



Connecticut Department of Energy and Environmental Protection



South Branch Park River Flood
Control System Maintenance
Public Information Meeting
West Hartford

November 4, 2015



Connecticut Department of Energy and Environmental Protection

Approach for the Evening

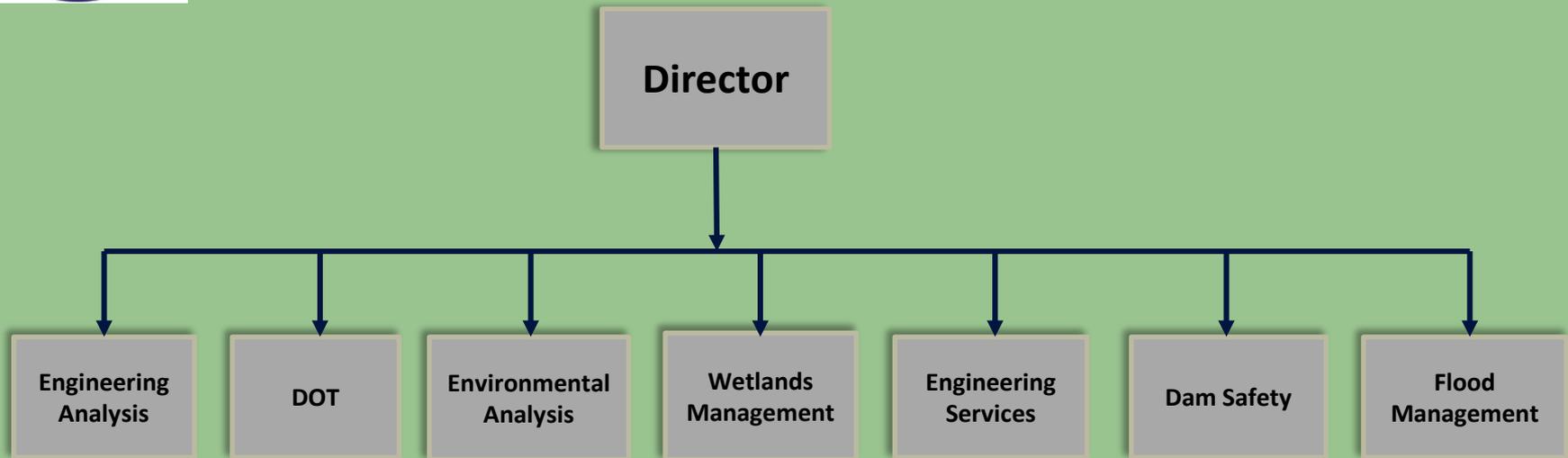
- Who we are
- History of Flood Control Project and identification of concerns – NRCS
- History of this maintenance project
- Present Status
- Next Steps
- Break-out session by neighborhoods



