

# Pathway to Revitalization

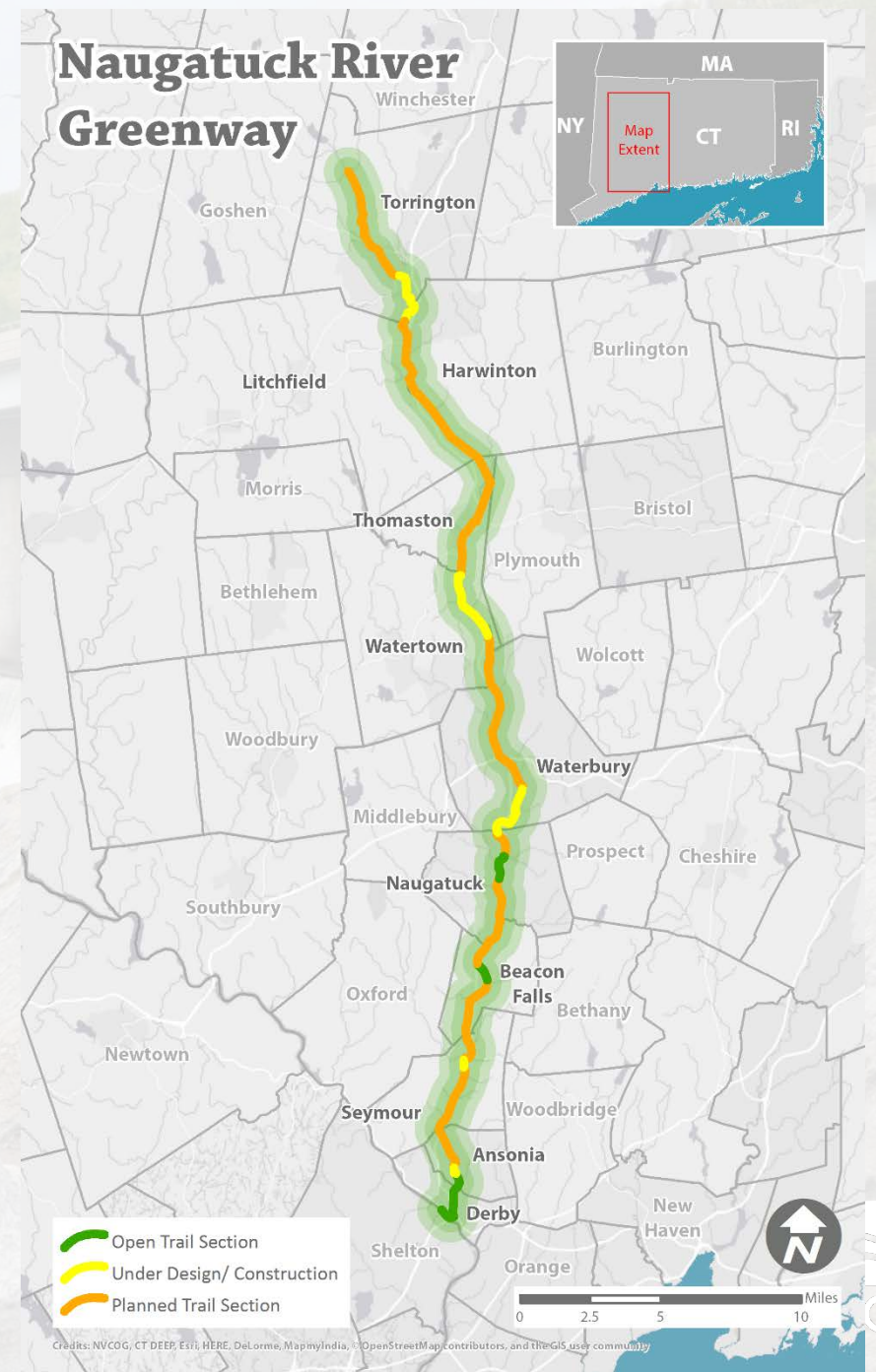
Economic Impacts of the Phased Completion of the Naugatuck River Greenway

October, 2017



# Naugatuck River Greenway

- Planned +44-mile multi-use trail along the Naugatuck River
- When complete will link 11 communities:
  - Torrington
  - Litchfield
  - Watertown
  - Naugatuck
  - Seymour
  - Derby
  - Harwinton
  - Thomaston
  - Waterbury
  - Beacon Falls
  - Ansonia
- Provide access & connection to the River
- Provide alternate transportation mode
- Progress guided & overseen by the Naugatuck River Greenway Steering Committee



# Naugatuck River Greenway

- About +5 miles completed to date:
  - Derby Greenway:  $\pm 2.2$  miles



# Naugatuck River Greenway

- About +5 miles completed to date:
  - Ansonia Riverwalk:  $\pm 0.5$  miles



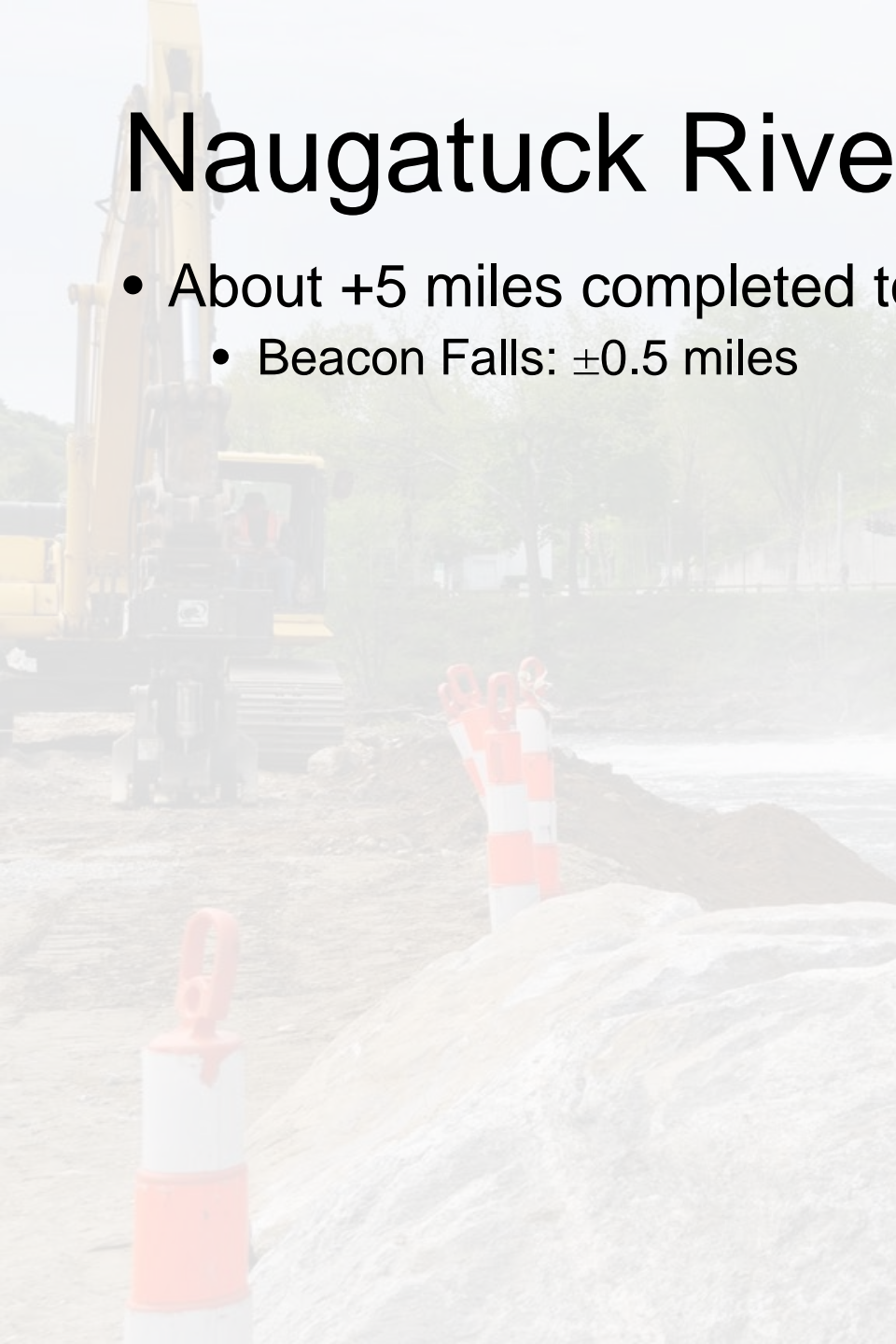
# Naugatuck River Greenway

- About +5 miles completed to date:
  - Seymour Linear Park:  $\pm$ 800 feet to Tingue Dam Park



