



FLOOD ADVISORY COMMITTEE

March 5, 2003

MEETING SUMMARY

The Flood Advisory Committee (FAC) meeting chaired by Bob Hainly began at 10:00 a.m. in the Commission office (DRBC) in West Trenton, N.J.

REVIEW OF DRAFT MINUTES OF DECEMBER 11, 2002

There being no corrections or additions to the Minutes, they were approved.

Mr. Gabrielsen made two notes of items mentioned in the minutes. The first concerned the Advanced Hydrologic Prediction Services (AHPS) website. It is now available on the NWS website. The information will be made available to DRBC. Secondly, the NWS has been provided a \$6.1 million budget for the AHPS program for FY'03. He attributed work from groups such as the FAC and the DRBC for the unprecedented budget.

FLOOD POTENTIAL SUMMARY -- NATIONAL WEATHER SERVICE

Mr. Nickelsberg informed the Committee of the current flooding potential as the upper basin has received snow on and off since December.

He passed out maps relating to observed and estimated water equivalent of the snow pack. The estimated map used the remote sensing unit out of Dr. Tom Carroll's office for remote sensing in Minneapolis. The observed map is from New York City DEP and the Corps of Engineers who took snow samples in late February. Their samples found actual measured estimates as high as 10"-12" of water in the reservoir watersheds. Estimates of samples taken in the upper Lackawaxen as of March 5 indicate over 9" of water equivalent (snowpack).

Mr. Nickelsberg noted that the weather pattern currently being experienced is very similar to the weather pattern of 1936, which produced heavy flooding. He then discussed the 1996 flooding that occurred and the condition of the reservoirs in the upper basin during that time. He commented that the reservoirs during that time were able to provide flood control by holding back a lot of the water. However, the reservoirs currently are above normal and there is enough water in the snow pack to fill them. They will be spilling at some point. The Corps reservoirs are being kept at flood control levels but with each precipitation event, water must be released.

Mr. Nickelsberg then discussed ice jams. The biggest problem appears to be in the Water Gap area with 7"-10" thick ice but no back water. The ice is beginning to weaken and some channels are opening up. This situation will continue to be monitored. He strongly urged that the AHPS information, as well as, any other sources for information be made available for the public especially through various websites.

Mr. Mangeri commented that the only concern expressed to him so far is with the northwest corner of New Jersey. Due to a flash flood scenario experienced a few years ago, they are now concerned with a heavy rain event or heavy snowmelt and the risk of flash flooding once again. Mr. Nickelsberg and Mr. Baumgardner stated they did not believe there should be concern for flash flooding as the snowmelt would not occur in a

short time period.

Mr. Baumgardner further noted that the situation is being monitored closely. Information available from the NWS Remote Sensing Office in Minnesota is being used. In advance of an event, 48-72 hours of expected rainfall and forecasted temperatures are programmed to provide the flood outlook that shows the potential for significant flooding over a five day period.

Mr. Nickelsberg also noted that the small streams in the lower portion of the basin will fluctuate greatly and be close to or at flood stage with each precipitation event that occurs as everything is so saturated.

Mr. Steigerwald asked if NYC was releasing any amounts from Cannonsville Reservoir. He was informed that Cannonsville is currently spilling and Neversink and Pepacton reservoirs have a combined total of approximately 30-35 bgal of space available.

Mr. Fromuth informed the Committee that since many water supply and recreation reservoirs do not have large release works to let water out quickly, the DRBC is discouraging such releases unless evidence can be produced to support that such reservoir lowering can be done without causing downstream problems and that it can be effective.

Mr. Fromuth commented that in 1996 the Pepacton Reservoir filled in early winter. Because of the large spill rate, flooding was occurring just downstream of the reservoir. Therefore, over a 30 day period, a total of 5 bgal was released out of Pepacton at a small rate and was carefully monitored. The Corps reservoirs are different in design as they have large release works designed for this type of situation. As flood storage accumulates, it can be released quickly to make room as needed. He further noted that the Corps provides approximately 60 bgal of flood storage in the basin.

