

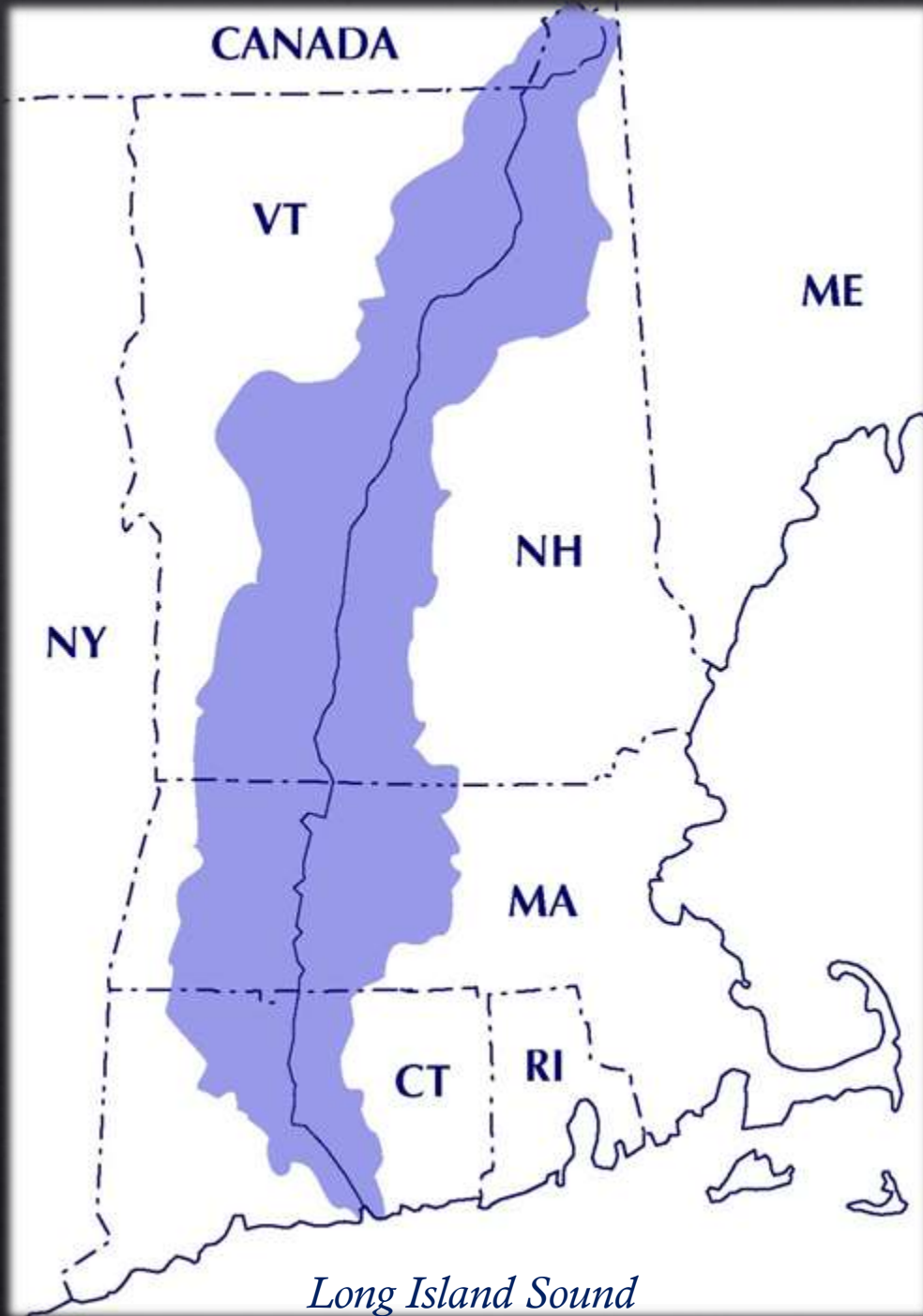
**The Power of Partnerships**  
**Reconnecting Rivers in New England**

*Ron Rhodes, Director of Restoration Programs*  
*Connecticut River Conservancy*  
*Pomfret, VT*



