Floodplain and Drainage Advisory Committee

September 20, 2011 Meeting Notes

Mr. Piorko began the presentation by welcoming all. Each Committee member as well as DNREC employees and its contractor introduced themselves. Fourteen Committee members were present. It was noted that some members still had not been appointed by their host agency.

Mr. Piorko gave a brief overview of Senate Bill 64. He noted that the Committee has been tasked with evaluating issues and making recommendations to the Secretary. These could range from "do nothing" to regulatory changes. These recommendation will be distributed to local governments State-wide for review and comment regarding hardships or impediments to implementation. The final report will be delivered to the General Assembly before March 15, 2013.

Mr. Baird asked if the recommendations would be legislative or regulatory. Mr. Piorko said they would not be legislative but may be regulatory.

Mr. Cahall and Mr. Powell each gave summaries of recurring issues regarding drainage and floodplains respectively.

Mr. Riemann inquired about the accuracy of FEMA flood maps. He asked if there is anything that says DNREC or FEMA or anybody is supposed to update the maps to which Mike Powell responded "Yes". Mr. Riemann then asked who the lead agency is to get that started. Mike Powell said there have been regulations in all three counties in Delaware since the 1970s. There is a threshold above which a developer is required to do a flood study if one does not exist and the local jurisdiction is responsible to make those changes or amendments or whatever is necessary. It falls back to the developer.

Mr. D'Anna stated that a government agency should be providing accurate flood mapping.

Mr. Collins asked who was responsible for accurate flood mapping (FEMA, DNREC). He further said that regulations already exist that require flood studies for large subdivisions where the mapping is poor. It was pointed out that threshold is 50 lots or 5 acres. Mr. Chau stated that the state of Maryland recently changed their regulations to 5 lots or 5 acres.

Mr. Collins said he could not understand how people are still getting into trouble in the modern age and was told that current regulations assume accurate data exists. Also, FEMA has higher insurance rates for properties within Zone A. Mr. Collins acknowledged the many practitioners on the Committee as expertise is needed.

Mr. D'Anna asked if anyone flags elevations after storm events. Mr. Powell said that DNREC has done some high watermark surveys following storms but there is not enough staff to do comprehensive assessments. USGS came to DNREC about 48 hours prior to Irene with 70 devices to flag along the coast. Mr. Cahall stated that after big storms DNREC tries to document as much as they can and a couple of surveys were done after Irene.

Mr. Morrill said that there are no regulations regarding elevations of properties in Zone A and there is a disconnect with available data. He asked if 17% of State lands are in a floodplain, how much of those lands have no BFEs (base flood elevations). Mr. Powell responded that the 17% figure includes tidal marshes but that there are several hundred miles of mapped rivers and streams with no BFEs.

Mr. Riemann asked if more detailed mapping was to be done, would properties be taken out of mapped floodplains or would more properties be put into the floodplain. Mr. Powell referred to some floodplain mapping slides that show a floodplain area before and after detailed remapping and indicated that typically some properties are added to a floodplain and some are taken out of the floodplain as the result of remapping.

Mr. Collins noted that most issues are "pre-FIRM" which new regulations would not be able to address. He also said that banks require flood insurance before granting loans for properties in mapped floodplains. Mr. Powell said he has received calls from homeowners after settlement stating that their lending institution is now requiring them to get flood insurance even though their loan was previously approved without insurance.

Mr. Benton stated that there are a lot of data sources including DelDOT, DNREC, FEMA, conservation districts, and developers and asked who was the "keeper" of studies. He said some FEMA maps are 30 years old and better communication between agencies was needed. Mr. Piorko responded that that same issue had been discussed by the Governor's Task Force in 2005, some communication was occurring, and that DNREC had previously undertaken a database inventory of H&H studies. Mr. Cahall recognized that each agency often has their own standards which could complicate data sharing. Mr. Jones noted that not only are standards often different but a variety of computer programs are available as well.

Mr. Riemann said that parameters to define who can build in floodplains and who cannot are needed. Mr. Garcia said that some drainage issues do not have a floodplain component associated with them to which Mr. Cahall reiterated an earlier statement that there are really two issues; drainage and flooding.

Mr. Mott recognized that even well constructed tax ditches are designed for drainage purposes and not for the 100-year storm event. Mr. Piorko pointed out that tax ditches are typically overtopped in a 2-year to 10-year storm event.

Mr. D'Anna said that drainage is essentially a land planning issue. He worked as a planner for New Castle County many years ago and provisions for drainage in the Code

were in existence then. He said government agencies should be reviewing lines and grades plans.

Mr. Collins believed that clarity was needed regarding what was being talked about. He said that development in floodplains is already forbidden by New Castle and Kent Counties and believes data being presented shows that government is not doing its job.

Mr. Athey presented expenditures resulting from shortfalls in current standards and he and Ms. Tonn discussed definitions and terminology that Committee members will likely be using.

Mr. Jones noted that in addition to a definition of 100-year storm event, discussion was needed regarding rainfall distribution, as a heavy but brief 10-year storm event, for example, could result in as high or higher a rate of runoff than a lighter, lengthier 100-year storm event. Mr. Athey acknowledged this but said that level of detail would be better addressed at a future meeting. Mr. Cahall said that a 100-year storm event does not always result in a 100-year flood. Mr. Athey acknowledged that there are many variables.

Mr. Cahall and Mr. Powell presented DNREC's roles in drainage and floodplain management and Mr. Athey gave an overview of others' roles including Federal agencies, DelDOT, counties, municipalities, and conservation districts.

Mr. Cahall and Mr. Powell concluded by summarizing DNREC's Top Ten issues. Mr. Piorko said that education should be added to the Top Ten list.

Mr. D'Anna said that the game plan presented is totally regulatory driven and more information beyond standards was needed such as where work has been done. He said studies and maps needed to be rationalized. Mr. Piorko asked not to confuse standards with regulations. Mr. Collins wanted to know who the standards would be for and how this Committee's work fit into the pending update to the State Sediment and Stormwater Regulations and was told by Mr. Piorko that specifics such as lot grades were not being addressed by those Regulations. He said that George Haggerty of New Castle County presented the County's requirements to the General Assembly with an acknowledgment that those requirements add "x" to the cost of a new house.

Mr. Mott asked if the Committee would be discussing roadblocks from agencies such as EPA and USACE and was told that Senate Bill 64 includes emergency provisions.

The path forward and future meetings were discussed and the meeting adjourned at approximately 11:30.

Floodplain and Drainage Advisory Committee

October 27, 2011 Meeting Notes

Committee Chair Frank Piorko began the presentation by welcoming all. Each Committee member as well as DNREC employees and its contractor introduced themselves. Committee members present were: Representative Quinton Johnson, Kyle Sonnenberg, Barry Benton, Paul Morrill, Sarah Keifer, Henry Chau, Ron Hunsicker, Fred Mott, Bruce Jones, David Baird, Gene Reed, David Carlson, Michael Harris, Jim Ford, Rich Collins, Vince D'Anna. Mike Powell, Greg Williams, Brooks Cahall, Bob Enright, Tony Pratt, and Marcia Cagle represented DNREC and David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guest was George Haggerty.

Mr. Piorko summarized the September 20, 2011 meeting and specifically described again the Senate Bill 64 process. Mr. Collins said he thought the Secretary's Minimum Standards would be sent to the General Assembly before any other entities but Mr. Piorko replied that the Bill stated these would first be sent to local governments. Mr. Morrill believed that the presented flow chart show indicate the Secretary will "propose" minimum standards and not "issue" them. Mr. Piorko agreed.

Ms. Tonn presented general terms and concepts. She differentiated between floodplain management (coastal and areas adjacent to streams), stormwater management (the management of water quality and quantity), and drainage (conveyance). Definitions were presented to Committee members for inclusion in their binders and two exhibits were mounted on easels for future reference.

Mr. Powell presented for the remainder of the meeting and started with *Development in Areas without Sufficient Mapping and Flood Data*. He noted that Mr. Chau had two additional handouts which were distributed: 1) Federal Emergency Management Agency NFIP Insurance Report for Delaware and 2) Sample Flood Insurance Costs.

Mr. Chau asked Mr. Powell to describe instances where the 5 acres/ 50 lots rule was not met. Mr. Powell said it is usually one of two reasons: 1) a failure to enforce regulations or 2) a developer submitted data that was accepted locally but not subsequently sent to FEMA. Mr. Collins asked about the requirements to obtain a building permit and questioned how permits can be issued which violate FEMA floodplain lines. Mr. Powell replied that in some instances local officials fail to enforce regulations. Mr. D'Anna did not understand how plans get recorded in these instances. Mr. Chau clarified that the NFIP rules are applied at the building permit stage, not plan recordation.

Mr. Powell explained that older FEMA maps such as those based on 1960s USGS information and not very accurate. He said he believes one of the Committee recommendations should be disallowing site plans with information that differs from FEMA maps. He also noted that lots in floodplains are allowed by some jurisdictions in Delaware.

Mr. Morrill inquired about whether FEMA map revisions should be approved before revised boundaries are shown on site maps and about the time frame for FEMA reviews of detailed studies submitted by developers and was told it usually takes about three months. Mr. Chau clarified that the clock starts once all data has been received by FEMA.

Mr. Powell explained how per unit mapping costs borne collectively by individuals in the same watershed is usually much greater than mapping costs borne by developers or DNREC.

Mr. Powell stated that BFEs in privately-funded flood studies are often unclear and better data when obtained as part of the development process should be sent to FEMA. He also thought unofficial floodplain lines should be kept off of subdivision plans.

Mr. Sonnenberg asked why projects under the 5 / 50 rule were exempted from the regulations. Mr. Powell explained that mapping costs were much greater when the rule was first developed but said that today, mostly through automation, those costs have dropped significantly and perhaps the 5 / 50 threshold should be lowered.

Mr. Mott asked what happens when a home owner obtains a mortgage and later is told he or she is in a mapped floodplain. Mr. Powell described the process of "forced placed flood insurance" and noted it is usually more expensive than if insurance had been obtained at the onset. Mr. Piorko asked if banks are notified when revised maps are issued. Mr. Powell said they are supposed to be but this doesn't always occur or if it does, not in a timely manner. Mr. Powell also noted that more often than not this occurs when a bank re-checks their zone designation and finds an error. People just weren't aware of their correct flood zone.

Mr. Collins asked if DNREC wants FEMA lines adhered to and Mr. Powell responded in the affirmative but furthered that the using unofficial lines on site plans is confusing. Mr. Collins asked if Mr. Powell was assuming that studies would be done to get the official maps changed. Mr. Powell said yes but also clarified that the requirement to perform a flood study would only apply in areas without BFEs shown on the FEMA map.

Mr. Cahall asked questions about the process when there is a detailed FEMA study for a site but the developer has better topographic data. Mr. Powell explained that older maps often have inaccurate topography and developers are encouraged to submit better topography to FEMA.

Mr. Collins asked what the goal is and noted that there is a window of opportunity given the current lack of new subdivisions. He said DNREC should request funds from FEMA to perform mapping where needed and asked what local officials are doing if they are not doing their jobs. Mr. Powell explained that assessments of existing codes is part of the Senate Bill 64 process. Mr. Piorko thought local governments would react in one of three ways: 1) agree changes are a good idea and implement them, 2) agree changes are a good

idea but state they do not have the resources to implement them, or 3) disagree changes are a good idea. He also noted regulatory changes moving forward are one thing but there are thousands of undeveloped but recorded lots in Delaware which is another.

Mr. D'Anna asked how people get mortgages for parcels in floodplains. Mr. Powell answered that he doesn't know why it takes so long for banks to verify floodplain status. Mr. D'Anna noted that there are lots of maps that are already platted and not developed and that there will be issues with those lots. He thought that the State should start mapping aggressively. Mr. Powell explained that banks were using paper maps in 1995 and now are using GIS technology to identify flood zones at properties.

Mr. Morrill noted that the FEMA time line for review adds months to an already lengthy plan review time period and asked how reviews are handled. Mr. Powell explained that the process is not quick and is typically multi-month. FEMA hires contractors and reviews are done on a regional basis. Reviews for Delaware are contracted by FEMA to a team in Maryland

Mr. Baird asked if site plans should show the current maps or those proposed for revisions. Mr. Powell answered the current maps. Mr. Baird questioned the use of current maps even though flawed and Mr. Powell reiterated that current maps are the ones everyone should use because those are the only official maps.

Mayor Ford inquired about FEMA schedules and was told by Mr. Powell that 90 day reviews are typical. Mayor Ford followed with asking whether developers are required to submit to FEMA. Mr. Powell said that that is a best practice being recommended but explained that few municipalities require submittals to FEMA.

Mr. Collins asked who was in charge of mapping. Mr. Powell answered that some responsibilities need to fall on private entities since neither FEMA nor states can always have accurate up-to-date maps readily available when development is proposed. Mr. Collins replied that that shifts costs to people who have no control over the process. Mr. Powell said that DNREC is performing mapping on an on-going basis. He described some of the statewide studies that are being done with FEMA funding and reiterated that it is not possible given changes in watersheds for DNREC to always have an accurate map. Mr. Piorko said the Department prioritizes mapping and currently has $700,000 to do additional studies.