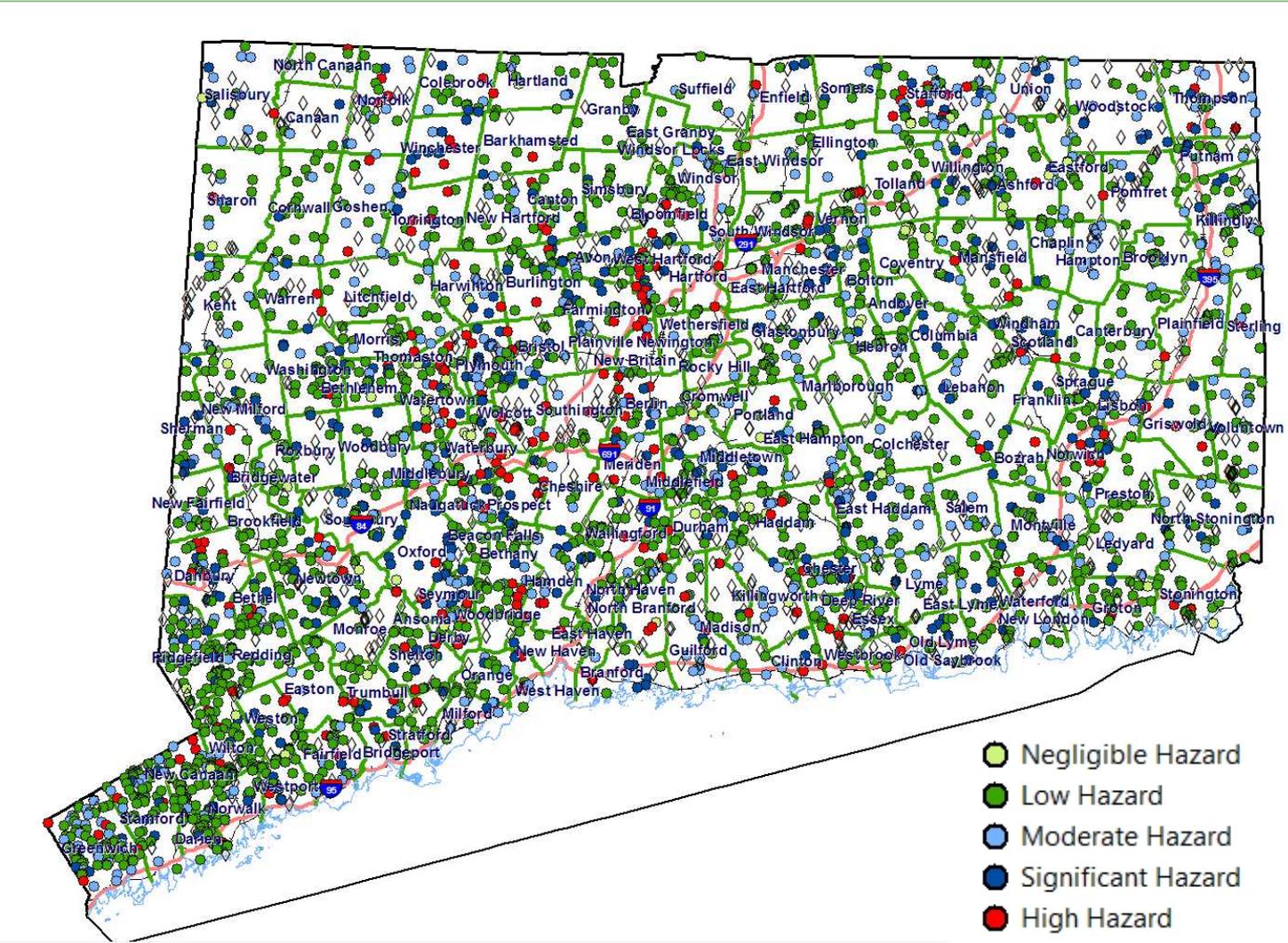
What We Do



Connecticut Department of Energy & Environmental Protection



Connecticut's Dam Safety Program



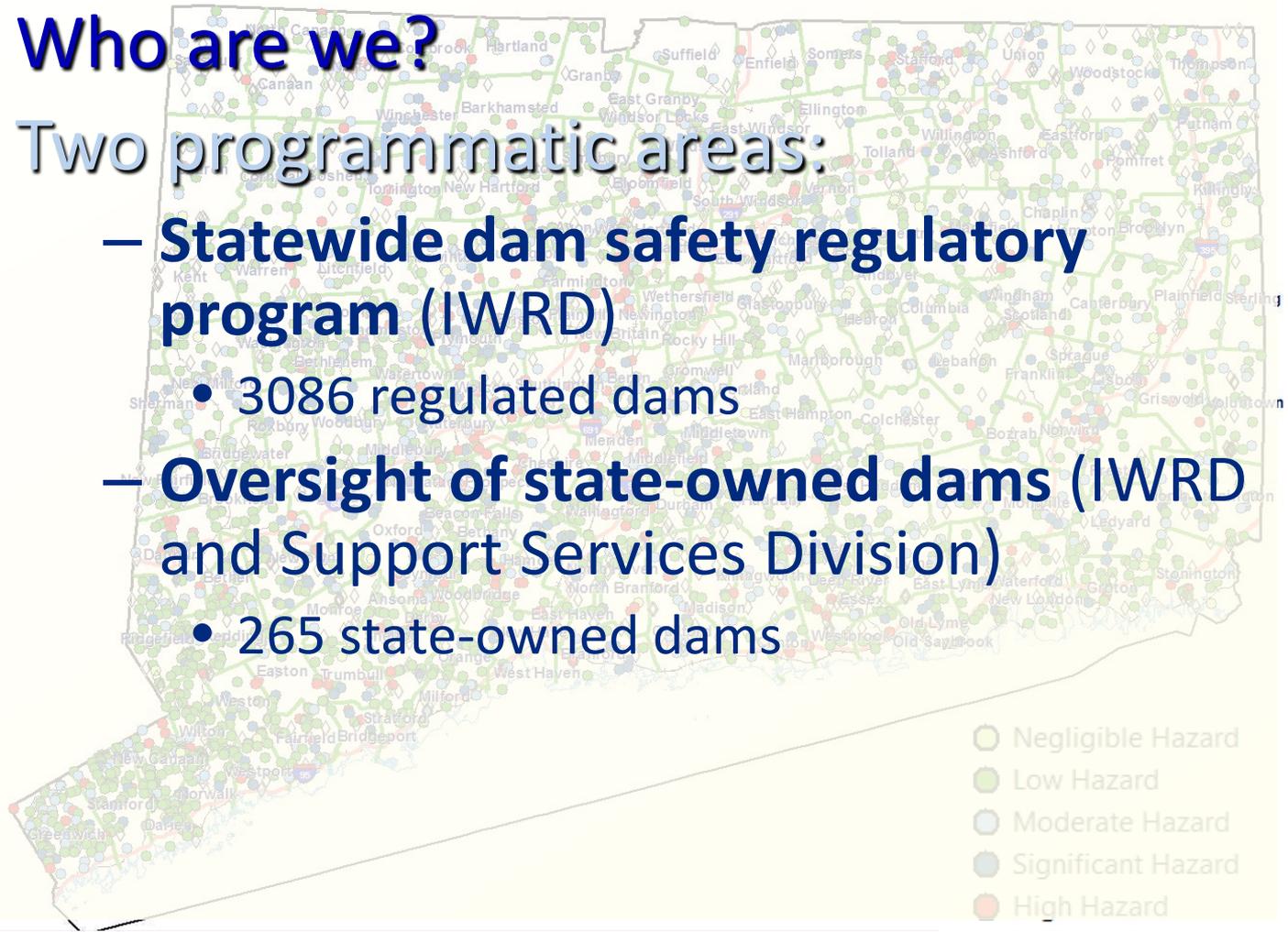
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Connecticut's Dam Safety Program

Who are we?

Two programmatic areas:

- **Statewide dam safety regulatory program (IWRD)**
 - 3086 regulated dams
- **Oversight of state-owned dams (IWRD and Support Services Division)**
 - 265 state-owned dams