*Clean water. Healthy habitat. Thriving communities.*

**Connecticut River**  
**Conservancy**



*410 miles*

*11,200 square miles*

*~ 3 million people*

*70% of freshwater to  
Long Island Sound*

*70 years of good  
work worth doing*

# Drivers of Restoration

*Nutrient Loading - Floods - Loss of Habitats*



# Floodplain Function loss due to 200+ years of:



*berming*

*draining*

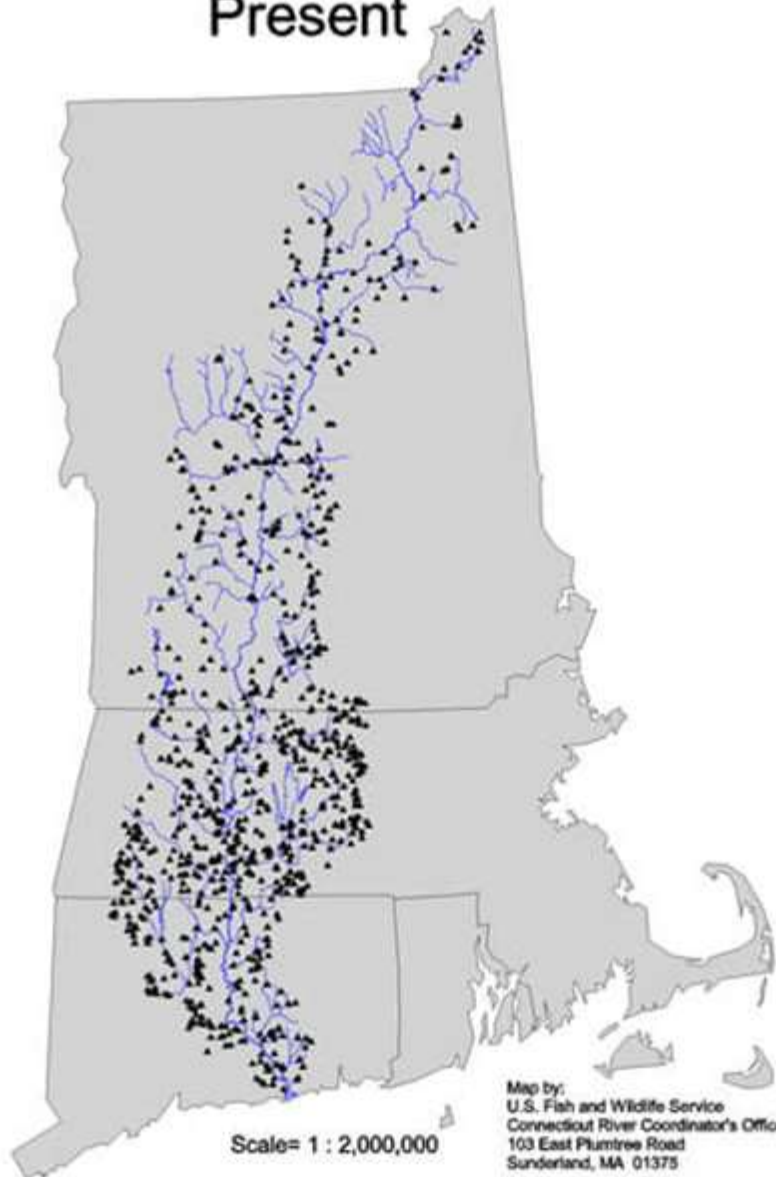
*dredging*

*channeling*

*damming*

**~ 50% of Vermont streams historically straightened**

## Dams Constructed in the Connecticut River Watershed to the Present



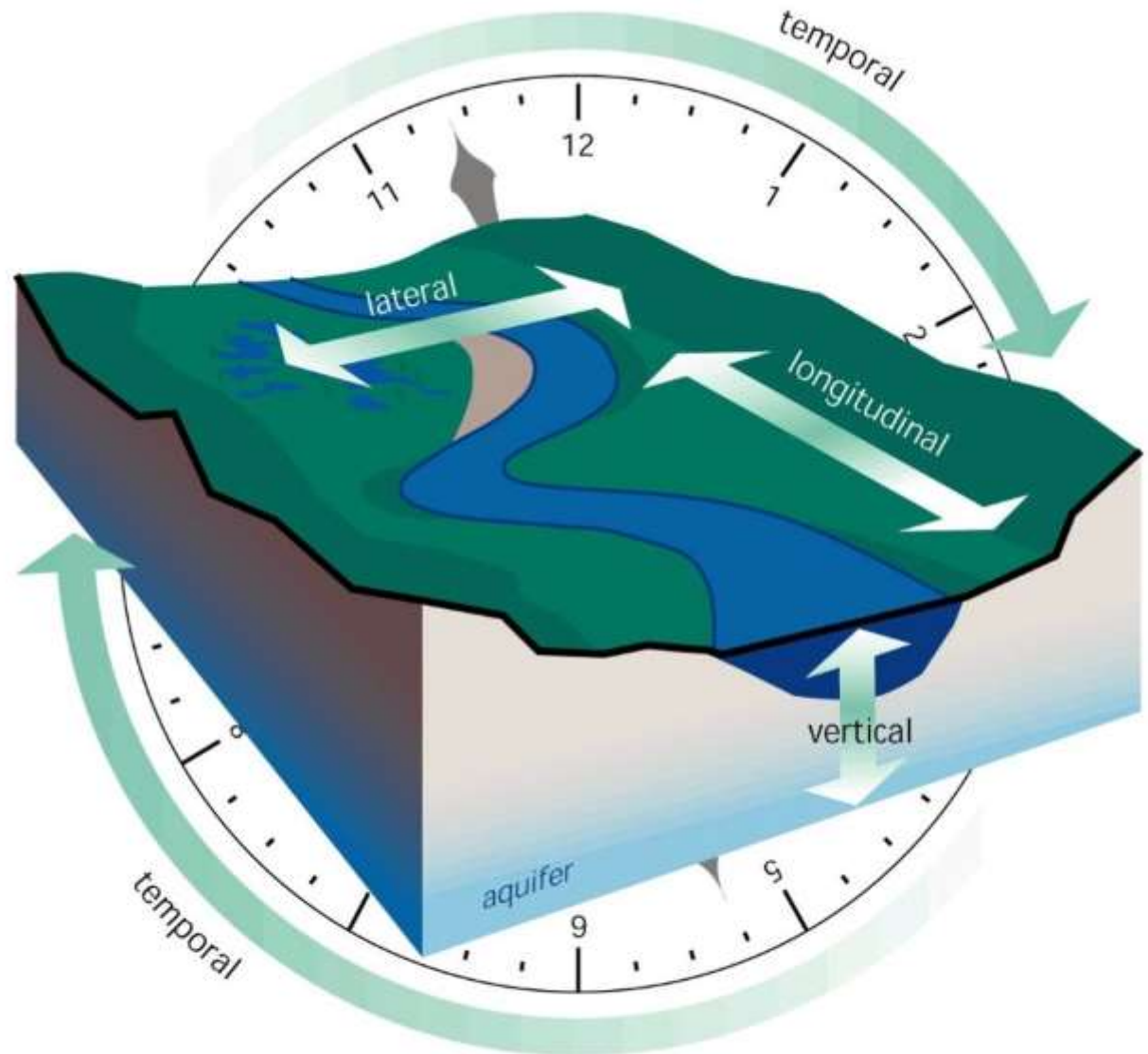
Map by:  
U.S. Fish and Wildlife Service  
Connecticut River Coordinator's Office  
103 East Plumtree Road  
Sunderland, MA 01375  
December 1996



## Connectivity (or lack of)

- *65 major dams  
(hydro, flood control,  
water supply etc.)*
- *~ 1,000 small dams  
in use*
- *~ 3,000 dams no  
longer serving a  
useful purpose*
- *~ 44,000 road &  
stream crossings*

**Our restoration strategies address the four dimensions of stream corridors by restoring lateral, longitudinal, vertical and temporal connectivity, thereby improving floodplain function, habitat, and resiliency through the power of partnerships.**



Dimensions of the stream corridor. A four-dimensional framework serves as a good starting point for examining stream corridors..

In *Stream Corridor Restoration: Principles, Processes, and Practices*, 10/98.

