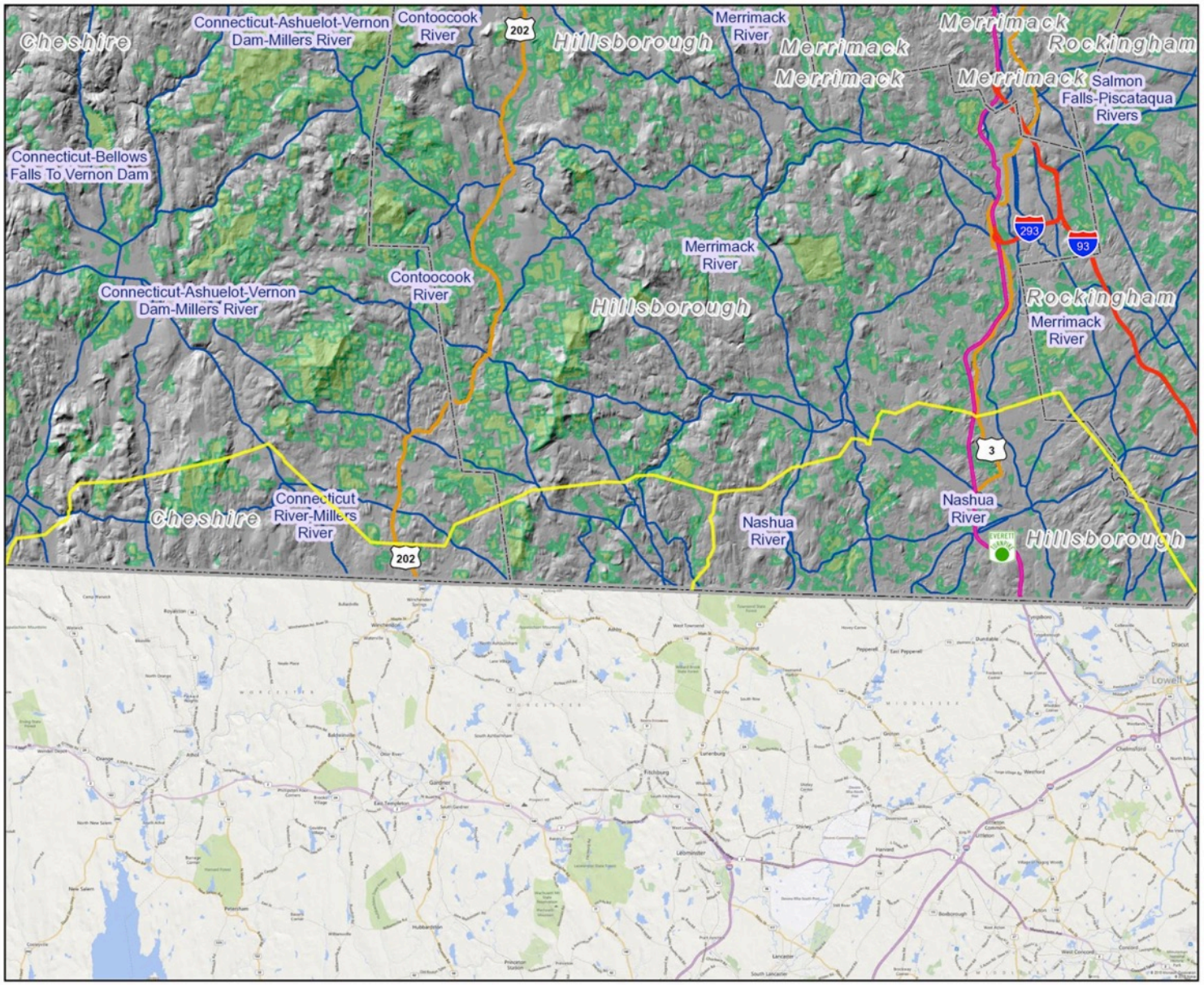
Addressing Environmental Impacts Of the Kinder Morgan Pipeline (TGP)

