

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

February 8, 2006

The February 8, 2006 Flood Advisory Committee (FAC) meeting began at 10:00 AM at the Commission office (DRBC) in West Trenton, NJ. Peter Gabrielsen of the National Weather Service chaired the meeting.

A. Introductions and Review of the Draft Minutes from the November 30th Meeting.

No comments were made regarding the draft minutes. The summary, once approved, will be posted on the DRBC web site. Tapes of the meeting may be reviewed upon request.

B. Updated Contact Information for Committee Members

Handout B-1 is a current list of contact information for the FAC committee members listed by member organization. In the event of a vote, each of the organizations listed will elect one member to cast a vote. It was recommended that each mentioned organization should appoint their voting member and inform DRBC through email in order to ease the process of a potential future vote.

Interim Discussion Topic: Change to the FAC Membership

Handout B-2 is a copy of the FAC Resolution. Rick Fromuth stated that Dave Burd has been an active member under the Hydropower and Off-Stream Storage heading of the FAC and has recently retired from his position at Merrill Creek. Additionally, Dave Burd is also the Emergency Management Coordinator for Lambertville. His retirement and the recent flood events have brought up the issue of the importance of the voice of local and county emergency management officials to the FAC. It is proposed that the FAC consider adding a local/County Emergency Management representative for each state in the Basin. It is also proposed that the FAC consider removing the media representative which is now vacant and filled by the role of the DRBC public information officer. The Executive Director of the DRBC would appoint each Emergency Management representative following the recommendations of the Commission.

John Moyle endorsed the proposal and made a motion that the FAC send a recommendation to the Commission that they add one additional local/County Emergency Management representative for each state. The motion was seconded. Peter Gabrielsen amended the proposal to include the removal of the media as a specific voting member to the FAC with the understanding that the DRBC public information office will continue to act as the conduit to the media. The amendment was seconded.

Actions:

1. Each organization should appoint their voting member and email that information to the DRBC.
2. DRBC will send the modified resolution to all FAC members and schedule the recommendation to the Commission for either the March 1st or May 10th Commission meeting.

C. Hydrologic Conditions Report

A presentation was given by Rick Fromuth of the DRBC Operations Branch. Hydrologic conditions have been very wet in the Upper Basin over the past months and this has more than made up for the dry summer/fall of 2005. In fact, there was one high water event on January 18th and 19th. Storage in the NYC reservoirs is currently spilling. There has been some water released from those reservoirs due to a snowpack void program. These releases have not stopped the spills but they have reduced the rate of the spills somewhat.

Bill Nechamen posed a question to Patrick Poliseno in regards to the Hudson Reservoir system and the dewatering of the Gilboa Dam. He asked if there was more water being taken for water supply use from

that system and less water than what would be normally taken from the Delaware System. Patrick Poliseno confirmed that they are trying to divert as much water from the Schoharie Reservoir as is possible and stay within the permitted limits, but he does not know if that is affecting the water that is taken out of the Delaware System. He responded that he would bring that question back to the officials that manage the Catskill system. Rick Fromuth brought up that the DRBC receives daily reports from NYC regarding the diversions out of the Delaware Basin and that the DRBC could look into the recent trends of the diversions.

Rick Fromuth mentioned that the NYCDEP has put forth a proposal for a program to provide a void big enough to handle the runoff from a 1" rainstorm in 6 hrs for the Pepacton and Neversink watersheds. The following website shows the amount of runoff estimated in the watershed of the three NYC reservoirs: <http://www.srh.noaa.gov/productview.php?pil=FFHPA2>.

Actions:

1. DRBC will provide recent data on out-of-basin diversions from the NYC reservoirs to the NYSDEC.

D. Opportunity for Public and Interested Party Comments

Peter Gabrielsen updated his comments from the last meeting regarding the NOAA NWS budget shortfall. NOAA NWS has rescinded the budget shortfall so that there will be no reductions in force, no early retirements and no travel restrictions. On the surface, he stated that the NWS will continue to operate under normal conditions. But, to make up for the shortfall, the NWS will have to reduce training opportunities and budget items such as computer maintenance.