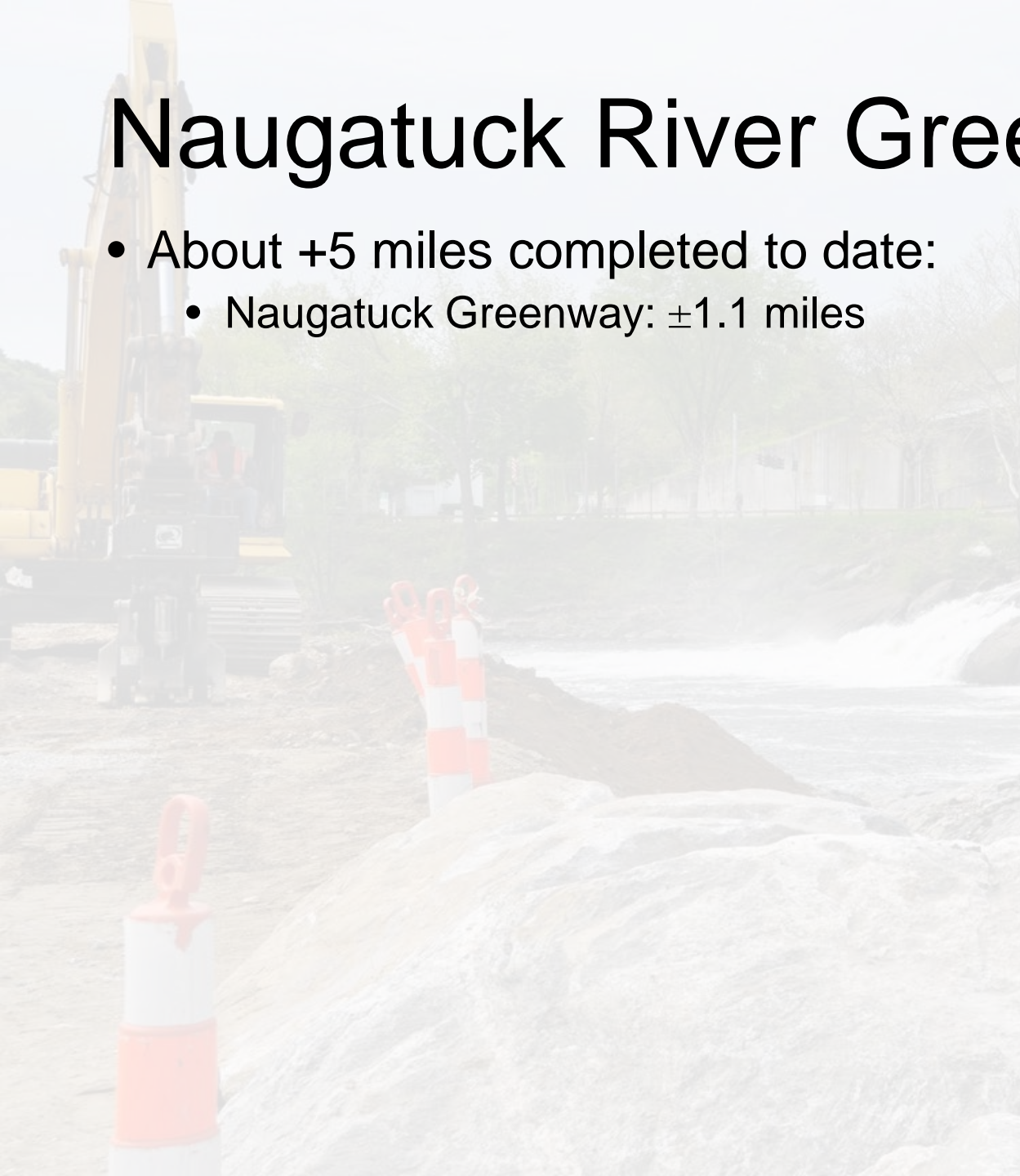
# Naugatuck River Greenway

- About +5 miles completed to date:
  - Beacon Falls:  $\pm 0.5$  miles



# Naugatuck River Greenway

- About +5 miles completed to date:
  - Naugatuck Greenway:  $\pm 1.1$  miles



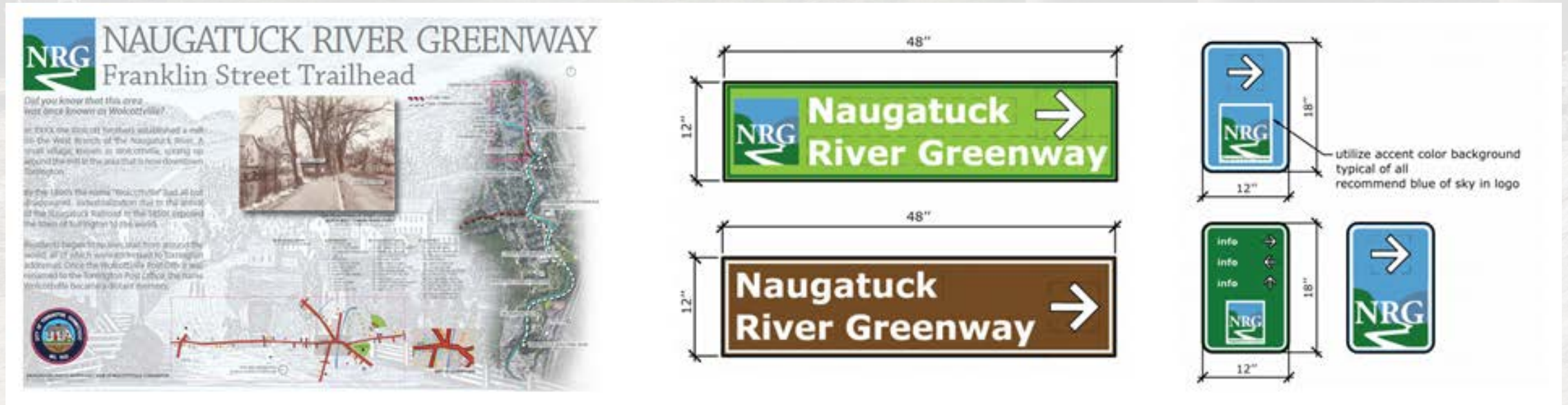
# Naugatuck River Greenway

- Work on Other Projects Underway:
  - Ansonia Riverwalk: start of construction of rail overpass
  - Ansonia Riverwalk: start of design of Sections 3 & 4
  - Naugatuck Greenway: LOTCIP application for Phase II
  - Waterbury: Phase 1 in design, construction expected Spring 2019
  - Watertown: design of critical elements & typical sections
  - Thomaston: design of short section near Branch Brook



# Naugatuck River Greenway

- Planning studies completed & underway:
  - NRG Uniform Signage and Wayfinding Design Manual:
    - Developed graphic standards – fonts/color palettes
    - Sign standards & templates – family of signs; installation, materials & details



# Naugatuck River Greenway

- Planning studies completed & underway:
  - Torrington to Thomaston routing study:
    - Determine preferred alignment
    - Approximate 10.9-mile corridor
    - City of Torrington & towns of Litchfield, Harwinton & Thomaston
    - Coordination with US Army Corp of Engineers