Dr. Rick Van de Poll, CWS #110
Ecosystem Management Consultants

Basic Facts – a Review

- 75.58 miles in total length in NH (77.69 miles listed in ER#1)
  - 61.42 miles "co-located" next to existing utility ROW corridor
  - 9.08 miles of new "greenfield" disturbance along main corridor
  - Most (5 miles) of new disturbance in Winchester
  - 5.08 miles of greenfield disturbance in Mason for lateral
- 17 towns directly affected
  - 4 other towns within ½ mile
- 150-foot wide swath needed (100-foot claimed)
- 1374.2 acres minimum direct impact (1138.2 listed)

Map by NH GRANIT



Legend

- State
- County
- Interstates
- Turnpikes
- US Routes
- State Routes
- CL: Solid

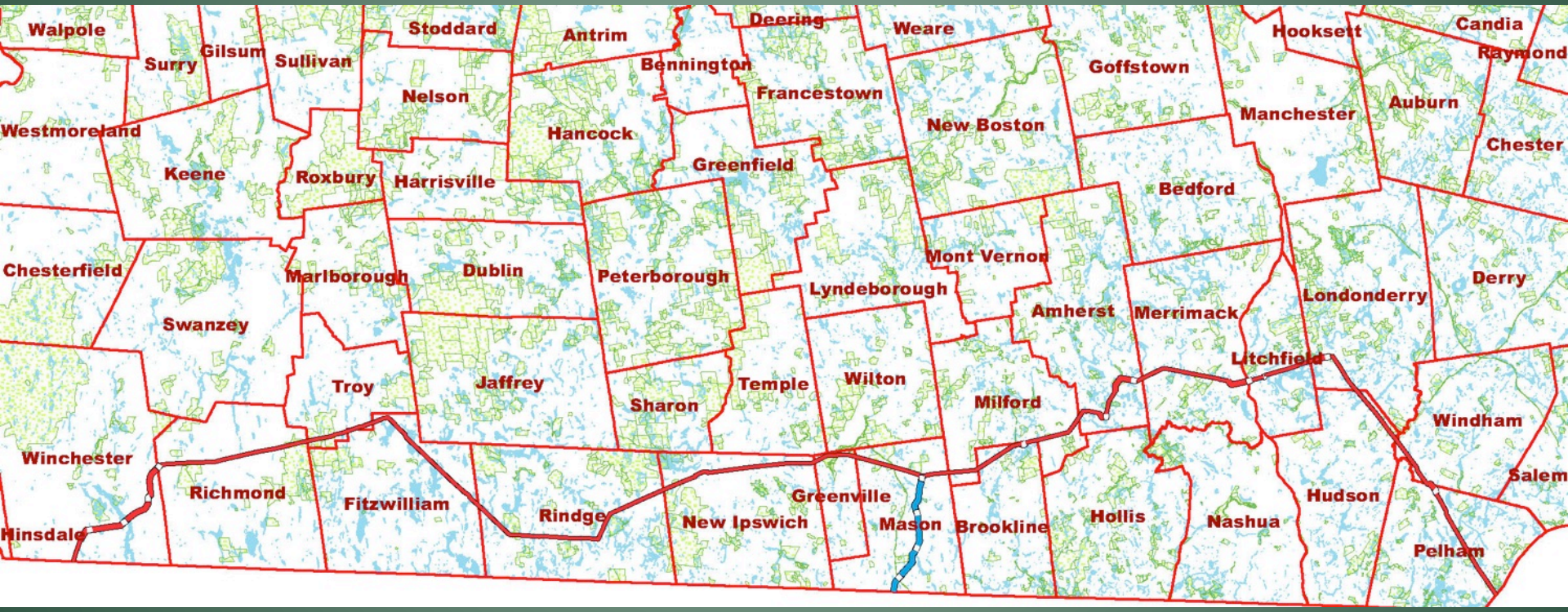
Map Scale
1: 400,047

Notes

Proposed TGP Pipeline Route

Principal Route (in red)

