lunch and snacks, door prizes and a field trip tour of local protection measures along the Arkansas River including the Keystone Dam, now in its fourth decade of operation.

(Continued on page 2)

IN THIS ISSUE

OFMA'S SPRING WORKSHOP	1
CALL FOR ABSTRACTS	1
SPRING WORKSHOP (CONT.).....	2
MAPPING SAFE ROOMS	3
FLOODPLAIN 101 COURSES.....	3
FEMA MAP STORE IMPROVEMENTS	3
OFMA REGION 1 REPRESENTATIVE.....	4
REGION 1 NFIP PARTICIPANTS MAP	5
POSTER CONTEST UPDATE.....	5
FLOODING FROM RESERVOIR BREAK....	6
2005 FLOOD EVENTS	7
WEBSITES/EDUCATION OPPORTUNITIES	8
FLOOD PROGRAMS FISCAL UPDATES....	9
OFMA'S VISION AND MISSION	9
OFMA MEMBERSHIP INVITATION	9
STATE NFIP COORDINATOR NOTES ...	10
CERTIFYING FLOODPLAIN MANAGERS	10
OFMA'S CORPORATE PARTNERS	11
2005-2006 BOARD OF DIRECTORS.....	12

INSIDE

2006 ANNUAL CONFERENCE - CALL FOR ABSTRACTS

The Oklahoma Floodplain Managers Association invites you to participate at our Annual Conference September 18-20, 2006, in Norman, Oklahoma. We are seeking presentations for community officials, engineers and students as well as floodplain managers.

If you are involved in managing or researching a flood-related program, please consider sharing your experience and expertise at the OFMA Fall Conference. This Call for Abstracts seeks a broad range of professionals and academics to address the many issues associated with reducing flood damages, making communities more sustainable, and managing floodplain resources. Suggested topic areas include, but are not limited to:

- | | |
|---|---|
| - Floodplain Mapping, Map Modernization | - Debris Management |
| - Survey Techniques, GIS – LIDAR Other Technologies | - Mitigation Planning |
| - Mitigation Success Stories, Floodproofing, Acquisition Programs | - Stream Channel/Wetlands restoration |
| - No Adverse Impact | - National Flood Insurance Program |
| - Storm Water Programs & Fees/Funding | - Community Rating System |
| - Hydrologic/Hydraulic Modeling | - Recent Flood Events/Lessons Learned |
| - Public Education and Outreach | - Implementing Floodplain Ordinances; Local Building Code and Permit Issues |
| - Integrating stormwater quantity and quality management, OPDES/nonpoint source pollution | - Legal Issues |
| | - Other Related Topics |

(Continued on page 8)

2006 OFMA Spring Technical Workshop

AGENDA

Thursday, March 2, 2006

Tulsa Technology Center, Jenks, OK

Diverting Oklahoma Disasters: Dams, Levees and Floodwaters

Time	Activity
8:00-8:30	Registration
8:30-9:00	First Timers' Meeting, Committee Work Sessions (Optional)
9:00-9:15	<i>Break</i>
9:15-10:45	Opening Plenary Session
	Flag Ceremony
	Welcome, OFMA (Strategic Plan Update), ASFPM
	FEMA
	State Emergency Dept.
	NFIP, OWRB
	"Partnering in Floodplain Management" - NRCS
	Video - 1 City of Tulsa Public Works Dept.
10:45-11:00	<i>Break</i>
11:00-11:30	Choose One Session - Intro to Floodplain 101 - or - Mapping
11:30-12:00	
12:00-12:45	Lunch and Keynote Speaker
12:45-1:00	<i>Board buses for field trip to Keystone Dam</i>
1:00-1:50	Bus sessions - Levees & evacuation plans or Mitigation: acquisitions & relocations
1:50-2:05	<i>Exit buses at Power Station parking lot</i>
2:05-2:30	Site visit at Keystone Dam
2:30-2:40	<i>Board buses for return trip to Tulsa Tech</i>
2:40-3:30	Bus sessions - Levees & evacuation plans or Mitigation: acquisitions & relocations
3:30-3:45	<i>Exit buses</i>
3:45-4:15	Closing Plenary Session
	About "Turn Around, Don't Drown" Poster Contest, the Fall Conference
	Door Prizes

(Continued from page 1)