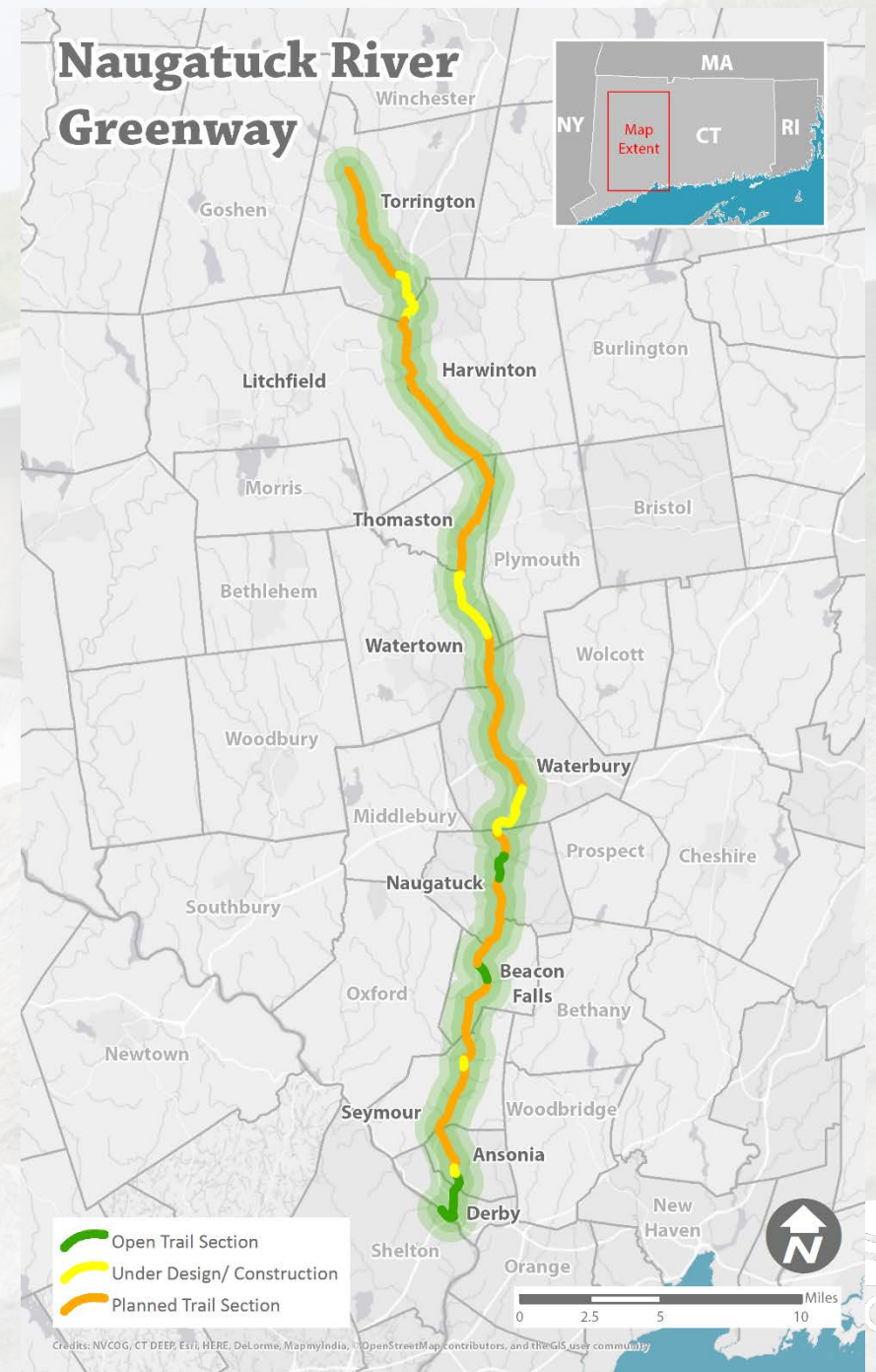
# Naugatuck River Greenway

## Vision:

- Restore access to the Naugatuck River
- Viable Transportation Alternative - Proximity of Downtowns
- Improved Health and Quality of Life
- Economic Driver

## But... Complex and Expensive

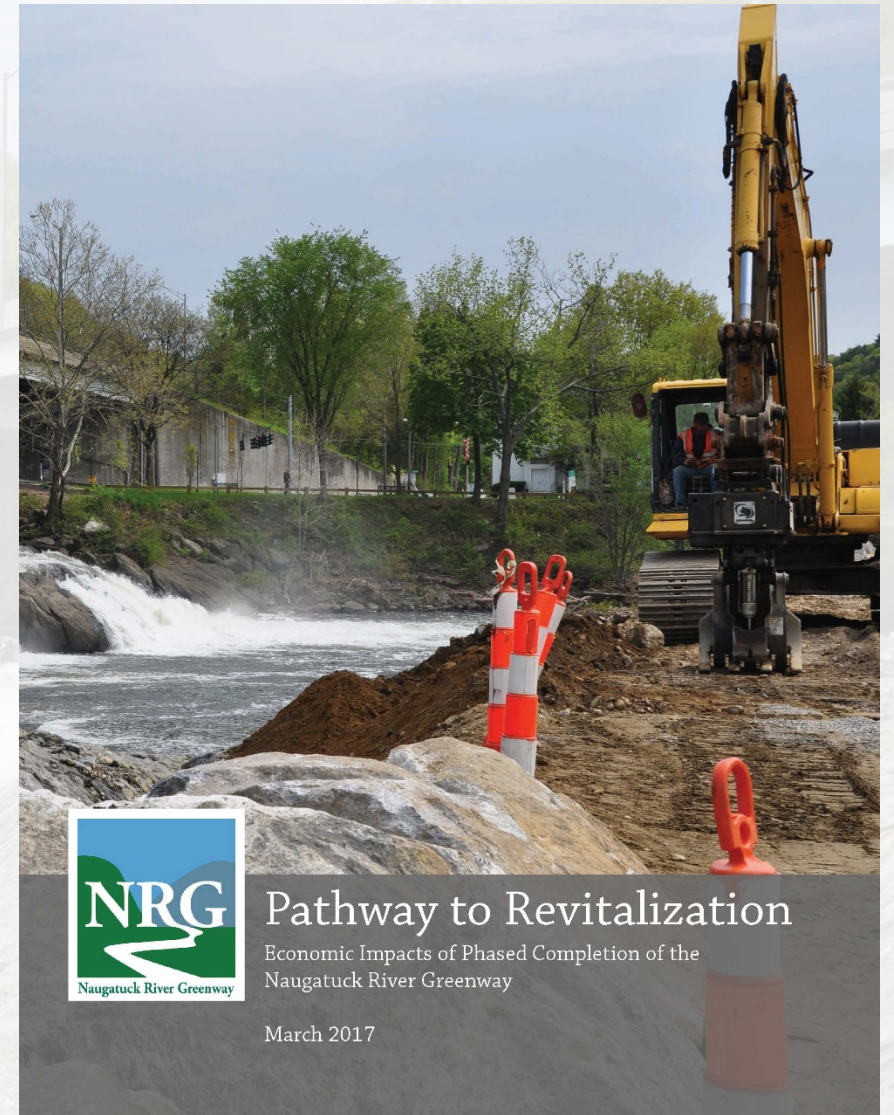
- No direct and easy route/ ROW
- Difficult geographies between river, Route 8 and Rail
- Limited Funding Available
- Municipalities may have to shoulder costs



# Economic Impact Study

## Purpose of Study

- Understand how completion of the Greenway would:
  - Change trail usage
  - Induce visitor spending
  - Impact property values
  - Spur development and redevelopment possibilities
  - Deliver health benefits
  - Improve quality of life
  - Generate brownfield remediation projects



# Funding and Research Partners

## Funding Partners:

- Connecticut Community Foundation
- Valley Community Foundation
- Katharine Matthies Foundation
- The Community Foundation of Northwest Connecticut (Through NHCOCG)
- US Department of Transportation
- CT Department of Transportation
- Member Municipalities

