

**DELAWARE RIVER BASIN COMMISSION
FLOOD ADVISORY COMMITTEE SUMMARY**

November 5, 2008

The November 5, 2008 Flood Advisory Committee (FAC) meeting began at 10:00 AM at the Commission office (DRBC) in West Trenton, NJ. Jason Miller of the U.S. Army Corps of Engineers chaired the meeting.

A. Introductions and Review of the Draft Minutes from the August 20th meeting

The minutes were approved conditionally with any corrections or changes to be sent to DRBC within one week's time. The summary will be posted on the DRBC web site. Tapes of the meeting may be reviewed upon request.

B. Hydrologic Conditions Report

A presentation of the current hydrologic conditions was given by Amy Shallcross DRBC.

The annual precipitation to date in the upper and central part of the basin is approximately 3.5 to 4 inches above normal, whereas, the lower basin is approximately 4 inches below normal. A fairly dry month of October recently ended with approximately 3-5" of rain over a 4-day period. Greater than normal streamflow (130-140%) over the month of October was exhibited at both Montague and Trenton.

In the upper basin, the NYC reservoir storage range is approximately 25% above normal in the reservoirs with a total storage of 195 BG. As of November 4, 2008, Cannonsville was at 61.2%, Pepacton at 79.2% and Neversink at 74.1%. The reservoirs are currently releasing at the FFMP L1-c levels. The reservoirs in the lower basin storage (Beltzville, Blue Marsh and Merrill Creek) are at or slightly below their normal pool indicating that all of the flood control storage is available. DRBC directed the following releases during 8/28/08-9/25/08: Beltzville Reservoir- 1,650 cfs-days (1.066 BG); Blue Marsh Reservoir- 750 cfs-days (0.485 BG).

As of November 3, 2008, the salt line (7-day average river mile location of 250 mg/l chlorides) was at river mile 76 which is four miles downstream of its normal position at 80 miles. The next one-three month outlooks show an equal probability of experiencing either higher or lower than normal temperatures and precipitation. During the months of October through September, Pennsylvania groundwater wells were below average, Delaware wells were below average but above the 25 percentile range and New Jersey wells were below the 25 percentile range.

C. Overview of the Corps Civil Works Process

(Janet Harrington, Philadelphia District Chief of the Project Development Branch)

Janet Harrington, Philadelphia District Chief of the Project Development Branch, gave an overview of the Corps Civil Works Process. She focused her presentation on efforts that lead to construction projects. The six Corps steps to implement a project are: 1. Problem Perception; 2. Request for Federal Action; 3. Study Problem & Report Preparation; 4. Report Review and Approval; 5. Project Authorization; and 6. Project Implementation.

For a study or project to begin, it must be both authorized and appropriated. USACE needs separate authorization for a study and project construction. Approval is via an Appropriation Act. For larger projects, specific authorities can include the House Transportation & Infrastructure Cmte. Resolution, the Senate Environment & Public Works Cmte. Resolution, Water Resources

Development Act and at times the Energy & Water Development Appropriations Act. For smaller projects, continuing authorities include:

SECTION	PURPOSE	FEDERAL COST LIMIT
14	EMERGENCY SHORE/STREAMBANK PROTECTION	\$1,500,000
103	BEACH EROSION CONTROL	\$3,000,000
107	NAVIGATION	\$7,000,000
111	MITIGATION OF SHORE DAMAGE FROM FED NAV PJT	\$5,000,000
204	ECOSYSTEM RESTORATION WITH DREDGED MATERIAL	\$5,000,000
205	FLOOD DAMAGE REDUCTION	\$7,000,000
206	AQUATIC ECOSYSTEM RESTORATION	\$5,000,000
208	SNAGGING / CLEARING FOR FLOOD CONTROL	\$ 500,000
1135	PROJECT MODIFICATIONS FOR THE ENVIRONMENT	\$5,000,000

Once authorized and appropriated, the project development phases are as follows:

- Reconnaissance Planning
- Feasibility Planning
- Preconstruction Engineering & Design (PED)
- Construction
- Operation & Maintenance

Reconnaissance Planning is required before initiation of feasibility study. It identifies potential solutions in sufficient detail to determine whether planning should proceed. As part of this phase, a preliminary analysis of Federal interest, costs, benefits & environmental impacts is conducted along with an estimate of cost for the feasibility phase. Reconnaissance Planning is usually 100 percent Federal funding and normally 12; but not to exceed 18 months duration.