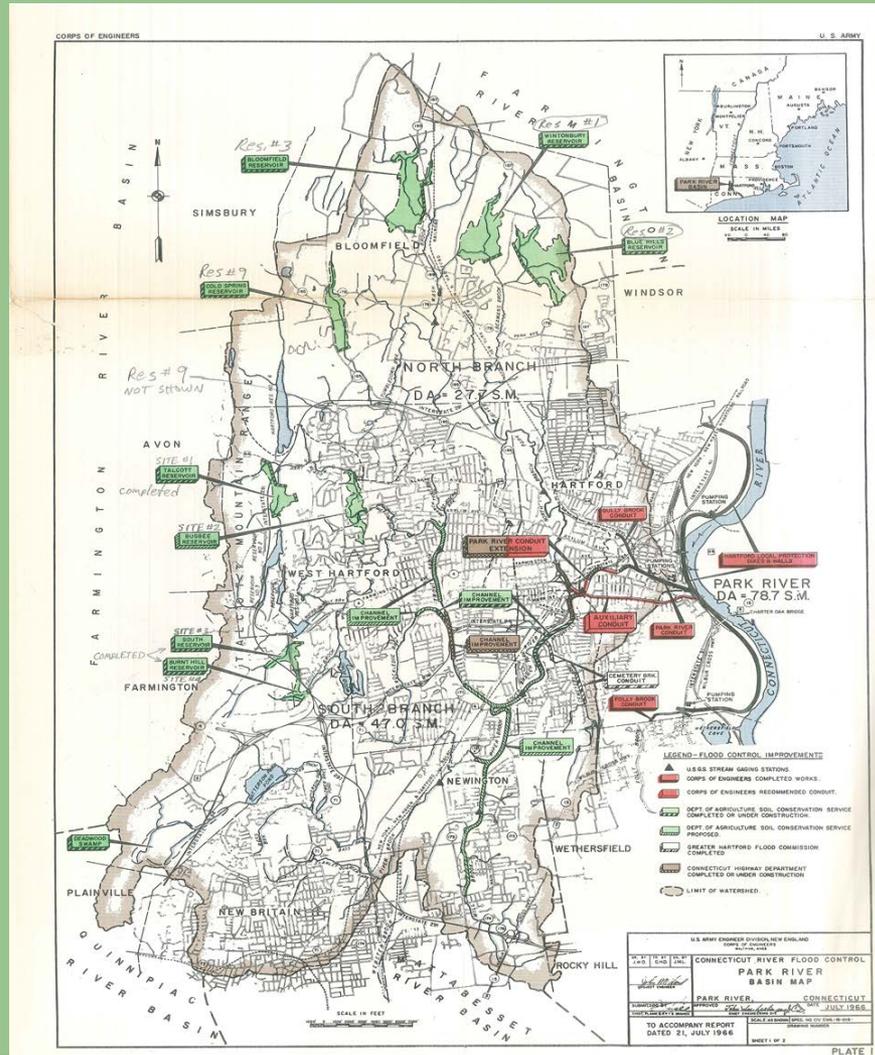


What does that mean?

- **State-Owned Dam Oversight**
- CTDEEP is responsible for operation and maintenance of 239 of these dams, which includes 28 flood control dams/dikes protecting towns such as Bloomfield, Hamden, Hartford, Stafford, Torrington, and Waterbury
- DEEP is responsible for day-to-day operations and maintenance, as well as overseeing repairs, upgrades & construction contracts.



Park River Basin Flood Control



Connecticut Department of Energy and Environmental Protection

Where Can You Find Information

- Website info: www.ct.gov/deep/sbpr
- New additions
 - Copy of contract
 - Copy of updated plans
 - Environmental protection plan
- Where we will post regular job meeting minutes and additional information



Natural Resource Conservation Service Presentation Arde Ramthun



Connecticut Department of Energy and Environmental Protection

South Branch of the Park River (SBPR)

- 1961 - Agreement between the Soil Conservation Service, State and the municipalities (West Hartford, Newington and Hartford) in response to the Flood of '55.
- 1964 - Agreement with Hartford to make channel improvements to remove meander in Park River.
- 1972 - Agreement with West Hartford to include channel improvements to St. Joseph's Brook, Trout Brook and Rockledge Brook down to the confluence of Piper Brook (to the Newington Town Line) and Park River.
- 1986 - Agreement with Newington to make channel improvements to Piper Brook to just upstream of Main Street and Mill Brook to just upstream of Dowd Street Bridge.
- Towns to incur costs to maintain vegetation and the state to incur costs to make future capital improvements.
- Last major maintenance project occurred in 1999-2000.



Why this scale of maintenance work now?



Natural Resource Conservation Services (NRCS)

- Annual inspections of the SBPR flood control project are required by NRCS. Federal, State and Town staff attend inspections and town is provided with inspection reports
 - Annual reports include increasing level of notification that maintenance deficiencies existed and were not being adequately addressed
 - 2010 NRCS notifies CTDEP of Operation and Maintenance violations within SBPR flood control channels and requests necessary maintenance within 2 years to avert further action
 - CTDEEP worked with NRCS to obtain a complete field and office analysis of required work and estimated costs
 - CTDEEP was granted an extension to obtain necessary funding through the state Bond Commission but warned of impending decertification if the necessary repairs and maintenance are not completed



2010 Notice of Violations

United States Department of Agriculture


Natural Resources Conservation Service
344 Merrow Road, Suite A
Tolland, CT 06084-3917
(800) 871-4311

November 29, 2010

Ms. Denise Ruzicka
Director
DEP – Inland Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

RE: OPERATION AND MAINTENANCE OF THE SOUTH BRANCH PARK RIVER WATERSHED FLOOD CONTROL CHANNELS

Dear Ms. Ruzicka:

This letter is to inform you of Operation and Maintenance (O&M) violations in the South Branch Park River (SBPR) watershed flood control channels.

In October 1985, the Connecticut Department of Environmental Protection (DEP) signed an O&M Agreement with the Natural Resources Conservation Service (NRCS) – known then as the Soil Conservation Service (SCS) – as sponsor of the SBPR flood control measures. The agreement states the sponsor is “responsible for operating and performing or having performed all needed maintenance” of the dams and channels identified in the Watershed Protection Flood Prevention Work Plan for the South Branch of the Park River Watershed, Hartford County, Connecticut. Attached to the agreement is an O&M Plan which outlines specific requirements to be performed by the sponsor.

