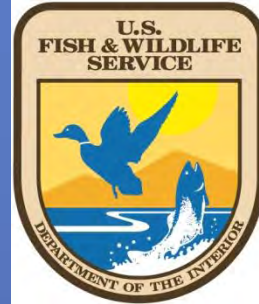


Natural Resource Damage Assessment and Restoration

Old Southington Landfill
and the
Solvents Recovery Service Site



March 21, 2012
Molly Sperduto
U.S. Fish and Wildlife Service

Presentation Topics

- Background – what is NRDAR?
- NRDAR Settlement in Southington
- Restoration Planning Process
- Potential Restoration Projects
- Next Steps (including opportunities for public involvement)

Natural Resource Damage Assessment and Restoration (NRDAR)

- When there is a release of oil or hazardous substances or materials, CERCLA and OPA authorize trustees to :
 - Assess injuries to natural resources
 - Seek monetary damages from responsible parties to compensate for impacts
 - Develop & implement plans to restore, replace, or acquire the equivalent of injured natural resources



Oiled marsh, Portland, ME. MEIFWD

Who are the Trustees?

Federal and state governments appointed to serve as Trustees of natural resources on behalf of the public

For the SRS/Old Southington Sites:

- State of Connecticut
 - Department of Energy and Environmental Protection
- U.S. Department of the Interior
 - U.S. Fish and Wildlife Service

Separate Process Addresses Site Cleanup

- EPA and State assess contamination and implement remedial actions to clean up sites



Remediation of Solvents Recovery Service Superfund Site, de maximus, inc.

NRDAR – Southington, CT



Solvents Recovery Service Superfund Site



Old Southington Landfill Superfund Site

Solvents Recovery Service Superfund Site

Injuries: 1.8 acres of wetland habitat, including riparian forested wetlands and part of the Quinnipiac River were contaminated with high levels of VOCs and metals or impacted during remedial actions

•**Settlement:** \$289,840



Site in 1980, de maximus, inc.



On-site wetland, USFWS

Old Southington Landfill

Injuries:

- 0.6 acres of shoreline habitat lost during landfill capping
- 4.4 acres of Black Pond contaminated with elevated levels of mercury, cadmium and other metals

Settlement: \$537,000



Restoration Planning Process

Trustees are required to:

Develop and implement plans to *restore, replace, or acquire the equivalent of injured natural resources*



Quinnipiac River, USFWS

Restoration Planning Process, continued

1. Identify potential restoration projects
2. Hold public meeting – solicit additional restoration ideas
3. Evaluate restoration alternatives
4. Prepare Draft Restoration Plan/Environmental Assessment (RP/EA)
5. Solicit public comment
6. Issue Final RP/EA
7. Implement restoration projects
8. Monitor project performance

Restoration Project Evaluation Criteria

Factors considered:

- **Nexus to the impacted natural resources**
- Proximity to the injured resources
- Cost-effectiveness
- Technical feasibility
- Magnitude of benefits
- Sustainability
- Implementation oriented
- Avoidance of adverse impacts to other natural resources
- Consistent with remedial work
- Consistent with relevant federal, state or local laws
- Complimentary to community goals
- Effects on public health and safety
- Leveraging additional resources

Restoration Projects That Don't Qualify

- Activities that are “otherwise required” by law or permit
 - For example, control of stormwater, combined sewer overflows (CSOs)
- Projects that do not restore the same or similar resources that were injured
 - For example, creating recreational opportunities (trails, public boating access)

Preferred Restoration Projects

- Projects that restore, replace or acquire the same or similar natural resources:
 - Habitats:
 - emergent or forested wetlands
 - open water or riverine areas
 - Species:
 - migratory birds – waterfowl, wading birds, songbirds
 - fish, reptiles, amphibians and other aquatic organisms

Habitat Projects – Wetland Restoration

- Remove fill or debris
- Remove invasive species and restore native species



Primus Property, Southington, USFWS



Primus Property, Southington, USFWS



Common reed, Southington, USFWS

Habitat Projects – Wetland Restoration

- Potential Benefits
 - Increase quality and quantity of habitat
 - Increase species diversity
 - Increase flood storage



