

---

# WATERLINES

News affecting the management and use of Indiana's water resources

---

DIVISION OF WATER  
INDIANA DEPARTMENT OF NATURAL RESOURCES  
SUMMER 2007

---

## WAVERLY – THE NEXT HISTORICAL STOP IN INDIANA?

By Anita R. Nance, CFM, and Darren Pearson, Division of Water

Morgan County is making the most of their “river” dollars and hoping to revive some of the “river” history in Waverly, as well as adding some recreational opportunities. Many of the homes and buildings located in the lowest lying areas in Waverly, most located in the floodway of the White River, have been deteriorating over the years. They have been inundated by murky floodwaters over and over, each flood taking it’s toll – at least until about two and one-half years ago. That’s when things began to change in Waverly!

Morgan County Plan Director, Kenny Hale, recently described their innovative plans to improve this area of Morgan County – this born of the ideas he and one of the county commissioners had when trying to look at flooding in Morgan County in a more proactive way.

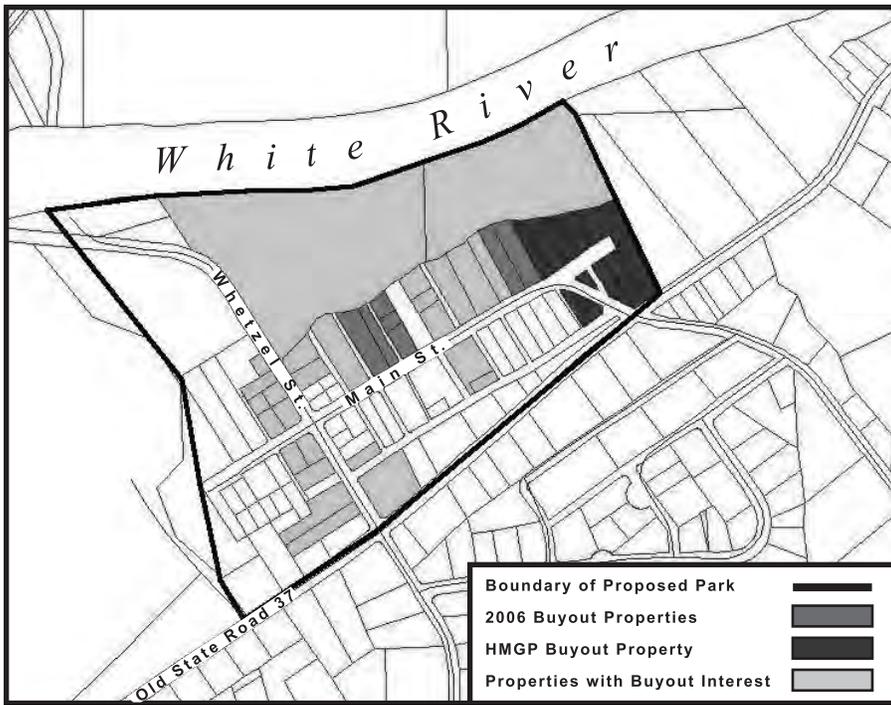
*Their first goal* is to buy all of the property in the floodway west of Old State Road 37. In this way, there would not be the recurring property damage, heartache, flood insurance claims, and disaster assistance claims. Overall, it gets these folks out of harm’s way and reduces the flood risk altogether!

*Their second goal* is to get Waverly cleaned up and turned into a park for the county and state. They would particularly like to see the old church, bank, livery stable, and blacksmith shop saved. The old bank has been targeted as a likely museum to show what Waverly looked like in its hey-day. Like so many river towns in times past, downtown Waverly was really booming in the late 1800’s to early 1900’s.

Mr. Hale has gathered about 60 photos of downtown Waverly, including the old covered bridge. Along with the photos is a list of all of the businesses that were there at that time. They hope to save the bygone years through this proposed museum. They also hope to use a portion of the old bank building/museum as a canoe rental office for the park system, making the rest of the area a living history park and recreational park with trails and sports field. Upon the completion of the acquisitions, the park would be approximately 45

### Also in this issue

<b>Floodplain Managers .....</b>	<b>3</b>
<b>FEMA Online Tutorials .....</b>	<b>4</b>
<b>Map Mod Scoping Meetings .....</b>	<b>4</b>
<b>Conference Corner.....</b>	<b>6</b>
<b>Precipitation Report .....</b>	<b>6</b>



Proposed Waverly Park  
(Map provided by Morgan County Plan Commission)

acres. Plans for each project located in the floodway will have to be appropriate for the site so it can be approved by the Department of Natural Resources.