The dams in this watershed are typically well maintained. Some channel sections are well maintained while others are in violation of the O&M Plan and in need of maintenance. The banks of several sections of flood control channels in the watershed contain unsuitable woody and other vegetation. In one section, the woody vegetation has been cut but not removed, a potential hazard should it float downstream and cause an obstruction. Channel sections identified to have issues are shown on the enclosed map; lengths of each section are shown on the enclosed table.

This unsuitable vegetation is a problem because design n-values (roughness) of the channels are 0.03 (in most sections) to 0.04, while the current woody and/or other high, dense vegetation on the channel banks have an estimated n-value of 0.09 to 0.11. Therefore, the channel does not have the conveyance capacity for which it was originally designed, causing flood elevations upstream to increase.

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 **STATE OF CONNECTICUT**
DEPARTMENT OF ENVIRONMENTAL PROTECTION 

December 14, 2010

Mr. Ron Van Winkle
Town Manager
Town Hall
50 South Main Street
West Hartford, CT 06107

Dear Mr. Van Winkle:

The annual inspections for the Natural Resources Conservation Service (NRCS) flood control projects which are the Town of West Hartford's maintenance responsibility were held on September 29, 2010. As you may be aware there are several miles of flood control channels and a flood control dam structure that exist in the Town of West Hartford. These projects were constructed as part of a three party commitment between the Connecticut Department of Environmental Protection (DEP), the NRCS (formerly SCS) and the Town of West Hartford to provide flood protection.

The flood control dam structure located at Bugbee Reservoir is generally well maintained as are various portions of the channel sections. However, several channel sections are poorly maintained and in some cases have been entirely neglected for some time now. These areas include but are not limited to Piper Brook Channel from the Newington-West Hartford town line to the confluence of the South Branch of the Park River, the inlet and outlet portions of Rockledge Brook and portions of Trout Brook and the South Branch of the Park River to the Hartford-West Hartford town line.

The banks of several sections of these flood control channels contain unsuitable woody and other vegetation. In one section, the woody vegetation has been cut but not removed, a potential hazard should it float downstream and cause an obstruction. The unsuitable vegetative growth is a problem because the roughness created by the woody or other high, dense vegetation limits the conveyance capacity of the channel for which it was originally designed. This lowered capacity will cause upstream flood elevations to increase. As the vegetation grows in size and volume its detriment to the channels ability to function grows exponentially as do the costs to remove it.

These flood control channels were built to protect the businesses and people residing in the Town of West Hartford and adjacent towns. Since the maintenance has not been performed regularly in some sections, homes and businesses are at risk and no longer have the originally designed level of flood protection. Additionally, this condition could potentially jeopardize the flood insurance benefits these residents and businesses receive.

It is imperative that this maintenance be performed as failure to complete the corrective measures may result in further action. Lack of maintenance in the channels may also jeopardize future watershed funding for structures located in the South Branch Park River Watershed for the Town of West Hartford as well as the potential of having the federal government decertify the existing system.

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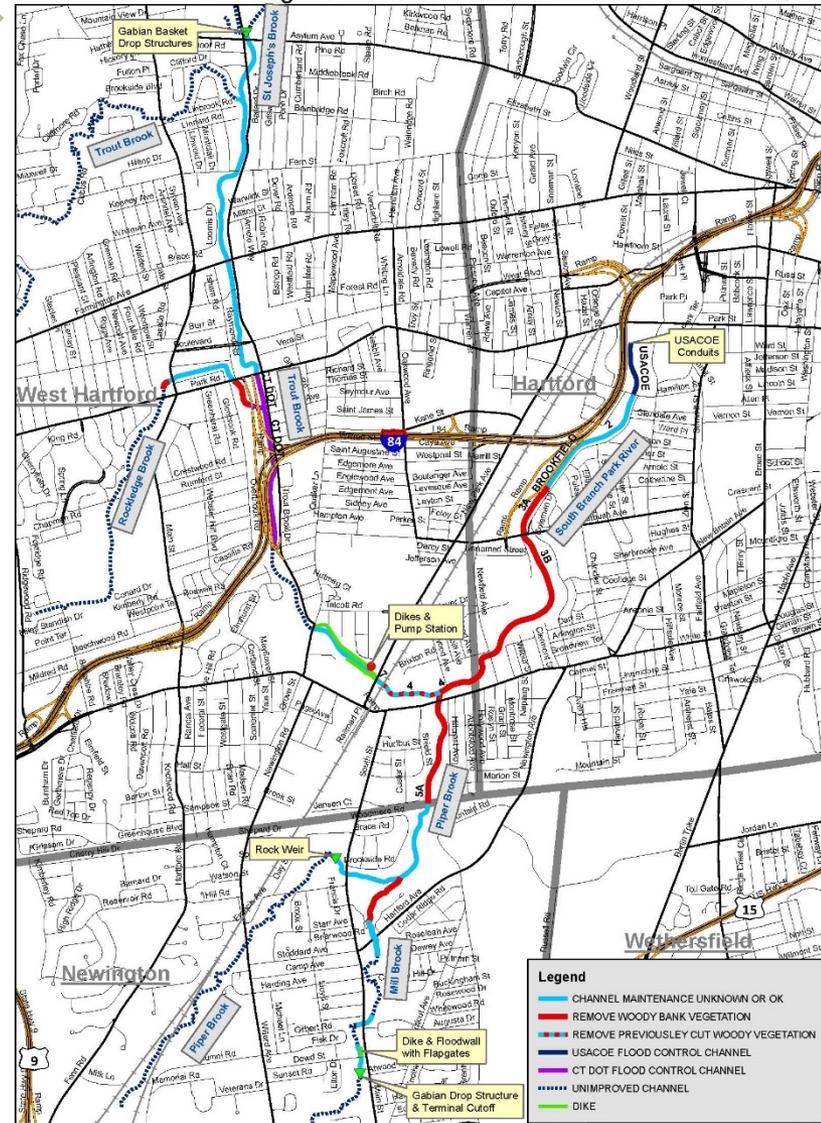


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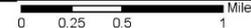
South Branch Park River Overview

- Includes maintenance in Hartford, West Hartford and Newington – all three towns received copies of this as well as previous and subsequent annual inspection reports
- Work includes:
 - Tree and vegetation removal
 - Sediment removal
 - Structural repair to floodwalls and flap gate structures.

