



# MassTrails: The Baker-Polito Administration's Trails Initiative

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Massachusetts Association of Conservation Commissions  
March 2019



# Welcome to MassTrails

Trails are the intersection of conservation, community, transportation and recreation. They connect Massachusetts residents and visitors to the places in which we live, learn, work, shop and play.

# MassTrails Vision

To expand and connect the Commonwealth's networks of off-road, multi-use pathways for people of all ages and abilities across Massachusetts.





# MassTrails Initiative

- Environmental Protection and Recreation
- Sustainable Transportation
- Municipal Partnerships
- Public Health
- Economic Development
- Community Development
- Public safety



# Different Kinds of Trails



Separated bike lanes; side paths



Unimproved, natural trails



Shared Use Paths /  
Greenways



Improved, unpaved trails



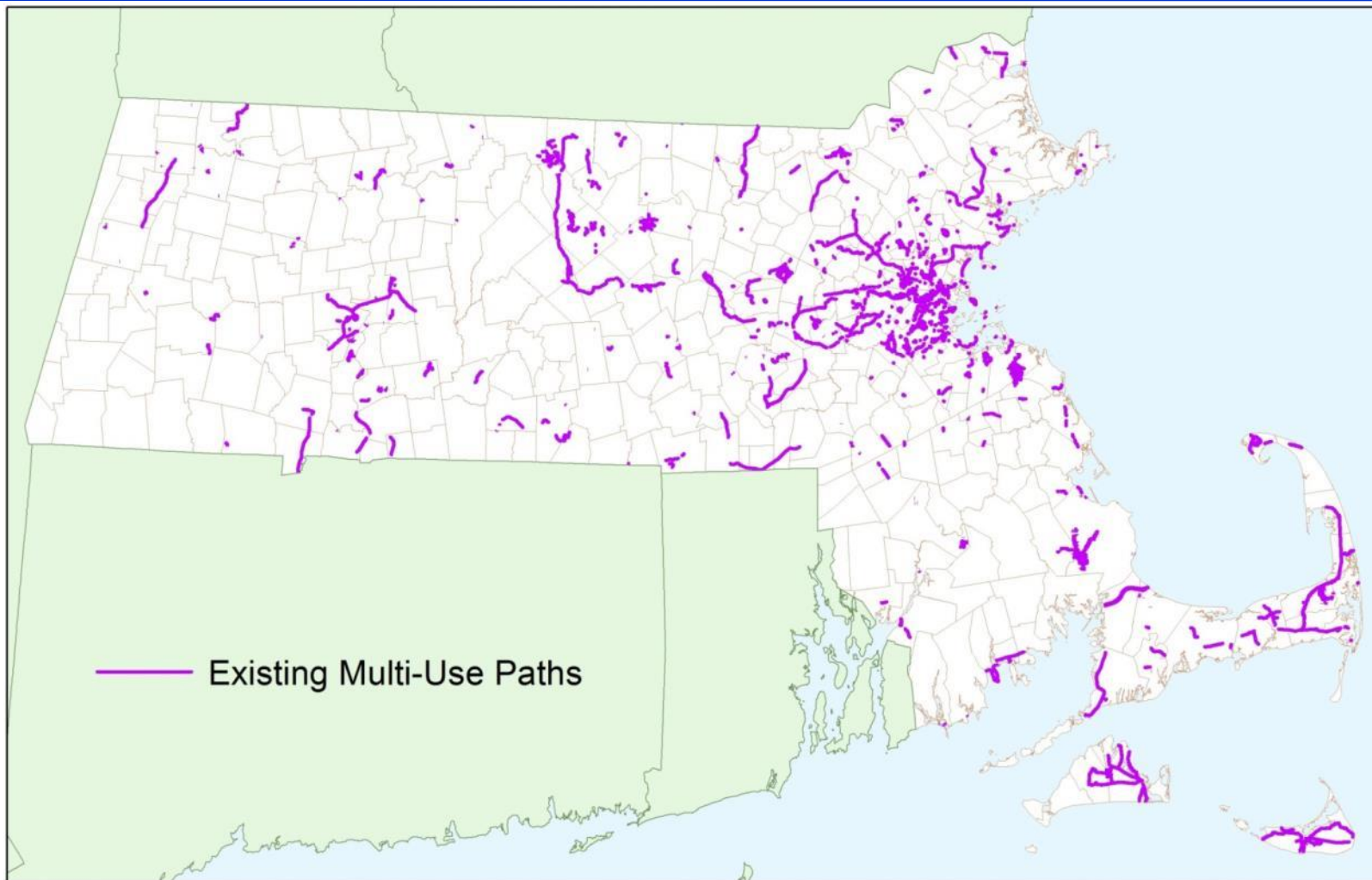
# One Trails Team

- Collaboration between Energy and Environmental Affairs (EEA), Department of Conservation and Recreation (DCR), and Massachusetts Department of Transportation (MassDOT)
- Direct support from the Governor's Office and Administration & Finance
- Meet every two weeks to discuss priorities, policies, & implementation.
- Engage with other state agencies on specific topics, such as trail permitting

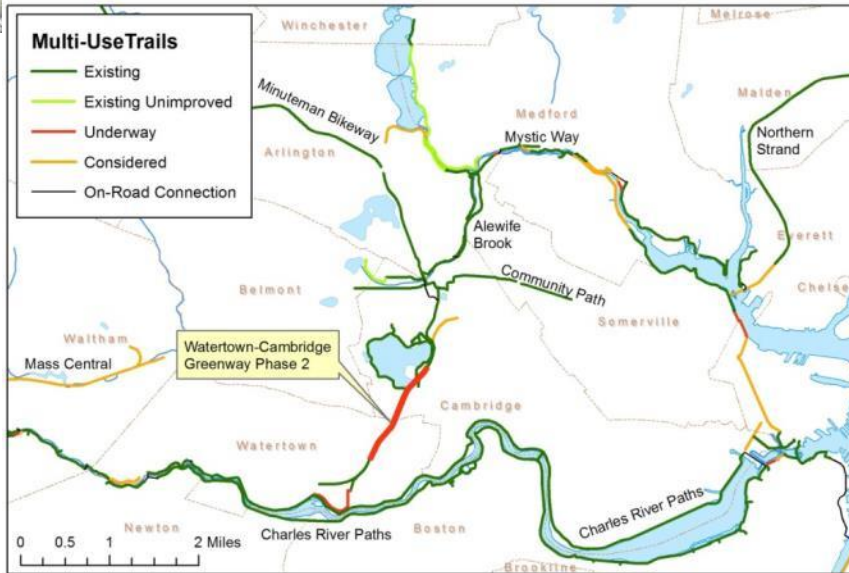
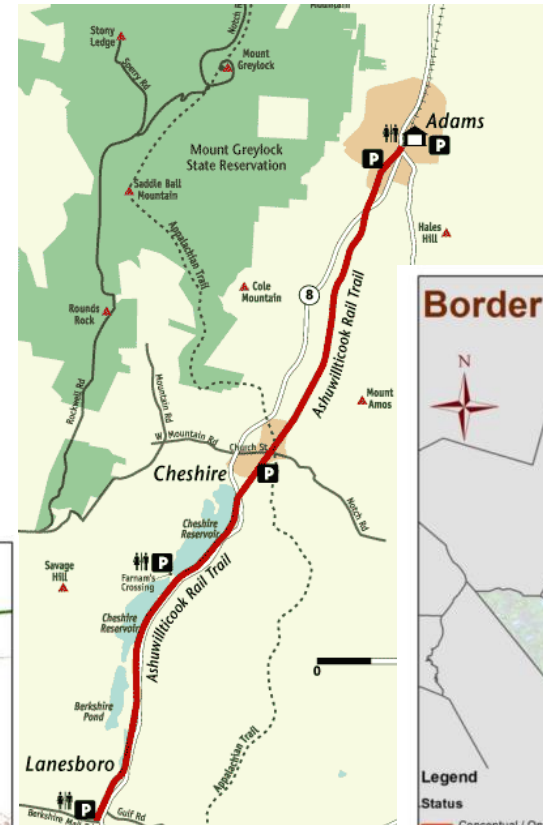




# Existing Multi-Use and Improved Trail Map



# Building Networks Closing Gaps





# Instead of this...



Can you imagine a  
road that just . . .  
ends?





