

expects to be finished with the field work by Fall 2001.

In May, EPA is conducting a surface geophysical scan of the ground at the Brook Village and Centredale Manor properties using ground-penetrating radar, seismic refraction and other methods to determine the thickness of the contaminated soils, the depth to bedrock and other features of the ground that might affect the travel of contaminants in the subsurface. Only a decade ago, this was done through extensive drilling operations and an evaluation of the soils and rock encountered. However, modern technology makes it possible to do more work electronically, which will be confirmed later with fewer direct measurements, shortening the work effort.

Once the final phase of the "Source Area Investigation" is complete, the groundwater data, combined with the soil sampling data and information from the ecological risk assessment study, will be used to consider the final cleanup approach for the project. This report is anticipated to be available for public comment in fall 2002.

Ecological Risk Assessment

The ecological risk assessment is conducted to determine the actual or potential effects of a hazardous waste site on plants and animals (other than domestic pets.) The assessment looks at the types of contamination, possible routes of exposure, and the environmental species which may be exposed to contamination from a site.

EPA is conducting field studies to determine if there is a link between contamination at the site and impacts to the environment. Among the assessments are studies of turtles, fish, birds and frogs. The first portion of the ecological risk assessment was a tree swallow study conducted during spring 2000 (see spring 2000 newsletter).

Preliminary data and findings from this study showed that the eggs, nestlings and diet of Allendale Pond tree swallows had much greater concentrations of dioxin and PCBs compared to the eggs, nestlings and diet of Greystone Mill Pond tree swallows (an area upstream not impacted by the Centredale Manor Restoration Project). In addition, less than 50% of the eggs laid in nest boxes on Allendale Pond hatched, as compared to 90% or more hatching on Greystone Mill Pond. The concentration of dioxin in tree swallow eggs and nestlings from Allendale Pond were among the highest observed in any study of this type

in the US. Additional tree swallow studies are being conducted during the spring of 2001 to confirm these high levels. There is no link however, between public health impacts and these ecological impacts from the site.

The ecological assessment and human fish consumption evaluation are expected to be completed by January 2002. The results will be included in the Remedial Investigation Report expected later that year.



Above: Front and side views of Allendale Dam in spring 2000 and spring 2001. Restoration of the dam is one component of the upcoming removal action.

Enforcement Update

EPA has identified 5 potentially responsible parties (PRPs) at the site so far. To date, EPA and the PRPs have been unable to agree on the terms of a settlement under which the PRPs would voluntarily perform work at the site. As a result, EPA has used Unilateral Administrative Orders ("UAOs") to prompt the parties to perform work at the site. The first was issued in April 2000 and the PRPs completed the work in fall 2000. The second UAO was issued in March 2001, and 4 of the 5 PRPs are in the process of fulfilling the requirements of this order.

EPA continues to search for additional PRPs. Formal information requests were recently sent to 8 companies and two military bases which are believed to have sent waste to the site prior to the early 1970's.