Feasibility Planning is the vehicle for recommending project authorization. It describes benefits and detriments of alternatives considered, as well as, includes a scope of the recommended plan. It also describes Federal & non-Federal participation and presents the views of public, State & Federal agencies. This is done at a 50% non-Federal cost.

The Preconstruction Engineering & Design (PED) Phase includes detailed studies and designs needed to award a construction contract. Studies and Reports may include: Design / Engineering Documentation Reports, Plans & Specifications, Reevaluation Reports (GRR, LRR, PAC), Economic Updates and Supplemental Environmental Compliance Documents (SEIS, SIR, EA).

During the Construction Phase, USACE continues design, prepares plans and specifications for subsequent contracts and contractors build the project. Non-Federal Sponsor cost sharing requirements depending on project purpose(s).

Operation & Maintenance is the Non-Federal Sponsor's responsibility except for navigation projects. USACE conducts periodic inspections and notifies Sponsor of deficiencies.

D. Status Report on Flood Hardening of USGS Gages (Tom Suro, USGS-NY)

A portion of the FY08 funds appropriated to the NWS for flood warning improvements in the basin were used to flood harden USGS gages. During the June 2006 flood, stream stages exceeded the design capacity of several stream gages, preventing transmission of data from the gages. Transmission of data is essential, especially during high flows, for flood forecasting and flood warning. Gage hardening involves either raising the gage housing and telemetry, raising only the telemetry or in some cases relocating the gage.

Mr. Suro gave a status report on five (5) gages prioritized in 2008 to be hardened. The gages all had over 3' of water in the gage house during the 2004, 2005 or 2006 flood.

USGS Station No.	Station Name	Approx. depth of water in gage
01420500	Beaver Kill at Cooks Falls, NY	4.5 ft
01428500	Delaware River above Lackawaxen River near Barryville, NY	>4.0 ft
01432160	Delaware River at Barryville, NY	>4.0 ft
01427510	Delaware River at Callicoon, NY	3.9 ft
01436690	Neversink River at Bridgeville, NY	>3.0 ft

Mr. Suro reported that USGS NY reallocated funding for the emergency relocation of Beaver Kill at Cooks Falls. This gage has been relocated to the top of the hill near the old gage. The relocation is almost complete, but the old gage and well still need to be decommissioned.

The gage hardening at the Delaware River above Lackawaxen nr Barryville is underway in cooperation with PennDOT. The work involves removing the old block gage house and building a new block gage house and 6 ft. extension. It was also reported that the gage relocation was complete at the Delaware River at Barryville, NY.

The two (2) gages planned to be hardened using the \$40,000 of the \$235,000 in appropriated Flood Warning funds are:

- Delaware River at Callicoon (work includes installing a 6' concrete riser block);
- Neversink River at Bridgeville (work includes removing top gage-house section, installing a new 6 ft. well section and re-installing the top gage-house section on well)

E. Status of other FY-08 Flood Warning Improvements

In addition to the gage hardening described above under agenda item D, the other Flood Warning Improvement tasks to be completed using the \$235,000 FY08 congressionally appropriated funds include:

- An inventory and evaluation of existing precipitation and stream gage networks in the basin;
- Evaluation of additional NOAA flood forecast points;
- Development of flood stage inundation mapping at flood forecast points along the main stem
- An education and outreach program geared to emergency managers led by DRBC.

The inventory and evaluation of existing precipitation and stream gage networks is ongoing, with Rick Fromuth and Sol Summer working on the project. A report is expected in August 2009. DRBC is currently helping to provide GIS layers for the work.