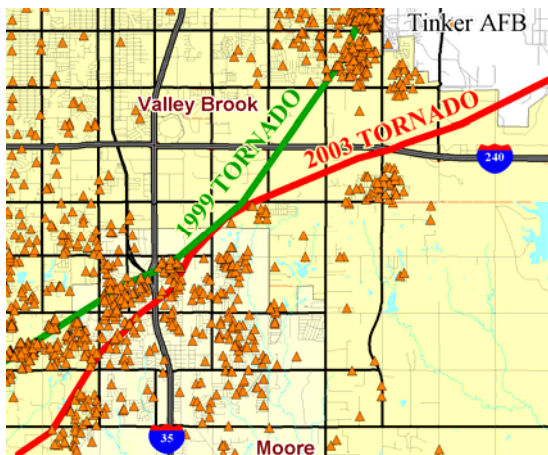
OMFA Annual Conference Summary

Certified Floodplain Managers (CFM) will receive 6 CEC's for their participation in the workshop, which will include material presented by the Oklahoma Floodplain Managers Association (OFMA), the Association of State Floodplain Managers (ASFPM), the Federal Emergency Management Agency (FEMA), the Oklahoma Department of Emergency Management (OEM), the Oklahoma Water Resources Board (OWRB), the Natural Resource Conservation Service (NRCS) and staff from public and private organizations. A one-hour breakout session before lunch includes two tracks to choose from. Track One will provide an introduction to the full-day Floodplain 101 class, which is held each month for people who are just starting in the floodplain management field. Track Two will highlight the increasingly important role maps and GIS play in floodplain management, disaster planning, response and recovery.

Your registration fee will include materials, lunch, refreshments and a seat on the bus tour for the afternoon field trip. To insure adequate food will be provided, it is important that all registration forms be completed prior to the workshop. Following the field trip, an exciting list of door prizes will be given away before the workshop concludes. Mark your calendars today and make arrangements to attend the March 2nd Spring Technical Workshop located in the Alliance and Conference Center rooms of the Tulsa Technology Center campus in Jenks, Oklahoma. Holiday Inn Select is offering discounted room rates for attendees who wish to stay in Tulsa the night before and/or the night after the workshop.

GIS in the Aftermath of the Storm

With the goal of saving lives, GIS tools can help emergency management agencies assess the results of their efforts. After a devastating tornado tore through Oklahoma in May of 1999, the State of Oklahoma offered a rebate program to encourage the construction of residential safe rooms. More than 6,000 safe rooms were built through the program, all of which were geocoded and entered into a GIS database. In 2003, another powerful tornado followed nearly the same track as the earlier storm, and by overlaying the storm track on a GIS map of the safe rooms, decision makers and residents could instantly appreciate how many lives had been saved by the program. To view the map, visit <http://www.fema.gov/mit/saferoom/map1.shtm>.

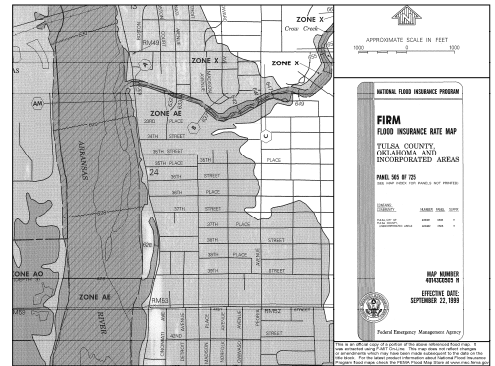


Geocoded safe room locations (shown in orange) built after the May 3, 1999 tornado outbreak utilizing the State and FEMA sponsored rebate program.

FEMA Flood Map Service Center

By now, we've all heard of FEMA's Map Modernization Program. It's a monumental initiative tasked with updating the entire nation's floodplain maps with new effective regulatory flood boundaries based on updated topographic data by the year 2010. But in the meantime, as floodplain administrators continue to permit and monitor development within their community, they are frequently in need of legal documents to defend their regulatory Special Flood Hazard Areas (SFHA) by means of FEMA Flood Insurance Rate Maps (FIRM). For this duty, FEMA has created and maintained the online Map Service Center to retrieve Flood Insurance Studies and FIRM related materials for the convenience of floodplain administrators across the country.

Recently this site, located at <http://msc.fema.gov/>, has undergone several improvements. You can still utilize the site for ordering and downloading of Flood Insurance Studies, Letters of Map Change, Insurance Manuals, Digital Q3 flood boundary data, and FIRM maps. The site also provides the ability to view effective FIRM maps and create and download FIRMettes through the MSC Viewer. If you are not familiar with a FIRMette, it is a customized image of a Flood Insurance Rate Map which also includes a map title block, north arrow and scale bar. Because each FIRMette is a full-scale section of an official



FIRMette created from the FEMA MSC Viewer
NOT TO SCALE

(Continued on page 7)



OWRB Continues Educating State Floodplain Administrators

Once a month, the Oklahoma Water Resources Board holds Floodplain Management 101 classes for Floodplain Administrators seeking to improve their understanding of the rules and regulations they are required to uphold and enforce within their community. With the passing of Senate Bill 932, all communities enrolled in the National Flood Insurance Program are required by law to have an appointed and accredited Floodplain Administrator. The OWRB has accredited 111 official Floodplain Administrators since the passage of SB 932. Classes are held each month in the Oklahoma City office of the Oklahoma Water Resources Board in the 2nd floor conference room from 8:30a.m to 4:00p.m. Each course seeks to impart to the participants the basics of promoting sound development within the State's designated floodplains as well as assisting in the accrediting process of CFM's by issuing six Continuing Education Credits (CEC's) for each participant who successfully completes the class. Classes typically average 20 participants in size and often include local officials, consultants, Sub-state planning districts and tribes. As well as having the State's premier individual on floodplain regulations, Mr. Ken Morris, teaching each class, the OWRB often brings in outside professionals to assist with topics in their field of expertise so that participants can be assured they are receiving the best training from the most knowledgeable staff the State has to offer. If you are interested in attending one of the monthly upcoming classes, please visit the OWRB website at www.owrb.state.ok.us to find more information on schedules and registration materials.