Mr. Powell continued with *Inadequate Building Standards*. Mr. Chau noted that for freeboard, insurance policies dictate rounding up so 18 inches of freeboard becomes two feet. Mr. Powell said New Castle County uses 18 inches and believes that is a good balance between not being too onerous but still providing insurance reductions.

Mr. Sonnenberg asked why construction should be allowed in floodplains at all, particularly considering the probability of global warming. Mr. Powell explained the difference between coastal and riverine flooding and said that due to the breadth of coastal floodplains, disallowing construction would not be practical. Mr. Pratt further

explained that when the NFIP was first established, it was based on home rule and that communities would be responsible for zoning.

Mr. Piorko said that there are tens of thousands of recorded lots in mapped floodplains and that there is a need to minimize risk for those lots and for unrecorded lots as well.

Mr. Collins used Long Neck Road in Sussex County as an example and said stringent regulations would have resulted in much less construction than exists today. He stressed that these were affordable places near the beach / water for average people. Mr. Piorko stated that adequate building standards can minimize risk without negating construction. Mr. Collins said that the government cannot dictate everything and citizens should be allowed to make decisions themselves. Mr. Piorko rhetorically asked what an acceptable level of risk is for the State and local governments. Mr. Collins opined that people know risks and, for example, they consider mobile homes disposable. Mr. Piorko said that DNREC gets hundreds of phone calls after storms and are asked why they allow people to be put at risk. Mr. Benton said that DelDOT paid nearly $20 million a few years ago buying out homes of people who chose to built at risk.

Mr. Chau noted the discussion is really about front-end versus back-end costs. He noted that on the back-end, government at multiple levels is asked to come in and help after floods. Mr. Collins believed the only costs being discussed were those borne by governments but the benefits of economic activity were not being included. He said that there is no requirement for the government to help. Mr. Piorko noted that this group is not intending to shut down development in Sussex County. Mr. Morrill did not believe the discussions were prescribing that development could or could not occur but were focused more on acceptance of responsibility. He suggested a focus on getting information and disclosures out to property owners. Mr. Powell observed that in 1995 FEMA increased the flood elevations on their maps around Long Neck Road by two feet. Communities argued that they would have difficult surviving. He saw that building continued but floors were elevated two feet higher than before the map change.

Mr. Powell continued with *Inconsistent and/or Minimum Code Provisions*. Mr. Morrill said that he believes there was a law three to four years ago regarding the height of homes in mobile home parks. Mr. Chau reiterated that Maryland had reduced the 5 / 50 rule to a 5 / 5 rule.

Mr. Baird asked about additional analyses being done after a property is removed from the floodplain due to fill. Mr. Powell answered that FEMA does not typically analyze the impact of the fill associated with map revisions due to fill.

Mr. Piorko said that existing code language may result in unintended consequences and inquired about the level of effort to collate and review local codes. Mr. Powell said it would be a difficult task as many regulations were adopted years ago and with multiple amendments were not always clear. Mr. Piorko said two approaches could be used: 1) provide model ordinances or 2) provide resources to review local codes.

Mr. D'Anna said there are some things that should be passed statewide. Most reasonable people would agree that standards for freeboard and filling in the flood fringe should be in any code.

Mr. Pratt noted adjustments to code have the benefit of CRS credits. Mr. Powell replied in the affirmative.

Mr. Chau said if higher standards were adopted, other regulations should also be made clearer. Mr. Powell agreed and said poor or contradictory regulations should be clarified in addition to higher standards being developed.

Referring back to Mr. Piorko's two approaches, Mayor Ford said he liked the second and likened it to the recent State efforts regarding recycling. He supports DNREC coming to communities to review their standards. He also thought it would be appropriate to have one or two standards to apply Statewide, but otherwise would like flexibility.

Mr. Pratt said there was already a vehicle in place at DNREC to assure communities' compliance with the NFIP. Mr. Powell and Mr. Williams visit communities for that purpose.

Mr. Morrill said that compliance with CRS was expensive for smaller towns. He thought it would be appropriate to develop a model that could be adopted and then a jurisdiction could get CRS credits.

Mr. Pratt asked if the League of Local Governments could assist in the process. Mayor Ford thought that was possible.

Referring to the NFIP Insurance Report distributed by Mr. Chau, Mr. Collins noted that other than coastal towns, in Sussex County the number of claims versus premiums meant FEMA was greatly profiting. Mr. Williams noted that claims and premiums are much more balanced Statewide once Kent and New Castle Counties were included. Mr. Collins said he did not think it appropriate for the Committee to spend two years addressing a problem that does not exist. He requested more basic information before being asked to make any decisions.

Mr. Harris noted that the amount of money being spent to address flooding problems is actually greater than previously discussed and should include other sources such as the 21st Century Fund. Mr. Piorko agreed that millions of dollars are spent addressing flooding issues and that there is spending at the local, state, and Federal levels.

Mr. Chau said the figures in the exhibit he distributed earlier in the column "Total Paid" are not in today's dollars whereas the premiums are. Mr. Collins reiterated that the FEMA profit is staggering if the coastal towns were not included. Mr. Chau replied that not everyone wins in insurance and that some states perhaps subsidize other states. Mr. Sonnenberg asked if the national program was in sound financial condition and Mr. Chau

replied that it was before Katrina. Mr. Powell said one reason was FEMA's ability to borrow money.

Mr. Pratt said FEMA makes a profit in coastal areas to offset damages paid in inland riverine areas. He also said the Corps of Engineers has spent about $80 million on beach nourishment projects in coastal Delaware and the storm damage reductions justified the expenditures.

Mr. Haggerty said $70 million was spent to buy out the homes in Glenville. Regarding building in flood plains, he said prohibitions would be detrimental economically but some mitigation measures were appropriate. He also said the way to minimize government expenditures would be to get everyone to sign a release saying they were responsible which will not happen. He said people always come back to the government for help. He concluded by stating the first reason everyone was present at the meeting should be public safety.

Mr. Piorko closed the meeting by saying the next meeting would conclude the floodplain issues and begin discussions about stormwater management and drainage. The meeting adjourned approximately 11:40.

Floodplain and Drainage Advisory Committee

November 30, 2011 Meeting Notes

Committee Chair Frank Piorko began the presentation by welcoming all. Each Committee member as well as DNREC employees and its contractor introduced themselves. Committee members present were: Kyle Sonnenberg, Barry Benton, Sarah Keifer, Henry Chau, Michelle Harel, Richard Sobota, Ron Hunsicker, Fred Mott, David Carlson, Michael Harris, Rich Collins, Vince D'Anna, Mike Riemann, John Garcia, and Lorilee Harrison (for Gene Read). Mike Powell, Greg Williams, Brooks Cahall, Bob Enright, Matt Grabowski, Jim Sullivan, and Marcia Cagle represented DNREC and David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included George Haggerty, Jared Adkins, Kevin Donnelly, and Jessica Watson.

Mr. Piorko summarized the October 27, 2011, meeting and specifically described again the Senate Bill 64 process. Mr. Cahall reviewed floodplain and drainage terms and concepts and noted that representatives from all three conservation districts were present at the meeting due to their work on drainage issues.

Mr. Cahall presented a case study for the first of four top drainage issues in Delaware; disruption of existing drainage patterns, wherein a drainage ditch constructed on a property by an adjacent property owner was filled in by a subsequent property owner. Mr. Collins asked if the property owner got permission to build the ditch on the adjacent property. Mr. Cahall indicated that permission was given, but no permanent easement was obtained. Mr. Piorko noted that there are regulations that prohibit blocking a jurisdictional waterway, but not a non-jurisdictional ditch. Mr. Mott said that the property owner should have gotten an easement in this case. Mr. Collins asked if the concern over the ditch was that the horses on the property might break a leg in the ditch, and Mr. Cahall indicated that that was the case.

Mr. Piorko explained that DNREC often spends money on drainage improvements without a permanent easement. Many feel that if public dollars are spent, DNREC should get a permanent easement. However, sometimes it is hard to get landowners to volunteer to let DNREC make improvements. It is even harder to get them to sign off on an easement.

Mr. Collins noted that in the case study, if there was a regulation prohibiting the filling of the drainage ditch, the landowner could have been negatively impacted. The property may have not sold to the new owner who wanted to have horses on the property. Mr. Cahall noted that DNREC presented other options to the property owner besides filling in the ditch, but the property owner only wanted to fill in the ditch. Mr. Grabowski stated that there was a debate over who would pay for the project.

Mr. Riemann said he thought there were code provisions in place in New Castle and Kent counties regarding situations such as this. Mr. Piorko responded that codes vary between

municipalities and drainage is handled in various parts. There are still many places where a neighbor can fill in a ditch or place a shed where it blocks drainage. There are often no restrictions and the only remedy is in the court system.

Mr. Haggerty stated that local remedies are designed around growth; not to fix legacy problems. He thinks that residents want a government answer and don't want to deal with the courts. Houses could be designed differently and until water is treated as a component of infrastructure (like roads), these issues will remain.

Mr. Piorko asked how New Castle County would respond if someone puts a shed in a swale. Mr. Haggerty said that the response would be that that is a civil matter to be discussed in court. The County may send a code enforcement officer to investigate and the response would partially depend on whether there is an easement. In the past many developers constructed swales but didn't include easements.

Mr. Piorko asked if any municipalities have legal authority without easements. Mayor Hunsicker replied that they have some general language in their charter but don't like to use it because it could be challenged.

Mr. Collins said that this is a natural conflict and that he felt the group is leaning towards favoring the regulatory side but there is a balance. Mr. Piorko said that lots of people don't like the "court" answer, but maybe that's what the answer should be. Mayor Hunsicker said that government shouldn't be the arbiter and that the rightful place is in the courts. Mr. Haggerty noted that people can't be stopped from calling their elected officials about these matters.

Mr. Collins said that the courts can look case by case at situations and make decisions based on facts. Regulations can't be case by case and can have a serious impact on the economy over time. He felt there is a bias toward one type of solution.

Mr. Sonnenberg asked if state law allows property owners to change drainage patterns such as moving a drainage exit point from the front to the back of a property. He recalled in North Carolina, a property owner could alter drainage on his or her property but couldn't change the exit point onto another property. Mr. Piorko replied that there is nothing in State law that restricts changing the drainage exit point. Mr. Cahall added that because most of Delaware is so flat, sometimes there aren't really defined natural drainage patterns.

Mr. Carlson asked what the codes say about new facilities and if they are made to consider drainage. Mr. Haggerty said that in New Castle County, a lines and grades submittal is required for anything over 480 square feet. The code was recently updated to deal with infill issues. Mr. Carlson said that there should be mechanisms to ensure new structures are built with adequate conveyance. Mr. Piorko said that it depends on the level and size. There is language in the tax ditch law that gives legal authority from restricting drainage in a tax ditch. Sometimes obstructions are built in a tax ditch right of way.

Mr. Cahall presented a case study for the second of four top drainage issues in Delaware; inadequate lot grading. Mr. Collins asked how the problem could be resolved with grading. Mr. Cahall replied that the house could have been raised with two courses of block. This would have allowed the owner to elevate the HVAC system.

Mr. Collins said that he understands that there is a human concern but that the house was built in a ridiculous place. After two major incidents, the property owner should have been told to jack the house up. Mr. Piorko replied that that's a great point. Should whoever issued the building permit have a responsibility to make a recommendation about height? Mr. Collins replied that maybe they should hand out information. He believes if an ordinance is made, there is a possibility for higher expenditures being required of home owners. Mr. Piorko said that there are various levels of requirements and that middle ground needs to be found.

Mr. Garcia said that there is no easy answer. A guide regarding finished floor elevations may have helped in this case, or it may not have, but additional expenses could put some house buyers out of the market. He doesn't know if in New Castle County they could have shown adequate conveyance in this case. Mr. Piorko replied that the Committee should be looking at what is reasonable to impose.

Mr. Riemann noted that the storm in question was greater than a 100-year event and asked at what point do you stop? Elevating the house to a 100-year flood elevation might not have been enough. Mr. Cahall said that the conversation is less about storm events as it is getting water away from the house.

Mr. Riemann said that there could be a lot of cost required to do a study. Mr. Enright noted that in this case they should have looked at the difference in elevation between the house and the road. Mr. Cahall said that this is really a homeowner issue and that DNREC spends a lot of time on these types of problems.

Mr. Athey asked if DNREC could clarify when they would get involved in such an issue and when they wouldn't. Mr. Cahall replied that DNREC goes to look at all complaints. They will make recommendations for landowners to fix on their own if possible. Complaints in general become a project when the fix would benefit more than one property.

Mr. Mott said that it would be much easier if the knowledge in this room was brought in before construction. For the Fox Hall project, the conservation district looked at the site first and made warnings which were ignored, and then the homes flooded.