## Research Partners:

- Naugatuck Valley COG
- UConn College of Agriculture, Health & Natural Resources
- UConn Connecticut Center for Economic Analysis



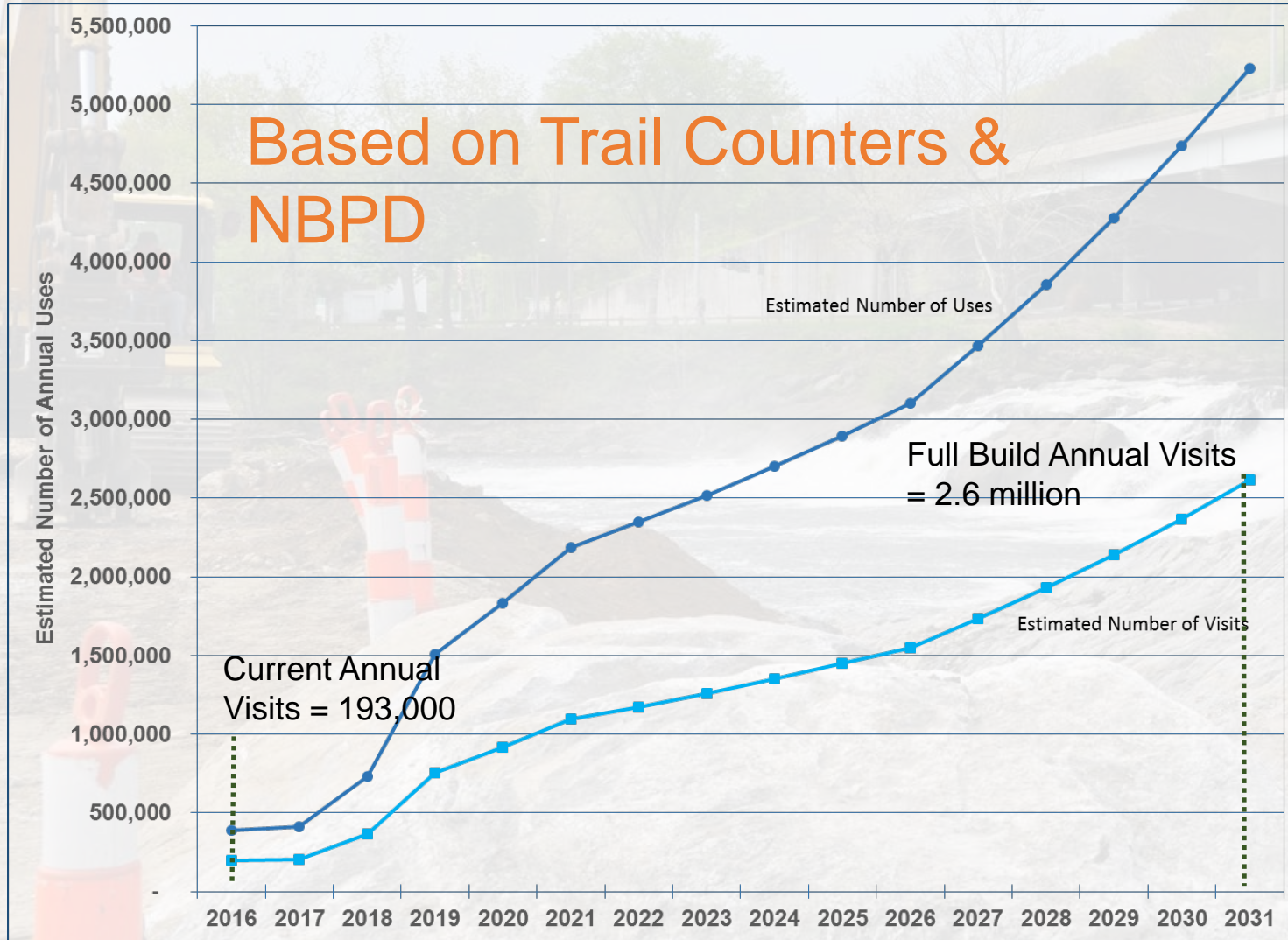
# Study Approach

- Literature Review – UConn Extension
- Infrared Trail Counts – NVCOG
  - Placed on open sections + Middlebury Greenway & Sue Grossman Trail
- Intercept Surveys – NVCOG + Volunteers
  - Conducted at trailheads – Derby, Beacon Falls, Naugatuck, Middlebury & Torrington
- Focus Groups – UConn Extension
  - Learn best practices
  - Public health professionals, trail administrators & business owners
- Economic Analysis – CCEA
  - Three Scenarios – Baseline, Current Trends & Accelerated Growth
  - Direct Economic Impacts
  - Indirect/Induced Impacts – REMI Model

# Trail Counts

- Conducted during summer & fall 2015
- Installed passive Infrared counters – 4 weeks of uninterrupted counts
- Some limitations:
  - Can't distinguish bikes & pedestrians
  - Under-counts
  - Represents number of “hits” not visits
- National Bicycle Pedestrian Documentation used to extrapolate annual uses =  $\pm 545,000$ 
  - Derby Greenway =  $\pm 302,000$
  - Naugatuck Greenway =  $\pm 58,000$
  - Beacon Falls =  $\pm 25,000$
  - Middlebury Greenway =  $\pm 95,000$
  - Sue Grossman Trail =  $\pm 64,000$

# Estimated Annual Uses (Baseline)



- Assumes full build-out
- Annual uses based on open NRG sections
- Set per-mile use rate
- 2 uses = 1 visit

2.6 Million  
Annual Visits  
(2031)




# Intercept Survey

- Conducted during October 2015; 2 hour windows over 12 separate days
- 383 surveys were completed
- 74% use trail one or more times per week
- 71% travel by car – alone or with someone
- <3% were bicyclists
- 88% use the trail for exercise
- Average spending =  $\pm$ \$14 (including travel costs)
- 97% consider the trail an asset to the community

# Focus Groups – Farmington Canal Trail

- Three sessions held:
  - Health Professionals
  - Trail Administrators
  - Business Owners
- Discussions focused on:
  - Trail uses & users
  - Community impacts of trails
  - Challenges
  - Recommendations
- Emphasized:
  - Potential for increasing use by promoting & supporting the trail
  - Use as venue for public health education & events
  - Add value to adjacent properties
  - Business impacts can be positive & negative
  - Actual vs. perceived safety & security issues
  - ADA compliance & access issues
  - Maintenance issues
  - Provide more amenities, wayfinding/information signs & maps

# Economic Analysis

- Trail Construction & Maintenance Costs
  - Direct Spending by trail users – from Intercept Survey
  - Consumer Surplus
  - Health Benefits
  - REMI economic model
  - Three Analysis Scenarios:
    - Baseline
    - Current Trends
    - Accelerated Growth
- Amenity Benefits
- 