Rick Fromuth brought attention to handout D-1, a New York Times article entitled, 'Floodwaters Revel a Divide Between Upstate and Down', dated 2/5/06. The article presents the issue of flooding downstream of the upper basin reservoirs while also presenting the water supply needs of NYC and the four Basin states downstream.

Rick Fromuth also presented handout D-2, a DRBC issued response to a flood inquiry. Rick stated that the DRBC has had many inquires from the public about the lack of attention to large structural projects to lower flood levels. This letter was issued as a response to one of those inquiries and lays out the staff position on the general state of flood loss reduction in the Delaware River Basin. Both the NWS and NJOEM expressed interest in sharing the contents of the letter. The letter will be posted on the DRBC website following a 10-day comment period. If there are comments on the content of the letter, they should be made to Rick Fromuth by 2/17/06.

Bill Vogt of the Delaware Riverside Conservancy asked a question regarding the dam safety inspections on the Neversink in light of recent reports that portions of inspection reports have been photocopied. He asked whether the DRBC receives copies of those inspection reports. Rick Fromuth responded that the DRBC has left the Dam Safety Programs to the states. It would take a directive from the Commissioners in order for the DRBC to investigate and get involved.

Bill Vogt also asked if the DRBC gets any correspondence regarding Swinging Bridge in reference to the problem last May. Rick Fromuth responded that the DRBC receives information on Swinging Bridge by contacting the Federal Energy Regulatory Commission (FERC) since the dam is under their jurisdiction. It was stated that the FERC website posts all proposed and current maintenance and construction that occurs at their dams. The website is <http://www.ferc.gov/industries/hydropower/safety.asp>.

Actions:

1. The DRBC will post the staff position on its website following a 10-day comment period.

E. Status of Draft NJ Governor's Task Force Report

John Moyle explained that the release of the draft report had been delayed due to the new administration coming in and the need to resolve some issues with the Department of Community Affairs regarding compliance with the NFIP. As it stands, the new NJDEP Commissioner, Lisa Jackson, has been briefed on the draft report and it is expected to be posted on the njflood.org website by Friday. It is expected that the public comment period on the draft report will continue to the middle of March and that a public meeting will be held potentially during the week of March 8th.

It was discussed that an overall endorsement of the recommendations from the FAC Committee would be beneficial. It was noted that a lot of members of the FAC participated in the preparation of the draft report recommendations.

In a letter that accompanies the report from Acting Commissioner Lisa Jackson, it is stated that some actions have already begun to be implemented following the recommendations in the report. These actions include \$1M towards the preparation of new floodplain delineations and associated mapping for the main stem of the Delaware River, a commitment of NJ funds to be cost shared with the USACE for the preparation of a feasibility study to evaluate possible solutions including flood-proofing and removing or relocating structures within the floodplain of the Mid-Delaware River Basin and developing strategies with the NJ Dept. of Community Affairs to ensure that building codes in NJ are fully compliant with FEMA requirements under NFIP.

Interim Discussion Topic: Map Modernization and LIDAR data

Mary Colvin of FEMA Region II stressed that it is imperative that the FAC work closely with the FEMA Regions because they are the ones that manage the contracts to update the flood insurance studies and rate maps under the Map Modernization Program. She stated that a main objective should be to get wall to wall mapping on the Delaware, between all the states, so that there are not big jumps in base flood elevations for example. Mariana Leckner of NJOEM mentioned that the Attorney general's office called her in for a meeting in order to work with the IT office in order to produce LIDAR for the entire State of NJ minus Camden and Burlington because they are already completed. Currently there is a proposal completed to do that work using Homeland Security funds. Mary Colvin restated that they need to involve FEMA because there are Map Modernization funds for that same purpose. She stated that FEMA has a cooperating technical partners agreement with the Governor's IT office to provide wall-to-wall ortho imagery for the state of NJ and that they are trying to partner w/ regards to LIDAR. In an effort to not have overlapping efforts, Mariana and Mary agreed to speak later on the issue.

Joe Zagone was asked about the status of PA Map Modernization and he stated that he thinks the DRBC should be the coordinating arm for all four states and that there might be a source of funding through either Map Modernization or DHS.