Interagency Stream Restoration Working Group (FISRWG)(15 Federal agencies of the US).

# Restoration Strategies

## *Lateral & Vertical Connectivity*

Reforest riparian areas & floodplains  
Bench and bio-stabilize streambanks

Remove berms & restore wetlands  
Conserve corridors & floodplains



## The Power of Partnerships – *Remove berms & restore wetlands*



CRC, Land Trust, Neighbors, CT DEEP, Town, Engineer, Contractor, Funders



# The Power of Partnerships - *Reforest riparian areas & floodplains*



Private & public  
landowners

Private donors &  
Grant funders

Other NGO's



Local nurseries

Contractors/  
Planting crews

Volunteers

## The Power of Partnerships - *Bench and bio stabilize streambanks*



CRC, Farmer/landowner, Land Trusts,  
USDA NRCS, USACE, NH DES, Town,  
Neighbors, Engineer, Contractors,  
Volunteers, Funders

# Restoration Strategies

## *Longitudinal and Temporal Connectivity*

Remove derelict dams

Restore Flows

Upsize/replace culverts

Install grade controls/roughness

Slow and store stormwater



# The Power of Partnerships - *Remove derelict dams*



CRC  
PVL  
USFWS  
USACE  
VT DEC  
VT F&W  
Town  
Community  
Engineers  
Contractors  
AR/TNC  
TU  
Volunteers  
Funders

# The Power of Partnerships – *Upsize/replace culverts*



CRC, Towns, Trout Unlimited,  
Neighbors, USFS, USACE, NH DES,  
Engineers, Contractors, Funders