Bill Smith P.E., CFM of Hydropower International Services; Inter-National Consultancy, LLC assists with the teaching in a November Floodplain 101 class to participants from around the State.

OFMA Region 1: About the Region and the Representative

OFMA is proud of each of the Regional Representatives for the hard work each volunteer commits to. Without their dedication, OFMA would not be the successful association it is today. Each Representative works very hard to promote sound floodplain management within their region by keeping Floodplain Administrators updated with current events and program issues. They provide an important point of contact for floodplain managers in each Region are here to help each of you with any support they can. OFMA would like to thank Region 1 Representative Leslie Lewis for providing some insight to her background and the goals she has set for the Region.

Leslie Lewis, P.E., CFM is the current Oklahoma Department of Transportation Hydraulic Engineer for the State of Oklahoma. In 2005, she was elected to the OFMA Board of Directors as the OFMA Region 1 Representative. Leslie is a nationally accredited Certified Floodplain Manager as well as a member of the American Society of Civil Engineers. In addition to her Board role with OFMA, she is involved with the Hydrology and Hydraulics Committee for the American Association of State Highway and Transportation Officials.

Ms. Lewis graduated from The University of Oklahoma with a Bachelors of Science in Civil Engineering in 1991. That spring, Ms. Lewis began work for the Oklahoma Department of Tourism and Recreation where she was involved with Capitol Improvement Projects for State Parks. Three years later Leslie transferred to the Oklahoma Department of Transportation to participate in the EIT training program. This program allows engineers to work for a period of time in each division of the Department, thereby receiving training in all facets of highway engineering. Upon completion of the training program, Ms. Lewis chose bridge hydraulics as her permanent appointment where she was assigned to assist in the completion of approximately 5,000 scour evaluations.



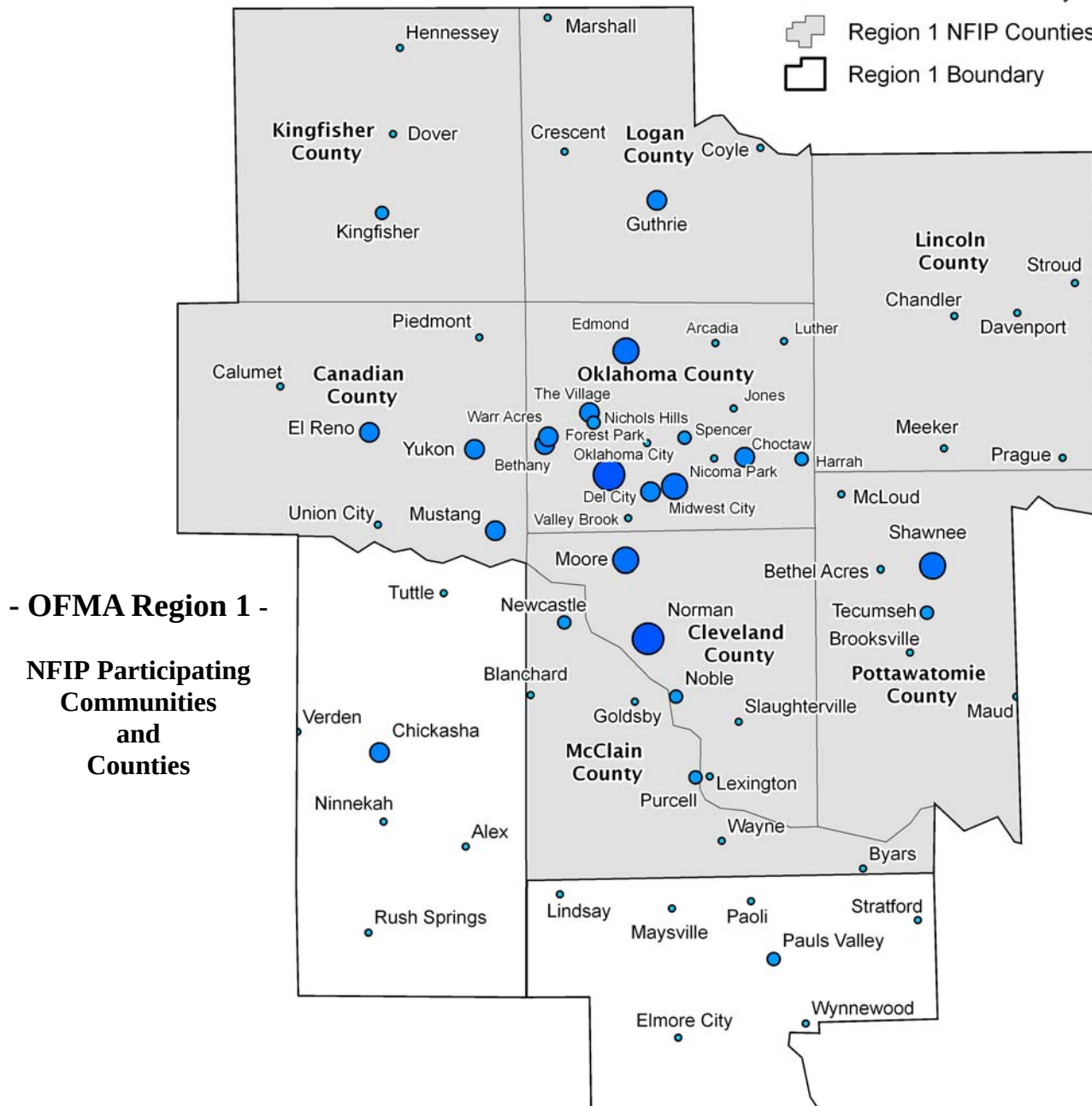
As Hydraulic Engineer for the State of Oklahoma, Leslie has performed Hydraulic and Hydrologic bridge analysis, theoretical scour analysis and FEMA flood studies for the state. Other special studies include risk assessment, erosion control design using riprap, gabions, kelter jetties, spur dikes and drop structures. In her spare time she enjoys spending time with family, traveling, boating, riding bikes and motorcycles.

