Funding and Research Partners

Funding Partners:
- Connecticut Community Foundation
- Valley Community Foundation
- Katharine Matthies Foundation
- The Community Foundation of Northwest Connecticut (Through NHCOG)
- 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
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
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 = ±545,000
  • Derby Greenway = ±302,000
  • Naugatuck Greenway = ±58,000
  • Beacon Falls = ±25,000
  • Middlebury Greenway = ±95,000
  • Sue Grossman Trail = ±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 = ±$14 (including travel costs)
• 97% consider the trail an asset to the community
Focus Groups

• 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

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

### Construction Costs

<table>
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<tr>
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*$77.2 Million*
Annual Direct User Spending (Baseline)

- Travel Costs
- Meals
- Refreshments
- Gear & Equipment
- Retail Items
- Activities

B:C = 4.2

Cumulative Spending = $77 million
Cumulative Spending = $323 million

Estimated Annual User Spending ($1,000,000)

$42.6 Million (2031)
• **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 & state economies based on Direct Expenditures & Construction Costs
- Estimates change from base
- Indirect and Induced Impacts - By County
  - Population
  - Employment
  - Real Domestic Gross Product (RGDP)
  - Personal Income
  - Personal Income Tax
  - Fiscal Impacts

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>Baseline Scenario</th>
<th>Current Trend Scenario</th>
<th>Accelerated Growth Scenario</th>
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<tbody>
<tr>
<td></td>
<td>Litchfield</td>
<td>New Haven</td>
<td>Litchfield</td>
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<tr>
<td>Population (N of People)</td>
<td>590</td>
<td>1,933</td>
<td>1,143</td>
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<td>Percent Increase</td>
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<td>Employment (N of Jobs)</td>
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<td>1,157</td>
<td>500</td>
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<tr>
<td>Percent Increase</td>
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<td>0.50%</td>
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<td>RGDP ($1,000,000 2009 Constant)</td>
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<tr>
<td>Percent Increase</td>
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<td>Personal Income ($1,000,000 Nominal)</td>
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<td>Percent Increase</td>
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<td>DPI ($1,000,000 Nominal)</td>
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<td>$128.94</td>
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<td>Percent Increase</td>
<td>0.20%</td>
<td>0.15%</td>
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Brownfields

• Discussion about obstacles and opportunities presented by the Naugatuck 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
Community Impacts

- 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*
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
Next Steps

• Publish Report
• Publicize findings
• Finalize Community Summaries
• Present findings to town boards and community groups
Questions?

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