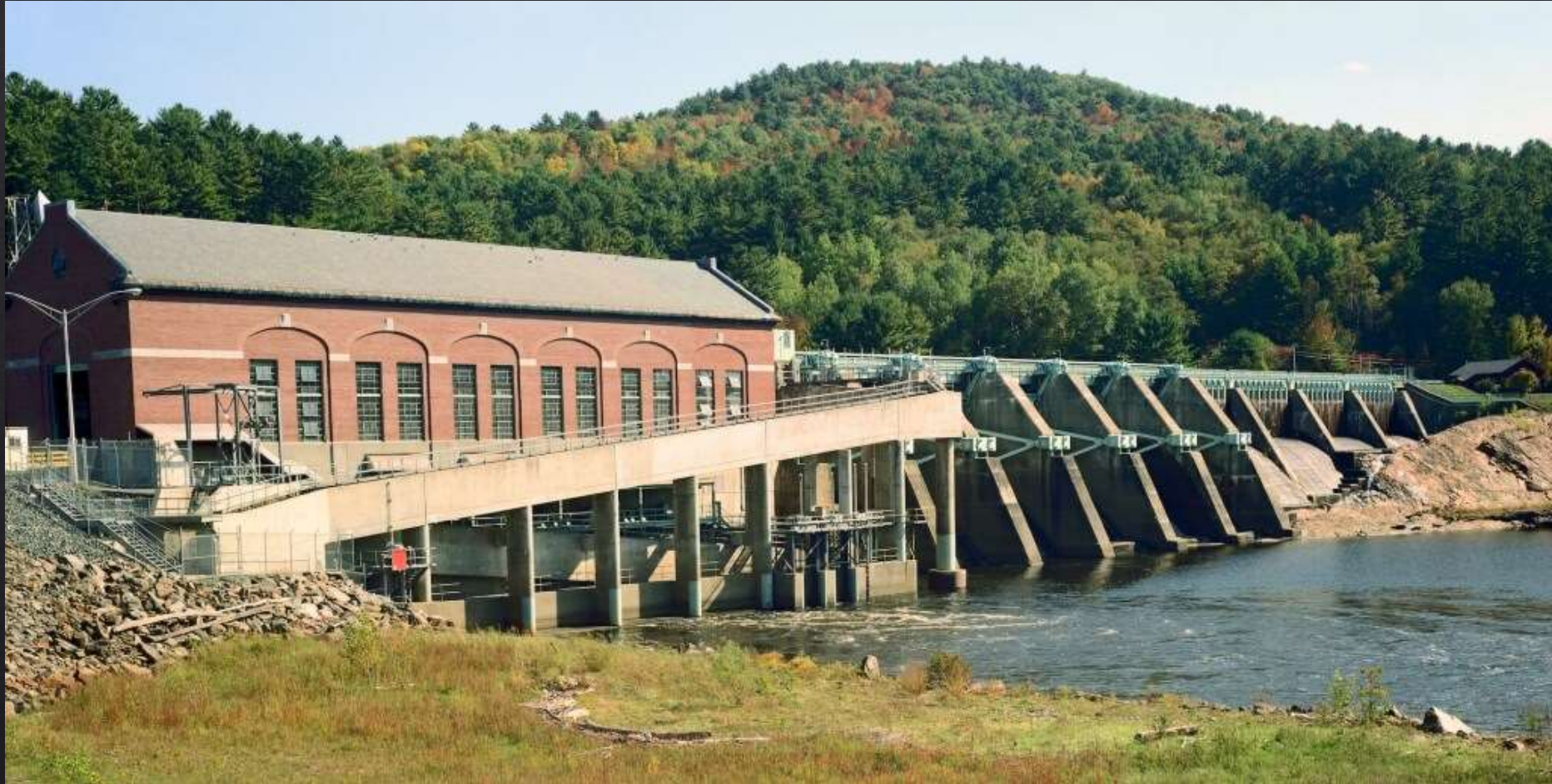
## The Power of Partnerships - *Install grade controls/roughness* (SWA)



CRC, Landowners, TNC,  
USDA NRCS, VT F&W,  
USFWS, Contractors,  
Volunteers, Funders



# The Power of Partnerships – *Restore Flows*



CRC, FERC, Hydro dam owners, State Agencies, USFWS, NOAA, TNC, American Whitewater, Towns, Public



Credit: Kiley Briggs



תודה  
Dankie Gracias  
Спасибо شکرًا  
Merci Takk  
Köszönjük Terima kasih  
Grazie Dziękujemy Děkojame  
Ďakujeme Vielen Dank Paldies  
Kiitos Täname teid 谢谢  
**Thank You** Tak  
感謝您 Obrigado Teşekkür Ederiz  
Σας Ευχαριστούμ 감사합니다  
ขอบคุณ  
Bedankt Děkujeme vám  
ありがとうございます  
Tack

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**Connecticut River  
Conservancy**