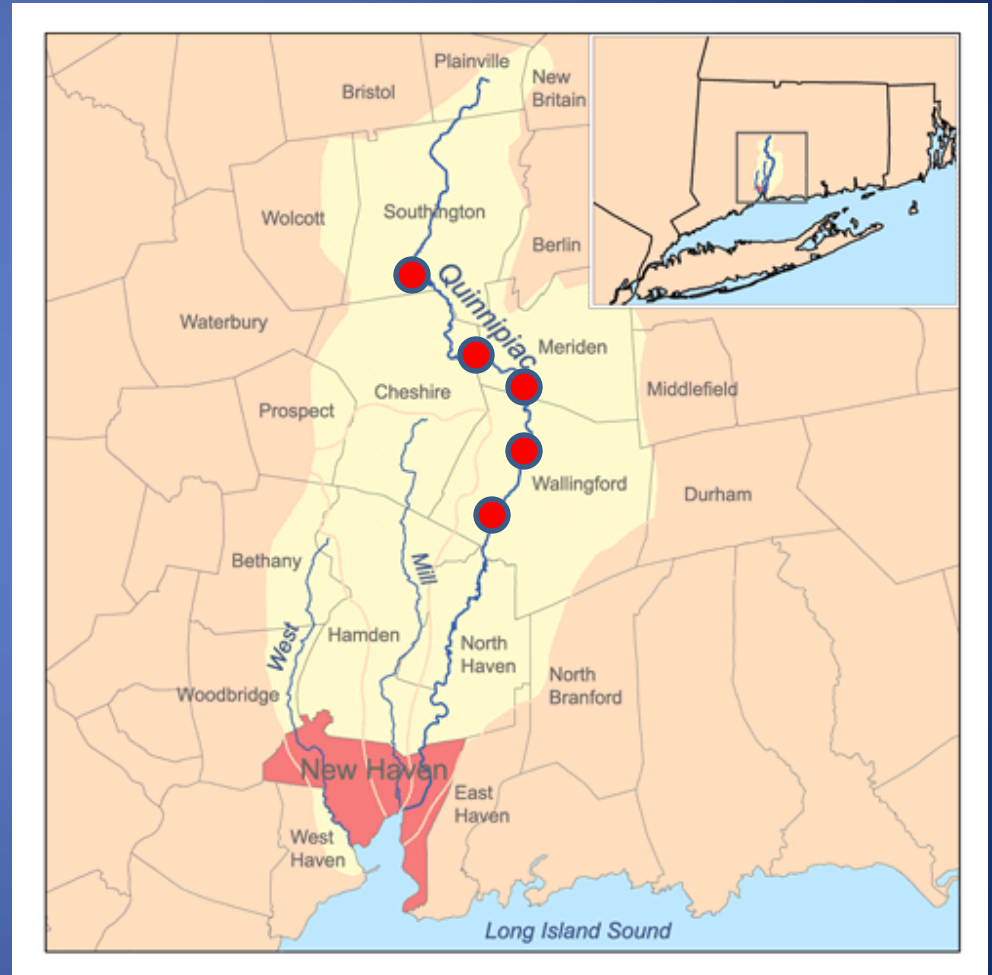
Lonsdale Drive-In, pre-restoration, USFWS



Lonsdale Drive-In, post-restoration, USACOE

Habitat Projects – River Restoration

- Five barriers in the Quinnipiac River
 - Wallace Dam
 - Britannia Spoon
 - Hanover Dam
 - Carpenters Dam
 - Clarks Brothers Dam

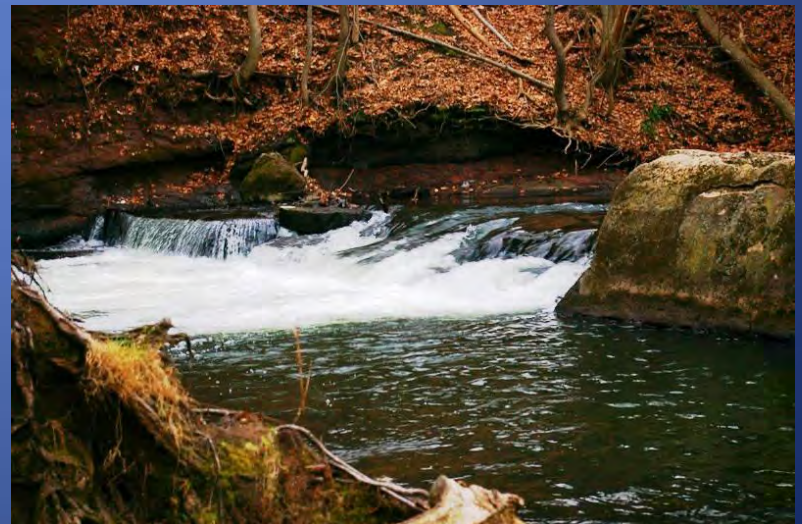


Habitat Projects – River Restoration

- Two barriers that block fish passage:
 - Clarks Brothers Dam
 - Carpenters Dam



Clarks Brothers Dam, Southington, USFWS



Carpenters Dam, Meriden, USFWS

Habitat Projects – River Restoration

- Benefits from restoring the Quinnipiac River
 - Increase water quality
 - Help increase oxygen content and decrease water temperature
 - Open river to resident and diadromous fish
 - Help alleviate flooding
 - Remove safety hazards to boaters