Mr. Fromuth stated that as DRBC has received several inquiries about lowering the reservoir storage, a statement has been prepared, and if approved, it will go onto DRBC's website. The Committee was asked to review the statement and offer comments. Mr. Mangeri requested the State of New Jersey Emergency Management website be able to link to the statement. He also encouraged distribution of information on flooding through the NJ OEM as county and local emergency management officials rely on them to advise them of such matters. Tracking of the distribution of the information can also be done.

Mr. Fromuth noted a press release statement on flood potential was issued by the DRBC on February 20. Several general precautions people could take were listed concerning the snowpack, information sources, etc.

Mr. Burd noted Merrill Creek Reservoir in Warren County has also just provided the Community Alert Network System Service to its seven surrounding municipalities, which include the areas that flooded in 1996. Emergency management personnel can have their central dispatch make notifications accordingly. Feedback on the distribution of the notification is also possible to allow for re-alerting or independent notification if necessary. He noted a similar service is being considered in Hunterdon County. If enacted, the service would cover another large segment of the river area. Mr. Fromuth noted Bucks County also utilizes a similar system for the Neshaminy Creek.

Mr. Gabrielsen stated a conference call recently occurred due to increasing interest in the set up of a plan for potential flooding, similar to the January 1996 flooding event, for the Harrisburg area (Susquehanna River Basin). It involved a group of interested parties (USGS, NWS, PEMA, ACOE, lock and dam operators & interests along the river). A review of the hydro-meteorological situation occurred, as well as, a summary of the reservoir status. After a question and answer segment, a discussion took place on how the information was to be presented through the media.

Mr. Gabrielsen noted that since the 1996 flooding event was widespread throughout the United States, the

NWS representatives from various regions had conference calls with FEMA representatives from various regions and provided them with the same type of briefing that occurred for the Susquehanna River Basin.

Mr. Hainly reiterated the importance of the exchange of technical information among the people who work within the field every day. He also stressed the importance of communication of information to the public in a variety of formats.

PRESENTATION BY DRBC STAFF OF ON-LINE FLOOD HAZARD ASSESSMENT CONCEPT

Mr. Fromuth stated that after the last Committee meeting, he met with representatives from the Federal Emergency Management Agency (FEMA) Dave Thomas, Joseph Zagone, and Alan Tamm of the Pennsylvania Emergency Management Agency (PEMA) to discuss ways that DRBC could provide a service in flood mitigation.

An idea raised by Mr. Tamm was to obtain on-line accessibility for communities to see their floodplains and overlay flood maps with orthophotography to see structures in the floodplain, which is the beginning of flood mitigation planning.

A software package that is being developed through DRBC's Information Services branch called i-Map DelBasin was introduced. Its current form has a recreational theme. Mr. Fromuth explained that it accesses information remotely and brings it to the web to be capable for overlay. It would enable communities anywhere in the basin to look at potential flood hazards in their watersheds, link them to planning resources for developing flood hazard mitigation plans, as well as, providing any inventory information on flood structures and flood control projects. Funding resources were reviewed which would assist in creating a flood hazard assessment center on the DRBC website.

Mr. Fromuth informed the Committee that FEMA's map modernization program was funded \$150 million for FY 2003 and is expected to continue another 10 years. He noted that maps produced in this manner would be accessible without the need for overlay. However, there will probably be a gap in time until they are available. The i-Map website would fill the time gap.

Mr. Fromuth indicated there is a relationship between the i-Map proposal and the Basin Plan for the Delaware Basin as the key result areas and goals of the plan, especially for flooding, are geared towards the ability to assess potential flood damage. There is also a relationship to the Comprehensive Plan as undeveloped floodplains provide an important ecological function including habitat and recharge.

He then spoke of the federal and state interests in the proposal. The Disaster Mitigation Act of 2000 (DMA 2000) requires the development of state and local hazard mitigation plans. Assessments of flood hazards are necessary steps toward compliance with the Act. The proposed program would support the direction of the FEMA in its emphasis on emergency preparedness and disaster mitigation. Each of the Basin states must ensure compliance with the DMA 2000 and oversee the completion of the flood mitigation plans. As each state emergency management office (EMO) is faced with county and local governments who have limited resources and often lack basic tools for assessments of flood hazards, this program could be a great benefit.