**They started with \$50,000 from riverboat revenue** in 2006. The money was used to complete two appraisals for each property interested in being purchased. They were able to purchase seven lots, totaling approximately two acres, tear down six homes, and tear down five accessory buildings to date. They pumped all of the septic tanks located on purchased lots and removed them. An additional

\$9,000 was obtained from the County Commissioners to complete the appraisals, purchases, demolition, and removal of the septic tanks.

Another property, approximately two and one-half acres, is the subject of a buyout project under the **Hazard Mitigation Grant Program** in cooperation with the Federal Emergency Management Agency, Indiana Department of Homeland Security, and the County. The home, located in the floodway, was substantially damaged by the last flood and could not be reconstructed. The homeowner from this site was relocated. When the buyout project is complete, a monument from the Chaplin Foundation Association is planned for the site to honor the memory of the homeowner's son, an Army soldier killed in the service of his Country.

Three additional properties were appraised twice, but not purchased at this time due to insufficient funds. The structures will be purchased when more funds become available. Since the first round of buyouts, five property owners have expressed interest in having their property acquired by the county. An additional property owner has approached the County to sell fourteen lots that all contain structures.



Property with manufactured home purchased in 2006 buyout  
(Photo provided by Morgan County Plan Commission)



Property after buyout with manufactured home removed  
(Photo provided by Morgan County Plan Commission)



Property with stick-built home purchased in 2006 Waverly buyout  
(Photo provided by Morgan County Plan Commission)



Property after buyout with stick-built home removed  
(Photo provided by Morgan County Plan Commission)

*An additional \$50,000 is being requested* in August for this year's buyout. In order stay on track with their goals, they also asked that a capital improvement plan be adopted by the County for the next five years in which \$50,000 has been requested for each of the five years in the plan. The County Commissioners as well as the County Council adopted the plan earlier this year. The County has been exploring other grants to help with the development of the park and land acquisitions.

If you are familiar with the Waverly area, you know that there are some significant sand and gravel operations nearby. Mr. Hale reports that they are also working with the Indiana Mining Association as well as the gravel pit operators within Morgan County to see if there may be any interest or potential for land donations. They do not want to overlook an opportunity.

What an excellent way to put "river" money to work, as well as pursuing and using other resources at hand. According to a study released in 2005 by the Multihazard Mitigation Council of the National Institute of Building Sciences, every dollar spent on mitigation saves society an average of four dollars. Copies of the study are available at [www.nibs.org/MMC/mmcactiv5.html](http://www.nibs.org/MMC/mmcactiv5.html). **Innovation**, perhaps not the most common thoughts – utilizing resources and *making things better for everyone!* ☞

## INDIANA'S NEWEST CERTIFIED FLOODPLAIN MANAGERS

The Floodplain Management Section of the Department of Natural Resources, Division of Water, offered morning Floodplain Management refresher courses and proctored afternoon Certified Floodplain Manager (CFM) exams on March 29 and May 10 of this year. *Congratulations* to the ten folks who made the grade! Denise E. Aschleman of the City of Noblesville; Brad C. Baldwin, Larissa L. Heller, Laura K. Kannapel, Debra K. Lowe, and Markita L. Shepherdson, of the Department of Natural Resources; Heather Fincock, Thomas G. Mhlbachler, and Peggy L. Shepherd of Christopher B. Burke Engineering; and, Stephen Roeschlein of Earthtech, earned the designation of CFM.

The Certified Floodplain Managers Program is a national program established by the Association of State Floodplain Managers (ASFPM) for professional certification of floodplain managers. The program recognizes continuing education and professional development that enhance the knowledge and performance of local, state, federal, and private-sector floodplain managers.

For additional information on the CFM certification program, you can visit the Association of State Floodplain Managers (ASFPM) Web site at [www.floods.org](http://www.floods.org). ☞

## FEMA ONLINE TUTORIALS

New to Floodplain Mapping? Been a while since you have worked with your community's Flood Insurance Rate Maps? Want some help in filling out a Letter of Map Amendment (LOMA) or Letter of Map Revision based on Fill (LOMR-F)?

FEMA is currently developing several multimedia tutorials to provide in-depth training in different facets of the National Flood Insurance Program (NFIP) and to support FEMA's public education and outreach efforts as part of the Map Modernization effort. Floodplain managers, engineers/surveyors, and homeowners, can find lots of useful information at the site.

