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### **Connecticut DEPs Implementation of DamWatch**

The over 76,000 dams and levees in the United States are, for the most part, ignored by many until a man-made or natural disaster occurs. Over the past few years there have been more than 200 documented dam or levee failures in the nation alone. These failures are costly in terms of life, property, and commerce; however, many dam and levee failures can be prevented, delayed, or mitigated through monitoring, early warning, and well-coordinated emergency response protocols.

In 2007 the Connecticut Department of Environmental Protections Dam Safety Unit (CTDEP) undertook the initial phase of implementing a dam and levee monitoring system known as DamWatch. DamWatch is a real-time, web-based, application developed by USEngineering Solutions that automatically alerts key CTDEP personnel when one of Connecticut's dams or levees are in potential danger.

DamWatch provides advanced warning by collecting, auditing, and displaying real-time data from official sources such as the National Weather Service (NWS), Natural Resources Conservation Service (NRCS), and the U.S. Geological Service (USGS) via a GIS-based web interface. Through these processes, DamWatch alerts officials when critical threshold values are met or exceeded for specific infrastructure via various electronic mediums (text message, fax, etc.); thereby allowing field personnel to concentrate their efforts on specific dams and levees, rather than expansive counties and drainage basins.

CTDEP's version of DamWatch incorporates valuable information for each site, such as database information, photos, inspection reports, design plans, inundation mapping, operation and maintenance manuals, and emergency operation plans (EOPs). DamWatch is designed to monitor 24/7 flooding hazards by acquiring real-time flood data from USGS gages and rainfall accumulation data from NWS NEXRAD. When the processing of incoming data results in the triggering of critical thresholds, electronic notifications are immediately distributed to CTDEP Dam Safety officials. Once notified, officials can then timely prioritize their evaluation of structures for damage and assign resources to minimize costs. DamWatch enables CTDEP to be proactive in protecting the public from potentially harmful effects of dam and levee failures.