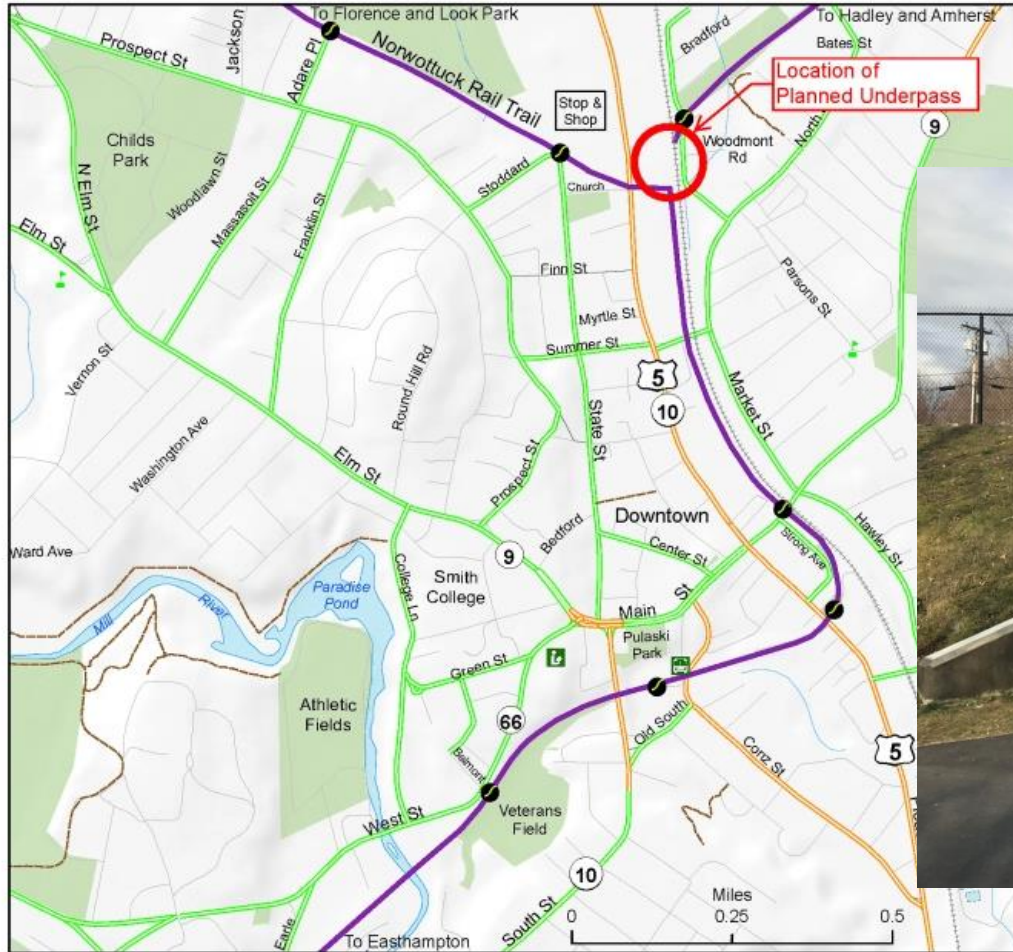


# And this...



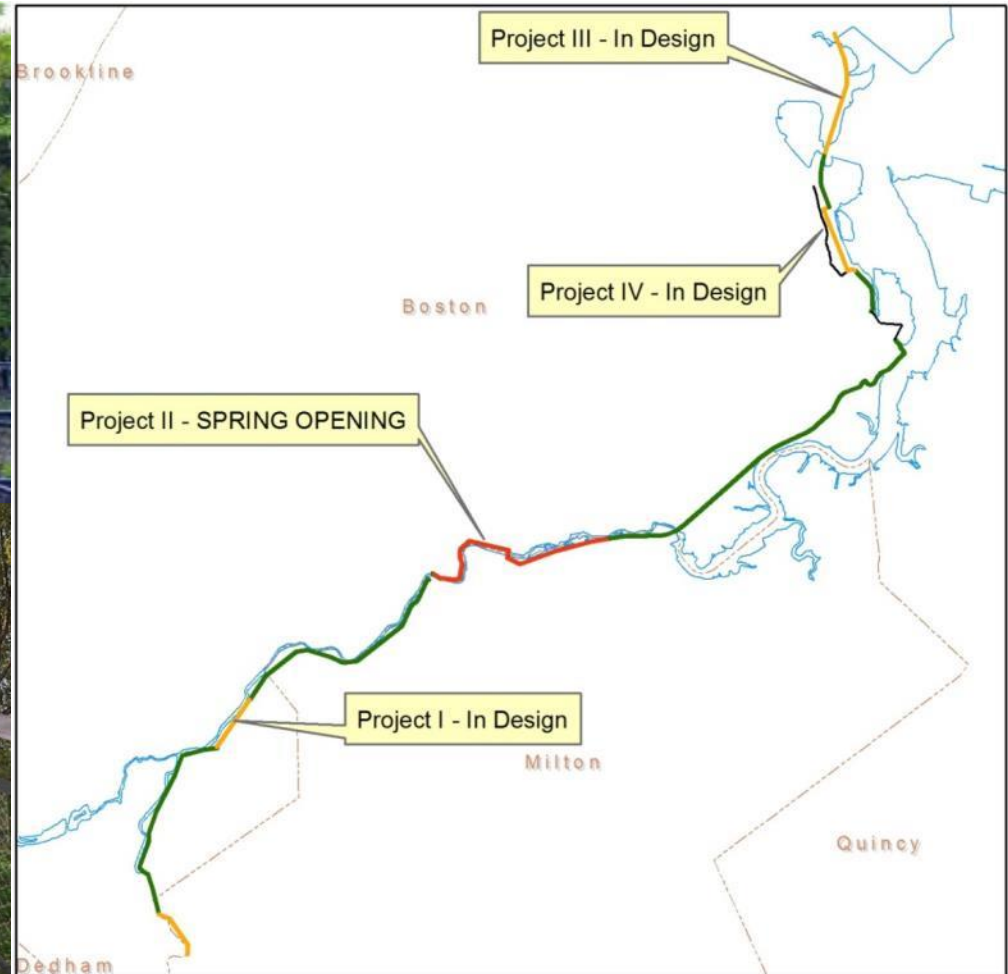


# Close Gaps Northampton, MA



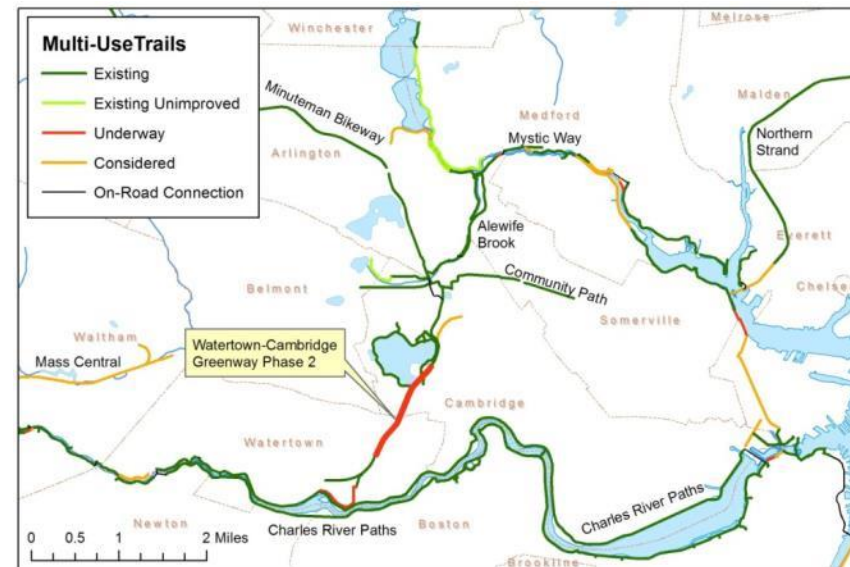


# Building Networks: DCR Neponset River Greenway



# MassTrails Strategies

- To **provide funding** to municipalities and non-profits to support the design, construction, and maintenance of all trail networks across the Commonwealth;
- **Consolidate the public face and application processes** for multiple trail funding programs into one user-friendly and simplified process.
- **Provide access to technical expertise** including publications and trainings
- **Collaborate with municipalities through one inter-agency team**
- **Work to address persistent issues** or barriers to Common Sense Trail development and maintenance, including Permitting.