Lastly, Mr. Fromuth discussed the time frame, steps necessary for implementation of the program by 2005, and possible obstacles.

Mr. Karl Heinicke of the Information Services branch of DRBC demonstrated the software to the Committee. The site would consist of a splash page with "buttons" to describe the program, tutorials on how to use it, links to other outside available information, disclaimers, and to launch the program. Once the program is launched a screen appears offering several options including links and queries. Various map services can be chosen providing a variety of information available and each service can be overlaid onto existing data.

Mr. Gabrielsen stated that as opportunities for partnering develop and expand, the NWS would be interested in the program as a great tool from the AHPS prospect. It could include flood inundation levels available and plot them onto the river reaches on the actual maps.

Mr. Mangeri questioned if it would be worthwhile to have FEMA's repetitive loss inventory available through the site. Part of DMA 2000 and flood mitigation planning is that municipalities identify repetitive loss properties, particularly those in the floodplain. Mr. Tamm cautioned there may be a confidentiality issue with it but agreed it would be a great tool to have.

Mr. Gilman questioned accuracy of property location as it would be vital to the program. Mr. Heinicke agreed and stated the use of the visual orthophotography will assist in pinpointing a specific area. It was noted that the program is more of a screening tool and would be available to determine potential risk. It is not intended as a regulatory or compliance tool for the National Flood Insurance Program.

Mr. Tamm voiced concern about the timing of the implementation of the program. He informed the Committee that the communities have a mandate to prepare their hazard mitigation plans by November 2004; therefore, the program has to be useful to them in preparation of their plans. Mr. Fromuth stated it can be approached to the extent it can without additional funding and provide as much available information as possible, but further development would be necessary.

Mr. Zagone stated Mr. Thomas of FEMA has reviewed the potential program and believes there could be a few possible funding sources available for it. He suggested a meeting between FEMA and the state planners to discuss funding to supporting this effort.

Mr. Gabrielsen asked if there was the ability to include the NWS real time information on the program. Mr. Heinicke stated it could be done. Mr. Gabrielsen asked if any consideration has been given to the volume of traffic to the site. Mr. Heinicke stated the State of New Jersey reviews issues such as this with the staff to ensure sufficient handling capability. Mr. Gabrielsen offered assistance if needed.

COMPREHENSIVE PLAN DISCUSSION

- **Summary of Corps of Engineers Reconnaissance Report Status**

Mr. Fromuth explained that the Corps completed a draft report identified as the 905(b) analysis as part of a reconnaissance study on the Delaware Basin with appropriated federal money. It has been sent to the Corps national headquarters for review. The purpose of the study is to establish a federal interest in an area so cost-shared feasibility work can be performed on particular items of interest to a state or a local sponsor. There has been no cost sharing to this point but this project would offer a 50/50 cost share.

The flood loss reduction objectives worked on by the FAC as part of the Basin Plan effort are incorporated as federal interests. The advantage of this is that it provides a consistent direction between some of the ideas discussed in the report and those included in the Basin Plan.

There are essentially \$2 million of federal money available to do a feasibility study for the Delaware River Basin. Areas focused on in the reconnaissance report are stream corridor assessment and flood loss reduction. The process to have a feasibility study done and have the Corps do the work can take a number of years. The FAC has to decide if there are things that the Corps can do that fit in with the time frames that the FAC is interested in out of the planning objectives and possible strategies and directions that can be taken to accomplish flood warning and flood mitigation.

Although discussions must occur to discuss the type of work that will fit in with what the FAC is doing, Mr. Fromuth noted one of the items that the Corps has a lot of experience in flood stage forecast

mapping. Therefore, if there is potential to cost share some of the aforementioned money and get flood stage forecast maps produced, it may be something to pursue. It was noted that the flood stage forecasting mentioned would be in addition to any mapping by NWS but would be coordinated with it.