Regarding the inundation mapping, Jason Miller, USACE, stated that he should have 3 of the 9 sited tuned over to the NWS by the end of December.

The education and outreach component funds were officially transferred over to FY09 due to the NWS being restricted from forwarding that funding over to DRBC. It is hoped that DRBC can, through a grant process, access those funds in order to hold 2-3 full-day training events geared for emergency managers/ local officials throughout the basin. Tom Suro, USGS, mentioned that he sees a real need to communicate what flood frequency is and how it is calculated.

F. Detail on Surveillance System at the Delaware River Bridges and the Potential for Support of Ice Jam or High Flows Monitoring (Matt Hartigan, Delaware River Joint Toll Bridge Commission)

The Delaware River Joint Toll Bridge Commission (DRJTBC) owns, maintains and operates 20 bridges- 18 vehicular and 2 pedestrian. These bridges span over 139 miles from the Trenton-Morrisville Bridge to the Milford- Montague Bridge.

Matt Hartigan of DRJTBC presented an overview of the newly installed Delaware River electronic security surveillance system and discussed with FAC members how it might be used to help detect ice conditions and monitor river flooding. The newly installed surveillance system is composed of approximately 300 surveillance cameras, a facility access control system, and a new 800 megahertz radio system which is tied to the NJ state police system who are partnering to provide radio dispatching response. The cameras are being monitored at the NJ Regional Operations Intelligence Center (ROIC). The DRJTBC also anticipates creating an EOC at the New Hope/Lambertville Toll Bridge in the future. The system is anticipated to be complete by June 2009.

There are two types of cameras; 1. fixed and 2. pan/tilt/zoom cameras that are able to rotate 360°. Many are capable of viewing many fields of view, including traffic deck, bridge abutments, approach cameras and up and down river views. Alarms can be set dependant on a number of triggers, including intelligent video features such as stopped vehicles, debris, motion detection, speeding. Mr. Hartigan (215-862-7695) demonstrated the capabilities of the cameras for the FAC.

Patti Wnek, National Weather Service, mentioned that a static picture of river conditions once/day would be useful for monitoring river conditions. Robert Tudor, DRBC, mentioned that some others may be interested in this system such as those who monitor the early warning system for drinking water concerns. Mr. Hartigan indicated that there may be opportunities for data sharing and collaboration, but that limitations could include data sharing capacity and security concerns. He encouraged FAC members to follow up with Frank Tolotta at the DRJTBC for specifics on how the data captured with the surveillance system could be best shared with end users.

G. Report on Commissioners Flood Summit in Kingston, NY October 16, 2008 (Bill Nechamen, NYSDEC)

Bill Nechamen provided a brief report to be read to the FAC on a recent Commissioner's Flood Summit in Kingston, NY. He reported that the summit was extremely successful, with about 175 attending and a full agenda. There was extremely good discussion and people went away with the knowledge that there is no one solution to flooding, but there are many programs that can help.

The agenda included introductions from Commissioner Pete Grannis, NYSDEC, Stephen Kempf, FEMA, Regional Director, Congressman Maurice Hinchey and James Tierney, Assistant Commissioner, NYSDEC. There was a focus was on Risk and Liability (Larry Larson, Executive Director, Association of State Flood Plain Managers and Ed Thomas, Esq., Baker Engineering presenting) as well as Streams, Stormwater and Watersheds (Restoration and Management Issues Jack Isaacs, NYSDEC Region 3 and Stream Management Techniques for Flood Reduction and Environmental Management Vince McDermott, Milone and MacBroom, Inc.)

H. Floodplain Regulations Evaluation Subcommittee

Jason Miller discussed the recent formation of the Floodplain Regulations Evaluation Subcommittee (FRES). Both the charge and composition were handed out for review by the FAC. It should be noted that the addition of representatives from the Chamber of Commerce and the Farm Bureau were made following requests from the public at the August 2008 FAC meeting.

