



NEW YORK STATE
FLOODPLAIN AND STORMWATER MANAGERS ASSOCIATION

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December 30, 2009

Mr. Jack K. Dahl, Director
ATTN: dSGEIS Comments
Bureau of Oil & Gas Regulation
NYSDEC Division of Mineral Resources
625 Broadway, Third Floor
Albany, NY 12233-6500

RE: **Suggestions for improved floodplain management** in the Draft Supplemental Generic Environmental Impact Statement (dSGEIS) Regarding Natural Gas Drilling

Dear Mr. Dahl:

The New York State Floodplain and Stormwater Managers Association is comprised of professionals from across the state who are committed to improved management of floodplain and stormwater resources. We have the following concerns regarding how flood hazards associated with natural gas development are addressed in the dSGEIS.

Identification of Flood Hazards

Problem: Although the dSGEIS recognizes the hazards associated with development in the Special Flood Hazard Area (SFHA; commonly referred to as the 100-year floodplain) and the requirement for a Floodplain Development permit when operations will occur within the SFHA, it fails to adequately account for the flood hazard areas that are not so identified on FEMA's Flood Insurance Rate Maps (FIRMs). Flooding often causes significant damage – including about a quarter of all flood insurance claims – in areas that are not currently mapped as Special Flood Hazard Areas. In many rural areas, where significant development pressure was not anticipated, floodplains were mapped using approximate methods, or were not mapped at all, rather than the detailed hydrologic and hydraulic studies used in more developed settings. Because gas development is expected to occur in rural areas and in valleys (due to existing transportation routes and favorable topography), we are concerned about the impacts that may result from encroachment on unmapped floodplains and areas mapped using approximate methods. Municipal floodplain development regulations generally do not provide authority to require floodplain development permits outside of the mapped Special Flood Hazard Areas. A process is needed to minimize flood risks in all areas that are not “reasonably safe from flooding.”

Proposal: We recommend that natural gas development in unmapped floodplains be subject to the same floodplain development standards as Approximate Zone A floodplain areas. The following process could accomplish this:

- (1) “Required Information” in the EAF Addendum would include whether any portion of the proposed project site is an unmapped floodplain subject to flooding from a 1% annual probability flood event (commonly referred to as the 100-year flood).
- (2) “Required Attachments” in the EAF Addendum would include certified documentation by a NYS licensed Professional Engineer indicating whether any portion of the project area has a 1% or greater probability of being flooded in any given year. Assessment of the local flood hazard should include consultation with the municipality, County Soil and Water Conservation District, and County Emergency Management Office concerning the flood history, supplemented by standard engineering practices for evaluating flood hazards. In areas where new hydrologic and hydraulic analyses are warranted, procedures should be consistent with the “detailed methods” developed by FEMA (and outlined in FEMA Publication 265, “Managing Floodplain Development in Approximate Zone A Areas”).
- (3) For projects that include any development in unmapped 1% probability floodplain areas (with a 1% or greater probability of flooding in a given year), “Required Attachments” in the EAF Addendum would include a flood damage reduction plan demonstrating how the project will meet or exceed the National Flood Insurance Program and NYS Building Code requirements for development in Approximate Zone A floodplain areas. This would include:
 - Base Flood Elevation (BFE) determined using detailed methods (as described in FEMA Publication 265, “Managing Floodplain Development in Approximate Zone A Areas”) if the project exceeds 5 acres;
 - elevation and/or dry floodproofing to a level 2 or more feet above BFE (or at least 3 feet above the highest grade if no BFE is available);
 - protection of equipment from damage during the Base Flood (100-year flood) by elevation and/or flood-resistant design;
 - anchoring of structures, storage tanks, and other materials;
 - analysis demonstrating that the project will not contribute off site damage due to increased velocities, flood heights, erosion, or environmental contamination in the event of the Base Flood; and
 - an emergency plan for securing the site in the event of a flood, if emergency actions are necessary to prevent flood damage.

Areas with known flood hazards that are not covered by a floodplain development permit from the municipality could then be addressed through the state permit process, with technical review by DEC Floodplain Management staff. Additional staff or a professional services contract may be necessary to enable effective review and enforcement of these floodplain development requirements.

Restoration of Floodplain Areas

Upon completion of any temporary construction within floodplains, ground surfaces should be restored to original grade, the streambanks should be stabilized using natural materials (rock, riparian vegetation), and the floodplain should be re-vegetated using native species similar to those found upstream and downstream of the site. The restoration plan should be included with the permit application.

Technical Assistance with Floodplain Management

Problem: Municipalities have primary responsibility for floodplain management and are responsible for issuing floodplain development permits. However, many municipalities lack the experience and knowledge to effectively regulate floodplain development, particularly non-building development such as that involved in gas drilling and road construction. DEC Floodplain Management Coordinators provide technical assistance to local government administrators of floodplain regulations. The dSGEIS proposal to rely on the local municipal floodplain development permit process for managing flood risks will only be reliable if permit administrators receive additional technical support to ensure that gas drilling complies with NFIP floodplain development standards, which include: determination of base flood elevations where required, documentation that development is elevated or otherwise protected from flood damage (includes buildings, equipment, storage tanks, impoundments, and other improvements), no-rise certification by a professional engineer where required for floodway encroachment, and assurance that the proposed development would not cause damage to any other property during a 100-year flood.

Proposal: Table 8.1 should be revised to indicate that the DEC Division of Water has an advisory role for floodplain permitting. In addition, procedures should be established to notify DEC Floodplain Management staff when a drilling permit application is received that involves floodplain development. That would enable DEC staff to reach out to the municipality and provide any needed assistance with the floodplain development permit process.

Thank you for the opportunity to review the dSGEIS. We urge the NYSDEC to address these concerns and improve the flood hazard protection provisions in the SGEIS.

Sincerely,



Janet Thigpen, CFM
Chair, NYSFSMA Public Policy Committee