Mr. Cahall presented a case study for the third of four top drainage issues in Delaware; adverse lot grading, where newer properties were elevated with fill around an existing property at a lower grade resulting in drainage problems on the lower property.

Mr. Collins noted that the case study involved an older development. Mr. Cahall affirmed that an older development was described but that new fill has been placed within the last two to three years on properties which have changed hands. The properties were elevated with fill by the community. Mr. Piorko said that often this filling is done to meet FEMA requirements, but that the requirements could also be met without fill. The discussion is one property owner building to the detriment of another.

Mr. Collins asked about legislation passed two to three years ago about mobile home communities. Mr. Piorko responded that it didn't address conveyance. Mr. Collins said that in one instance he created a standing water problem near his own driveway and if the government regulates these types of small problems it will open the door to addressing more problems.

Mr. D'Anna said that lines and grades approval as is required in New Castle County is needed in Kent and Sussex Counties or there is no hope in fixing this type of problem. He believes there is something fundamentally wrong if severe flooding is happening in neighborhoods. Ms. Watson said that there is no consistency with requiring first floor elevations on plans and problems exist without them. Mr. D'Anna said that good drainage planning is needed.

Ms. Watson said that the Sussex Conservation District is often asked to fix problems on lots in developments where roads and infrastructure have already been placed. She noted it would be much less expensive if these issues were addressed initially. Mr. Piorko indicated that there are community-level versus lot-level issues and asked how can it be assured that something will work. Options include lines and grades submittals and spot grades submittals. Mr. D'Anna recommended that New Castle County be looked at since the drainage works there.

Mr. Haggerty said New Castle County's approach seeks to prevent problems if possible before they occur. The County is now requiring grading plan as-builts which he feels has been fairly well received. Mr. Garcia concurred. Mr. Harris questioned the process for a single lot versus a subdivision. Mr. Garcia noted lines and grades plans typically do not include off site areas.

Mr. Collins said that everyone is still reacting to the housing boom. He thinks future buyers will be more discriminating when they get back in the market and a lot of issues with new housing will diminish. People will be looking for more quality.

Mr. Piorko said that in the 1990s there were many of communities designed with 15-20 houses. Then land development changed with large residential homebuilders doing 150-200 lot developments. He said it is often easier to manage larger than smaller subdivisions and he thinks a way to manage grades for 15-20 lot subdivisions with 4-5 different builders is needed. Mr. Cahall said that as developments take longer to build, conveyance still needs to be considered.

Mr. Riemann said that in New Castle County, sediment and stormwater, lines and grades, and bulk grading are all included in plan submittals. In Kent, finish floor elevations are included, but no lines and grades. In Sussex, finish floor elevations and lines and grades are not required. Often engineers don't know the details about the types of houses being proposed when they are preparing plans and can't always put the finish floors on the plans. Also, easement requirements vary by municipality.

Mr. Cahall presented a case study for the fourth of four top drainage issues in Delaware; the need for adequate conveyance with easements.

Mr. Riemann said that Dover requires 8 foot easements. Ms. Keifer added that in Kent County it is typical to include 10 foot easements. Mr. Cahall noted that easements are sometimes put on record plans but it is unclear who the responsible parties are. Mr. Piorko said that the state sediment and stormwater regulations can't require an easement as part of the permitting process. DNREC does not have the legal authority as this would be considered a taking.

Mr. Grabowski asked who has responsibility for activities in the easements. Mr. Piorko responded that this will need to be identified and the line between public and private responsibilities is not well defined. Regarding DelDOT, the responsibility for activities in easements seems to depend on the county and is not set in stone.

Mr. D'Anna asked about problems with road front lots. Mr. Cahall responded that the example shown was a road front lot. Mr. D'Anna said that New Castle County stopped allowing these type of lots and Ms. Keifer added that Kent County also stopped allowing them. Mr. Piorko said that many road front lots have been approved but not built. Ms. Keifer said that there is no political will to rescind the lots.

Mr. Collins said that clustering is now popular with homes typically built close together. He asked what happens with pipes built in between. Mr. Haggerty said that they wouldn't put pipes between those houses now. The drainage would be done elsewhere. He said the best scenario is when a project is designed, built, and then sold by the same entity. The next best is when a project is designed and built by the same entity but sold be someone else. The worst scenario is when a project is designed, built, and sold by different entities.

Mr. Piorko said that there are some tools available for managing drainage that fall in the middle ground. Mr. D'Anna asked what would be the mechanism for enforcing minimum standards. Mr. Piorko replied that it would be part of the building permit process.

Mr. Athey presented examples of drainage and grading standards from the City of Deltona, Florida as well as excerpts from various codes from Delaware counties and municipalities.

Mr. D'Anna asked how a model ordinance would be implemented. Mr. Piorko said that a town could require a sketch plan or spot grades. Mr. Athey said that's part of the process the Committee is working on. Mr. Piorko explained that all municipalities will review the recommended standards and bring comments back to the group. The final draft report will go to the general assembly.

Mr. Collins said that there are vastly different conditions throughout the state with many communities. He believes one rule for everybody is absurd and will drive up costs. Mr. Piorko said that providing a generic ordinance regarding no adverse impact would not be onerous. A generic recommendation can be made that doesn't impact those that don't have water issues. Mr. D'Anna said that he doesn't understand why this wouldn't work in Sussex. Mr. Piorko said that sometimes the problems are caused by those with building permits.

Mr. Powell and Mr. Cahall jointly presented a discussion about lack of real estate disclosures.

With regards to the real estate disclosure form, Mr. D'Anna said that if DNREC would get together some information on what they think should be on the form, he could set up a meeting with the attorney at the Delaware Association of Realtors. They regularly modify the form and could potentially modify it based on DNREC's request.

Mr. Chau asked if the disclosure form was a statewide form and if it was required by State law. Mr. D'Anna responded that the form is generated by the realtors association. It is a legal requirement to fill out a disclosure, but the form is not generated by the state.

Mr. Powell asked if the form applies to both developed and undeveloped lands. Mr. D'Anna said it did. Ms. Tonn asked if realtors regularly check for buyers to see if properties are within the floodplain as this would be easy to do. Mr. D'Anna replied that good realtors often do. Mr. Williams noted that realtors are not responsible for the forms. Ms. Harel said that "unknown" can remove a person's responsibility.

Mr. Powell and Mr. Cahall jointly presented a discussion about lack enforcement of existing standards.

Regarding floodplain regulations, Mr. Chau said that Maryland did a model MOU, which is a form for a community to use for another level of government to enforce their floodplain regulations. Mr. Collins said that he has a theory that more and more regulations will be developed. Looking at the data from the last meeting, he believes all FEMA claims in Delaware were paid for by premiums and therefore the program is working. Mr. Piorko said that there was plenty of room for improvement in the floodplain management program.

Ms. Harel said that not all communities are properly enforcing their ordinances. Elevation certificates are a way to make sure regulations are followed. Mr. Collins asked if there are only two communities in the state that don't have flood insurance. Mr. Powell responded that there are two communities with mapped floodplains in Delaware that do not participate in the NFIP and a couple others that don't have mapped floodplains and don't participate. Mr. Collins said that FEMA disqualifying communities that don't follow the rules should make the system work.

Mr. Chau noted that the Committee is a great idea because it is such a diverse group to discuss these issues. Other options to elevation certificates are available. Talking about the issues and looking at the procedures can improve the practice.

Mr. Powell noted that surveyors are needed during construction and said that he could check with the surveyors association to see whether or not it really costs more to do an elevation certificate also during the building process. Ms. Harel said there may be a cost up front but spending money then will save money down the road with insurance.

Mr. Collins said he wonders how many actual problems are out there. Mr. Piorko responded that almost 10% of homeowners in the state call to ask for assistance.

Mr. D'Anna asked if flood insurance premiums are the same from state to state. Mr. Sobota responded that rating is by zone, and is not specific to the state. Mr. D'Anna asked if states get rewarded for managing floodplains well. Mr. Sobota responded that they can get a rate discount for managing floodplains well. Mr. D'Anna said that better mapping could improve the program and asked if floodplain insurance is available to those not located on a stream, for instance in Seaford. Mr. Sobota replied that yes, it is available. There is a perception that the program is taking in more money than it is paying out, but that the program is developed on a 100-year cycle. One single catastrophic event could change the payout amount. FEMA can not pull out of the most problematic areas.

Mr. Collins asked if flood insurance would pay for the house previously discussed that was built in a hole. This lead to a discussion about the FEMA definition of a flood. Mr. Collins suggested that there are self-correcting features in the flood insurance program. Mr. Sobota stated that elevation certificates are not a FEMA requirement, but are required for FEMA flood insurance if a property is located in the SFHA.

Mr. Piorko closed the meeting by saying the next meeting would occur on January 27, with subsequent meetings on February 21 and March 28.

Floodplain and Drainage Advisory Committee

January 27, 2012 Meeting Notes

Committee Chair Frank Piorko began the presentation by welcoming all. He made mention of several new people present. Committee members now include Lew Kilmer as a replacement for Dave Baird representing the Sussex County Association of Towns. Christian Hudson is sitting in for Rich Collins who couldn't make this meeting. All present introduced themselves. Committee members present were: Kyle Sonnenberg, Sarah Keifer, Michelle Harel, Richard Sobota, Fred Mott, David Carlson, Michael Harris, Vince D'Anna, Bruce Jones, Mike Riemann, and John Garcia. Mike Powell, Greg Williams, Brooks Cahall, Bob Enright, Jim Sullivan, and Meghan Gloyd represented DNREC and David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included George Haggerty, Jared Adkins, Kurt Brown, Mr. Baker, and Mr. Johnson.

Mr. Piorko stated that comments were received on draft standards and have been posted to the website. He gave a quick recap of previous meetings and said that comments will be taken from today's meeting and worked into recommendations. New ideas will be considered as well.

Mr. Kilmer said that he tried to get a handle on how extensive flooding is, especially in Sussex County. He got information on the number of flood insurance policies held. Bethany has 2,000, Lewes 1,000, and Delmar four policies. He is concerned that towns that don't have flooding issues will be negatively impacted. One size fits all may be too broad.

Mr. Powell said that flood insurance questions have come up as a way to get a handle on the extent of the issue. Mr. Powell and Mr. Williams have also gotten information from FEMA. This information is to be handed out and posted on the website.

Mr. Sobota said that the biggest driver of insurance is the mandatory purchase requirement. Properties without mortgages are not required to obtain coverage even if in high risk areas. The flood insurance program only captures information about claims paid, and flood damage is not on FEMA's radar if they don't have insurance.

Mr. Powell said that DNREC is attempting to see if the existing standards are adequate. They sorted all the claims data since 1978 into Pre-FIRM and Post-FIRM. The handout showed the Post-FIRM data summarized by year and by communities. The last page included summaries of pre-FIRM versus post-FIRM claims data.

Mr. Hudson stated that on the data that was passed around, it is indicative of significant work in the regulatory environment and advancement in code. A lot of the problems are handling themselves. Mr. Sobota replied that there is a short duration of claims data. The program is based on a 100-year cycle of events. Short-term figures can be misleading. Mr. Hudson said that even so, it shows significant improvement based on the regulations in place.

Mr. Athey introduced the presentation. Duffield Associates came up with themes to develop the draft standards to engage everyone in dialog. He noted that input as to whether the presented direction is correct is welcome. For some standards alternates are included. Consensus is not

being sought this morning and the list can be whittled down as appropriate. The first draft standard for Floodplain Mapping and Data Scenarios was introduced by Mr. Athey and pertained to Non-delineated Floodplains.

Mr. Riemann asked for clarification of what a non-delineated floodplain is. Mr. Powell explained that a non-delineated floodplain is a stream where FEMA never attempted to map the floodplain. For example, Hyde Run in New Castle County is a non-delineated floodplain. Mr. Riemann asked if there is local data available for non-delineated floodplains. Mr. Powell replied that that is the dilemma. Mr. Riemann said that he thinks DNREC or FEMA should map these floodplains.

Mr. Hudson said that the onus is being put on the landowner. For consistency, information should not be pieced together and one map would be better. Mr. Athey replied that FEMA funds are being cut and it is unrealistic to think that all non-delineated floodplains will get mapped by FEMA. Mr. Powell added that he would be shocked if DNREC ever got the point of all floodplains being mapped with FEMA funds. Mr. Piorko said that DNREC currently has $700,000 from FEMA for mapping. DNREC is trying to leverage $500,000 of State money. There is no guarantee of sustainable funding in the future. Funding needs to be prioritized but there still will be unmapped floodplains. A threshold needs to be discussed.

Mr. Riemann said that he's concerned about how the threshold would be determined. Would there be some trigger? What if there's no floodplain information available but a property is adjacent to a stream. This could lump in lots of properties.

Mr. D'Anna said he is concerned looking at the numbers on insurance claims. If the government would invest the premium money that Delaware doesn't get back in flood insurance claims into mapping, he thought that could take care of the problem.