Below is an outline of several goals and priorities Leslie has set as Region 1 Representative.

- Organize and hold a meeting to bring all interested Floodplain Administrators in Region 1 together. In addition to putting a face with a name, she intends to accomplish several objectives at the meeting including discussion on what OFMA can offer each FPA as well as providing an opportunity to share floodplain management experiences to further enhance each Administrator's role in enforcing regulations.
- Require consultants under the hydraulic professional services contract to be Certified Floodplain Managers.
- As a conference committee member, evaluate the accommodations for the 2006 Annual Conference by accompanying them on tours of the facilities and accommodations.
- Serve as a point of contact for the State to get Base Flood Elevations for any property close to a State Highway bridge and/or county bridge.
- Coordinate OWRB and ODOT memorandum of agreement that all ODOT projects on state owned and operated land obtain floodplain development permits from OWRB.
- Requires State hydraulic consultants to become CFM's.
- Forward emails regarding any hydraulic news, interesting stories related to floodplain topics, software applications and updates to a group of over 50 consultants, contractors and professionals to keep everyone informed and updated.

LEGEND

- NFIP Communities By Population
- Region 1 NFIP Counties
- Region 1 Boundary



Poster Contest Update

The "Turn Around Don't Drown" poster contest is in full swing for 4th graders around the State of Oklahoma. Students can find more information about this flood awareness campaign on the National Weather Service web site at: www.srh.noaa.gov/tadd/. Notification of the local floodplain manager is all that is needed when the posters are complete and ready for pick up. OFMA will award certificates of appreciation to all participants and cash prizes to statewide winners. Floodplain managers looking to promote participation in the event are encouraged to visit class rooms to discuss the dangers of flooding. A short video entitled "The Hidden Danger, Low-Water Crossings" can be ordered from the National Weather Service for free to assist with class room presentations. Simply visit www.nws.noaa.gov/om/water/Ahps-resources.shtml for details on how to order. Remember, the deadline for entries into this years contest is February 28, 2006. Stay tuned to the BFE or visit www.okflood.org for updates on this year's winners and to view winners from last year's contest.

Advanced Hydroelectric Facility Succumbs to the Forces of Nature

It can be stated that when it comes to water, you really don't want to underestimate the power of gravity in terms of becoming your enemy. So often structures that retain water far above its natural elevation provide the perception of security that masks the real power of nature. But during a structural failure, those perceptions are immediately realized to be false. This became all too clear to residents and visitors of Johnsons Shut-Ins State Park and nearby Lesterville in rural Reynolds County, Missouri in the early morning hours of December 14, 2005.

The Taum Sauk Hydroelectric Plant is a renowned hydroelectric power plant owned and operated by AmerenUE. When the facility was awarded the prestigious "Milestone in Electrical Engineering and Computing" award by the Institute of Electrical and Electronics Engineers (IEEE) for its many technological and engineering "firsts" it joined the elite ranks of other historic engineering milestones including the first wireless transmission across the Atlantic in 1901 and the first use of RADAR in wartime conditions in 1941. The facility was the largest pumped-storage plant in North America when it came on-line in 1963 and is capable of being operated by "remote control" from St. Louis some 90 miles away. These credentials prove that even the elite can fall susceptible to the forces of nature.