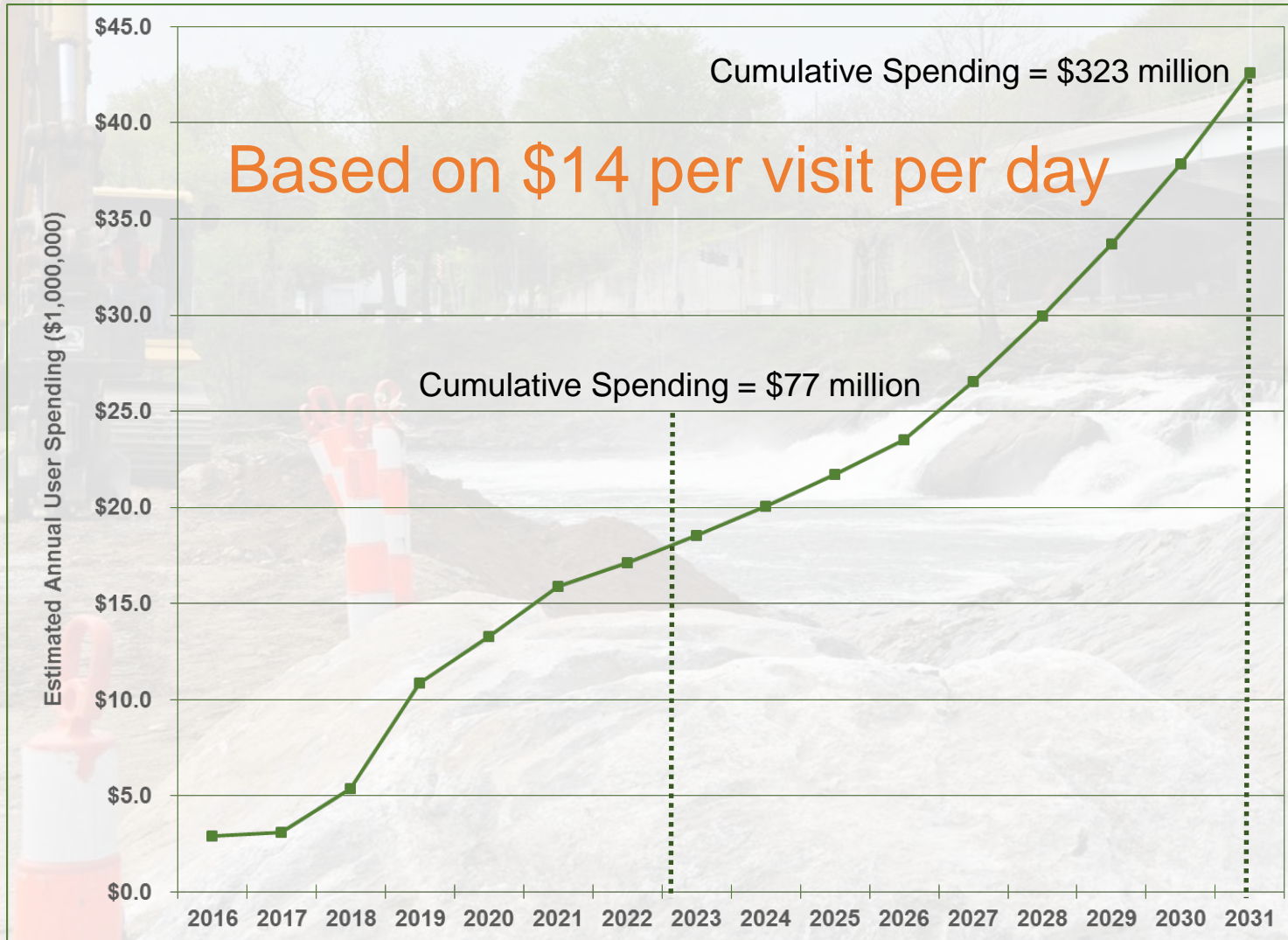
# Construction Costs (2016\$s)

<i>Community</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Annually (2021– 2025)</i>	<i>Annually (2026– 2030)</i>	<i>Total</i>
<b>Litchfield County Total</b>	\$0	\$0	\$2,347	\$0	\$6,029	\$900	\$2,190	\$24,021
Torrington	\$0	\$0	\$500	\$0	\$0	\$900	\$0	\$5,000
Litchfield/ Harwinton	\$0	\$0	\$0	\$0	\$0	\$0	\$2,190	\$10,950
Thomaston	\$195	\$0	\$0	\$0	\$5,529	\$0	\$0	\$5,724
Watertown	\$0	\$0	\$1,847	\$0	\$500	\$0	\$0	\$2,347
<b>New Haven County Total</b>	\$2,220	\$7,457	\$6,210	\$3,200	\$14,580	\$420	\$3,490	\$53,197
Waterbury	\$0	\$5,500	\$0	\$0	\$8,600	\$0	\$2,380	\$26,000
Naugatuck	\$0	\$0	\$3,000	\$0	\$3,236	\$420	\$0	\$8,336
Beacon Falls Trail	\$0	\$1,357	\$0	\$3,200	\$2,744	\$0	\$0	\$7,301
Seymour	\$700	\$0	\$0	\$0	\$0	\$0	\$750	\$4,450
Ansonia	\$1,500	\$0	\$0	\$0	\$0	\$0	\$360	\$3,300
Derby [1]	\$0	\$600	\$3,210	\$0	\$0	\$0	\$0	\$3,810
<b>Total Construction Costs</b>	\$2,395	\$7,457	\$8,557	\$3,200	\$20,609	\$1,320	\$5,680	\$77,218

- Additional Expenditures to Complete Entire Trail
- 41.4 miles to complete
- Estimated Timeline
  - Completion by 2030
  - Fully Operational 2031

**\$77.2 Million**

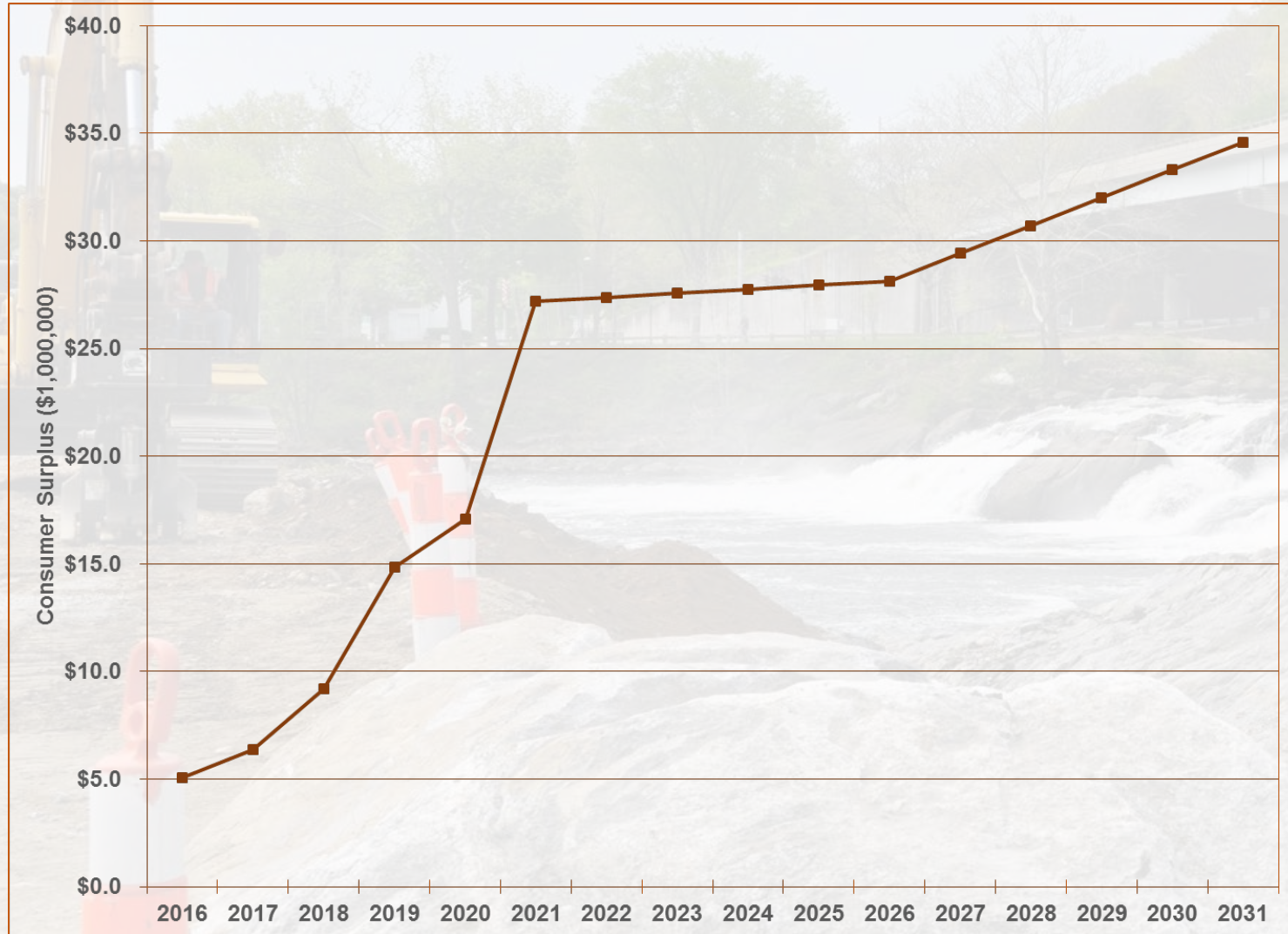
# Annual Direct User Spending (Baseline)