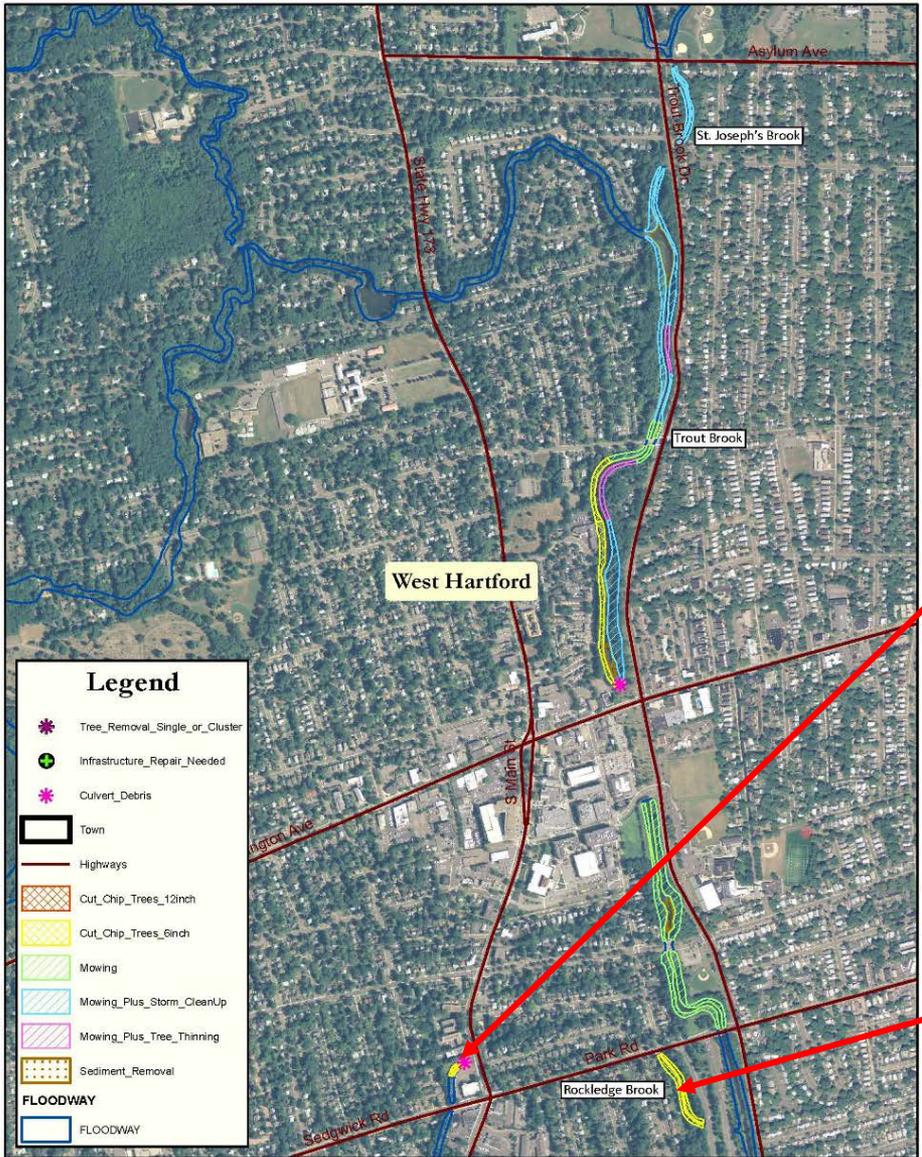


- Map Projection - Datum = CT State Plane - NAD83
- Map prepared by Ben Smith, CT NRCS, Nov 2010

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Channel Maintenance Areas West Hartford - Northern End