View from above the Taum Sauk upper reservoir

The Taum Sauk plant includes four primary features: the upper reservoir atop Proffit Mountain, a 7,000 foot tunnel, a power house with two reversible pump turbine units and a lower reservoir formed by a dam across the East Fork of the Black River. Electricity is created when water is released from the upper reservoir through the tunnel to the lower reservoir, passing through electrical generating turbines on its way. The plant design is unique because it can generate electricity even in the absence of a power grid, making it critical for re-starting the system in the unlikely event of a widespread blackout. Several similar facilities have come on-line in the U.S. since its construction.



View from inside the emptied reservoir following the 1.5 billion gallon release of water

Things at the facility went awry that Wednesday morning when the 55-acre mountaintop reservoir at the Taum Sauk Hydroelectric Plant ruptured its foundation sending what the Missouri Emergency Management Agency (MEMA) estimated as more than a billion gallons of water into the valley below. The subsequent 20-foot wall of water thundered through the valley annihilating anything in its path including a house, a mobile home, several cars and a tractor-trailer situated on Highway N near the reservoir. A family living in the impacted house was reportedly swept one-half mile downstream when the structure broke free of its foundation. Had the lower reservoir dam failed from the floodwaters, downstream Clearwater Lake would have raised six feet nearly instantaneously. Officials expressed relief that the accident occurred during a low-use period for campers and visitors to the State Park. The breach, some 500 feet wide, occurred when backup measures, designed to stop water being pumped up to the reservoir

once a threshold was reached, failed to stop the ongoing flow resulting in an overtopping and eventual bursting of the foundation lining.

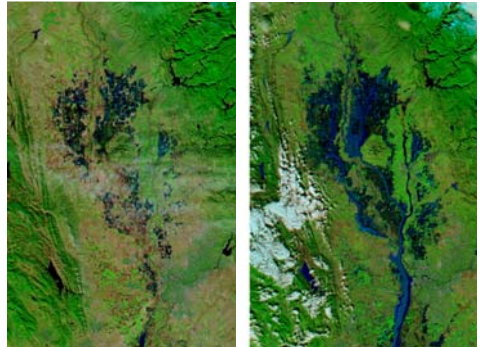
The localized disaster created a surge of activity for emergency responders. Emergency operation centers in Shannon and Carter counties were activated and in all, 16 HF and VHF stations were in use for mobile and command center reporting efforts. Residents of Lesterville and elsewhere downstream from the dam were urged to move quickly to higher ground in a voluntary evacuation order. Although three of the five family members washed downstream were taken into immediate medical care, no fatalities resulted from the failed reservoir.

Flooding 2005: Common Recurring Themes to the Nation's Flood Hazards

2005 was the year water resources made the national headlines continuously. The year saw a record setting hurricane season and extraordinary damages inflicted upon the Gulf Coast, a reservoir failure at the Taum Sauk hydroelectric plant, mud slides and levee failures in California and the Napa Valley and a drenching episode of heavy storms in the Northeast. With each major headline, one common theme continued to emerge: the potential and occasional failure of a flood prevention structure.

In northern California, at least two levees in the Sacramento-San Joaquin Delta region were unable to handle the rising waters and strong winds, and residents nearby evacuated as the water-control structures began leaking. In the wine-country town of Napa perhaps as many as 1,000 homes were flooded along with thousands of acres of rural and agricultural land. The governor declared several counties in the region flood disaster areas.

In Taunton, Massachusetts, emergency officials feared the complete collapse of a 173-year old high hazard wooden dam located two miles upstream of the community. Officials monitoring the situation reported "excessive vibration" on the Mill River pond dam after a stalled front and a steady stream of tropical moisture, followed by the remnants of Hurricane Wilma a few days later, contributed to record monthly rainfall totals in several New England locations. Had the structure collapsed, as much as 6 feet of water could have flooded downtown Taunton. Funds from the Emergency Watershed Program (EWP) administered by the NRCS, provided up to \$200,000 in federal funds to assist in stabilization and replacement of the dam, after community officials requested the Federal assistance.



Satellite image of the Napa Valley before (left) and after (right) the levee break along the Middle River. Flood waters shown in dark blue, vegetation shown in green, clouds shown in light blue. Each image is approximately 100 miles across.



Replacement work gets underway near Taunton, MA after federal EWP funds had been secured.

The Association of State Dam Safety Officials (ASDSO) is urging federal lawmakers, governors, and state legislative leaders to study the lessons of 2005. ASDSO recommends to state leaders that they take a serious look at the strength of dam safety policies and programs within state government and make it a priority to address the most deficient dams under state regulation. Of the nation's 79,000 plus dams, 95% are regulated by the states. Of these, about 60% are privately owned. In Oklahoma, the Oklahoma Water Resources Board coordinates the Oklahoma Dam Safety Program to ensure the safety of more than 4,500 dams in the state, which defines inspection frequencies and approval of dam modification plans.