Mr. Garcia said his firm performs these studies in non-delineated floodplains in New Castle County. If a home is in a non-delineated floodplain are they required to get insurance? He's also concerned about consistency statewide. Who would do the reviews? There is a difference between New Castle County and Sussex County.

Mr. Jones asked if there will be a standard for flood studies statewide or county by county? Mr. Garcia asked if there was a statewide standard, would it make sense to have one state agency do the reviews? Mr. Jones noted that there may not be qualified individuals in each agency to review flood studies. Mr. Piorko added "or a qualified consultant".

Mr. Hudson said that he's concerned with consistency. New Castle County has different types of flooding than Sussex County and the Committee needs to be sensitive to the differences. There isn't flash flooding in Sussex County like there is in New Castle County.

Mr. Athey asked if the standard is going in the right direction. Is it reasonable to mandate at a certain threshold?

Mr. Morrill stated that there is an issue with having property owners do the mapping. Is there a size impact here? There may be a better way than having individual property owners pay for the mapping which results in the job being done piecemeal. Mr. Piorko replied that it is likely better to do on a watershed basis. He doesn't know what the threshold is. New Castle County tied

their studies to blue line streams. DNREC may need to look at other jurisdictions to see what they're doing.

Mr. Riemann asked if a flood study would be needed for a six acre lot adjacent to a blue line stream. Mr. Piorko replied that there is some interest in discussing the size of watershed or correlation between the number of units. The discussion should be whether these are good ideas and the Committee does not need to figure out the numbers right now.

Mr. D'Anna stated that it has been 38 years since the beginning of the flood insurance program and this is the responsibility of the government. The government should define the floodplains. Mr. Athey replied that this is a philosophical versus practical conversation and that reliance solely on a government entity will result in voids. DNREC and the Federal government will not map the entire state's floodplains. Mr. D'Anna replied that they at least need to have a sense of priorities. Hyde Run has lots of flooding.

Mr. Powell said that DNREC is buying two houses in New Castle County that were damaged beyond repair in non-delineated floodplains. Flooding problems can be severe in non-delineated floodplains.

Mr. Hudson noted that looking at Recommendation Number 10, DNREC shall make it a priority to seek funding for updating maps. It is DNREC's duty to make a request for mapping funds. Mr. Piorko said that DNREC agrees. The question is that there are other considerations that can happen at the same time. Are there other alternatives? Mr. Hudson agreed. He understands these things will take time. He asked if a request has been made and what is the process to make a request to FEMA.

Ms. Harel said that FEMA would map everything if they could but they don't have land use authority. Based on the data they have they need to make smarter decisions moving forward. Until unmapped areas are mapped, they need to be protected.

Mr. Morrill asked if when flood studies are done they have to be signed off on by FEMA. Mr. Powell replied that if a request is made to FEMA, then it needs to go through the LOMR process. He understands that a FEMA request is not always made for non-delineated floodplains.

Mr. Haggerty said that in New Castle County requests will be sent to FEMA. The problem is when a structure is put close to a floodplain. Is establishment of a BFE important? Often, somebody is trying to take the existing use of a property and change it. If someone wants to build a house, he believes the BFE should be established.

Mr. Piorko noted that the discussions are moving on to the next topic and that folks may want to submit written comments.

Mr. Kilmer asked Ms. Harel if someone can get flood insurance without being in the floodplain. Ms. Harel replied that flood insurance is available to anyone in a participating community.

Mr. Athey introduced standards for the second category under Floodplain Mapping and Data Scenarios regarding activities in areas with Delineated Floodplains but no Base Flood Elevations (BFEs) also known as Zone A. Mr. Powell added that the differences between this and the last scenario is that here there is already an NFIP requirement that BFEs be established under certain

thresholds. Mr. Athey noted that the current regulations are not very prescriptive and the proposed standard is intended to raise the bar on how BFEs are determined.

Mr. D'Anna said that with limited funds, improving Zone A maps should be a priority. There must be some history that indicates that a floodplain should be delineated.

Mr. Hudson asked how many watersheds are there in Sussex County? Mr. Cahall replied that every point is in a watershed. Isolated areas sometimes don't have an outlet and that's a drainage issue.

Ms. Harel asked what the recommendation was about the 5 acres / 50 lots standard. Mr. Powell said that there is a recommendation that the level be changed. Ms. Harel said that FEMA's focus is to have a study done for large scale development to see what the impacts of that development are on the floodplain and adjacent property. Safety is the issue since development affects neighboring communities. Mr. Morrill said that the discussion is not about unmapped floodplains but those without BFEs.

Mr. Powell said that tidal floodplains have all been mapped in Delaware. The basic function of a floodplain map is to identity high risk areas versus low risk areas. This allows the floor level to be high enough, which is not possible without BFEs.

Mr. Riemann said that in Kent County, there is language in the code on how to deal with this. There are two options: a flood study or the point on the boundary method. It is up to the builder on whether or not to spend the money on a flood study. In his opinion, this has worked well.

Mr. Powell said that the point on the boundary method has created problems. If a point on the boundary is determined in a Zone A (taken from old 1960s era USGS topo maps), this is from a blob on a USGS map that was not ever intended for a 100 year storm. Mr. Riemann added that the Zone A maps aren't very good. New Castle County made a decision that a flood study makes sense for them. This is shifting costs from one entity to another.

Mr. Piorko said that the Committee should be looking at two things consistently: 1) the risk to occupants and 2) alterations to floodplains. Is there a size or threshold to require a study? If consensus is that this is too expensive, impacts to a watershed still need to be thought about.

Mr. Hudson said that safety is a primary concern. Insurance is lucrative with premiums in the 10's of millions. The payouts are minimal. It is in the best interest of government to promulgate this and to expand coverage areas. There should also be talk about reducing coverage. Mr. Athey replied that in discussions at a previous meeting, it was noted that it would only take one Katrina in Delaware to remove the surplus. Mr. Sobota added that non-federal sources of insurance are available. If it were truly profitable, non-federal sources would step in. Delaware has been very fortunate so far. Mr. Morrill said that insurance rates are not based on payouts versus premiums.

Mr. D'Anna asked if there is a program to map areas following storm events. Mr. Powell replied that high water marks are sometimes mapped. Mr. Piorko added that this was done on the Inland Bays most recently. All that does is assign a value to risk folks already have. Ms. Harel said that post-disaster teams go out and map high water marks. Mr. D'Anna said that in Newark on July 5, 15 years ago there was a flood. Is that reflected on the flood maps?

Ms. Harel said that FEMA requires minimum standards and encourages communities to go above and beyond. Communities have a role to play.

Mr. D'Anna asked if anyone records or marks water marks during or after a storm event. Is there a program? Mr. Athey said that the problem is in determining what level of storm an event is. Mr. Jones said that the floodplain is just a statistical calculation and it would make sense to use high water mark data if there was certainty about a storm event. Maybe could use the data in non-delineated floodplains or Zone A. Mr. Riemann added that the lines aren't very good in Zone A's and that high water mark data might be better.

Mr. Powell said that if the options are a point on a boundary or using storm event data, he'd rather see the use of storm event data rather than the point on boundary method. There was a comment that there are a lot of premiums paid and lesser amount of claims. In Zone A, getting BFEs on maps before building can save lots of money in premiums to homeowners. Mr. Hudson asked who should be doing maps? Mr. Piorko asked if the 5 acre / 50 lot standard is good? How should it be done?

Mr. Jones asked what would be the method for establishing BFEs? Can risk thresholds be identified and have lower standards in different areas and require H&H studies for higher risk areas?

Mr. Haggerty said that people are building houses and in five years they flood. How do these people get protected? New Castle County is trying to make sure what they build has some reasonableness and understanding that hydrology is going to change. In Glenville, they'd been there for 50 years and then a rain event wiped them out.

Mr. Riemann said that rules and regulations already exist but not everyone likes the rules. Buffers from blue line streams exist. Should regulations be at the DNREC level or at a County or municipal level? Using broad brush standards can create a huge cost. Mr. Athey noted that there are recurring and underlying cost versus risk themes with the morning's dialogue.

Mr. Sobota said that means of reducing uncertainty is desirable. Rates become lower with more certainty. Rates are high in Zone A because there is less certainty of risk. Conversely rates are lower in Zone AE because there is a higher certainty of risk. From an insurance affordability perspective, better / more information equals lower rates. This is all about life and human safety.

Mr. Piorko stated that the discussion was moving into standards for Development and Building Scenarios topics now. Mr. Athey briefly introduced the third topic of standards under Floodplain Mapping and Data Scenarios pertaining to Delineated Floodplains but noted these were essentially covered in the ensuing standards for Development and Building Scenarios.

Mr. Piorko said that in the comments received so far, no one was in favor of the adjacency issue. Adjacent can be a nebulous term and will not be further considered.

Mr. Kilmer said that in Bethany Beach, there is no freeboard requirement but new construction usually has freeboard with a minimum of a 30 inch crawl space. He's reluctant to make a rule, and with grandfathered properties, non-conforming properties could be created.

Mr. Hudson said that this should be left up to towns and municipalities. Land configurations are different in New Castle County versus Sussex County. Mr. Athey asked what happens if municipalities have no or low freeboard. Whose pockets do damages / buy-outs come from?

Mr. Hudson said that if adequate mapping exists, the threshold should be up to municipalities. This is about the rights of towns and counties versus states. It is in DNREC's best interest to avoid litigation and avoid this issue. Mr. Piorko said that the process is to make recommendations to the Secretary. There will be a process for public comment. Municipalities will then review the draft standards in light of their ordinances. Mr. D'Anna said that we got here because a lot of communities don't have good standards.

Ms. Harel said that Pennsylvania has a 1.5 foot freeboard requirement. This is one of the best standards to protect communities and reduce insurance rates. She strongly recommends it. Mr. Piorko asked why isn't freeboard the FEMA standard. Ms. Harel replied that freeboard is rounded up and generally increases savings in insurance premiums. Mr. Sobota said that the FEMA standard is the 100-year event, mandated by Congress. A standard should be higher than the 100-year event. He recommends freeboard. Mr. Piorko asked if freeboard should be included in the recommendations.

Mr. Hudson said that in SB-64, the committee ultimately submits recommendations to the Secretary. In line 54, all counties and municipalities shall adopt. Mr. Piorko replied that Mr. Hudson was looking at an old version of the legislation. The wording changed subsequently.

Mr. Morrill asked why freeboard should be arbitrarily set. The cost associated may vary from community to community. Mr. Powell replied that examples of why freeboard is needed were shown at prior meetings. Fill is allowed in floodplains that can push flood elevations up one foot. With no freeboard, there could be one foot of water in a house due to encroachment in the flood fringe. Many streams were mapped 10-20 years ago before NOAA increased the 100-year rainfall estimates. Building at the BFE will allow quite a bit of damage to occur if water reaches the first floor of a house.

Mr. Athey said that there is a dollar value savings in premiums if a structure is built with freeboard. Ms. Harel added that this was discussed at previous meetings. Mr. Williams quoted the handout from the October 26th meeting showing that for two foot freeboard at an average structure, the annual premium is reduced from $726/year to $358/year resulting in a savings of $368/year. Mr. Athey said that over a 30 year mortgage, the freeboard could pay for itself.

Mr. Piorko stated that there is a range of views on whether or not a freeboard standard makes sense statewide. Mr. Jones asked shouldn't enough information be given to the group to make a decision on the amount of freeboard. Mr. Carlson said that he did a presentation at the Sea Level Rise Committee meeting. He supports 1.5 foot freeboard. On the Inland Bays, many homes are below BFE. When doing home elevation projects, the extra freeboard requirement could negatively impact the benefit / cost analysis and disallow some grants.

Mr. Sobota said that NFIP reform is a hot topic at FEMA. Soon the NFIP and FEMA will be less and less involved in providing resources. Responsibilities are going more to states and local communities. There is suggestion to get away from the NFIP and insurance rates from private insurers could be three times higher.

Additional standards related to Development and Building Scenarios were presented by Mr. Athey. Mr. Piorko requested that everyone think as if the maps were adequate so the Committee could now focus on fill in the floodplain, etc. He solicited thoughts on fill/encroachment in the floodplain. Mr. Sonnenberg said that he doesn't understand allowing building in the floodplain that hurts other property owners. It should be a fundamental consideration that something that causes damage to others should not be allowed.

Mr. Hudson asked if there is information on how much fill equates to the 0.1 foot threshold. Mr. Piorko replied that 0.1 foot is just one measure. Sometimes no measureable impact is used. When developing multiple properties and each property has no measureable impact, there may still be a cumulative impact. Mr. Morrill agrees with limiting the fill restrictions to non-tidal areas.

Mr. Kilmer said that most coastal communities are pretty well built out. There is a lot of construction in existing floodplains and building in floodplains with either new lots or taking down existing structures shouldn't be prohibited. A lot of rules are in place, but to prohibit is too strong. Mr. Athey replied that there have not been motions to outright prohibit development in floodplains.