John Moyle summed up that he hoped that within the next month a coordinating meeting would be held with FEMA, DRBC, USGS, and USACE in order to determine how to move forward with the new H&H that's required for the Delaware and then how that ultimately ties in with the DFIRM map mod that FEMA is doing.

It was discussed that some of the recommendations in the Task Force Report relate to the Flood Warning Recommendations Report from 2002 and that those recommendations need to be looked at again. Rick Fromuth specified that the DRBC is in the process of updating the report and that the DRBC would like to be able to map out where new gages are proposed and where gages are still needed in the Basin.

Actions:

1. Issue an endorsement of the Flood Task Force Recommendations from the FAC Committee.
2. NJDEP to hold a coordinating meeting with FEMA, DRBC, USGS, and USACE in order to determine how to move forward with the new H&H that's required for the Delaware and then how that ultimately ties in with the DFIRM map mod that FEMA is doing.
3. Work towards updating the 2002 Flood Warning Recommendations Report.

F. Automated Email Distribution of Flood Forecasts

John Yagecic developed a program that retrieves AHPS data for the eight daily river forecast points and compares the forecasted stages to station specific Flood Action Levels. If the forecasted stages exceed the station specific Flood Action Levels, the program generates and sends an email warning to a list server. By subscribing to the list server, individuals can get email warnings about flood forecasted flood events on the main stem Delaware, the Lehigh River, and the Schuylkill River. To learn more or to subscribe to the service go to: <http://groups.yahoo.com/group/DRBCFloodWatch/>.

John clarified that the program runs at 12:30pm everyday, but that once a predicted flood action stage has been exceeded, it can be run more frequently. A comment was made that it would be helpful to list the flood stage & caution stage on the email itself. Peter Gabrielsen mentioned that the NWS is in the process of reevaluating and reassessing their internet web structure to support public dissemination of information. He stated that as a service provider, the NWS needs to have some way to formally announce to users when an ip address or service location is changing.

A question was asked by Rad Anderson as to why there were no gages on the Neversink. It was explained that this program only accesses daily forecast points. There are other forecast points, but they are only run when the daily forecast points are expected to exceed caution stage.

Actions:

1. DRBC Staff will revise the message page to add the flood stage and caution stage level.
2. NWS will look into issuing an announcement to users in the future when an ip address or service location is scheduled to change.

G. Updating of 2002 Flood Warning Recommendations

Updates to the recommendations have been received by Bob Hainly, Ward Freeman, Tony Tallman, and Scott Hoffman provided updated GIS layers that depict all stream gage and precipitation gages for Pennsylvania. DRBC is working on incorporating the comments received and will continue to update the report as more information comes in.

Bob Hainly stated that he would contact NY & DE to receive an updated status report regarding the gages if DRBC emails him the excel list of gages the DRBC currently has. It was mentioned that many new precipitation gages have been added in DE due to the Delaware Environmental Observing System (DEOS) which provides 30-minute data now to the USGS. It was decided that the DRBC will need to be in contact with Dan Leathers, DE state climatologist, in order to get the locations of these meteorological stations. It was also mentioned that the DRBC should contact the Middle Atlantic River Forecast Center for updates as well. Additionally, as the general recommendations are updated, the Governor's Flood Task Force recommendations will be included.

Actions:

1. DRBC staff will continue to update the 2002 Flood Warning Recommendations report and continue to solicit updated recommendations from interested parties.
2. DRBC will email out their current list of stream and precipitation gages for comment.

H. Proposal to Complete an Emergency Services Inventory downstream of High Hazard Dams in the Basin

Peter Gabrielsen proposed that this item be removed as an action item for the FAC. The Eastern Region of the NWS has had a number of recent high exposure dam incidents. One of the incidents that the NWS has had is trying to coordinate the dissemination of non-weather related emergencies (civil messages) through the flood warning systems. After the last meeting, Jason Miller provided information on the high hazard inventory available from the USACE. Peter stated that the work and responsibility really needs to come to the local weather service offices where they need to work with their state and local emergency managers to develop templates for disseminating these non-weather related emergency messages. So, it has been determined that this item is something that the NWS will handle internally.