A listing of the online multimedia tutorials that have recently been completed, are currently in development, or are planned for development in the near future, is provided below. To see the free tutorials, go to [http://www.fema.gov/plan/prevent/fhm/ot\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/ot_main.shtm). Once there, select a link to view a description of a particular tutorial, access available tutorials, and to obtain more information concerning how to sign up for related e-mail updates. If you have questions about any of these resources, please call the FEMA Map Assistance Center at 1-877-FEMA MAP for assistance. ☞

## MAP MOD SCOPING MEETINGS FOR REMAINING 32 COUNTIES

As the Map Mod process continues on, scoping meetings are now conducted and/or scheduled for the remaining 32 Indiana counties. This portion of the Indiana Floodplain Mapping Initiative falls under the Federal Fiscal Year (FFY) 2008 funding in accordance with the original grant agreement between the Federal Emergency Management Agency (FEMA) and the Department of Natural Resources, Division of Water.

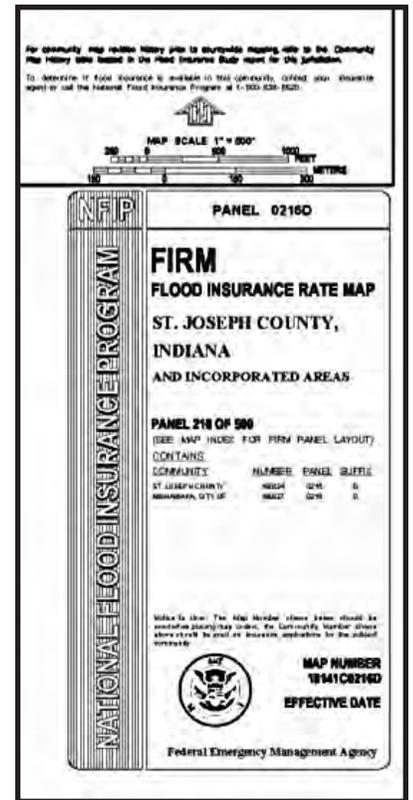
The counties included in the FFY 2008 funding are Tipton, Starke, Pulaski, Jasper, Newton, White, Benton, Carroll, Warren, Fountain, Vermillion, Parke, Owen, Sullivan, Orange, Pike, Spencer, Perry, Scott, Jefferson, Switzerland, Ohio, Ripley, Franklin, Union, Rush, Randolph, Jay, Blackford, Wells, Huntington, and Whitley. Key officials of every incorporated town and city within each county as well as key county officials will be invited to attend the meeting and assist in identifying and prioritizing efforts in mapping potential flood risks for each community throughout each county.

Software	NFIP Revisions Amendments	Coastal Theory and Mapping	GIS and Advanced Mapping Technology Tutorial Series	Other Tutorials
Quick-2, Version 2.0	Letter of Map Amendment (LOMA)	Coastal Tutorial featuring CHAMP	Introduction to GIS Tutorial	How to Read a Flood Insurance Rate Map
CHECK-RAS, Version 1.1	Letter of Map Revision Based on Fill (LOMR-F)		Using GIS to Create DFIRMs	How to Read a Flood Insurance Study
RASPLOT, Version 2.1.0			Using GIS, DFIRM, and Other Data for Sample Community Applications	Cooperating Technical Partners (CTP) Self-Assessment Tool
National Flood Frequency				

*Available Online Tutorials*



*Preliminary Flood Insurance Rate Map for St. Joseph County*



The scoping meeting is the beginning of a community's opportunity to get involved and be a critical and effective partner in the production of their flood hazard maps. The process for each countywide map product will take about two years to produce, resulting in new digital flood hazard maps that each community within a county can use. At completion of the Map Mod process, all 92 Indiana counties will have Digital Flood Insurance Rate Maps (DFIRMs).

Progress continues for counties around the state. Johnson County now has new DFIRMs effective August 2, 2007. Hancock County is right behind them, having new DFIRMs becoming official on December 4, 2007. Allen and Adams counties are currently in the appeals process, while Hendricks, Tippecanoe, Elkhart, Monroe, and Warrick counties will have preliminary maps very shortly. Preliminary maps are out for St. Joseph County and an open house for the public to review the maps will be held in August. Please check [floodmaps.in.gov](http://floodmaps.in.gov) for preliminary maps in pdf format, and other information regarding the map modernization project.