Remove Debris, Rockledge Brook at S. Main St. in West Hartford



Remove sediment, Rockledge Brook in West Hartford

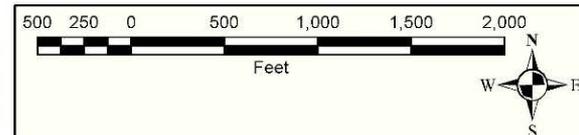
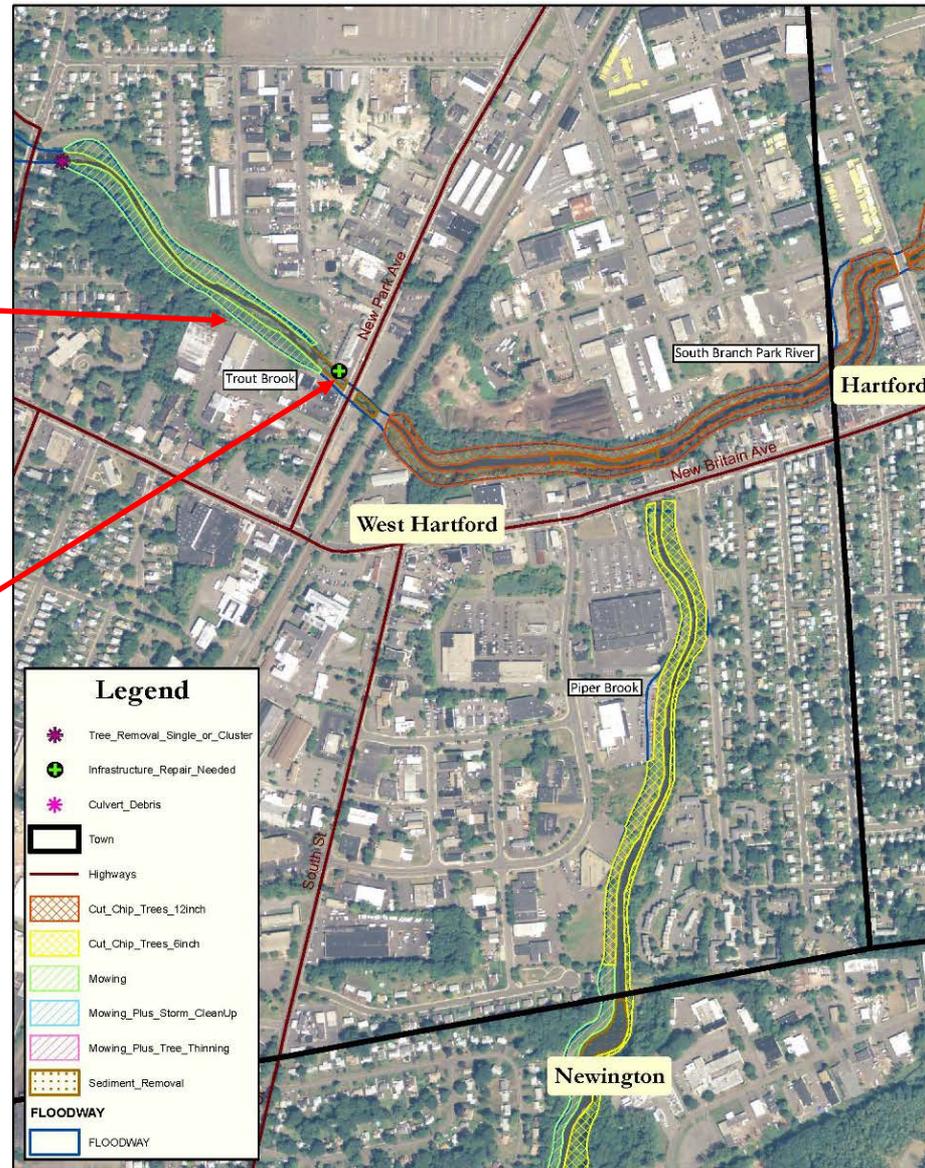
Channel Maintenance Areas West Hartford - Southern End



Remove Sediment
Trout Brook WH



Repair Flood Wall Cracking
Trout Brook WH



What if maintenance isn't done?



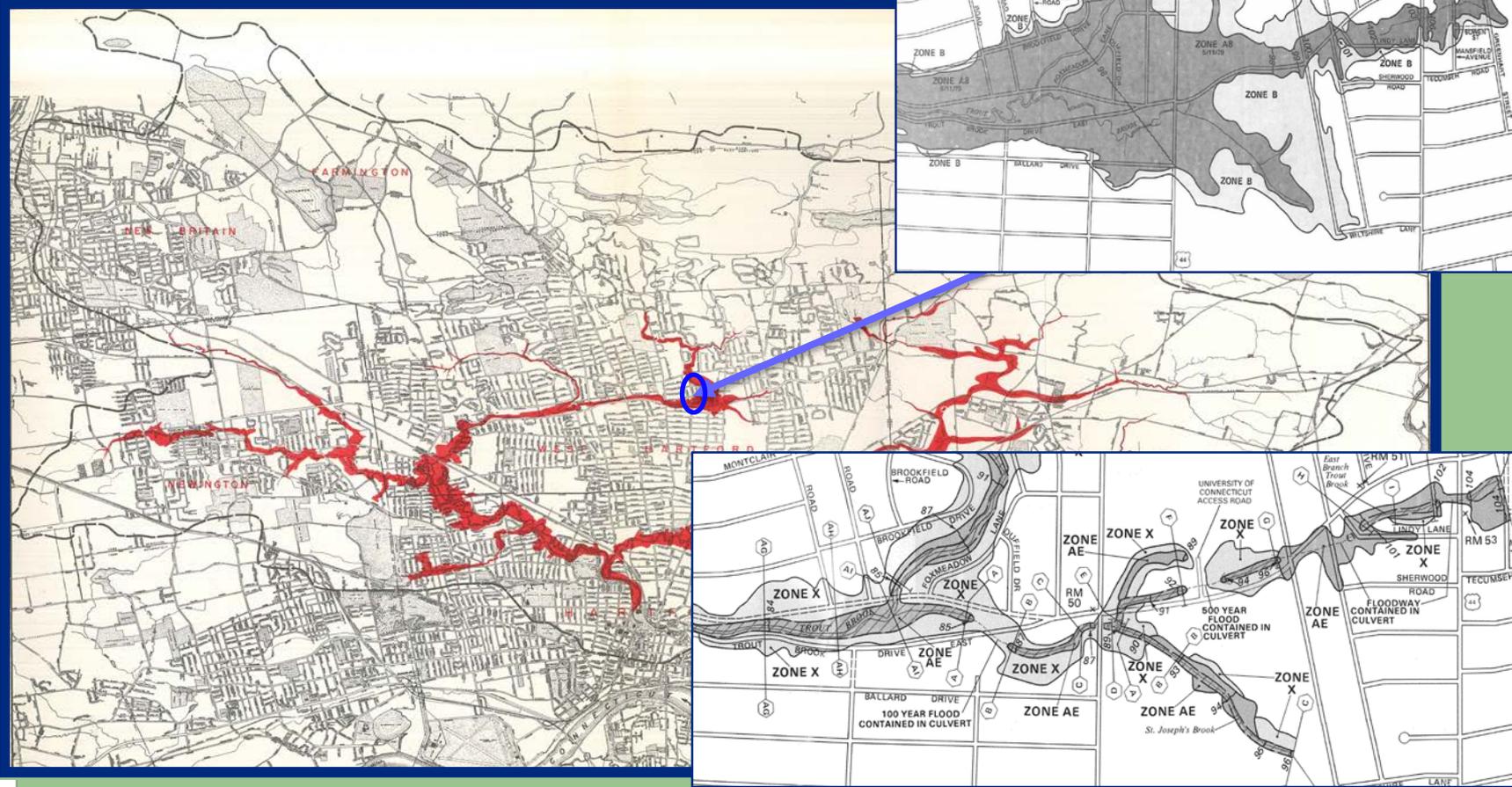
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For the State of CT