- **Report on Watershed Advisory Council Meeting of January**

Mr. Gilman provided the Committee with a status update of the WAC as follows:

- There will now be two plans -- a Basin-wide Water Resources Plan and the DRBC Comprehensive Plan -- that will work together;
- The format of the Water Resources Plan, which will be one overarching plan for the basin, all the basin states, and the various organizations within the basin. The existing DRBC Comprehensive Plan will be revised to be in-line with the Water Resources Plan;
- Discussions occurred about combining some of the various committees Key Result Areas (KRAs). Concerns were expressed because of specific language already selected by some of the committees for the existing KRAs;
- The final Water Resources Plan will soon be created and the FAC seems to be on target or slightly ahead of some other committees.

Dr. Sanchez provided the Committee with a cover page for the development documents for the Basin Plan, which were reviewed at the January WAC meeting. A web address was provided to view the documents.

She addressed interdisciplinary issues that need to be addressed by various committees; one being stormwater management. She asked that the Committee review KRA 3 in the Framework document and respond to her as an entire committee or individually on how the issue of stormwater management fits in the planning aspect to the plan, as well as, consistency on addressing it throughout the basin.

Mr. Gilman informed the Committee that the State of New Jersey has proposed new stormwater regulations that tie into the EPA stormwater management program, Phase II, which requires that local and state governments obtain discharge permits for every storm sewer.

Mr. Steigerwald clarified this matter and stated that the program is based on population, not territory. Under Phase I, a NPDES license had to be obtained in Philadelphia. Now, population has been more defined in Phase II. Basically, to obtain a NPDES one needs to show the institution of best management practices.

Mr. Steigerwald stated that stormwater management deals with higher frequency/lower magnitude events than flood loss reduction. Therefore, when the FAC addresses the issue, it should be realized that stormwater retention on the basis of a development level may not address anything that the Committee is trying to address. Mr. Fromuth noted that one area where it could be addressed is when flood mitigation plans are prepared.

The Center for Sustainable Communities, headed by Jeff Featherstone has a contract in the Pennypack Watershed to perform re-mapping through a combination of funding. They are going into detail and providing updated flood insurance maps, as well as, looking at ways to help the watershed with flood mitigation planning, which extends into flood water management. This could serve as a prototype depending on what they produce.

It was agreed to include this topic on the Committee's next meeting agenda for discussion and to decide the degree of participation of KRA 3.

- **Basin Plan Concept and Flood Advisory Committee Input**

Mr. Fromuth provided the Committee with a handout (D-3), which lists the four objectives the FAC has been working on. The next step is to take the four objectives and build them into a framework that can be dealt with in terms of directions for the basin in flood loss reduction.

He informed the Committee he will be sending out the Flood Warning chart, which will stay in tact as it is work plan as opposed to a set of strategies to achieve the objective of modernization of the flood warning network. He asked that the Committee review its content for accuracy. The other handout is a consolidation of three of the four objectives. Some comments received about the objectives were that 2.1B was very general and all encompassing and the two objectives listed below it could be strategies that fit into the overall objective 2.1B. Consolidation of the four objectives into two is being proposed as follows:

Objective A: Upgrade and Modernization of Flood Warning Capabilities

Objective B: Characterize Flood Damage Risks and Prioritize Actions to Reduce Risk and Losses Including Retreat From the Floodplain.

He reviewed his attempts to take the general objectives and come with areas that would encompass the objective, which were derived from comments made by the members of the FAC at their meetings. He asked the Committee to review the spreadsheets and provide their comments to him on strategic planning directions for the entire basin.

He reiterated that the two areas, Flood Warning and Flood Mitigation, the Corps accepted them and included them in their reconnaissance report as federal interests so there is some consistency, as well as, FEMA's interest in moving forward in many of these directions.

The KRA 2 - Waterway Corridor Management was reviewed. It was noted that the format it is currently in would be the format that the Basin Plan would take on.

Dr. Sanchez informed the Committee that 2.1A and 2.1B have now been covered; 2.1C and 2.1D she suggested as targets to be achieved. She also discussed numbers and dates attached to each one and suggested they be plugged in as milestones.