Lawrence County is currently in a comment period. Clark, Dearborn, Delaware, Floyd, Hamilton, Madison, Porter, Vigo, Bartholomew, Boone, Dubois, Grant, Harrison, Howard, Jackson, Knox, Kosciusko, LaPorte, Marshall, Montgomery, Morgan, Shelby, Vanderburgh, Marion, Lake, and Wayne counties have maps in production at this time. Surveying and other data gathering will happen through the end of the year.

Activity statements are signed and the Division of Water is negotiating contracts for mapping work for Brown, Cass, Clay, Clinton, Crawford, Daviess, Decatur, Fayette, Fulton, Gibson, Greene, Henry, Jennings, Lagrange, Martin, Miami, Noble, Posey, Putnam, Steuben, Wabash, and Washington counties.

For further information about the Map Modernization project in Indiana, contact David Knipe, PE, CFM, at the Division of Water, 317-232-4160. To understand about Map Modernization, you can also go to [www.fema.gov/plan/prevent/fhm/mm\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/mm_main.shtm).

# CONFERENCE CORNER

## INAFSM CONFERENCE

The 11<sup>th</sup> annual conference of the Indiana Association for Floodplain and Stormwater Management (INAFSM) will take place September 12-14 at the Potawatomi Inn nestled in Pokagon State Park near Angola, Indiana.

Abstract submittals are currently being reviewed and the agenda will be finalized soon. Topics of interest for this year's conference include: Floodplain/Drainage Management Policies, Construction & Design Techniques, Flood Insurance, CRS, Bank Stabilization and Erosion Control, Stormwater Quality and Quantity Issues, Low Impact Development, HAZUS, Floodplain/Stormwater Projects & Case Studies, Phase II Compliance/Implementation, Disaster Response & Recovery, Planning Initiatives – All Hazards, Watershed, IDEM – MS4 Program, Illicit Discharge, Stormwater – BMPs.

The CFM exam will again be offered this year. Conference attendance is not required to sit for the exam. The exam will be conducted

## PRECIPITATION REPORT FOR JANUARY THROUGH JUNE 2007

The wet and warm weather of late December continued through mid January, which led to flooding in central Indiana as well as southwestern Indiana. Two flood deaths occurred as a result of the flooding – a consequence of driving vehicles into flooded roads. Overall, snowfall during January was below normal with monthly totals ranging from a trace to over ten inches. The most significant snow of the season occurred early on January 21. Snow of three to five inches fell in much of central and southern Indiana, with lesser snow events following through January 31.

on September 13, 2007 at 1:30 pm. Exam applicants should visit the Association of State Floodplain Managers' (ASFPM) Web site at [www.floods.org](http://www.floods.org) for Certified Floodplain Manager (CFM) qualifications, exam requirements and CFM applications. Applicants should have their applications and fees submitted to ASFPM, at least two weeks prior to the test date. No walk-ins will be allowed on the test date. Contact Steve Benagh, CFM at (317) 266-8000 or [sbenagh@cbbel-in.com](mailto:sbenagh@cbbel-in.com) if you have questions on applying for the CFM exam. Please note that a refresher course will be offered as part of the conference on the afternoon of September 12 for those who may be interested in "brushing up" before the exam.

This year's conference will be an opportunity you won't want to miss! For up-to-date conference details and registration information visit [www.inafsm.net](http://www.inafsm.net).

## ASDSO NATIONAL CONFERENCE

Dam Safety '07 – The Association of State Dam Safety Officials (ASDSO) National Conference will be held September 9-13, 2007 at the Hilton Austin Hotel in Austin, Texas. For more information, go to [www.damsafety.org](http://www.damsafety.org). ☞

February 2007 was one of the coldest and snowiest ever verified. For the Indianapolis area, February was the fourth snowiest of record. While the first significant February snow fell on the sixth with three to six inches in central Indiana, a major winter storm struck northern and central Indiana on February 12 through 14. Blizzard conditions occurred just north of Indianapolis where as much as eighteen inches of snow fell accompanied by drifts over six feet high. Areas along I-70 and areas south of Indianapolis dealt with sleet and freezing rain along with the snow. On February 17, another one to more than four inches of snow fell on central Indiana. Monthly melted precipitation was above normal in the central and

some southern portions of Indiana. Other portions of southern Indiana had near normal precipitation while northern portions of the state had somewhat below normal overall precipitation.