The charge to the subcommittee is as follows, “To review and evaluate the similarities and differences in floodplain regulations throughout the Delaware River Basin, and to develop and present recommendations on the potential for more effective floodplain management throughout the basin to the FAC.”

This subcommittee was formed at the request of NJ and PA Commissioners to address the Interstate Task Force Recommendation FR-1: Catalog, Evaluate and Update Existing Floodplain Regulations in the Basin. The first meeting of the subcommittee will be November 12, 2008 at 9:30 a.m. All subcommittee meetings will be open to the public, although participation in the deliberative process will be limited to designated representatives. Joe Ruggeri (NJDEP) and Dan Fitzpatrick (PADCED) were named as co-chairs to the subcommittee.

I. Opportunity for Public and Interested Party Comments

A brief report on the 2008 New Jersey Association for Floodplain Management (NJAFM) conference was made by Laura Tessieri, DRBC. Ms. Tessieri thanked all FAC members that participated in and made the Annual NJAFM Conference a success. The two-day, 2008 conference had close to 300 attendees and multiple breakout sessions. There was a concentration on coastal issues this year. NJAFM is a professional, nonprofit organization that is dedicated to reducing loss of life and property damage resulting from floods and promoting sound floodplain management at all levels of government.

J. Next Meeting

The next meeting was scheduled for Wednesday, February 11, 2009 at 10:00 am.

**FLOOD ADVISORY COMMITTEE
ATTENDANCE**

November 5, 2008

NAME	AGENCY
BRANDES, Kate	Nurture Nature Foundation
BURD, Dave	Lambertville Office of Emergency Management
COLVIN, Mary	Federal Emergency Management Agency (FEMA) Region II
ERICKSON, William	Philadelphia City Planning Commission
DUNN, Kim	Dewberry
FERRARI, Mark	New York State Emergency Management Office (NYSEMO)
GARLITS, Skip	Stakeholder
GOULD, A. Chris	New Jersey Department of Environmental Protection (NJDEP)
HAINLY, Bob	United States Geological Survey (USGS) – PA
HARRINGTON, Janet	U.S. Army Corps of Engineers (USACE)
HOGAN, Rachel	Nurture Nature Foundation
KRUZDLO, Raymond	National Weather Service (NWS)
MAHOOD, Jeff	Natural Resources Conservation Service (NRCS)
MATTE, Al	National Weather Service (NWS)
MILLER, Jason	U.S. Army Corps of Engineers (USACE)
MUSZYNSKI, William	Delaware River Basin Commission (DRBC)
PLACER, Katrina	Mercer County Planning
REISER, Robert	United States Geological Service (USGS)
RIMAWI, Hani	Medina Consultants
RODGERS, Ted	National Weather Service (NWS)
RUGGERI, Joseph	New Jersey Department of Environmental Protection (NJDEP)
RUPERT, Clarke	Delaware River Basin Commission (DRBC)
SAFAFAR, Senobar	New York City Department of Environmental Protection (NYCDEP)
SCHAFFNER, Mike	National Weather Service (NWS)
SCORDATO, John	New Jersey Department of Environmental Protection (NJDEP)
SHALLCROSS, Amy	Delaware River Basin Commission (DRBC)
STEIGERWALD, Scott	Pennsylvania Department of Environmental Protection (PADEP)
SURO, Thomas	United States Geological Service (USGS) - NY
TAMM, Alan	Pennsylvania Emergency Management Agency (PEMA)

TESSIERI, Laura	Delaware River Basin Commission (DRBC)
TUDOR, Bob	Delaware River Basin Commission (DRBC)
van Rossum, Maya	The Delaware Riverkeeper
WILLIAMS, David	Pennsylvania Emergency Management Agency (PEMA) Eastern Area
WILSON, Kerry	Pennsylvania Department of Environmental Protection (PADEP)
WINSLADE, C. William	Yardley Borough Manager & Emergency Management Coordinator
WNEK, Patti	National Weather Service (NWS)
Zagone, Joseph	FEMA Region III