

The Position of the Mattabeseck Audubon Society

with regards to an application by

PDC-EL Paso

Floodplain disturbance associated with

The construction of water supply wells,

Cromwell, Connecticut

September 2, 1999

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Biome: Floodplain

Reviewed by: Mattabeseck Audubon Society

Reasons for Concern:

1. There will be a loss of floodplain storage as a result of 4,000 cubic yards of fill proposed for the project. This loss of storage may be compounded by future expansion of water supply wells for the proposed power plant.

High flood levels over 5 meters above mean sea level occur during any month of the year. Severe summer floods are uncommon, but they have occurred several times during one season; in 1973 in late May and July; in 1969 in late May and twice in August. June was the month of the 1984 flood. There are 350 years of recorded flood stages of the Connecticut River. Prior to 1936 the largest flood of record was the 1854 flood. Since 1927 the 1854 flood has been nearly equaled or exceeded five times—1936, 1938, 1955, and 1984. Therefore, five of the six greatest floods in a 350 year span have occurred in the past 50 years.

An interesting fact is that the measured volume of water flowing past a particular cross section of Connecticut River channel per unit of time has constantly increased in proportion to a measured amount of rainfall. What this means, simply, is that today it takes less rainfall to move the river to flood stage than in any of the past years of record keeping. This is due to over development of the river valley. Flood water storage capacity is constantly being chipped away. Because there are only seven major natural flood storage areas in the entire Connecticut River Basin, this is a serious problem.

The true volume of storage needed to compensate for filling a river floodplain is not the volume of the fill placed on the floodplain, but rather the volume of water that would have otherwise flowed through that part of the river floodplain for the duration of the flood. A rough estimate of this storage can be made by determining the cross-sectional area of the fill and estimating the discharge of water through that cross-section for the specified flood event. This simple calculation will demonstrate that the lost storage is many times the volume of the fill. The calculation also illustrates that natural flood storage or valley storage is not only water which is not flowing and trapped in backwaters along the river, but also water which is flowing across the floodplains. This water on the floodplains is in storage because the water is usually flowing more slowly than the water in the main channel and is therefore moving downstream at a rate that is less than the downstream propagation of the flood crest.

2. There will be a loss of indigenous trees, understory, and herbaceous growth associated with floodplains, and the subsequent displacement of avian species endemic to floodplains. Riparian corridors are proven avenues of bird migration.

3. A description of the ecological communities and functions of the wetlands or watercourses involved with the application and the effects of the proposed activity on these communities and wetland functions [Section 6, 6.6 subset D] has not been submitted by the applicant. This is cause for a rejection of the application.

4. The application describes no alternatives to working in the floodplain. We suggest that abandoned industrial property north of the proposed site, and immediately south of the Rocky Hill ferry could be used for the pumping stations. Also, there should be an exploration of whether outflow from the Mattabasset Sanitary District could be used for cooling. It is understood that the effluent would have to be further filtered before use. This filtering is standard procedure for most industries using water from the Connecticut River, including Pratt & Whitney Aircraft in East Hartford and Middletown.

5. The industrialization of the floodplain will probably not end with this application. It behooves us to protect our natural resources. The immediate past is a reminder that mistakes are costly and not easily rectified. Furthermore, the floodplain is already occupied by the plants and animals that depend on it for their lives. Cromwell does not own the natural heritage that is involved in this application: the riverine ecosystem. It is not Cromwell's to give away.

Prepared by:

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