Frequent and locally heavy rains kept rivers above normal in many areas during March. Portions of central Indiana experienced the highest stream levels in more than three years. A few locations along the Wabash River were above flood stage the entire month. Monthly rainfall in central Indiana ranged from near normal to above normal, especially just north of Indianapolis. However, monthly rainfall in southern Indiana was below normal in most areas and monthly rainfall was near normal in northern Indiana.

Overall rainfall totals for April were generally less than March. Monthly rain totals were slightly below normal to slightly above normal and ranged from two and one-half inches to nearly seven inches. Most locations had between three and five inches of rain for the month. Although overall precipitation at Fort Wayne was slightly below normal for the month, the April snowfall for Fort

Wayne was 3.4, 2.3 inches *above* normal. The snowfall total for South Bend this April was 6.1 inches, 4.4 inches *above* normal. April 2007 was the sixth snowiest at South Bend.

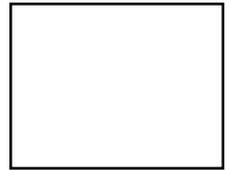
May was very warm and dry in much of the state. The dry weather pattern began in April and continued through the month of May. Rainfall was much below normal. There were no widespread rains during May.

Rainfall was a precious commodity during June. Many areas slipped into a drought by the middle of the month. Drought conditions eased during the last week of June, but continued in many areas into July. Rainfall remained widely scattered though June 21. Rain of one to more than three inches occurred in much of the state from June 22 through 24. The heaviest rain fell in western and southwest Indiana. Additional rainfall from June 25 through 29 was more scattered with amounts generally less than one inch. Some areas received more than four inches of rain during this period. Rainfall ranged from below normal to above normal. ☁

Locations	KEY:						Totals
	January	February	March	April	May	June	
CHICAGO	1.72	1.61	3.66	3.49	1.80	2.29	14.57
IL	1.75	1.63	2.65	3.68	3.38	3.63	16.72
SOUTH BEND	3.50	1.38	2.44	4.48	1.70	1.80	15.30
IN	2.27	1.98	2.89	3.62	3.50	4.19	18.45
FORT WAYNE	3.74	0.96	3.39	3.47	1.10	3.04	15.70
IN	2.05	1.94	2.86	3.54	3.75	4.04	18.18
INDIANAPOLIS	4.41	2.77	4.91	3.30	1.97	2.22	19.58
IN	2.48	2.41	3.44	3.61	4.36	4.13	20.43
EVANSVILLE	5.47	3.41	2.66	2.88	2.73	2.71	17.15
IN	2.91	3.10	4.29	4.48	5.01	4.10	19.79
LOUISVILLE	3.63	2.90	2.99	4.55	2.37	1.58	18.02
KY	3.28	3.25	4.41	3.91	4.88	3.76	23.49
CINCINNATI	3.84	3.42	3.16	3.15	.91	1.74	16.22
OH	2.92	2.75	3.90	3.96	4.59	4.42	22.54

Note: Official and certified climate data can be accessed at the National Climatic Data Center (NCDC) <http://www.ncdc.noaa.gov/oa/ncdc.html>

INDIANA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WATER  
402 WEST WASHINGTON STREET, ROOM W264  
INDIANAPOLIS, INDIANA 46204-2641



**The work that provides the basis for this publication was supported by funding under a cooperative agreement with the Federal Emergency Management Agency. The author and publisher are solely responsible for the accuracy of the statements, and interpretations contained in the publication. Such interpretations do not necessarily reflect the views of the Federal government.**

### **THANK YOU**

Morgan County Plan Commission, Kenny Hale, David Knipe, Darren Pearson, Greg Main, Debbie Smith, Bill Marsh, and Ed Reynolds.

Editor – Anita Nance

*Waterlines* is published biannually as a public service by the Division of Water, Indiana Department of Natural Resources. The cooperation and assistance of the National Weather Service is gratefully acknowledged.

*Waterlines* is available free of charge to interested parties upon request. Call or write:

Division of Water  
Indiana Department of Natural Resources  
402 West Washington Street, Room W264  
Indianapolis, Indiana 46204-2641  
Phone: (317)232-4160  
Toll free 1-877-WATER55

***Waterlines* is also available on the Web at [www.IN.gov/dnr/water/publications/waterlines/](http://www.IN.gov/dnr/water/publications/waterlines/)**