showing Mason lateral in blue



Basic Facts – Conservation Lands

- 34 properties intersected (as of June 2013 NH GRANIT)
  - 5.91 miles of intersection
  - 107.5 acres of direct impact
  - + 3.79 miles of indirect impacts (immediately adjacent)
    - 2.64 miles to Rhododendron State Park
    - .62 miles to NEFF Moore easement
    - .10 miles to Litchfield town land
    - .43 miles Town of Pelham Peabody Town Forest
- Organizations Affected (west to east)
  - Yale University, Monadnock Conservancy, State of NH (DRED), New England Forestry Foundation, State of NH (F&G), NHDOT, Society for the Protection of NH Forests, Town of Mason, NHOEP, Town of Milford, NH Audubon Society, Town of Amherst, Merrimack Village District, Town of Londonderry, Town of Hudson, Town of Windham, Town of Pelham

Basic Facts – Private Lands

- 721 properties described as being directly affected
- 841 property owners notified (within 400 feet)
- 99% refused on-the-ground surveys
- Estimated 69.7 miles or 1266 acres of direct impact
- Compressor station "TBD" – Mason? New Ipswich?
- Meter Station proposed in West Nashua
- All lands proposed to be taken by Eminent Domain
- Unclear mitigation proposed for affect to land values

In case you were wondering what the industry says about land values….

- "It was determined that there is no significant impact on the sales price of properties located along natural gas pipelines in the areas of study. It was further determined that neither the size of a pipeline (diameter) nor the product carried by a pipeline has any significant impact on sales price."

http://www.ingaa.org/

Pipeline Construction Process

[From the PA Cooperative Extension Office]

- Acquiring the right of way (ROW).
- Planning route, surveying.
- Permitting.
- ROW is cleared.
- Topsoil removed, trench dug.
- 'Stringing Pipe'
- Pipe is welded and contoured.
- Pipe Lowered into trench.
- Pipe buried & site restored.

Basic Facts – Construction Spec.s

- Pipeline size: 36 inch diameter (laterals 12-inch)
- Normal construction procedures followed (.e. bury pipe with 36” soil or 24” consolidated rock
- Steep slope (> 15%) measures: TBD
- Trenchless methods to be employed: TBD
- Number of directional drilling crossings: TBD
- Number of blasting sites for shallow bedrock: TBD
- Number of alternative wetland crossings: TBD
- Plus:

“Additionally, information about the adjacent powerlines would be obtained from the applicable utility company including voltage levels, available fault current, and the location of transformers. Special software modeling techniques would then be applied to predict potential induced voltages and determine if mitigation measures are needed for safety and cathodic protection.”