# Municipal Partnerships

- Cities and towns own the majority of paved trails in Massachusetts
- Multi-use, paved trails often promoted and advanced by municipalities
- Trails Team aims to become a better partner to cities and towns

## Town of Wellesley

- Built more than 46 miles of biking and hiking trails to create a bicycle/pedestrian network
- The Fuller Brook Trail (shown) serves as the major sewer line, stormwater retention system, and an improved trail







# “Build Out” of Key DCR Trail Corridors



- “Major Trails” line item in the Capital Budget
- Example Projects:
  - Conant Road Underpass on the Mass Central Rail Trail
  - Closing Gaps in the Mystic River Reservation
  - Expanding the Southern New England Trunkline Trail



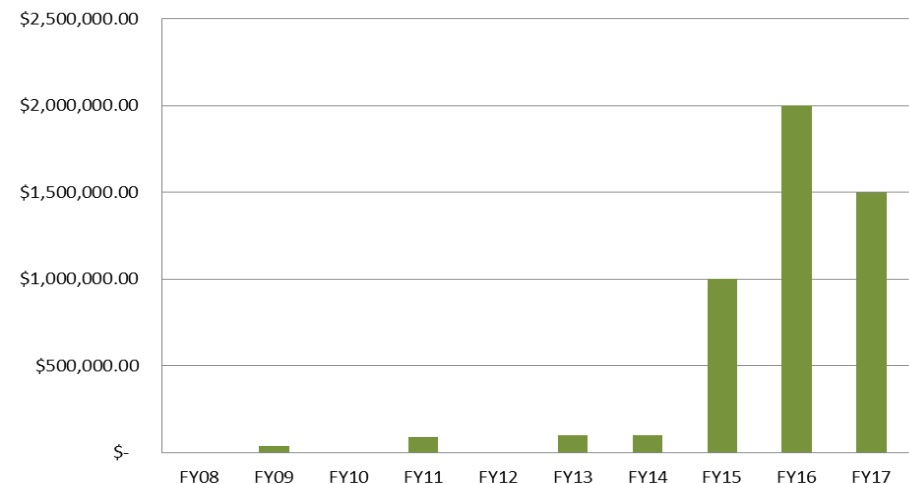
# Fix it First: Investment in Maintenance

Under the Baker-Polito Administration, DCR has for the first time prioritized maintenance of the existing DCR trail system

The FY19 Budget provides \$800,000 to maintain existing DCR trails



DCR Trail Maintenance Spending by Fiscal Year





## What would you like to do?

### Top tasks

[Apply for a MassTrails Grant →](#)

[Build a Shared Use Path →](#)

### All other tasks

[Learn about the MassTrails Conference →](#)

[Find Trails in Massachusetts State Parks →](#)

[Explore Regional On-Line Trail Map →](#)

[Search Trail-Related Resources →](#)

[Find Trail-Related Events →](#)

[www.mass.gov/masstrails](http://www.mass.gov/masstrails)



# Tools for Trail Development: Planning and Design Guide



[www.mass.gov/guides/shared-use-path-planning-and-design-guide](http://www.mass.gov/guides/shared-use-path-planning-and-design-guide)



# Core Funding Streams that Support Trails



- Federal Funding via MassDOT
  - Federal government pays 80% of construction cost
  - Massachusetts matches 20%
  - Allocated through the Capital Investment Plan (CIP) and MPO process
- EEA and DCR Capital Funding
  - Municipal grants



## CAPITAL INVESTMENT PLAN



## Recreational Trails Program



# MassTrails Grant Program



## MassTrails Grant Program Overview

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MassTrails provides grants to support recreational trail and shared-use pathway projects across the Commonwealth. Grant amounts are dependent on the project and its needs, but generally range from \$10,000 to \$100,000 with grants of up to \$300,000 awarded to high priority projects.

Eligible grant activities include project development, design, engineering, permitting, construction, and maintenance of recreational trails, shared use pathways, and the amenities that support trails.