- Travel Costs
- Meals
- Refreshments
- Gear & Equipment
- Retail Items
- Activities
- B:C = 4.2

**\$42.6 Million  
(2031)**

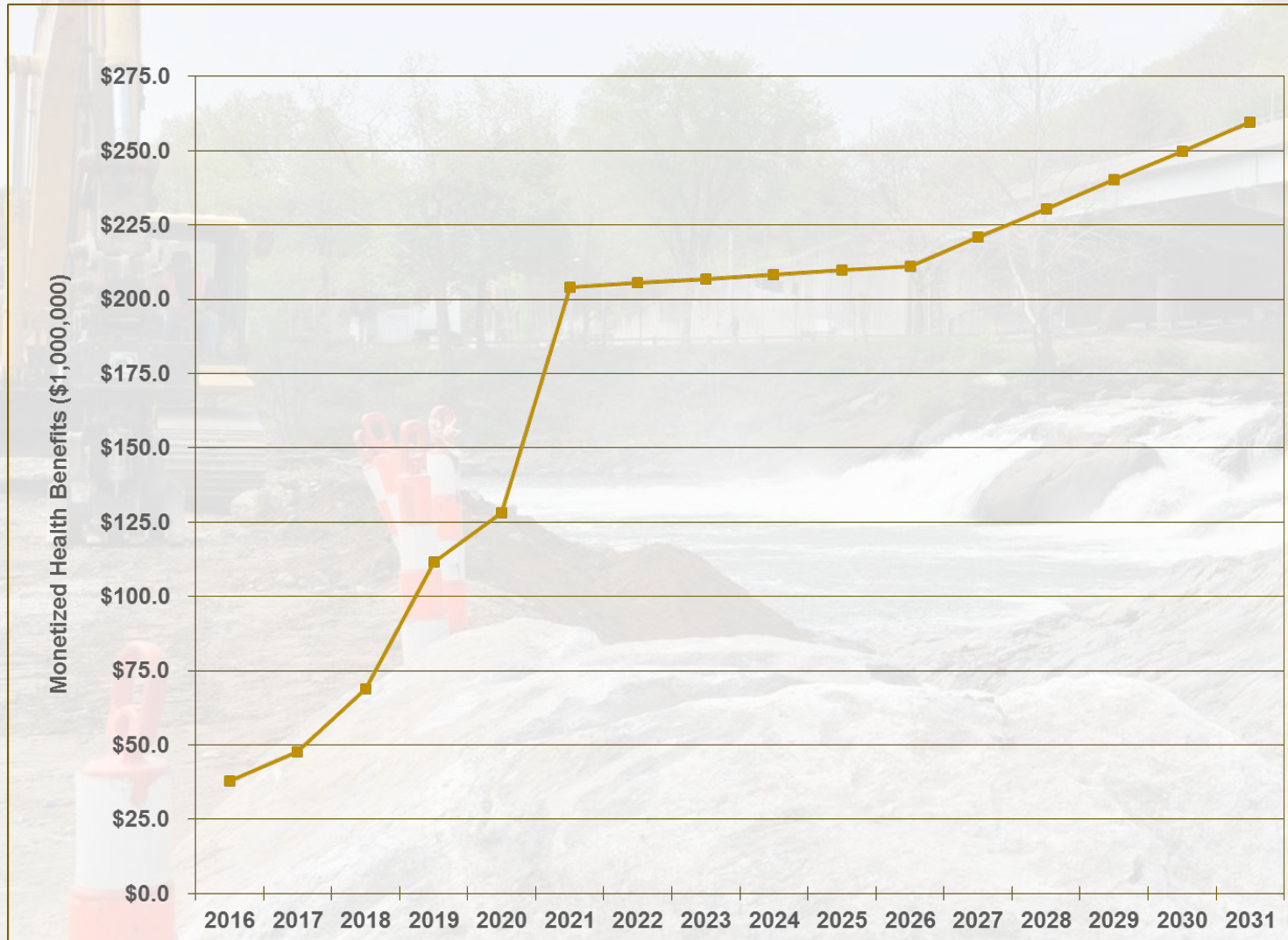
# Annual Monetized Consumer Surplus (Baseline)



- *Consumer surplus* is the value that consumers are willing to pay over and above what they actually pay for consumption of a good or to participate in an activity.
- Calculated based on avoided transportation costs

**\$34.6 Million  
(2031)**

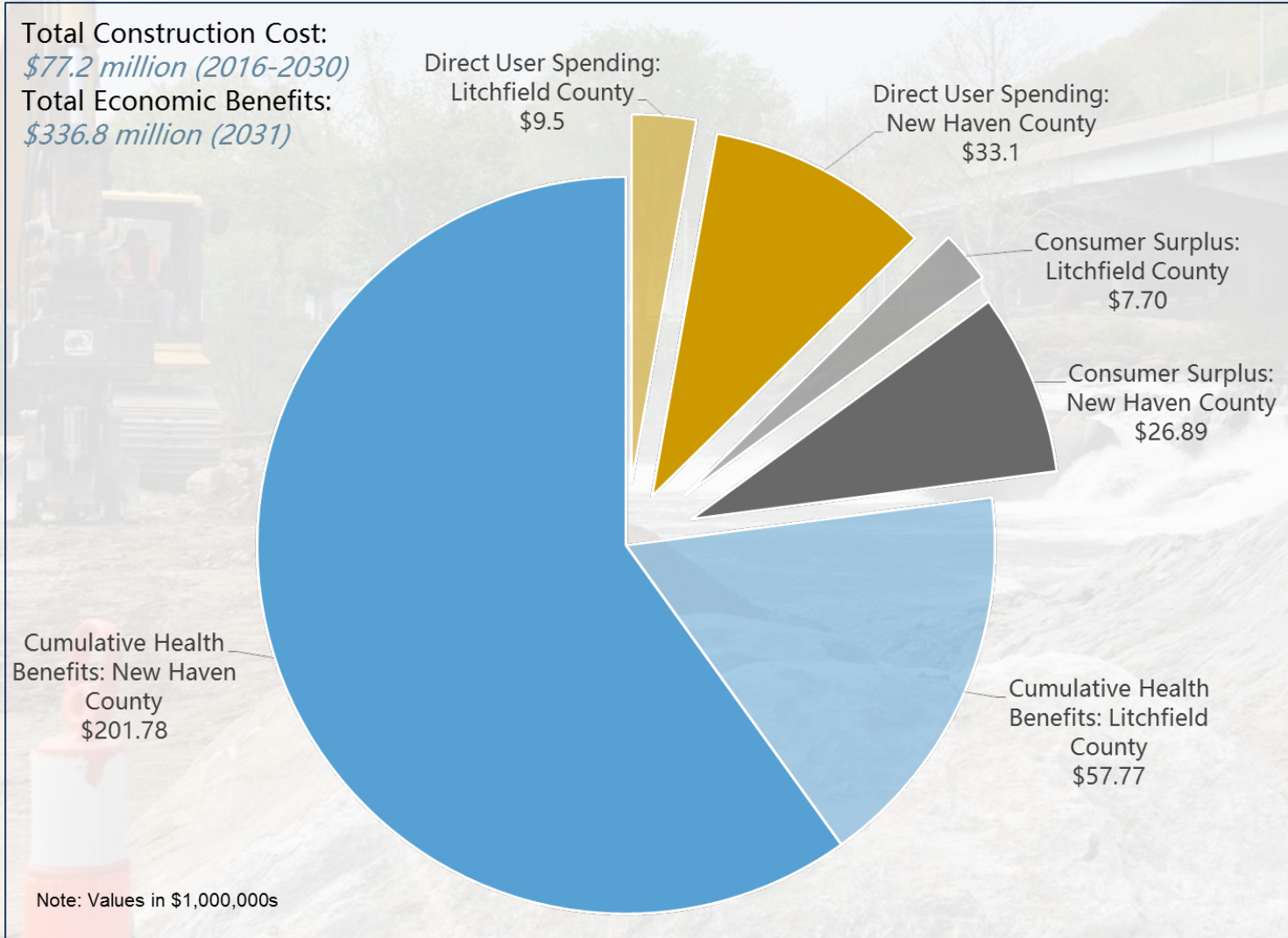
# Incremental Monetized Health Benefits (Baseline)