(Continued from page 3)

FEMA Flood Insurance Rate Map, it can be used in all aspects of the NFIP, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements, i.e. it is a legally binding document. But did you know a photocopy of that same FIRMette is not considered a legal document?

The site is user friendly and only takes a few trial runs to completely grasp the functionality. By following the provided 3-step procedure, FIRMettes can be created in letter (8.5"X11"), legal (8.5"X14") or tabloid (11"X17") page sizes and exported to digital Adobe PDF or Image TIFF files for download. A recent feature upgrade to the site allows the user to input a property address and city information to search for effective FIRM maps for the area of interest. Once found, a FIRMette is only a few steps away. If a LOMC has been approved for the FIRM, a link to the document is also provided. As a Floodplain Administrator, getting to know and use the Map Service Center Viewer can greatly assist your efforts in regulating and permitting development within your Special Flood Hazard Areas.

Web Sites

OFMA www.okflood.org
ASFPM www.floods.org
OWRB www.owrb.state.ok.us
FEMA www.fema.gov
OEM www.ok.gov/oem
Corps of Engineers (USACE)
www.swt.usace.army.mil
U.S. Geological Survey (USGS)
ok.water.usgs.gov
Advanced Study Institute
web.uccs.edu/geogenvs/natoasi
CLOMR/LOMR Forms:
www.fema.gov/fhm/frm_form.shtm
EPA NPDES Phase II site:
www.epa.gov/npdes/
SMRC Stormwater Mgr Resource Center:
www.stormwatercenter.net
FEMA Official NFIP Site:
www.floodsmart.gov
Link to: 44 CFR Ch. I (10-1-02 Edition)
http://www.access.gpo.gov/nara/fr/waisidx_02/44cfrv1_02.html
Webmaster: Tinna Song-Wallis
stsong@cox.net

Calendar of Educational Opportunities

- **Floodplain 101**; January 25th, February 8th, March 8th, April 4th, May 2, 2006. OWRB 3800 N. Classen Blvd. Oklahoma City, OK. Contact Rhonda Bowers (405) 530-8800; website www.owrb.state.ok.us
- **9th Annual OFMA Legislative Reception**; February 7, 2006. Room 412 A & B of the State Capital, Oklahoma City, OK
- **OFMA Spring Technical Workshop**; March 2, 2006; Tulsa Technology Center, Jenks, OK. Contact: *OFMA, P.O. Box 8101, Tulsa, OK 74101-8101*; website: www.okflood.org.
- **Resource Management Conference**; March 16th, 2006; Tulsa County Conservation District; Contact (918) 280-1595
- **Texas Water 2006**; April 4-7 2006. Austin Convention Center, Austin, TX. Contact: *TAWWA or WEAT, P.O. Box 80150, Austin, TX 78708*; website: www.texas-water.com
- **Safety Evaluation of Existing Dams: Midwest Region Seminar**; April 5-7 2006. Indianapolis, IN. Contact: *ASDSO, 450 Old Vine St., Lexington, KY 40507*; website: www.damsafety.com
- **2006 National Flood Conference**; May 7-10, 2006. Wyndham Philadelphia at Franklin Plaza; Philadelphia, PA. Contact: Catherine King FEMA Mitigation Division. Website: www.fema.gov
- **AWRA - GIS and Water Resources IV**; May 8-10, 2006 Contact: Patricia A. Reid (540) 687-8390 American Water Resources Association website: www.awra.org/meetings/Houston2006/
- **ASFPM Annual Conference**; June 11-16, 2006; Albuquerque, NM. www.floods.org
- **OFMA 16th Annual Conference**; September 18-20, 2006, University of Oklahoma Conference Center, Norman, OK. Contact: *OFMA, P.O. Box 8101, Tulsa, OK 74101-8101*; website: www.okflood.org.

(Continued from page 1)

Total presentation time is limited to 25 minutes (20 minutes presentation, 5 minutes Q&A)

Please submit your information electronically in the following format to simplify our compilation. There is a 200 word maximum for vita and the abstract should be no more than 300 words in Microsoft Word, Times New Roman 11 point. Provide the following topic titles in Arial 11 point BOLD as shown below:

Name of Presenter(s):
Affiliation:
Address:
Phone and FAX Number:
Email Address:
Presentation Title:
Abstract:
Audio/Visual Needs:

Abstract must be submitted by March 15, 2006.
 Presenters will be notified of acceptance by April 17, 2006.
 Email abstracts to: Lgilroy@cityoftulsa.org
 For additional information contact the Conference Chair:
 Laureen Gibson Gilroy, CFM
 City of Tulsa Public Works Dept.
 200 Civic Center, Room 515
 Tulsa, OK 74103
 Tel: (918) 596-2859
 FAX: (918) 596-1869