Mr. Morrill asked if studies could be done on a watershed basis with a possible tie-in with stormwater work. There could be different standards depending on where a project is in a watershed. Mr. Piorko said that everyone needs to recognize and be cautious that less risk is not assigned to homes on already recorded lots. Already recorded lots are those that are not built and those that are not recorded yet.

Mr. D'Anna said that for grandfathered / already recorded lots, some consumer notification could be done. Home buyers could be educated and the real estate association can help with that.

Mr. Piorko said that for large properties, analysis on downstream impacts is done. Is DNREC in a position to discuss incremental changes to a watershed when 200 already-recorded lots in a watershed are allowed to be built without understanding the impacts? It's assumed that cumulative fill is causing an impact.

Mr. Hudson said that this speaks to prioritization of the FEMA map updates. Streams to be affected by development on paper lots should be studied and map updates can better manage downstream consequences. Mr. D'Anna said that in watersheds with problems, like 500 paper lots, detention requirements should help.

Mr. Piorko said that terms to allow risk were being discussed and if allowances for building above the BFE have not been made, people are being put at risk. Mr. D'Anna said that as a realtor, if he sells a house and there is information out there about flooding, he needs to inform the buyer.

Ms. Harel said that she was responding to Mr. Hudson. Even if the risks are known, going above and beyond may be good. Mr. Hudson replied that the BFE has to be known to set houses appropriately. Paper lots are a completely separate issue and building on these lots cannot be disapproved. Mr. Piorko said that standards can be applied to those paper lots.

Mr. Haggerty said that there are problems getting mapping funded. Assuming BFEs are known, what should be done with the information?

Ms. Gloyd asked if the BFEs assume a level of build out. If a level of build out was assumed, the maps wouldn't need to be changed. Mr. Powell said that the BFEs in Delaware are based on a snapshot in time at best a few years old.

Mr. Kilmer said that his town uses the Sussex Conservation District for reviews. A lot of agencies are capable of assisting developers to make sure plans are viable. Mr. Morrill said that this is another argument for watershed studies to include recorded lots. Mr. Powell said that ideally there would be two separate sets of maps. For development, developed conditions would be included. For insurance purposes, present conditions are needed because rates have to be based on current risk.

Mr. Morrill asked why fill is being required in standard #4. Mr. Powell replied that that is not the intent and Mr. Athey said the wording would be revised to clarify. In some cases, land is elevated, removed from the FEMA floodplain, and no construction standards are applied. Mr. Pratt said that Standard #4 as written would infer that more than 18 inches of fill would relax standards. How would a beach fill project apply? Mr. Powell said that FEMA doesn't allow fill in a V Zone to change the maps. It's different in A Zone. Mr. Pratt asked if erosion should be considered part of the equation. Mr. Powell replied that under the current FEMA regulations if a little bit of fill is brought in to raise the grade to the BFE then all standards get thrown out, i.e. basements could be built on a lot that was initially in the floodplain. The spirit of the draft standard is to require that these areas meet the freeboard requirements or at least not relax the current floodplain standards in areas filled to a few tenths of a foot above the BFE.

Mr. Kilmer said that developers sometimes are clearing full lots and taking trees away in order to place fill. He doesn't want them to clear a lot to meet requirements.

Mr. Hudson said that this is a property rights discussion. If land is in the floodplain, what abilities should be allowed to retain? The Committee should be very mindful of "takings". What do requirements mean in the real world? What is encroachment? Mr. Athey said that a principle issue being looked at is that problems should not be created on an adjacent lot.

Mr. Piorko said there is a tidal versus non-tidal issue. Folks should comment on whether the standards apply the right level of protection. Maybe some information should be given regarding what's happened elsewhere in other states and in-state, including what applies to Delaware, and what's working. Mr. Athey added that there is an ASFPM guide with some suggested standards.

Mr. Powell said that New Jersey uses a 0.2 foot height for encroachment which results in streams with wider floodways with narrower floodplains. This widens the area that can't be filled or encroached in. Mr. Jones said that it would be good to have perspective on what others are doing.

Mr. Hudson said that standards depend on when filling was done and if there has been past encroachment. Mr. Powell replied that the standards that are being proposed don't impact previous construction. Mr. Athey added that there are FEMA standards on substantial renovation.

Mr. Piorko asked are there thoughts on whether recorded versus unrecorded lots should be treated differently? Throughout the State, there are varying degrees of standards. Some standards say that a lot of record can be built in the floodplain but that no new lots may be subdivided in the floodplains.

Mr. D'Anna asked doesn't FEMA have standards that prohibit building in a floodplain? Ms. Harel replied that FEMA just restricts building in the floodway.

Mr. Morrill said that in some building codes, if a lot is recorded, structures could be built even if the floodplain changes in the interim. Mr. Powell said that structures based on a previous flood elevation can't be approved and built. FEMA requires building to current standards even if a subdivision was approved previously.

Mr. Hudson said that building codes change all the time. It is up to municipalities to accept a certain building code. Sussex County still uses the 2007 International Building Code.

Mr. Morrill said that the conclusion is that construction in the floodplain on a previously recorded plan can't be prohibited but the current floodplain standards could be imposed. Mr. Haggerty said that for a plan previously recorded in 2000 and built in 2012, New Castle County could rely upon the old flood elevation but Mr. Powell replied that that's against the FEMA standards. Mr. Haggerty clarified that the County would use newer or current information.

Mr. Haggerty said that the flood elevation is established by the recordation of the plan. The chances of that occurring are relatively small. In Port Penn, there are plots of record in the floodplain. They go through a public process and building standards are applied. They don't stop them from building, but make them build to a different standard.

Mr. Kilmer said that he attends Sussex County Council meetings and the ag community is very vocal on property rights. The Committee needs to be careful of that.

Mr. Riemann said that if a subdivision is recorded and FEMA remaps with new elevation, the county won't take away the right to build, but the standards will change. Ms. Harel replied that FEMA sees this a lot. Often communities know ahead of time that the elevations will be changing and can encourage developers to use new data.

Mr. D'Anna suggested that a recommendation be made that new standards apply to recorded lots. Ms. Harel said that FEMA says to use "best available data". This may not be the effective floodplain map.

Mr. Haggerty said that in New Castle County, a change in flood elevations / lines will probably be caught through a lines and grades review. He asked what kind of review is done against a changed map in Kent and Sussex Counties. Mr. Powell replied that Kent and Sussex Counties would require an Elevation Certificate to be filed at the time of the Building Permit Application. The permitting staff would catch the change.

Mr. Hudson said that for mobile homes in Rehoboth Bay, there are elevated homes right next to homes right on grade. New homes are built about chest high above grade (above water level). There is a regular inspection that occurs.

Mr. Piorko opened the meeting up for public comment.

Mr. Brown spoke about his home on an island at the edge of the floodplain on the Nanticoke River, on Concord Pond. He has an issue with the operations of the pond dams by DelDOT and DNREC. Mr. Piorko replied that this is an unresolved dam safety issue and isn't pertinent to this Committee's topic.

Mr. Brown asked if FEMA cover flood losses if DNREC caused the flooding. Mr. Sobota replied that yes, FEMA would pay the claim.

Mr. Johnson asked if this committee votes on anything and what the timeframe is for the process. Mr. Piorko replied that it may take three more meetings to formulate consensus. An April meeting may be needed. Mr. Johnson asked when the process will be done. Mr. Piorko replied that a report needs to be delivered to the General Assembly in March 2013.

Mr. Piorko asked if the Committee should try to structure meetings based on the need for a 3rd meeting. Mr. Morrill replied that he thinks a 3rd meeting will be needed.

Mr. Piorko said that in February more comments from folks will be heard. The draft standards will be reshaped and reframed into what might look more like recommendations to the Secretary. Between now and the end of February comments will be shared via email. Meeting notes and presentations will be sent out.

Mr. Powell said that he and Greg Williams would meet with anyone who needs perspective or technical assistance in understanding the issues.

The meeting was adjourned at 11:55.

Floodplain and Drainage Advisory Committee

February 21, 2012 Meeting Notes

Committee Chair Frank Piorko was unable to attend. Brooks Cahall and Mike Powell chaired the meeting in his absence. Mr. Cahall welcomed all and everyone introduced themselves. Committee members present were: Lew Killmer, Rich Collins, Paul Morrill, Ron Hunsicker, Barry Benton, Sarah Keifer, Richard Sobota, Fred Mott, Vince D'Anna, Bruce Jones, Mike Riemann, John Garcia, and Lori Harrison (for Gene Reed). In addition to Mr. Cahall and Mr. Powell, Greg Williams, Bob Enright, Jim Sullivan, Marcia Cagle, and Meghan Gloyd represented DNREC. David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included Mike Clar from New Castle County and Jared Adkins from the Kent Conservation District.

Mr. Powell continued with the presentation that was not completed at the January 27, 2012 meeting with lack of enforcement of Development and Building Standards. Mr. Collins asked how towns stay in compliance with FEMA requirements without providing FEMA mandated documentation, specifically elevation certificates. Mr. Powell explained that in some instances, engineers or surveyors simply furnish memos describing elevations and neither FEMA nor the State reviews every application. All agreed that a future buyer in those instances may need to get an elevation certificate. Mr. Sobota clarified that while elevation certificates may be required by FEMA's insurance division, they are considered optional by FEMA's regulatory division.

Mr. Collins asked why the Committee has not heard from any flood plain managers and said he believes they cannot go forward without their input.

Mr. Riemann asked if the memos need to be signed and sealed and Mr. Powell said they did. Mayor Hunsicker noted that FEMA's technical bulletins include some recommendations and problems could be created if a Standard calling for their adoption is agreed upon.

Mr. Powell continued with a discussion about flood studies. Mr. Morrill asked how long FEMA reviews typically take and Mr. Powell replied 90 days. Mayor Hunsicker asked why a Standard was needed if FEMA already requires flood studies in certain instances. Mr. Powell said the requirement is not always enforced and the presented Standard also has clarifying language. He said the standard would not apply if a development avoids the floodplain.

Mr. D'Anna asked if the Standard pertains only to residential development and was told it did not. He said as a representative of real estate agents, better disclosure was needed about homes that may be at risk. Mr. Williams noted that a lot of communities enforce the Standard but do not send the information to FEMA.

Mr. Collins asked what goes on now. Mr. Garcia said there are two scenarios. First is an existing home in a floodplain and in this case a survey is needed to determine its floor elevation with respect to the flood elevation. An elevation certificate is completed to respond to a request from the bank, at an added cost to the buyer. Second is a home in an unmapped floodplain and in this case a flood study is needed with the information sent to FEMA by way of a LOMR

(Letter of Map Revision). This adds costs for the developer. Mr. Collins asked about requirements around the State and costs and was told both vary.

Mr. Powell asked Mr. Jones to explain the situation at Forest Glen. A flood study was done for this development when it was being designed, but FEMA did not accept the study. Later it was found that numerous homes are within the FEMA-delineated floodplain and their owners are now paying several thousand dollars a year in flood insurance.

There was further discussion about costs. Mr. Powell said DNREC had mapped (and FEMA accepted) over 100 homes adjacent to Tidbury Creek for between $30,000 and $40,000 for 5 ½ miles of stream.

Mr. Riemann said that Kent County does not allow subdivisions in the floodplain. For developments there, they identify the BFE, perform a survey, delineate the BFE on the survey, and then avoid doing anything below that elevation.

Mr. Collins noted that he recently spoke to a businessman who was going out of business due to excessive regulations. He wanted to expand but it was too expensive. He said he is tired of too many levels of government getting too much authority, said citizens have zero control over FEMA, and better enforcement is needed of existing laws and requirements before more are created.

Mr. Cahall began presentation of Drainage and Grading Standards with a discussion of easements. Mr. Jones asked who would be responsible for easements and was told by Mr. Cahall it could be anyone. Mr. Benton stated that DelDOT will typically accept responsibility for easements downstream from their drainage system but otherwise will not. Mr. Killmer said DelDOT will not allow people to access their drainage systems. He also said that there is no place for water to go downstream of Bethany Beach. Mr. Collins stated a new regulation for easements could shut down development. Mr. Garcia thought responsible parties needed to be identified better, particularly for maintenance responsibilities.

Mr. D'Anna said that the recording authority should be responsible for easements as enforcement as a civil matter would not work. Mr. Riemann noted that DelDOT typically requests easements as part of the development process but subsequently often does not want the responsibility of them. Mr. Adkins clarified that DelDOT will usually accept responsibility for drainage downstream of their conveyance systems but in upstream areas or in backyards no one wants to accept. Ms. Gloyd asked how "adequate width" and "obstruction" would be defined and Mr. Cahall replied it would be up to local governments. Ms. Keifer said language such as this should be in development codes and not building codes.