Quinnipiac River, Southington, USFWS



Brook trout, USFWS

Habitat Projects – Wetland Protection

- Protect Wetlands
 - Acquire habitat adjacent to and including forested wetlands, marshes, ponds and rivers



Forested wetland, Southington, USFWS



Eightmile River, Southington, USFWS



Quinnipiac River, Southington, USFWS

Habitat Projects – Wetland Protection

- Benefits from protecting wetlands
 - Prevent future degradation and/or destruction of wetlands, marshes, ponds and rivers
 - Benefits numerous species, in addition to those that were impacted
 - Benefit in perpetuity



Subdivision construction, USFWS



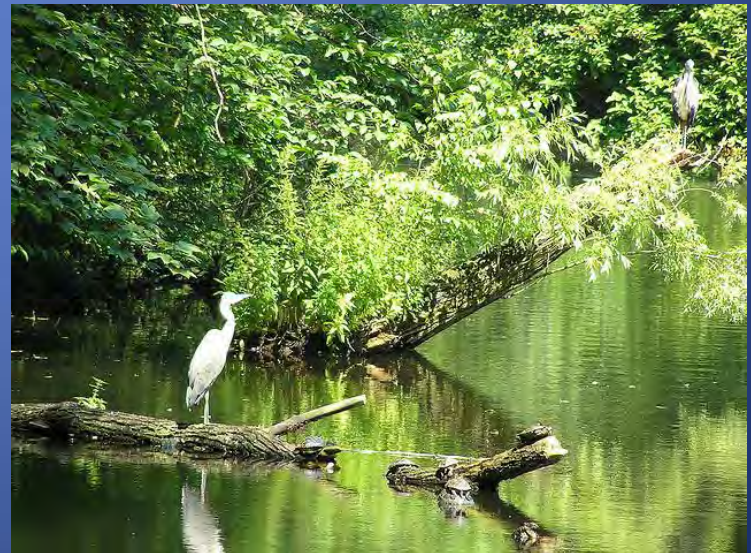
Quinnipiac River, Southington, USFWS

Species-Focused Projects - Birds

- Protect migratory bird nesting and wintering habitat
- Neotropical migrant birds depend on both breeding and wintering habitats