2006 Fiscal Funding Updates to FEMA's Floodplain Management Programs

In the last edition of *The BFE*, we reported the unprecedented number of payouts the National Flood Insurance Program remitted due to the extreme damages generated from hurricanes Katrina and Rita. The \$22 billion dollars in payouts is the most granted during a single year by FEMA and represents the fastest delivery of relief funds in FEMA's history. As a result of the claims and the subsequent debt of the program, President Bush signed the National Flood Insurance Program Further Enhanced Borrowing Authority Act of 2005, temporarily allowing the NFIP to borrow up to \$18.5 billion to settle flood insurance claims from 2005. An amendment made to the National Flood Insurance Act of 1968 in September 2005 increased the borrowing authority from \$1.5 billion to \$3.5 billion through fiscal year 2008. The new law further increases this authority, the total amount that the director of the Federal Emergency Management Agency may borrow from the Treasury, with the president's approval, to carry out the flood insurance program, to \$18.5 billion.

In other appropriation updates for the new fiscal year, FEMA will receive \$2.6 billion for response and recovery programs and activities. Of the total dollar amount, \$50 million will be set aside for the National Pre-Disaster Mitigation Fund, the competitive funding source for government entities who are looking to implement cost effective mitigation projects that complement a comprehensive mitigation program, down from \$150 million in 2005 and \$255 million in 2004. PDM applications for FY2006 began 11/21/05 and end 3/3/06. The Map Modernization Program, an aggressive initiative designed to update flood maps for the entire nation, was again appropriated \$200 million for the fiscal year, matching the appropriations from 2003 and 2004. The largest appropriation of the funding, a total of \$1.77 billion, will go to disaster relief.

Oklahoma Floodplain Managers Association

Vision

The Oklahoma Floodplain Managers Association advocates the protection of the natural functions of the floodplain through education, training, and service to Oklahomans.

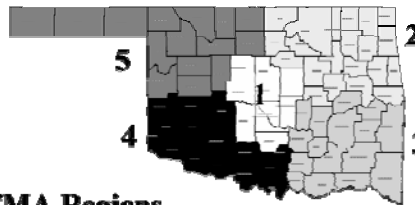
Mission

We encourage and support, with our partners, flood-safe development and flood mitigation. We promote sound floodplain management practices and the natural and cultural benefits of the floodplain. We support the floodplain management profession through education and certification.

Saving lives from floods and reducing property loss from floods are paramount to us.

An Invitation to Join OFMA

The Oklahoma Floodplain Managers Association is a non-profit organization primarily dedicated to providing information and education to the public about reduction of loss of life and property due to flooding.



OFMA Regions

The best investment that \$30.00 can buy in the future of your state is a membership in the Oklahoma Floodplain Managers Association.

OFMA Membership Application

Name: _____

Company/Organization: _____

Title: _____

Address: _____

Work Phone: _____

City/Town: _____ State: _____ Zip: _____

Fax: _____

E-Mail: _____

Detach and Mail to:

OFMA

P.O. Box 8101

Tulsa, OK 74101-8101

New Member: ☐

Renewal: ☐

Region (see map): 1 2 3 4 5

Committees:

___ Mitigation

___ Mapping and Engineering

___ Education/Legislative

___ Certification

___ Conference

Dues Schedule:

First-Year dues for joining OFMA are listed below. The fiscal year for membership starts October 1st and ends September 30th.

Full Membership	\$ 30.00
Student Membership	15.00
Associate Membership	20.00
Agency Membership	50.00
(Plus \$10.00 per employee designated by the Agency)	
Corporate Sponsor	100.00



Notes from the State NFIP Coordinator

Mike Mathis, Oklahoma Water Resources Board, NFIP State Coordinator

It is early January and much of Oklahoma is in desperate need of rain, as I told an Oklahoma City television news team who just interviewed me for a story on weather modification. If only we could make rain from a cloudless sky...

It seems rather inappropriate to be discussing floodplain management in the midst of a drought, but that is exactly what we should be doing. We all know that both rainfall and subsequent flooding are unavoidable occurrences. In fact, as we look back at the history of drought episodes in Oklahoma, they are often punctuated by major, and often tragic, flooding events.

That is why all local floodplain administrators must continue to do the basics, to ensure that your permitting system is functioning properly and that new development will be safe from flooding. Are you doing this?

In this day and time there are so many different aspects of floodplain management and related programs that it is easy to become distracted. Please remember it is your charge as the local floodplain administrator to first and foremost regulate development in the 1% chance floodplain areas in your community.

Map Modernization, CRS, CTP, Dam Safety, Levee Policies, Emergency Management, Mitigation and many other programs are very important to what we do. But we must continue to regulate development in the floodplain. Floodplain management basics are what we are about. Let's get our foundation established first before we advance to other areas.