Mr. Collins thought this was a complex topic but Mr. D'Anna disagreed and cited New Castle County's approach which has been effect for years. Mr. Clar clarified that developments continuing existing drainage patterns may not need downstream easements but those creating new discharge points would. Easements give New Castle County right of access to inspect. Mr. Cahall asked if easements are needed in New Castle County over conveyances within a development to a BMP and Mr. Clar said they are required over conveyances and BMPs. Mr. Athey asked if the County takes responsibility over those easements and Mr. Clar stated it is

usually the HOA. Mr. Garcia noted the County often does by default as HOAs are usually ill-equipped to take responsibility.

Mr. Collins sought clarification about the Standards and whether or not they are intended solely for within subdivisions or downstream too. Mr. Cahall said it would cover within subdivisions only and not downstream. Mr. Jones said downstream drainage can be a huge issue. Mr. Benton said DelDOT does not allow increases in flow rates to its right-of-way.

Mr. Adkins said in Kent and probably Sussex County, developers need to demonstrate that capacity exists downstream and if not, they need to either secure an easement or provide for retention on site. Mr. Clar clarified that property owners are entitled to discharge predevelopment flow rates off-site. Mr. Jones described the Buckingham Green situation where the developer met the New Castle County development requirements about 20 years ago, but subsequently was sued by downstream property owners.

Mr. Cahall presented the next Drainage and Grading Standards regarding obstructions in drainage conveyances. Mr. Jones asked who would be responsible for enforcing the Standard and Mr. Cahall replied local governments and also clarified the Standard would apply to any conveyance and not just those in easements.

Mr. Collins asked if the Standard would apply to all developments. Mr. Cahall said that could be discussed but perhaps it could apply to major subdivisions but not minor subdivisions. Current enforcement was discussed by several Committee members and Mr. Cahall said degree of enforcement varies around the State. Mr. Adkins said some municipalities in Kent County use vague words such as “adequate drainage” and not specifics like “10-year event” and that he does not look at backyard drainage as part of his reviews. Mr. Riemann believes DelDOT looks at all drainage within a development.

Mr. Cahall continued his presentation of Drainage and Grading Standards with a discussion of lines and grades and as-built plans and offered that the use of the word “minimum” may not be appropriate.

Mr. Garcia said a building could be lower than a roadway but good drainage could still exist. Mr. Riemann said that building higher than roadway elevations could be very expensive. If accepted, the proposed Standard would probably not result in much change in New Castle County but would in Kent and Sussex Counties and in many situations a lot of information is already required.

Mr. Cahall explained the rationale behind the Standards by citing two common problems. First is development on existing recorded lots when adjacent lots have already been developed. Second is a large development with multiple builders working at different times. It is much less a problem on major subdivisions with a single builder.

Mr. Morrill noted that inspections are not the same as having an as-built plan prepared. Mr. Garcia said that New Castle County requires as-built plans but grades are not included. Mr. Jones noted that if adequate grades are not provided, owners typically call DNREC with problems and believes preparation of lines and grades plans would be a small effort and result in a good “bang for the buck”. Mr. Riemann said some of his clients have these plans prepared

even if not required. Mr. Sobota subsequently asked if that was to avoid potential legal action and Mr. Riemann said he did not know.

Mr. Adkins believes lack of lines and grades plans can lead to problems and that some standards may be good but is worried about his ability to provide staff time and effort needed to review. Mr. Clar said the cost to prepare these plans is minimal compared to the cost of moving dirt. Mr. D'Anna asked if grandfathered lots are a problem and Mr. Cahall replied that they are.

Mr. Collins said these Standards would result in people of limited means needing to put more money up front and requiring plans for developments over 5,000 square feet would be another layer of bureaucracy. He noted that the unpredictability of timing in following the regulations can be an issue. Mr. Riemann asked if the Kent Conservation District has authority over grading and Mr. Adkins said it does not.

Mr. Sobota stated that sometimes going above and beyond minimum standards reduces legal costs in the future. In an ideal world, standards would be gauged on the 100-year event.

Mr. Powell led the discussion regarding Floodplain and Development and Building Recommendations. Mr. Collins stated for the record he is opposed to a separate plan review or building permit process for development or construction in floodplains as he believes that could lead to denying permits.

Mr. Jones asked if disallowing the "point on the boundary method" would preclude the approach Mr. Riemann described earlier. Mr. Riemann said he thought Kent County's process was even more conservative than the "point on the boundary" method. Mr. Powell said the Recommendation states a certain level of project should have a better process than others and it would only apply when subdividing within a floodplain. Mr. D'Anna said there should not be a threshold and that the government should take responsibility. He reiterated that a recommendation should be for the Legislature to provide more funds.

Mr. Cahall presented Drainage and Grading Recommendations. There were no comments.

Mr. Athey explained that as DNREC's support contractor, he and Ms. Tonn were being tasked with developing a format for Standards and Recommendations that could be voted upon. He said that they along with DNREC had looked into matrices, flow charts, and text-based documents and is seeking Committee input for the presentation of Standards and Recommendations. Examples were provided as part of the presentation.

Mr. Collins stated that the bill doesn't say what the General Assembly will do with the report. Mr. Powell said that they want to get feedback from local governments as to what extent they currently meet or do not meet the proposal standards and get a sense as to whether local governments are capable of enforcing minimum standards. Towns will have assistance from DNREC to look at their codes. Mr. Killmer said that coastal communities have separate issues and may need separate standards.

Mr. Jones wanted to know how others such as neighboring states approached these problems. Mr. Powell noted that Kent County revised their code 10 years ago to prevent subdivision in the floodplain. It was asked what New Jersey does in coastal areas, and Mr. Powell replied that New Jersey has State standards enforced at the local level. Mr. Williams added that New Jersey has

its own floodplain maps. Mr. Jones said that it is difficult to make a decision without knowing what the cost impacts are of the proposed standards.

Mr. Clar said providing background information and the benefits of different scenarios would assist with the discussions. Mr. Adkins said that it would be helpful to describe which communities have which freeboard standards.

The meeting was adjourned at 12:00.

Floodplain and Drainage Advisory Committee

March 28, 2012 Meeting Notes

Committee Chair Frank Piorko presided and everyone introduced themselves. Committee members present were: Lew Killmer, Rich Collins, Paul Morrill, Ron Hunsicker, Barry Benton, Sarah Keifer, Fred Mott, Vince D'Anna, Tim Anderson (for Bruce Jones), Mike Riemann, John Garcia, Michele Hagel, Mike Harris, Dave Carlson, and Jeff Bergstrom (new representative from DLLG). Michael Powell, Greg Williams, Brooks Cahall, Bob Enright, Tony Pratt, and Marcia Cagle represented DNREC. David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included Debbie Absher and Jessica Watson for the Sussex Conservation District, Jared Adkins from the Kent Conservation District, and Mike Fortner from the City of Newark.

Mr. Piorko began the meeting by reviewing the Committee charges and process. He reminded members that the Committee is not creating legislation or binding regulations. Mr. Morrill asked if a community did not adopt standards but was still in compliance with NFIP, would that create a pejorative. Mr. Piorko said he did not think so and Mr. Powell noted that pejorative can be subjective. Mr. Piorko again stated that the Committee's recommended standards would be included in a report sent to local governments who would then send information back. The Committee would review submitted comments and incorporate them into the final report for the General Assembly. No one knows what the General Assembly will do then.

Mr. Collins noted that Senate Bill 64 did not include guidance for General Assembly actions. He believes the Committee is lacking information and no member can know the potential long-term consequences of their actions. Mr. D'Anna said they were still in the early stages of the process and thought the Committee should find closer agreement where they could. He did not want a 12-11 vote.

Summaries of discussions regarding each proposed floodplain standard follow.

Proposed Standard 1: Flood study required in unmapped floodplains.

Mr. D'Anna expressed lack of comfort with the 50 lots / 5 acres component of the standard since topography in Delaware varies and thought the word "adjacency" was problematic. Several Committee members were confused over what would constitute a "Minor Subdivision". Mr. Garcia asked if the studies would be submitted to FEMA and Mr. Powell answered that the standard was not worded that way. Mr. Garcia noted that the subject homes would not be required to purchase insurance and Mr. Powell concurred.

Mr. Collins said the 5 acres part of the standard was not acceptable due to the potential expense of a flood study. Mr. Morrill asked about current regulations and Mr. Powell replied that FEMA does not regulate unmapped floodplains. Mr. Carlson noted there are many unknowns and studies could be costly. He suggested an independent economic impact study. Mr. Anderson asked how many unmapped floodplains had watersheds over 640 acres and was told by Mr. Piorko there were lots.

Mr. Collins said it was easier to assign homes outside of floodplains a “preferred risk” category than to implement new rules. Ms. Harel replied it is better to reduce risk than to insure risk and that communities should be given the opportunity to make their own assessment.

Proposed Standard 2: Use accepted base flood elevations in development documents.

Mr. Powell clarified that if base flood elevation information exists, the standard states to use it but if the information exists but has not been approved by FEMA, do not use it. Mr. Garcia clarified by saying if a property being developed is not in a Zone A or AE, the Record Plan should reflect this information. Mr. Powell agreed and said the intent of the standard is to stop the practice of using unapproved information. Mr. Piorko said it could be reworded.

Mr. Collins asked where unapproved information comes from and Mr. Powell replied from numerous sources and that information not reviewed by FEMA should be reviewed by a county or municipality. Mr. D’Anna asked if there would be one standard for the entire State. Mr. Powell said that different engineers use different methods and Mr. Piorko agreed and stated they did not want to be too prescriptive. Ms. Tonn noted there is usually different data available for different situations.

Mr. Piorko said the language would be clarified. Ms. Harel said FEMA assumes that valid methods are used when a professional engineer or registered architect prepares reports. Mr. Collins said $1,000 sheds often need building permits and questioned the applicability of the standard in those instances.

Proposed Standard 3: Flood Study required in Zone A (no BFE) FEMA mapped floodplains.

Mr. D’Anna asked if the 50 / 5 rule was arbitrary and was told by Mr. Powell that it was from FEMA. Ms. Harel noted that if FEMA does not accept a study then banks or insurance companies would not accept either and this would affect insurance rates.

Mr. Collins asked about costs and Mr. D’Anna said it varied by size of watershed. Mr. Anderson said a study for a 20 acre parcel in a 7,000 acre watershed on a branch of the Christina River cost $10,000 to $15,000. Mr. Powell said mapping of 200 properties in a six mile stretch of Tidbury Creek cost about $35,000. Mr. Bergstrom thought these costs divided by the number of properties was inconsequential when compared to flood insurance costs.

Mayor Hunsicker said he was previously told the standard was intended to define BFE but not dictate where it applied. Ms. Harel agreed the language is a little unclear. Ms. Tonn said FEMA has guidelines and in some cases the point on the boundary method, for example, was acceptable. Ms. Harel said using historical watermarks is not accurate.

Proposed Standard 4: Only FEMA approved floodplain and BFE data may be shown on site plans.

Mr. Killmer asked if the Corps of Engineers reviewed flood studies in tidal areas and was told by Mr. Powell that this work is done by FEMA. Mayor Hunsicker asked why the standards would apply to tidal areas and Mr. Powell replied that all tidal floodplains in Delaware have been mapped.

Mr. Morrill did not understand how the standard would not apply to minor subdivisions but five lot subdivisions would be included. Discussions ensued about how different jurisdictions defined "minor subdivision" different ways but Mr. Powell said the standard would not apply to a five acre parcel being subdivided into two or three lots.

Mr. Collins asked how this standard differs from Standard #3. Mr. Powell clarified that this standard states that where the information exists, it must be used. Mr. Carlson suggested combining standards #3 and #4 but this would potentially necessitate a waiting time for FEMA reviews. Mr. Powell said standard #3 requires preparation of a study but not its submittal to FEMA whereas standard #4 includes FEMA approval beforehand.

Mr. Killmer suggested changing "may" to "shall" and Mayor Hunsicker suggested adding the phrase "as determined by local governments" after "minor subdivisions".

Proposed Standard 16: Zone A flood studies must go through FEMA Map Revision process prior to development.

This standard was moved due to its subject matter.

Mr. Collins said this would put control of local land use in the hand of the Federal government. Mr. Riemann said this process is already more or less being done and unless studies went through FEMA, home owners wouldn't know the status of their homes. Mr. Powell concurred that it would minimize after-the-fact problems. Mr. Bergstrom noted in Newark, home owners are informed of their status prior to moving in.

Mr. Morrill said he thought standard #16 would trump #2. Mr. Powell agreed there was some overlap but said #2 applied to grandfathered lots whereas #16 applied to new subdivisions only.

Mr. D'Anna reiterated his previous comments that DNREC should seek funds to aggressively perform more mapping. Mr. Piorko replied that there is epilogue language in a General Assembly bill that would grant $550,000 to DNREC for mapping and other efforts

Mr. Collins was not sure what was a better deal, continue with current conditions or pay for studies. Mr. D'Anna countered that "ignorance is bliss" and thought the best thing was to delineate all flood plains.

Proposed Standard 5 / 5a: Require 18 inches / 1 foot of freeboard.