- Measured in terms of lives saved & extended life years
- Reduced incidence:
  - Obesity
  - Diabetes
  - Cardiovascular Disease
- Based on:
  - Regional incidence rates
  - Number of users that use the trail frequently enough to realize health benefits
  - Surgeon General's report

**\$259.6 Million**  
**(2031)**

# Total Direct Economic Benefits (Baseline)



- Direct User Spending
- Consumer Surplus
- Health Benefits
- Excluding Indirect & Induced Impacts
- Benefits far exceed investment

**\$336.8 Million  
(2031)**



# REMI Modeling

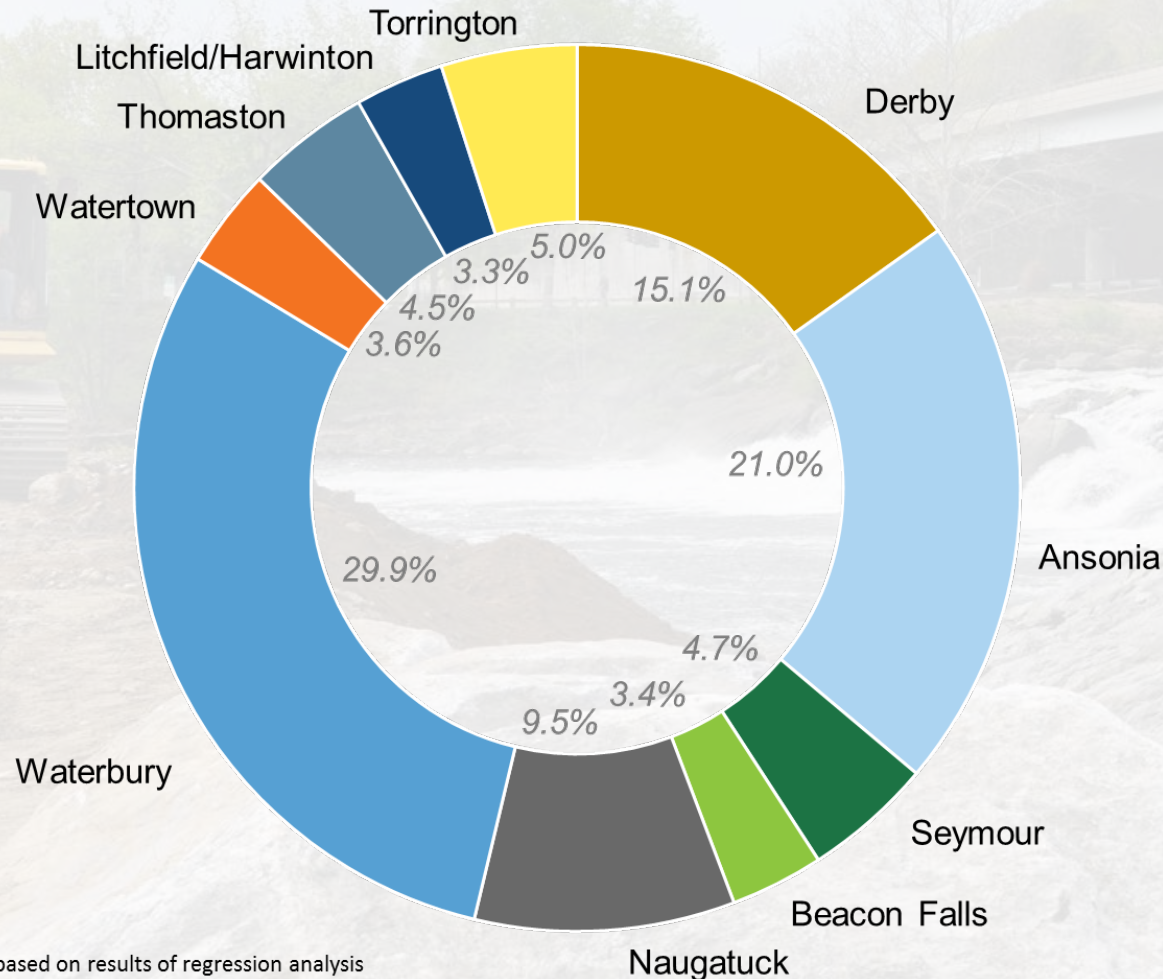
- Simulates county level & state economies
- Estimates change in economy from base conditions
- Based on Direct Expenditures & Construction Costs

## 2031 Indirect and Induced Impacts (Baseline) By County (Litchfield & New Haven)

- Population (new & retained  $\approx$ 2,500 people)
- Employment ( $\approx$ 1,400 jobs)
- Real Domestic Gross Product ( $\approx$ \$127.9 million; 0.21%)
- Personal Income ( $\approx$ \$205.8 million; 0.16%)
- Disposable Personal Income ( $\approx$ \$165.8 million; 0.16%)
- Fiscal Impacts ( $\approx$ \$40.0 million in income taxes)

# Community Impacts

Percentage\* Breakdowns by Community



- Disaggregated economic benefits by community
- Used a multiple regression analysis to estimate use and infer impact:
  - Population density
  - Population within 5 miles of the trail
- Adjusted based on county population and totals

\*Percentages based on results of regression analysis

# Community Summary Reports

## Overview and Definitions

The Naugatuck River Greenway (NRG) trail is a planned 44-mile multipurpose trail following the Naugatuck River from Torrington to Derby. When complete, the NRG trail will link 11 municipalities, help reclaim the Naugatuck River for recreation, provide an alternate mode of transportation, support tourism and economic development in the region, and improve residents' quality of life.

Overseen by the Naugatuck River Greenway Steering Committee, the Naugatuck Valley Council of Governments (NVCOG) and the Connecticut Center for Economic Analysis (CCEA) at UConn, with support from UConn Extension, conducted an economic impact study of the development of the NRG. The study addresses the primary question: "How will communities and residents along the Naugatuck River benefit from their investment in building the proposed trail?" The study involved a literature review, collection of new quantitative and qualitative primary data through trail counts, a trail user intercept survey and three focus groups, as well as deployment of the Regional Economic Impact Model (REMI) to estimate total economic impacts of the proposed trail.

All figures presented assume complete trail buildout in 2030 following an aggressive construction schedule. The local community impacts presented herein were disaggregated from the total trail figures based on estimated completed trail use.

**Construction Cost:** Estimated financial cost of construction of the planned trail (in 2016 dollars).

**Direct Spending:** Visitor spending related to trail use, estimated at approximately \$14 per visit from local survey data.

**Estimated Annual Visits:** Estimated using current trail use data collected on open sections of trail and converted to a per-mile figure.

**Health Impact:** The value of extended lifespans attributable to improved health and avoided disease resulting from increased physical activity.

**Consumer Surplus:** the value that consumers are willing to pay over and above what they actually pay for consumption of a good or to participate in an activity, calculated based on avoided transportation costs. These surpluses are often reflected in increased property values.