Actions: None

I. Update on Flood Hazard Mitigation Plan Proposal for the Basin

The DRBC has been actively looking into funding sources in order to help realize the goal of FEMA-approved All Hazards Mitigation Plans for all communities within the basin. Handout I-1 shows the updated status of current County wide efforts to complete All Hazards Mitigation Plans for their communities. The map shows that the plans are complete in DE and that many are in progress in PA and NY. In NJ, only Burlington County within Basin is in progress.

Through conversation with NJOEM, it was discovered that the FY-06 PDMC planning funds were being prioritized for counties in NJ to complete their All Hazards Plans. The five county applications chosen to be ranked at the national level were outside of the Delaware Basin.

Therefore, in response to these findings, the DRBC and NJOEM is discussing the formation of a multi-agency and local planning effort that results in the development and local adoption of a multi-jurisdictional Flood Mitigation Plan for a portion of the Delaware River Basin. This effort would be funded under the FEMA FMA FY-06 planning funds. It would serve to provide a template for other FMA plans in the basin and also hopefully encourage the continuation of local mitigation planning of other hazards in order to complete the required All Hazards Mitigation Plans.

Due to grant constraints, the plan will examine the Non-Tidal New Jersey Section of the Delaware River Basin. This includes the municipalities within Sussex, Warren, Hunterdon, and Mercer Counties that have boundaries either partially or entirely within the Delaware River drainage basin. A draft scope of work, timeline and map of the project area was handed out as Handout I-2.

Joe Zagone cautioned that the DRBC should act as a community agent, not a state agent, in order to be eligible for more planning funds within a five-year time period. He also clarified that the All Hazards Plan is defined under the Stafford Act and at this point is strictly a natural hazards plan. Therefore, this Flood Mitigation Plan could be used by the counties in order to help them further develop their own All Hazards Plans.

A question was raised as to when the Flood Hazard Plan would be developed because new information will be available in the future due to the acquisition of LIDAR data. It was decided that the plan needs to be in place as soon as possible. Joe Zagone mentioned that the plans need to be updated at a minimum of five years, so that the new data may be available during a plan update. During an update, only the parts of the plan that require updating need to be updated, not the entire plan. It was again clarified that each municipality is responsible for the preparation and adoption of the plans. But, a county or other multi-jurisdictional effort could be put forward that seeks municipal involvement from each community.

The local adoption of the Flood Mitigation Plan will enable the municipalities in the plan area to become eligible for future mitigation grant opportunities through FEMA's Flood Mitigation Assistance program. The future mitigation projects that could be funded through the FMA program include only structures insured under the NFIP program. These projects could include acquisitions, elevations, relocations and other actions that would mitigate a flood. The Flood Mitigation Assistance is confined to the Special Flood Hazard Area, but the All Hazards Plans are available to the other two grant programs (PDMC and HMGP) which can provide funding for any type of mitigation, in or out of the floodplain, insured or not insured. Mary Colvin specified that the plan can take into account areas outside the floodplain, but for future project funding, the projects need to be a structure and be located in the floodplain.

Actions:

1. DRBC will meet with NJOEM and further the development of the FMA grant application.

J. Further Discussion of Flood Modeling for Basin Reservoirs

At the last meeting, there was discussion about using the National Weather Service Flood Routing model to look at different scenarios for reservoir spill rates. Discussion continued on what would be reasonable scenarios to try given the limitations of the model and the kinds of information that would result from the runs. Rick Fromuth presented the scenario of taking the hydrograph from the April 2005 storm and then analyzing different reservoir voids and the effects on the storages downstream.

Peter Ahnert and Ward Freeman brought up the concern that any scenario that is developed and modeled will only be applicable to that particular scenario because no two floods are produced by the same rainfall distribution or water equiv. in the snowpack. All floods are so unique that any one scenario will be unlikely to represent future flood conditions. Therefore, the model results will not be applicable for future planning unless a full engineering design study is done.

Rick Fromuth stated that one of the purposes is to look at a storm where we know the scenario and determine what would have happened downstream if there were different voids in the model. Because the hydraulics are already determined, this modeling would only look at different void scenarios. It was mentioned that it would be important to talk with NYCDEP to determine what an acceptable void in the reservoirs would be. It was also stated that the run showing the results if the reservoirs hadn't spilled would be important too.