Mr. Killmer noted this standard could result in conflicts with the Americans with Disabilities Act particularly for commercial properties. Mr. Morrill agreed and discussed potential problems with historic districts. He thought floodproofing should be offered as an alternative.

Ms. Harel said she preferred the 18 inch standard as FEMA rounds up to the nearest foot which would be 2 feet. She said this was the requirement in Pennsylvania and other states. Mr. Riemann said this was not as easy as just adding a couple blocks to foundations and could pose problems regarding height restrictions. He also said this standard was a huge issue for the Homebuilders Association which he represents. He asked why FEMA does not have a freeboard requirement to which Ms. Harel said she could not answer.

Mr. Riemann stated that many communities already use a 1 foot standard and questioned why the standard is going above and beyond.

Proposed Standard 6 (formerly mislabeled as 5): Require 18 inches of freeboard for Manufactured Homes.

Mr. D'Anna said he thought there should be a higher standard for manufactured homes in coastal areas due to global warming. Mr. Anderson thought "substantially improved" should be clarified.

Proposed Standard 7: Hydrostatic venting required.

Mr. Powell explained the rationale for this standard as reinforcing NFIP. Mr. Piorko asked what was missing and Mr. Powell responded that NFIP is not properly enforced.

Mayor Hunsicker asked if the word "adjacent" is in NFIP and Mr. Powell said "No" and that it was new. Mr. Morrill and Mr. Killmer both thought adjacency was problematic and asked how property owners would know if they were adjacent.

Proposed Standard 8: Prohibit encroachments which would increase flood heights.

Mr. Powell said this standard goes above and beyond FEMA and that compensatory storage was commonly used to offset fill. Mr. D'Anna noted the standard did not include any process and Mr. Powell responded they did not want to prescribe how an applicant shows compliance. Mr. Anderson said the standard would not apply in New Castle County since activities in floodplains are not allowed. Ms. Keifer noted fill in a floodplain in Kent County is allowed. Ms. Tonn said filling in a floodplain can be done in New Castle County if a floodplain development permit is obtained, which typically involves the Board of Adjustment.

Proposed Standard 9: Prohibit encroachment that would cause more than 0.2 foot of rise.

Mr. Powell said this standard is identical to the previous standard but it adds a measureable height. He noted current criteria allow one foot.

Mr. Collins said it is a policy of the State that sea levels will rise 1.5 feet by 2100 but he thought DelDOT will not be subject to any requirements and will not be raising any roads. He said marginal properties will need to be abandoned but said the slow pace of S.L.R. could be dealt with by small amounts of fill. He believes some may take care of the problem with or without permits. Mr. Piorko clarified that the standard would not apply in tidal areas.

Mr. Anderson said floodways were often already established. Mr. Powell agreed and said designers could get the model runs and evaluate the effect of an activity on the existing model.

Mr. Benton responded to Mr. Collins' earlier statement and said DelDOT is bound by the same regulations as everyone else. He questioned how an activity such as lining a pipe culvert which improves hydraulics would be affected and how far up or downstream would need to be evaluated.

Mr. Morrill noted New Castle County has a variance process. Mr. D'Anna asked if this standard has any relationship to the pending Sediment and Stormwater Regulations and Mr. Piorko replied "Not really".

Mr. Riemann asked what was wrong with NFIP. Mr. Powell replied that filling is happening and impacting neighboring properties. Because there is no freeboard requirement, flood elevations can go up by a foot, impacting properties elevated to the BFE. People are being impacted with Puncheon Run as an example. He said without freeboard standards, homes were built to the BFE but filling occurred on the other side of the stream which raised water surface elevations. Mr. Cahall said the flat topography downstate results in more drastic impacts. Mr. Collins thinks the market will dictate what happens as lower lands traditionally were lower priced but with the current real estate situation, higher lands are now more reasonable.

Proposed Standard 10: Shallow fill above BFE will not exempt a structure from floodplain regulations.

Mr. Morrill asked about a standard that would combine fill and freeboard.

Proposed Standard 11 (formerly 12): Prohibit subdividing of land in the floodplain.

Mr. Piorko noted similarities between this and standard #12 but said this one was more restrictive. Mr. Killmer expressed concern how this would affect Bethany Beach as he believes there are non-tidal floodplains but Mr. Powell disagreed.

Regarding the 50 lot criteria, Mr. D'Anna asked if that meant all 50 lots had to be in the floodplain for it to be applicable. Mr. Powell said it would be applicable if one or two lots out of a 50 lot subdivision were in the floodplain. Mr. D'Anna questioned that logic.

Proposed Standard 12 (formerly 11): Prohibit new non-water dependent structures in floodplains.

Mr. Collins said this standard was a major assault on property owners for an incredibly small benefit and said more reasons were needed for this government draconian action. Mr. Piorko clarified it would not apply to non-delineated floodplains. Mr. Morrill said it is "buyer beware" in floodplains. Buyers should know they are in a floodplain and builders shouldn't cause adverse impacts on other properties by filling. Information should be shown on plans along with performance standards. Mr. Piorko commented that public funds are often sought to mitigate damages. Mr. Morrill was worried about the upfront preemption aspects of the standard.

Proposed Standard 13: Incorporate FEMA technical bulletins in local floodplain regulations.

Ms. Harel said FEMA did not support this standard as each of the subject documents are "living". She said they were advisory in nature and adherence to them is good but incorporating them into codes is not. Mr. Piorko said the intent is to reference them in codes but not include them and Mr. Powell agreed language would not be cut and pasted.

Mayor Hunsicker said some of the FEMA documents make recommendations and asked how a recommendation could be required. Mr. D'Anna asked about the word "compliance". Ms. Harel said many communities are not aware of the technical bulletins and she supports making them

aware, but noted that they are not legal documents. Mr. Killmer suggested terminology such as "with most current". Mr. Harris said New Castle County could not adopt a bulletin by reference and instead needed a specific version or date.

Proposed Standard 14: Floodplain information included on permitting documentation.

Mr. Piorko said he had concerns about how this standard would be implemented specifically in instances of small ancillary structures. Otherwise he said he thought this standard should be placed in the "parking lot" for vote at the May 4 meeting.

Ms. Harel said each community does things differently. Mr. Collins said all the discussions to this point have been centered around housing and asked if this standard would apply to minor additions to industrial buildings. Ms. Harel said she believed it would.

Proposed Standard 15: Require use of elevation and flood proofing certificates.

Mr. Collins said this standard would result in expenses on the order of hundreds of dollars and create a new bureaucracy. Mr. Powell said NFIP participating communities already require elevations to be submitted, and this is just about using certain paperwork. Mr. Collins said he wanted to hear from the Sussex County floodplain administrator. Ms. Harel said communities wanting to join the CRS would have to follow standard.

Proposed Standard 17: Prohibit below-grade crawl spaces or enclosures

Mr. Powell said NFIP already prohibits below-grade crawl spaces or enclosures but the wording is circuitous. Mr. Collins agreed.

Mr. Piorko asked if Committee members could stay until 1:00 at the May 4 meeting if DNREC supplied lunch. Most said they could. Mr. Piorko said at that meeting they would go through the proposed floodplain standards briefly and ask if each was supported or not. They would then move on to the drainage standards and repeat the process done this morning. Finally all recommendations would be discussed and consensus sought.

Mr. Killmer asked if a simple majority was enough to pass a standard and Mr. Piorko replied that the record would be recorded and not just yes's and no's. Mr. D'Anna asked that the record include minority opinions.

Mr. Riemann asked that NFIP criteria be included in standards when applicable. Mr. Piorko said that statements such as "I support the NFIP instead" would be recorded. He also said a fresh set of standards would be prepared that would include a space for comments. He encouraged everyone to provide feedback. Mr. Carlson reiterated that he thought an economic impact study of standards be prepared.

The meeting was adjourned at 12:00.

Floodplain and Drainage Advisory Committee

May 4, 2012 Meeting Notes

Committee Chair Frank Piorko presided. Committee members present were: Barry Benton, Jeff Bergstrom, Dave Carlson, Rich Collins, Vince D'Anna, Mike Harris, Ron Hunsicker, Bruce Jones, Sarah Keifer, Lew Killmer, Paul Morrill, Fred Mott, Mike Riemann, Rich Sobota and Lori Harrison (for Gene Read). Michael Powell, Greg Williams, Brooks Cahall, Bob Enright, Tony Pratt, Jim Sullivan, and Meghan Gloyd represented DNREC. David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included Michelle Harel from FEMA and Jared Adkins from the Kent Conservation District. DNREC Secretary Collin O'Mara attended a portion of the meeting and thanked Committee members for their service.

Mr. Piorko began the meeting by reviewing the Committee process and next steps forward. Mr. Collins asked about the General Assembly's role and if DNREC was going to seek regulatory legislation. Mr. Piorko explained the General Assembly will be the recipient of the final report which will include input from the Committee, Secretary, and municipalities and that DNREC would not be seeking legislation. Mr. Morrill sought clarification if the outcome of the Committee's work would be statewide regulations and was told by Mr. Piorko that local governments would be able to choose which standards to adopt or not adopt. The Committee's job is to inform the Secretary but the General Assembly will have the final word.

Mr. Sobota said proposed changes could not have a negative effect on a community's compliance with FEMA requirements. Mr. Carlson asked how a community that participates in the NFIP but chose not to adopt the standards would be affected. Mr. Piorko said all of the standards are above and beyond FEMA standards and therefore no one would be at risk of noncompliance with NFIP if new standards were not adopted. Mr. Sobota asked if nonvoting members present could participate in the discussions and was told Yes.

The formal presentation began with drainage standards and summaries of discussions regarding each follow.

Proposed Standard 1: Easements.

Mr. Collins noted that cluster development is common in recent years with small lots and more open space. He noted that there are sometimes narrow areas between houses which might impact space for easements. Mr. Piorko replied that some municipalities currently have easements that are too small and that details on easements should get worked out at recordation. Mr. D'Anna asked what the norm is and stated that it is important to make sure that drainage easements remain open. He was told the intent is for easements to be considered during Lines and Grades Plan preparation but the Standard was crafted so local governments could consider how to incorporate within their codes. Mr. Cahall clarified that the issue is more about who is responsible for easements. Mr. Bergstrom noted there are two parties that should be responsible: the governing jurisdiction and home owners (for encroachments). Mr. Killmer again stated an easement needs provisions for downstream conveyance.

Mr. Jones said "adequate width" is too open to interpretation. Mr. Piorko said municipalities may comment on applicability of width and storm events. Mr. Morrill said storm event is addressed in another standard and noted all maintenance is not the same and some activities

require a greater width than others. Mr. Piorko reiterated that assigning responsibility is of more importance.

Mr. Collins said two to three years earlier tax ditch regulations regarding maintenance had changed and large buffer widths ensued. He thought the Standard generally makes sense but is worried that widths could become overly wide or prescriptive in its final form. Mr. Piorko again noted "adequate width" leaves details up to local governments.

Mr. Harris said he had seen many cases where proper easements did not exist and thought this Standard was a great idea. Mr. Morrill suggested adding the phrase "as determined by local governments" after "adequate width". Committee members concurred but Mr. Powell did not support the language change.

A vote was taken and the Committee unanimously approved the amended Standard.

Proposed Standard 2: Obstructions.

Mr. Jones said "willful" and "negligent" were legal terms and asked why they were included. Mr. Riemann thought they described an order of magnitude of a problem. Mr. Piorko said the intent is not for officers to be called in to enforce violations when there is an inadvertent blockage or silting in of a drainage path. Mr. D'Anna said 99 percent of cases will be willful or negligent with the other one percent being natural sedimentation. Mr. Jones suggested insertion of the phrase "man-made obstruction".

Mr. Collins asked what the term "conveyance" means and said he thought many problems the Standard is seeking to correct would be historic in nature. Mr. Athey said that definitions would probably be included in the final report. Mr. Collins furthered by stating nearly all of the landscape has been manipulated and people could not be held responsible for prior or past events.

Mr. Piorko said he understood Mr. Collins' concern but said currently obstructions are handled as a private matter between two individuals in court and the Standard is meant to remedy that. Mr. Powell noted almost all of the standards will have implementation issues and local government input will help determine how and when to apply.

Mr. Jones said he believes attorneys should review the Standard's language. Mr. Enright quoted from the tax ditch law which includes the terms "willful" and "negligent".

A vote was taken and the Committee approved the amended Standard with Mr. Jones casting a No vote. Mr. Collins again noted difficulties with the Standard in regards to historical issues.

Proposed Standard 3: Conveyance Systems.

Mr. Cahall noted the inclusion of a reference to a DelDOT document was to create uniformity. Mr. Piorko asked why and Mr. Cahall said that since DelDOT does not have jurisdiction statewide the Standard would address private roads and commercial projects. Mr. Benton said it was the Department's desire to keep additional drainage off its roads.