Mr. Fromuth commented that each of the seven implementation strategies would require an entire work plan in and of itself and probably more complicated than the flood warning.

FLOOD WARNING RECOMMENDATIONS

- **Report by Members On Progress Toward Implementation**

Mr. Fromuth made mention that handout E-1 is from the congressional conference session of the federal budget, which addresses funding received by the NWS for their operations for FY'03. In it reference is made that the conferees direct the NWS to expand the Susquehanna River Basin gauges project to include the Delaware River Basin. He noted that this is in addition to AHPS for which funding was increased but that no additional monies were provided to the NWS for the directed gauge expansion.

Mr. Gabrielsen agreed and informed the Committee that the NWS had requested \$1.3 million to continue their sustained operations with the Susquehanna River Basin and received \$1.292 million. No new money was provided into the Susquehanna funding. The Susquehanna budget has now become part of the operational base budget within the NWS rather than a specific line item for earmarked

funded projects. He further stated that the NWS needs to keep the interests going into the Susquehanna Basin while expanding into the Delaware Basin and moving forward with the AHPS deployment.

Mr. Fromuth commented that Mr. Tudor and Ms. Collier of DRBC have devoted a lot of time in Washington, D.C. with people from the Northeast Midwest Institute and with individual congressmen including members of the Delaware River Basin Task Force. Summaries of the Flood Recommendations have been provided to them along with a letter requesting funding for the full set of recommendations. He noted that some of the AHPS work will contribute to fulfilling the recommendations.

The appropriation for the NWS that came out of committee was much different than the President's budget for FY'03.

Mr. Hainly stated that over the past few years, USGS has developed support in Congress. The President's FY'03 budget zeroed out some USGS programs, but Congress felt they were important enough to add the funding back in plus additional funding than what was requested in certain instances. The President's FY'04 budget now has these programs funded rather than being zeroed out.

Mr. Fromuth questioned Mr. Zagone about money FEMA received for pre-flood mitigation money he believed to be around \$150 million. Mr. Zagone replied that FEMA has received an initial indication that they will be receiving \$150 million and is preparing to release the first round of planning money under the pre-disaster mitigation program of \$250,000 per state plus seven other entities. The ruling for this has just been published in the Federal Register. The remaining balance will become part of a competitive pre-disaster mitigation program, which will allow states to compete for. The rule for this is in process and is expected to be published in the Federal Register on March 28. He believes that the grants under this program can be planning grants or project grants.

Mr. Mangeri commented that the grants made available will be made available to locals and they should be able to directly apply via the e-grants. There will be a national competition that will have a major factor involving benefit cost analysis. It is his opinion that planning grants will have a difficult time against structural project activity to surpass the benefit cost analysis.

NEXT MEETING

The next meeting of the Flood Advisory Committee was scheduled for June 4, 2003 at 10:00 a.m. at the DRBC offices in West Trenton, N.J.

FLOOD ADVISORY COMMITTEE MARCH 5, 2003

ATTENDANCE

NAME	AGENCY
BAUMGARDNER, Tom	National Weather Service - MARFC
BURD, David K.	Merrill Creek
FROMUTH, Rick	DRBC
GABRIELSEN, Peter	National Weather Service - ERH

GILMAN, Clark	New Jersey Department of Environmental Protection
HAINLY, Robert	U.S. Geological Survey - Pennsylvania
HEINICKE, Karl	DRBC
KANE, John	New York City Department of Environmental Protection
MANGERI, Anthony	New Jersey State Police - Office of Emergency Management
MIKETTA, Joseph	National Weather Service - Mt. Holly
NAJJAR, Ken	DRBC
NICKELSBURG, Walt	National Weather Service
QUINODOZ, Hernan	DRBC
REUBER, Mike	National Park Service
SANCHEZ, Jessica	DRBC
SCHOPP, Robert	U.S. Geological Survey
STEIGERWALD, Scott	Pennsylvania Department of Environmental Protection
TAMM, Alan	Pennsylvania Emergency Management Agency
ZAGONE, Joseph	Federal Emergency Management Agency - Region III

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