With that said, mark your calendars for March 2 in Jenks at the Technology Center for OFMA's Spring Workshop. A major part of the workshop will deal with dam safety and levees. As you know, these are forms of structural floodplain management and can be a potential problem if not properly maintained and inspected. Lauren Gilroy, Conference Chair and Cecil Bearden, OWRB Dam Safety Engineer, have worked together to ensure that this is an informative and interesting workshop. You can register yourself today using the application provided in this issue of the *B.F.E.* I hope to see you there.

Finally, even though drought and wildfires are the current headlines, it is up to you to ensure that when we do flood again that it will not cause damage or take lives. Keep up the good work.



OWRB Provides Managing Floodplain Development through the NFIP training

On January 9, 2006, OWRB hosted the 2006 "Managing Floodplain Development Through the NFIP" course at the University of Oklahoma, Continuing Education Center. Floodplain officials from Jackson County, Custer County, Atoka County, Seminole, Tulsa, Oklahoma City, Chickasha, Owasso, Bethany, Watonga, Mooreland, Shawnee, Bartlesville, Rogers County, SODA and several private engineering companies completed the five day course. Thirty-one of the 35 folks that completed this premier floodplain management course applied to take the CFM exam on Friday afternoon. Mr. Joe Remondini, PDCC Chair, proctored the exam for these 31 individuals. Mr. Bill Smith, Chair of the OFMA Mitigation Committee, provided valuable instruction during this course standing in for Jack Graham, FEMA, still on disaster duty in Texas. Other instructors included Hank Elling, OWRB, Dorothy Martinez, NFIP, Rex Hennen, OFMA Chair. OWRB extends heartfelt appreciation to these instructors for their valuable time. This course is an official EMI Course 273 and is offered each January by OWRB and is limited to the first 36 individuals enrolled. Please contact Ms. Rhonda Bowers at (405) 530-8800 for more information.





OFMA'S CORPORATE PARTNERS



Association of County Commissioners of Oklahoma

Dusty Birdsong
429 NE 50th Street
Oklahoma City, OK 73105
405 524-3200

Benham

Barend Meiling, PE, CFM
One West Third St., Suite 100
Tulsa, OK 74103
918 492-1600

Carter & Burgess, Inc.

Brian Bannister CFM
10001 Broadway Extension,
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Oklahoma City, OK 73116
405 810-8254

Cinnabar Service Company

Terry Young
5121 South Wheeling Avenue
Tulsa, OK 74105
918 742-0082

Crafton Tull and Assoc., Inc.

Phil Hagen
235 North MacArthur Blvd
Oklahoma City, OK 73127
405 787-6270

Cyntergy AEC

Robert Day, P.E.
320 South Boston, 12th Floor
Tulsa, OK 74103
918 877-6000

Dewberry Design

Andrew Cueto, P.E.
1350 South Boulder, Suite 600
Tulsa, OK 74119
918 295-5263

Eagle Consultants, Inc.

Satish Dasharathy
2803 South Bryant Avenue
Edmond, OK 73013
405 844-3900

FTN Associates, Ltd.

Conrad Battreal, PE, CFM
3 Innwood Circle, Suite 220
Little Rock, AR 72211
501 225-7779

Grand River Dam Authority

Robert W. Sullivan, Jr.
P.O. Box 409
Vinita, OK 74301-0409
918 256-5545, x4467

Greenhorne & Design

Vince DiCamillo CFM
9001 Edmonston Road
Greenbelt, MD 10770
301 982-2898

Guy Engineering

Julie Guy P.E., CFM
10759 East Admiral Place
Tulsa, OK 74116
918 437-0282

Harden and Associates Surveying

Jim Harden, LS
2001 South 114th East Avenue
Tulsa, OK 74128
918 234-4859

Hydropower International Services; Inter-National Consultancy, LLC

Bill Smith P.E., CFM
28508 W. 41st St.
Mannford, OK 74044
918 865-6977

JGVE, Inc.

Donald D. Vick, PE
124 NW 10th St., Suite 101
Oklahoma City, OK 73103
405 236-8313

Meshek and Associates, Inc.

Janet K. Meshek, P.E., CFM
P.O. Box 636
20 West 2nd Street, Suite 100
Sand Springs, OK 74063
918 241-2803

Michael Baker, Jr., Inc.

Bart Standley
16225 Park Ten Place, #420
Houston, TX 77084-5142
281 579-4579

Myers Engineering

Bill Myers
President
116 Northwest 132nd
Oklahoma City, OK 73112
405 755-5325

Oklahoma Municipal League

201 N.E. 23rd Street
Oklahoma City, OK 73105-
3199
405 528-7515

Oklahoma Society of Land Surveyors

Burk Cornelius
13905 Twin Ridge Road
Edmond, OK 73034
405 721-7222

Poe & Associates

Shane Smith CFM
525 Central Park Drive
Oklahoma City, OK 73105
405 949-1962

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