# MassTrails Grants

- Funded through FY23 in the Governor's Capital Budget.
  - Authorized in the Environmental Bond Bill
- Funded by Federal Recreational Trails
- Applications were due February 1, 2019
  - 123 proposals were received requesting just under \$13 million





# Coordinated Permitting and Mitigation



- Working to streamline environmental permitting & coordinate mitigation
- Working with MEPA & DEP to collaborate on permitting questions
- Trails network will provide clear signals about desired mitigation strategies



## MassDEP

Commonwealth of Massachusetts  
Department of Environmental Protection



## Bottom Line:

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- The new MassTrails Team meets on regularly to improve coordination across the Administration.
- Funding to municipalities for trail development has increased & increased again – from \$1.18 million to an expected \$5 million in FY2020 – 4x increase
- “MassTrails” was authorized in the Environmental Bond Bill & funded
- More than \$200 million will be invested thru MassDOT over the next five years.
- We are coordinating with environmental agencies & the private sector as part of the Trails Initiative, e.g. Malden River Trail System and Northern Strand
- More state & local trail projects needing Conservation Commission Review and Determinations and Orders of Conditions!





Massachusetts Association of Conservation Commissions  
*Shared Use Path Planning and Design*  
March 2, 2019



# So I want to build a path...

How much will it cost?

Where should it go? What do I need to plan for?

Do I have to design it a certain way?

How do we build it? How will it be maintained?

Where do I even start?



# Building a Shared Use Path

- Where do I start?
  - Planning Primer
  - Cost Estimator Tool
- Planning & Design Guide (SUPPDG)
  - Planning
  - Design
  - Maintenance





# Planning Primer



## Shared Use Paths: FROM VISION TO REALITY

Throughout Massachusetts, communities are recognizing the many benefits of shared use paths. These paths provide options for active transportation and healthy recreation while contributing to economic development and sustainability goals. Consequently, the Commonwealth of Massachusetts has made traveling in new shared use paths and completing existing shared use path networks a priority. This work is the focus of MassTrails, a multidisciplinary team of state agencies, including the Massachusetts Department of Transportation

(MassDOT), the Department of Conservation & Recreation (DCR), and the Executive Office of Energy and Environmental Affairs (EEA).

This Shared Use Path Planning Primer demonstrates how to propel a path project from vision to reality. Advocates and planners, with or without technical backgrounds, should use this primer to understand the process of planning, designing, funding, and constructing shared use paths in their communities.

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Goal: propel your path project from vision to reality, regardless of your technical background

Use: understand the process of planning, designing, funding, and constructing shared use paths