The Flood Task Force Report recommended and the letter from the Commissioner indicates that we are already looking at some limited modeling capabilities. This effort would be a first step to look at the sensitivity of different voids based on one storm event that may provide a basis for the next step. Peter Ahnert will be in further conversation with Rick Fromuth and NYC to develop the scenarios and talk to Gary Petrewski regarding assumptions for Lake Wallenpaupack.

Actions:

1. DRBC Staff and NWS will work to further define void scenarios and look to begin the limited modeling.

Open Business:

NRCS received funding in FY-06 to continue the work in the Neshaminy Creek to continue elevating, acquiring, and floodproofing homes and businesses. Additionally, the NRCS has received a small amount of money in the Brandywine for wetland mitigation in a flood control project. This funding is under the Watershed Protection and Flood Prevention Program. This program is potentially slated for elimination in FY-07.

Joseph Zagone mentioned that David Maurstad, FEMA's Acting Director of Mitigation, testified before Congress recently. Some of the statistics he offered included that for every \$1 of mitigation money, the nation has realized \$4 of savings. He also stated that under NFIP with the flood mitigation activities, the nation has saved \$1.1B a year. If Katrina ends up costing \$33B, then over the past 30 years, the taxpayer has come out about even.

Bill Nechamen brought up that after Katrina, there is talk of making changes to the NFIP. One of these changes would be expanding the reach of mandatory flood insurance to levee protection areas, areas beneath dams, and 500-year flood areas under a lower cost residual risk insurance. Another change would be going to actuarial rates as opposed to subsidized rates for pre-FIRM structures. Bill Nechamen urges caution to the latter change as most of the pre-FIRM properties are older homes and low income. FEMA representatives Mary Colvin and Joe Zagone mentioned that they expect changes to actuarial rates will occur for secondary homes and homeowners that have refused mitigation acquisitions.

Rick Fromuth posed a question regarding cost/benefit ratios needed to justify mitigation actions. One example is the 1984 Corps study where the mitigation projects had difficulty showing a ratio of even close to one. Mary Colvin stated that one of the reasons is due to the relatively rural nature of portions of the Basin in addition to a small number of NFIP claims. The possibility of using IA requests instead of NFIP claims to justify the cost/benefit ratio was brought up. Also, the potential of using BFE vs. first floor elevations to exhibit the potential for flooding could be used to justify cost/benefit ratios.

K. Next Meeting

The next meeting was scheduled for Wednesday, May 3, 2006 at 10:00 am.

**FLOOD ADVISORY COMMITTEE
ATTENDANCE**

February 8, 2006

NAME	AGENCY
AHNERT, Peter	National Weather Service (NWS)
ANDERSON, Rad	New York Emergency Management Agency
CARPENTER, Dave	New Castle County, Delaware – Office of Emergency Management
COLVIN, Mary	Federal Emergency Management Agency (FEMA)
FROMUTH, Rick	Delaware River Basin Commission (DRBC)
GABRIELSEN, Peter	NWS– Eastern Region Headquarters
HAINLY, Bob	United States Geological Survey (USGS) – Pennsylvania
LECKNER, Mariana	New Jersey – Office of Emergency Management
MAHOOD, Jeff	Natural Resources Conservation Service (NRCS)
MERRITT, Wayne	New Castle County, Delaware – Office of Emergency Management
MOYLE, John	New Jersey Department of Environmental Protection (NJ DEP)
NECHAMEN, Bill	New York State Department of Environmental Conservation (NYS DEC)
NICKELSBURG, Walt	NWS
NOBLE, Mary Ellen	Delaware Riverkeeper Network
POLISENO, Patrick	New York City Department of Environmental Protection (NYC DEP)
REUBER, Michael	National Park Service – Upper Delaware Scenic and Recreational River
RUPERT, Clarke	DRBC
SCHOPP, Bob	USGS
SCORDATO, John	NJ DEP
STEIGERWALD, Scott	Pennsylvania Department of Environmental Protection (PA DEP)
TAMM, Alan	Pennsylvania Emergency Management Agency (PEMA)
TESSIERI, Laura	DRBC
VOGT, Bill	Delaware Riverside Conservancy
YAGECIC, John	DRBC
ZAGONE, Joseph N.	Department of Homeland Security – FEMA Reg. III