Environmental Impacts

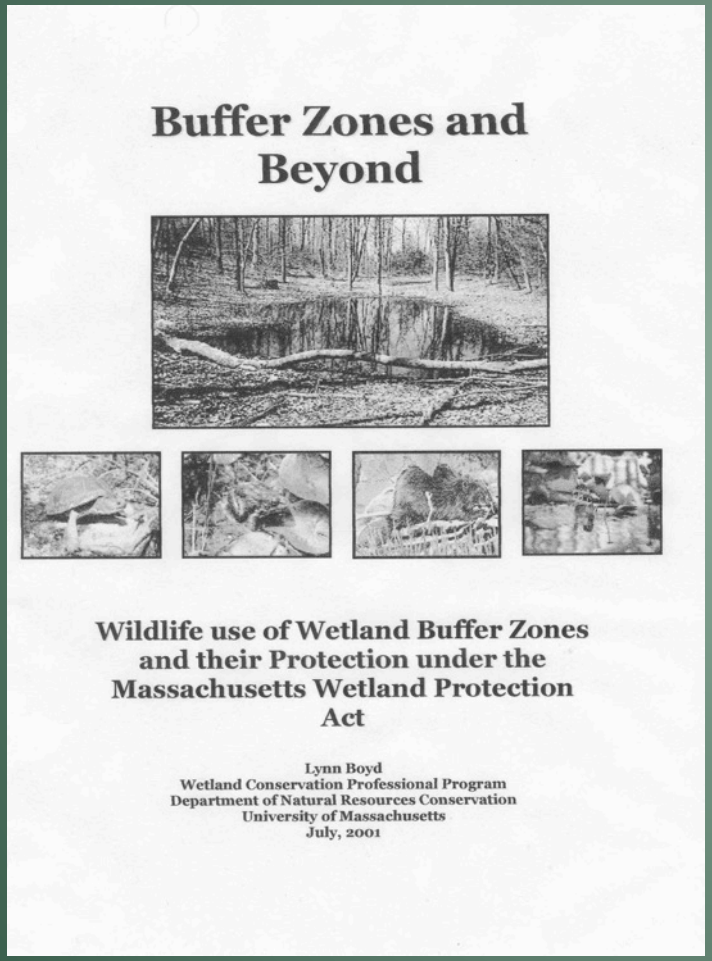
- Air
  - Construction phase
  - Post-construction phase
- **Water**
  - **Surface Waters**
    - **Lakes & ponds**
    - **Wetlands**
  - **Groundwater**
    - **Bedrock aquifer**
    - **Stratified drift aquifer**
- Land
  - Ecological integrity
  - Wildlife habitat
  - Forestry & agricultural use
  - Other land uses


STREAM BUFFER
ZONE

Wetland Impacts

- 82 NWI wetland crossings (likely twice that number)
  - Min length: 2 feet; max: 1436 feet; mean: 241 feet
  - Total length of crossings (NWI) = 3.75 miles
  - Total estimated actual length: 6.5 miles
- Longest crossing (Scott Pond) exceeds probable length of HDD capability
- Largest River Crossing (Souhegan) involves over 200-foot elevation loss/gain
- Greatest impact: shallow (surface) hydrology

Wetland Functions of Concern



- Ecological Integrity
- Wetland Dependent Wildlife Habitat
- Fish & Aquatic Life Support
- Groundwater Recharge
- Sediment Trapping
- Noteworthiness

In case you were wondering what FERC will say about environmental impacts….

Proposed Natural Gas Pipeline Wouldn't Have A Major Impact On The Environment, FERC Rules

BY KATIE VALENTINE POSTED ON OCTOBER 27, 2014 AT 9:03 AM

CREDIT: SHUTTERSTOCK

A new 124-mile natural gas pipeline could soon be running from Pennsylvania to New York, after a federal agency found the project won't have a major impact on the environment.

What Can Conservation Commissions (and Land Trusts) do?

1) Ensure that town-wide NRI's are up-to-date
2) Ensure that conservation lands are recorded at County Registry and submitted to NH GRANIT
3) Ensure that Baseline Documentation Reports (BDR's) are complete
4) Ensure that all rare & endangered species records are on file with NH Natural Heritage
5) Become familiar (again) with areas of greatest conservation concern and identify relative values
6) Identify and record all vernal pools within and near pipeline corridor (see http://nhwildlifesightings.unh.edu/)

What Can Conservation Commissions (and Land Trusts) do?

7) Document and map all archaeological and historical resources
8) Investigate existing easements and become familiar with restrictions & language
9) Check municipal equalized values against ARM Fund listing to calculate wetland values
10) Prepare potential impacts list to wetland functions & values and identify suitable mitigation sites

What Can Conservation Commissions (and Land Trusts) do?

11) Participate in KM open houses, public meetings, and FERC scoping meetings
12) Ensure adequate review of all KM Environmental Reports by third party consultant
13) Establish record by drafting letter to FERC regarding areas of greatest conservation concern
14) Identify alternatives and locations of significant environmental concern; submit these in writing relative to NEPA process
15) Consider filing an appeal as an intervenor