- Loss of future rehabilitation funding for all structures in the Park River Basin Watershed
- Loss of future watershed planning funding and rehabilitation funding for future projects and all 28 flood control projects in the state



Areas Impacted by 1955 Flood



Project development timeline



Connecticut Department of Energy and Environmental Protection



- **April 27, 2012**
State Bond Commission funding for design and permitting of necessary repairs and maintenance
- **July 25, 2014**
State Bond Commission funding of \$4.5M for construction

- **October 23, 2014**
Notice of Tentative Determination to Issue a Dam Safety Permit published
- **December 19, 2014**
Dam Safety Permit Issued

- **June 11, 2015**
Bid advertisement

- **June 25, 2015**
Mandatory Pre-bid Meeting
- **July 30, 2015**
Bid opening. Paganelli Construction corporation selected

- **September 16, 2015**
Letter to local abutting residents and businesses regarding project status.

- **October 1, 2015**
Preconstruction meeting with contractor, CTDEEP and towns



Coordination Meetings

- 11/19/13 – Meeting with Town of West Hartford to review draft plans
- 06/25/14 – Meeting with Hartford, Newington and West Hartford to discuss semi-final plans
- 11/17/14 - Meeting with town of Newington to discuss project and O&M agreements
- 06/25/15 Pre-bid meeting
- 07/17/15 – Meeting with West Hartford to discuss project access points
- 10/01/15 – Pre-construction meeting in CTDEEP offices, Hartford, West Hartford and Newington town officials in attendance
- Field Meetings:
 - 10/19/15 Weekly job meeting, Town Engineer and Director of Public Works present
 - 10/26/15 Weekly job meeting, Town Engineer and Director of Community Services present
- Town and contractor have walked the clearing limits as well as access points

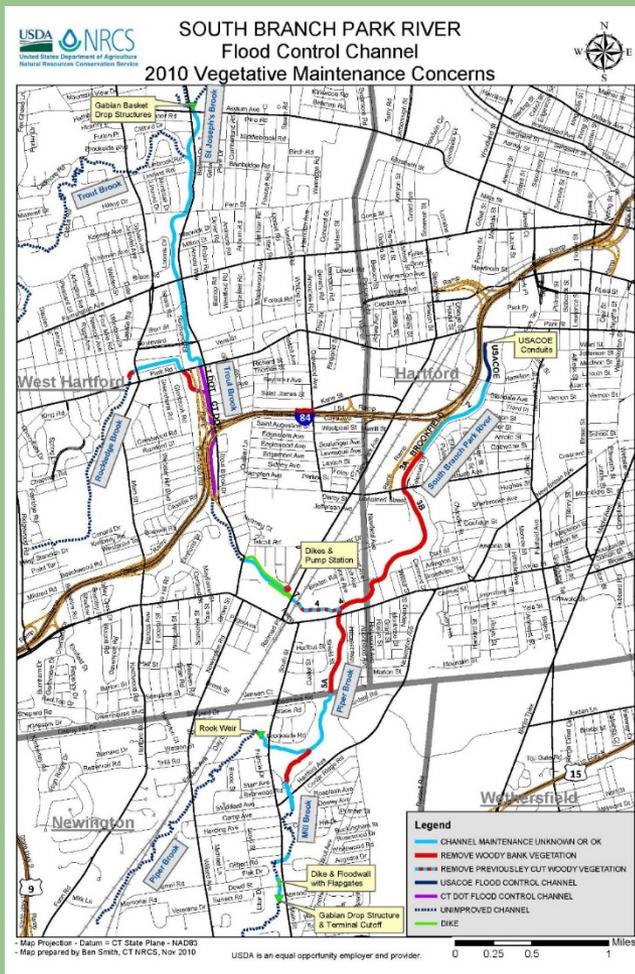


What happens moving forward?



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Project Scale



Area cleared in Linbrook/Linnard area = 1.5 acres

Overall project:

Vegetation Removal Type I – 15.2 acres

Vegetation Removal Type II – 36.2 acres

26 Construction entrances/exits

Sediment removal:

16 dewatering/stockpile sites

Unregulated material – 19,100 cu yds

Regulated material – 5,000 cu yds

Total material: 25,000 cu yds



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Work to be completed

- Dredging and sediment dewatering
- Trees and vegetation removed from flood channel
- Concrete flood walls repaired
- Newington and Hartford sections similar work
- Access site restoration



Sediment issues and schedule

- Additional sediment testing due to neighborhood concerns
- Dredging originally scheduled to be complete by December 1st, dewatering to take approximately 1 month
- Hauling and disposal to take about 3 weeks



Sediment Concerns raised by residents

- Potential Contaminants?
 - Sampling performed previously at locations considered by Department as having potential for some level of contamination
 - There is no hazardous material being dredged as part of this project
 - Materials identified as regulated will be segregated and disposed of by the contractor in compliance with all appropriate laws and regulations
 - Due to concerns raised by residents, additional sampling has been performed and we are waiting for lab results



Sediment concerns (continued)

- Access/safety/oversight
 - Full time inspector
 - Will inspect stockpile areas, trucks and routes, quantities and sampling results
 - Hauling to occur during winter months to minimize any exposure to noise or odors
 - Agreed that trucking will occur between 9 am and 3 pm



Environmental Protection Plan

- An Environmental Protection Plan (EPP) has been submitted and covers:
 - Soil handling (including all access, staging and stockpile locations)
 - Traffic control including temporary signage
 - Street sweeping
 - Erosion and Sedimentation Controls
- EPP is posted on our website