Yellow warbler, USFWS

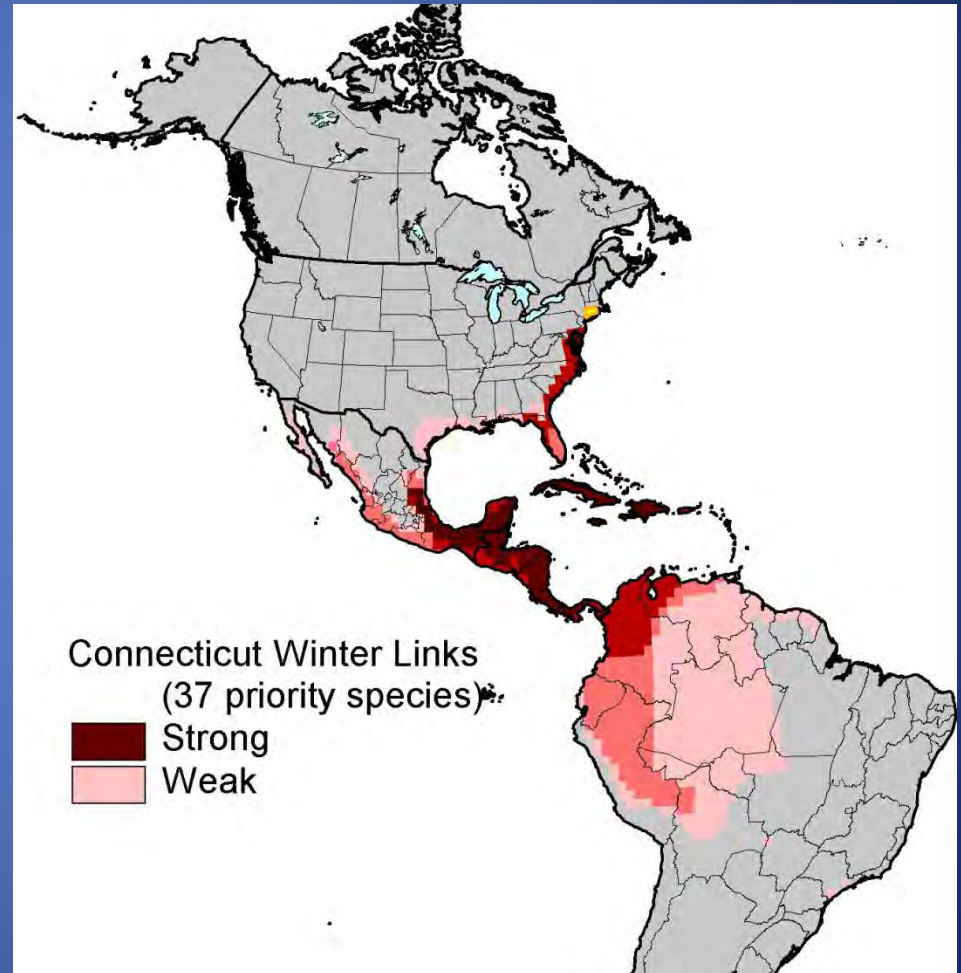


Great blue heron, USFWS

Species-Focused Projects - Birds

Protecting wintering habitat is key:

- Spend more time on their wintering vs. breeding areas
- Site fidelity is high for both breeding and wintering areas
- Declines in songbird numbers continue
- Limited opportunities to restore breeding habitats



Species-Focused Projects - Birds

- Benefits from protecting migratory bird nesting and wintering habitat:
 - Increases survival and productivity of bird populations



Common yellowthroat, USFWS



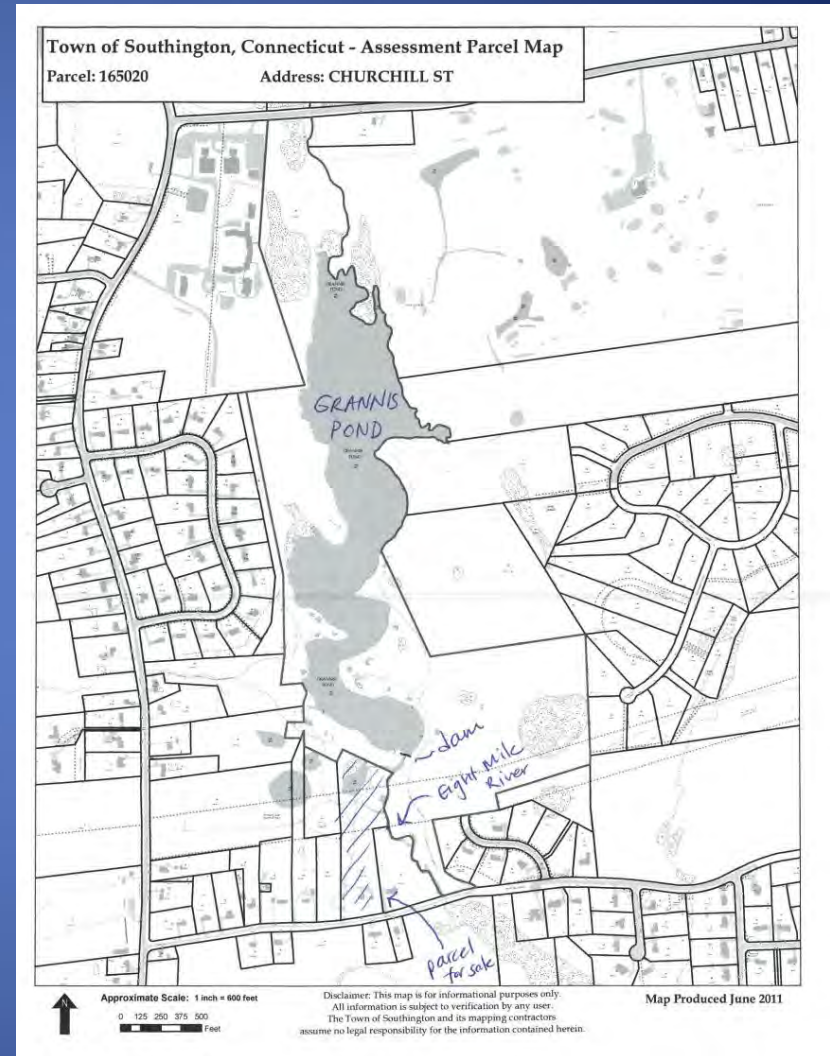
Great blue heron, USFWS

Species-Focused Projects – Fish

- Eightmile River fisheries restoration
 - Create passage for fish at outlet for Grannis Pond