Mr. D'Anna said whatever standard was used should be in deed restrictions. Mayor Hunsicker noted the costs for compliance for minor subdivisions could be significant and he was not comfortable including them. Mr. Collins said the Standard may not be possible in areas with high water tables and that compliance with DelDOT regulations was already too expensive. He thought regulatory efforts should seek to get the job done and lower costs.

Mr. D'Anna said as a realtor he objects to situations that result in flooding to which Mr. Collins said people can ignore inconveniences. Mr. Jones said that doesn't happen and people call the State seeking relief.

Mr. Riemann opined that DelDOT's requirement for design to handle a 25-year storm event in sump conditions was overkill and reminded the Committee this discussion was not about major flooding. He said a blanket reference to the DelDOT document which is hefty could be going too far and saying "last revised" could result in inclusion of more than is thought. Mr. Cahall said the reference is to a specific section not the entire document.

Mr. Morrill said he supports Mr. Riemann and that a 10-year event is reasonable. Mr. Piorko asked how the Committee would feel if the language was changed to "10-year storm event". Mr. Benton said that would create a conflict with the DelDOT code but that adding "or" would avoid the conflict. Mr. Riemann said that these are minimum recommendations for municipalities and adding the clarification isn't necessary. Mr. Piorko suggested eliminating the DelDOT reference altogether and using just the 10-year event which the Committee agreed with. Mr. Collins said the market will not allow development in undesirable land, when better land is available.

A vote was taken and the Committee approved the amended Standard with Mr. Collins and Mayor Hunsicker voting is opposition.

Proposed Standard 4: Lot Grading.

Mr. Killmer said this Standard is common sense but Mr. Collins said he thought it could result in unintended consequences and that ponded water can be good for recharge. Mr. Piorko said DNREC receives 1,200 complaints a year and the Standard is intended to save taxpayers money.

Mr. Riemann said he thought the Standard was a good idea in general but was worried about "to point of defined conveyance". He said that may not be possible or needed on really big lots and suggested deletion of the phase "to point of defined conveyance" as it is not needed to avoid adverse impact. The Committee generally agreed with the revision.

A vote was taken and the Committee approved the amended Standard with Mr. Collins and Mr. Jones voting is opposition.

Proposed Standard 5: Topographic Plan.

Mr. Killmer thought a definition of "topographic plan" was needed but Mr. Sobota said he thought that may conflict with FEMA's requirement for finished floor elevations in flood hazard areas. Mr. Powell said that this is a minimum standard and may be exceeded or superseded by other requirements. Mr. Sobota said he thought it was not clear and Mr. Powell said it was assumed.

Mr. Benton asked what constituted a topographic plan and Mr. Cahall said it was open to local interpretation. Mr. Riemann agreed that local definitions vary. Mr. Cahall noted problems with minor subdivisions and Mr. Piorko said lots developed over time without a master plan were also a problem.

Mr. Piorko said "topographic plan" is intentionally vague but local governments have a sense of their needs. Mr. Jones said two standards were really being discussed: topography and finished floor elevation. Discussion ensued about what information should be shown on plans and Mr. Piorko reminded the Committee that development of templates was a recommendation. He said

the Standard would help local governments decide what should be required. Mr. Adkins said there is a disconnect between engineers and builders regarding master plans.

A vote was taken and the Committee approved the amended Standard with three members casting No votes (names not recorded).

Proposed Standard 6: As-Builts.

Mr. Mott noted this Standard would take care of the problems Mr. Adkins had stated. Mr. Riemann said he could not support the Standard because often visual observations are enough, local government should have the ability to use judgment, and as-builts on all lots can be expensive. Mayor Hunsicker said as-builts would be a benefit as they create a historic record.

Mr. Morrill asked about typical costs but was told they can vary. Mr. Piorko said the Standard did not include the requirement for a P.L.S. to certify the plan which should keep costs down. Mr. Morrill thought this was overkill and Standard #5 was enough. Mr. Benton said an as-built is often required when financing a home.

Mr. D'Anna said this should be part of the Certificate of Occupancy (C of O) process but Mr. Piorko said few have that in their codes. Mr. Collins said the Standard was not needed for a two acre lot as ponding on other parts of a property is OK. He thought a no adverse impact requirement could render some lots unusable.

A vote was taken and the Committee approved the amended Standard with four members casting No votes (names not recorded).

Drainage Recommendations

Regarding the recommendation for the review of drainage patterns as part of the building permit process, Mr. D'Anna asked how that would be done. Mr. Piorko said the reviewer of a building permit application should also look at the record plan.

A vote was not taken regarding the recommendations but Committee members in general thought they were appropriate.

After a short break, brief discussions were had and votes taken for the floodplain standards. Summaries of discussions regarding each follow. Note some standards were renumbered since the March 28 meeting and two were deleted.

Proposed Standard 1: Flood study required in unmapped floodplains.

A brief discussion between Mr. D'Anna, Mr. Morrill, and Mr. Piorko clarified under what circumstances the Standard would apply.

A vote was taken and the Committee approved the Standard with Ms. Keifer, Mr. Collins, and Mr. Riemann voting is opposition.

Proposed Standard 2: Flood Study Required in Zone A (no BFE) FEMA mapped floodplains.

Mr. Riemann asked how close this Standard is to FEMA regulations and was told it is a clarification to the standard and creates a more rigorous procedure for complying with the FEMA minimum.

A vote was taken and the Committee approved the Standard with Ms. Keifer, Mr. Collins, and Mr. Riemann voting is opposition.

Proposed Standard 3: Only FEMA approved floodplain and BFE data shall be shown on record plans and development documents.

Mr. Harris asked if resubdivision plans would be needed to previously recorded plans when FEMA floodplain lines change. Mr. Powell replied they would not but plans for new houses would need to comply.

A vote was taken and the Committee approved the Standard with Mr. Collins voting in opposition.

Proposed Standard 4: Use accepted base flood elevation in building permit application documents.

Mr. Sobota asked about the connection between FIRM maps and the more precise Flood Insurance Studies (FIS) and was told by Mr. Powell that this Standard does not get into that interpretation. Mr. Riemann asked how this Standard differs from the previous Standard and was told by Mr. Piorko this one address building permits whereas the previous was in regards to recordation documents.

A vote was taken and the Committee unanimously approved the Standard.

Proposed Standard 5: Floodplain information included on permitting documentation.

Mr. Powell stated there was some overlap between this Standard and the previous Standard but that administrative procedures do not always capture the source of floodplain/BFE information shown on plans. Mr. D'Anna asked if the new Corps of Engineers wetland standards could have an effect on this Standard and was told by Mr. Powell that while wetlands and floodplains often are in the same location, there is no connection between the two.

A vote was taken and the Committee unanimously approved the Standard.

Proposed Standard 6: Require use of elevation and flood proofing certificates.

There was no discussion of note.

A vote was taken and the Committee approved the Standard with Mr. Collins voting in opposition.

Proposed Standard 7: Require 18 inches of Freeboard.

Mr. Collins noted a concern about this Standard with regards to height restrictions and that many locations have never had a flooding problem and asked if pressure would be put on those that don't want to adopt the Standard. He was told No. Mr. Powell said the Standard is dealing with new buildings or substantial improvements and that it would not include minor additions. In response to Mr. Collins, Mr. Killmer said if a community did not have floodplains the Standard would not apply to them. Mr. Powell said the Standard may have limited applicability in inland communities with small floodplains and that some communities, like Blades, mostly consist of high ground outside the floodplain. If someone were to build right next to the stream, then the standard would apply. Mr. Collins said it should be up to the town. Mr. Morrill thought that if more people were aware of the impact of freeboard on insurance rates, the market would dictate. He thought it was more important to inform and not require.

A vote was taken and the Committee was evenly split between approval and denial. Those in opposition were Ms. Keifer, Mr. Killmer, Mr. Jones, Mayor Hunsicker, Mr. Benton, Mr. Morrill, Mr. Collins, and Mr. Riemann.

Proposed Standard 7A: Require 12 inches of Freeboard.

There was no discussion of note.

A vote was taken and the Committee was evenly split between approval and denial. Those in opposition were Ms. Keifer, Mr. Killmer, Mr. Jones, Mayor Hunsicker, Mr. Benton, Mr. Morrill, Mr. Collins, and Mr. Riemann.

Proposed Standard 8: Require 18 inches of free board for manufactured homes.

Mr. Collins said he was opposed to this Standard since no one from the manufactured home community was asked to provide input. Mr. Sobota said that due to materials commonly used, a floor being saturated in a manufactured home will typically result in much higher damages as a percentage of the overall value as opposed to in a non-manufactured home.

Mr. Killmer asked if there was a difference regarding manufactured homes on individual parcels or on group lands under single ownership. Mr. Powell said No. Mr. Collins said he contacted a manufactured home park owner who reported he has no problems but Mr. Piorko said his department is working with three or four owners trying to resolve problems.

Mr. Morrill noted that a park owner and home owner would not be insured the same and that the owner of a manufactured home has no responsibility but would be the one incurring damages. Mr. Collins asked if manufactured homes were typically covered by private flood insurance and was told by Mr. Sobota that many companies have gotten out of the business.

A vote was taken and there was a near even split between approval and denial. Mr. Piorko was among those voting in opposition and said he thought there needed to be more discussion with the industry.

Ms. Keifer and Mr. Collins left the meeting.

Proposed Standard 9: Shallow fill above BFE will not exempt a structure from floodplain regulations.

Mr. Sobota asked if there were compaction requirements in Delaware and was told there are but they apply to structural issues only.

A vote was taken and the Committee approved the Standard with Mr. Morrill and Mr. Riemann voting is opposition.

Proposed Standard 10: Hydrostatic Venting required.

Mr. Powell said the Standard should be revised to include the phrase “excluding V zones”. Mr. Sobota asked if it included Coastal A zones. Mr. Powell said Coastal A zones had not yet been included on any floodplain maps in Delaware and DNREC prefers to wait to see how those flood zones look before standards are set for them. Mayor Hunsicker said he thought the Standard did not address the supporting rationale which mentioned lack of enforcement.

A vote was taken and the Committee members present unanimously approved the amended Standard.

Proposed Standard 11: Prohibit below-grade crawl spaces or enclosures.

Mr. Powell said a home with a basement or crawl space with at least one side above finished grade elevation would be less expensive to insure than a home with no sides above. Mayor Hunsicker asked about the effect if a dirt floor was present. Mr. Sobota noted that sometimes fire codes and floodplain management codes conflict. Mayor Hunsicker asked to have the phrase "floor or grade" added which the Committee agreed with.

A vote was taken and the Committee members present unanimously approved the amended Standard.

Proposed Standard 12: Prohibit subdividing of land in the floodplain.

Mr. Piorko explained the difference between open lots and buildable lots. Mr. Powell said if the Standard was not passed it could result in clearing in the floodplain. Mr. Morrill said the clearing issue could also be handled in deed restrictions. Mr. Jones said the goal is to avoid building homes that could get flooded. Mr. Riemann said a size restriction was needed.

A vote was taken and the Committee members present unanimously voted against the Standard. Mr. Piorko said his staff would draft a replacement Standard and reissue for comments.

Proposed Standard 13: Prohibit new non-water dependent structures in floodplains in newly subdivided lands.

Mr. Benton asked how "structures" is defined and Mr. Powell said it is usually done locally. Mr. Morrill thought a fill performance was a better approach. Mr. Powell said the Standard was a default scenario and a community could choose to exempt small buildings.

A vote was taken and the Committee narrowly approved the Standard as six members casted No votes (names not recorded).

Mr. Riemann left the meeting.

Proposed Standard 14: Prohibit encroachments that would cause more than 0.1 foot of rise without compensation.

There was no discussion of note.

A vote was taken and the Committee members present unanimously approved the amended Standard.

Ms. Harrison left the meeting.

Proposed Standard 15: Incorporate FEMA technical bulletins in local floodplain regulations.

Mr. Killmer said if the Standard passed that building officials would need to become familiar with the technical bulletins. Mayor Hunsicker again noted that FEMA language often includes "should" and questioned the implementation of a standard that says "shall". Ms. Harel said the main purpose is to make sure communities know the bulletins exist.

A vote was taken and the Committee members present unanimously approved the amended Standard.

Mr. Jones left the meeting.

Floodplain Recommendations

Mr. Morrill said many of the recommendations hinge on getting flood studies done by DNREC with costs allocated over time.

A vote was not taken regarding the recommendations but Committee members in general thought they were appropriate.

Mr. Piorko summarized the remaining components of the process. He specifically asked if the Committee wanted to meet again to develop the framework for municipal reviews or if his staff should develop a draft framework for distribution of comments. The Committee unanimously opted for the second option. Mr. Morrill said the document distributed to local governments should reflect the tone of the discussions. Mr. D'Anna reiterated the importance of getting the mapping done. Mr. Carlson asked about the formal recordation of votes and Mr. Piorko said the record will be developed.

The meeting was adjourned at 1:15. Each Committee member handed in their copy of the standards which included not only their official votes but additional comments as well.