**Employment, GDP and Personal Income:** Measure of impact on the wider economy that the direct economic impacts will have, as calculated by the Regional Economic Impact Model (REMI). All figures are the impacts to the economy in 2031 with construction of the trail as compared to a base scenario without construction of the NRG Trail.



The Naugatuck River Greenway Economic Impact Study was made possible by funding and support from the following organizations. Thank you.



The Naugatuck River Steering Committee oversaw this study, and consists of members from all 11 municipalities along the NRG: Torrington, Harwinton, Litchfield, Thomaston, Watertown, Waterbury, Naugatuck, Beacon Falls, Seymour, Ansonia and Derby, along with regional, state, and federal officials and other stakeholders.

For more information, visit NVCOG's website at: [www.nvcogct.org](http://www.nvcogct.org) or contact Aaron Budris, Senior Planner, at [abudris@nvcogct.org](mailto:abudris@nvcogct.org)

NAUGATUCK VALLEY  
COUNCIL of GOVERNMENTS  
CITY of DERBY SUMMARY

## Pathway to Revitalization

Economic Impacts of Phased  
Completion of the Naugatuck River  
Greenway Trail  
August 2017



# Community Summary Reports

## Naugatuck River Corridor Impacts

If completed by 2031, the construction of the Naugatuck River Greenway Trail is estimated to have the following impacts on the area's economy:

### Construction Cost



### Annual Direct Spending



### Estimated Annual Visits



### Cumulative Health Impact



### Employment in 2031



### Annual Consumer Surplus



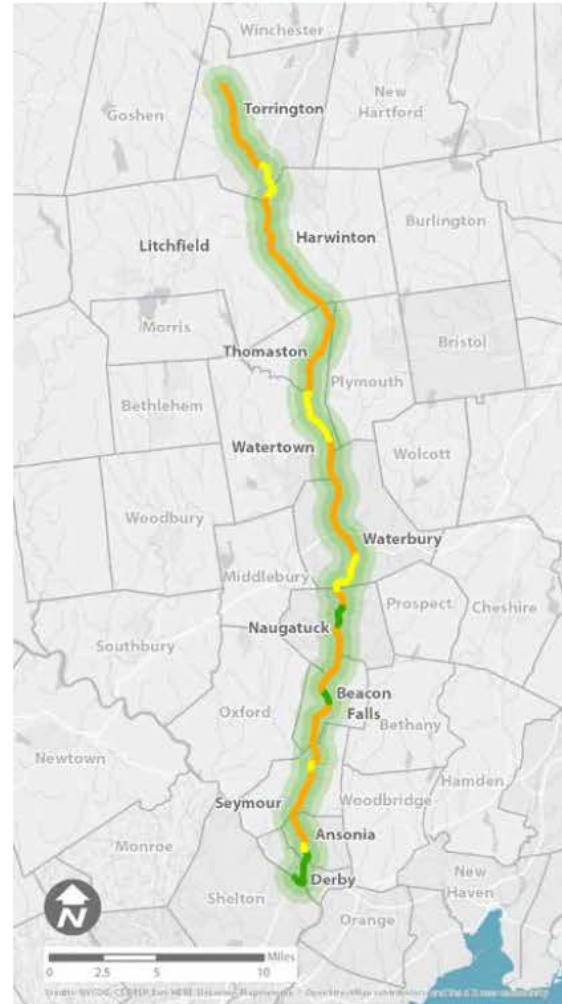
### GDP in 2031



### Personal Income in 2031



## CORRIDOR TRAIL PLANNING



## City of Derby Impacts

Based on completion of the total NRG trail, the portion of total trail economic impacts attributable to Derby's trail section are estimated to be as follows:

### Construction Cost



### Annual Direct Spending



### Estimated Annual Visits



### Cumulative Health Impact



## CITY OF DERBY TRAIL PLANNING



Open trail section



Under design/ construction



Planned trail section



# Brownfields

- Discussion about obstacles and opportunities presented by the Valley's industrial legacy
- Environmental Regulations
- Technical Assistance Available
- Funding Opportunities
  - EPA Revolving Loan Fund
  - EPA Assessment Grants
  - EPA Cleanup Grants
  - DECD Municipal Grant Program



# Recommendations

- Safety

- Engage public safety officials early
- Provide for easy locating along trail

- Amenities

- Wayfinding and Signage are essential
- Provide for connections to pedestrian network

- Demonstrate Value

- Educate leaders and the public about trail benefits

- Maintenance

- Create plan and budget from the beginning
- Engage volunteers

- Business/Community Engagement

- Help businesses capitalize on the trail
- Integrate the trail into community planning
- Program events and activities

- Routing and Planning

- Integrate other uses like playgrounds
- Create destinations

# Contacts & Questions?

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- Aaron Budris, Senior Regional  
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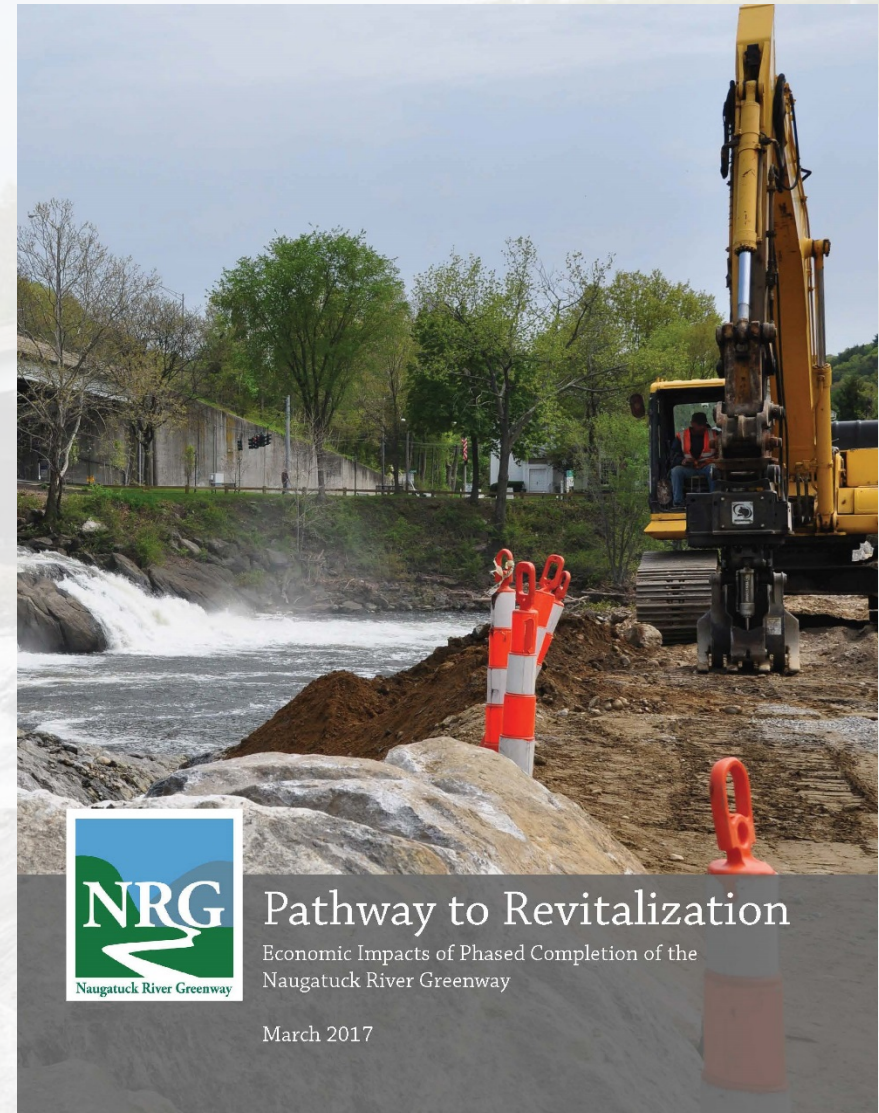
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Report: [www.nvcogct.org](http://www.nvcogct.org)