Outlet from Grannis Pond, USFWS



Species-Focused Projects – Fish

- Benefits of Eightmile River fisheries restoration:
 - Provides spawning habitat for diadromous fish (once fish pass up Quinnipiac River)
 - River herring provide food for birds, fish, mammals, reptiles and other wildlife

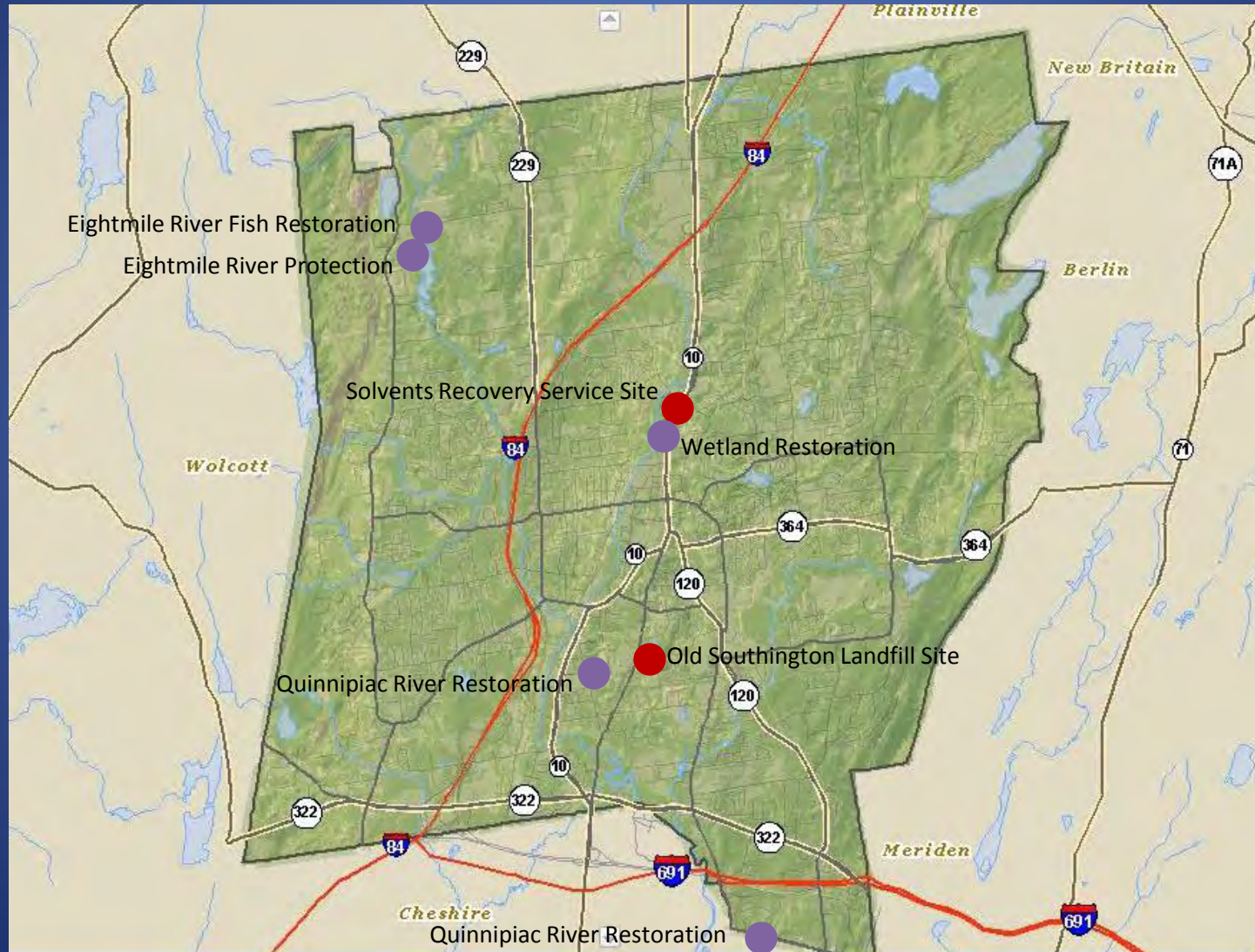


Great blue heron with alewife, Tim Watts



Alewife, Tim Watts

Locations of Potential Projects



Next Steps

- Gather restoration project ideas from the public
 - Ideas need to be submitted by May 18, 2012
 - Utilize NRDAR Restoration Project Form
- Prepare draft Restoration Plan/Environmental Assessment (RP/EA)
- Release draft RP/EA for 30-day public comment period
 - Available in Southington Public Library
 - Available on USFWS website <http://www.fws.gov>
- Incorporate comments and suggestions and issue final RP/EA
- Implement restoration projects
- Monitor restoration performance

Questions/Contact Information



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