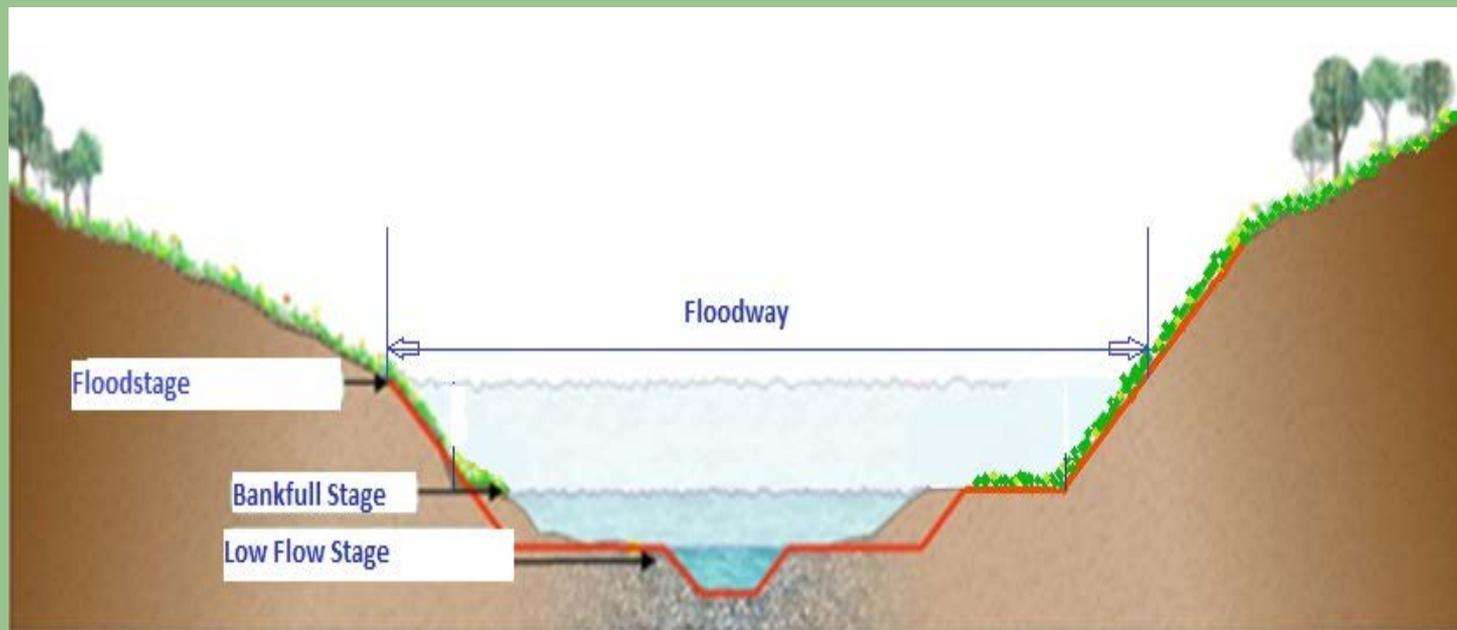


Tree/vegetation removal

- Linbrook/Linnard neighborhood – tree removal complete, stumping and grading to take approximately 1 week
- Downstream areas – tree clearing from Memorial south to town lines
 - Trees being marked
 - Trees must be removed within the floodway
- Herbicide application
 - Only EPA approved herbicides have been used, by a licensed applicator, following approved procedures, including posting signage
 - Additional spraying to occur following remainder of tree and vegetation removal to inhibit spread of invasive plants and growth within flood channel
- Licensed arborist
 - A licensed arborist is on call according to the terms of the contract and is available at any time the DEEP or resident inspector deems necessary
- Treed “buffer” areas
 - We cannot leave a 20 foot buffer along all private property lines bordering state and town property – in many areas that would involve leaving trees in the flood way



Keeping the floodway clear



Economic Benefit of Tree Clearing?

- The contractor is not making additional money by clearing additional trees
- No trees are being cleared without approval of CTDEEP
- Trees removed in areas designated as Type II vegetation are still at the direction and approval of CTDEEP



Flood wall repair issues/ schedule

- Saw-cutting and Demolition of New Park Avenue flood walls moved from December 2015 to March 2016. Reconstruction to follow in April 2016.
- Concrete demo and joint seal replacement of Dowd Street flood wall to occur concurrently with Dowd Street Bridge flap gate cleaning and repair in April 2016.



What will it look like?



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Sediment dewatering/storage



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Tree removal



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What will we do to restore sites?



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Within and directly adjacent to channel

- No trees or woody vegetation is allowed within the flood way. We cannot replant in these areas
 - We cannot maintain a treed buffer all along the floodway due to limited property constraints
- Sediment will be removed once it is dry enough to be hauled



Access and staging areas

- CTDEEP will restore sites to the previously existing conditions as much as possible, except where that may hamper future maintenance
- Linbrook/Linnard Ave – CTDEEP will develop a replanting plan and provide it to town of West Hartford and residents for comment. Target date of meeting to review plan: December 2015. Planting to occur Spring 2016.
- Southwood Drive – CTDEEP to restore open field area including additional drainage and grading.



Where Can You Find Information

- Website info: www.ct.gov/deep/sbpr
- New additions
 - Copy of contract
 - Copy of updated plans
 - Environmental Protection Plan
- Where we will post regular job meeting minutes and additional information





- CTDEEP Contacts:

- Dan Biron
- Jennifer Perry
- Cheryl Chase
- Betsey Wingfield

Website info: www.ct.gov/deep/sbpr



Break Out Sessions

- Neighborhood 1 – North
 - Asylum Avenue to Farmington Avenue
- Neighborhood 2 – Central
 - Memorial Road to South Quaker Lane
- Neighborhood 3 – South
 - South Quaker Lane to Southwood Drive