# Cost Estimator Tool

Shared Used Path Design Guide  
Cost Estimator

PROJECT DESCRIPTION PROJECT INPUTS - PAGE 1 OF 2

	INPUT	CLICK INFO						
1 What year is the project expected to begin construction?	2020	<a href="#">i</a>						
2 Should the estimate include cost of engineering design and/or traffic control?	Design	<a href="#">i</a>						
3 How many distinct segments of path are there? (differing exist. or prop. conditions) <i>Input a number between 1 and 4.</i>	3	<a href="#">i</a>						
4 What is the length of the segment of path? (in feet)	<table border="1"> <thead> <tr> <th>Segment 1</th> <th>Segment 2</th> <th>Segment 3</th> </tr> </thead> <tbody> <tr> <td>400 ft</td> <td>800 ft</td> <td>3,000 ft</td> </tr> </tbody> </table>	Segment 1	Segment 2	Segment 3	400 ft	800 ft	3,000 ft	<a href="#">i</a>
Segment 1	Segment 2	Segment 3						
400 ft	800 ft	3,000 ft						
5 What are the existing conditions of the area?	<table border="1"> <tbody> <tr> <td>Roadway</td> <td>Clear, flat</td> <td>Clear, flat</td> </tr> </tbody> </table>	Roadway	Clear, flat	Clear, flat	<a href="#">i</a>			
Roadway	Clear, flat	Clear, flat						
6 What type of path is being proposed?	<table border="1"> <tbody> <tr> <td>Roadway</td> <td>Rail Trail (w/ exist. rail)</td> <td>Rail with Trail</td> </tr> </tbody> </table>	Roadway	Rail Trail (w/ exist. rail)	Rail with Trail	<a href="#">i</a>			
Roadway	Rail Trail (w/ exist. rail)	Rail with Trail						
7 What material will the shared used path be?	<table border="1"> <tbody> <tr> <td>Concrete</td> <td>Asphalt</td> <td>Asphalt</td> </tr> </tbody> </table>	Concrete	Asphalt	Asphalt	<a href="#">i</a>			
Concrete	Asphalt	Asphalt						
8 What material will the shoulders be?	<table border="1"> <tbody> <tr> <td>Concrete</td> <td>Grass</td> <td>Unpaved</td> </tr> </tbody> </table>	Concrete	Grass	Unpaved	<a href="#">i</a>			
Concrete	Grass	Unpaved						
9 What is the width of the path? (Typ. range: 10 ft to 14 ft)	<table border="1"> <tbody> <tr> <td>8 ft</td> <td>10 ft</td> <td>12 ft</td> </tr> </tbody> </table>	8 ft	10 ft	12 ft	<a href="#">i</a>			
8 ft	10 ft	12 ft						
10 Will a separate equestrian path be provided?	<table border="1"> <tbody> <tr> <td>No</td> <td>Yes, unpaved</td> <td>No</td> </tr> </tbody> </table>	No	Yes, unpaved	No	<a href="#">i</a>			
No	Yes, unpaved	No						
11 What length of the path requires boardwalk due to <u>unavoidable</u> wetlands? <i>Please see the Guidance Document and consult the MassGIS website to locate wetlands.</i>	100 ft	<a href="#">i</a>						
12 Are there steep separations or resource areas that may require retaining walls?	OLIVER	<a href="#">i</a>						
13 Is the ROW constrained in any locations?	Some of the length	<a href="#">i</a>						
14 How many crossings with roadways are there? <i>Please fill in the information in the chart on the next page.</i>	3	<a href="#">i</a>						
15 How many crossings are there over bodies of water? <i>Please fill in the information in the chart on the next page.</i>	1	<a href="#">i</a>						
16 How many crossings are there with a active railroad? <i>Please fill in the information in the chart on the next page.</i>	0	<a href="#">i</a>						
17 What is the extent of landscape restoration and enhancements?	Moderate	<a href="#">i</a>						
18 How many parking spaces will be provided?	25	<a href="#">i</a>						
18a What will be the material of the parking lot?	Typical Asphalt	<a href="#">i</a>						
19 Will the path require lighting along its length?	Yes	<a href="#">i</a>						
19a If not along the entire length, what length requires lighting?	200 ft	<a href="#">i</a>						
19b If there is lighting, should security be included?	No	<a href="#">i</a>						

**CHECK FOR ERRORS** Click Button before proceeding

**PATH**

**STRUCTURES AND INTERSECTIONS**

**LANDSCAPING AND AMENITIES**

**LIGHTING AND SECURITY**

Goal: Quickly estimate the cost of potential shared use path projects to help plan and assess feasibility

Use: make a “planning-level” cost estimate, help choose a path alignment, and begin to plan for funding the project



# So I want to build a path...

Where do I even start?

How much will it cost?

Where should it go? What do I need to plan for?

Do I have to design it a certain way?

How do we build it? How will it be maintained?





# Planning & Design Guide



Goal: Learn how to plan, design, fund, and construct your project

Use: plan for the people the path serves, meet design standards and best practices, and ensure the project succeeds



# Who will use the guide?





# What do people need from the guide?

## Proponents

**A process  
guide and  
checklist**

Building the  
case for a path,  
what it will cost,  
who to work  
with, questions  
and challenges  
to expect

## Consultants

**Library for  
planning &  
design**

Compiled  
planning and  
design  
experience,  
lessons learned,  
goals and  
aspirations

## DCR

**Standards for  
design and  
maintenance**

Maintenance,  
landscaping,  
drainage,  
widths,  
materials,  
encroachment  
resolution

## MassDOT

**Coordination  
with agencies  
& standards**

Project  
Development,  
Complete  
Streets, ROW,  
Environmental,  
Landscaping,  
Districts, ADA





# Goals of the guide

- Create a useful resource: make a guide and a toolbox
- Create more proponents: make the process easier
- Create more projects: make the projects easier
- Create more users: support statewide priorities and goals



## Planning      Design



# Building a Shared Use Path Planning

- For the Process
- For Networks
- For Users
- For Design
- For Funding





# Planning for the Process

- Vision
- Common Goals
- Local Context
- Agency Coordination
- Public Engagement
- Project Feasibility



All paths should be:

Useful

Safe

Secure

Comfortable

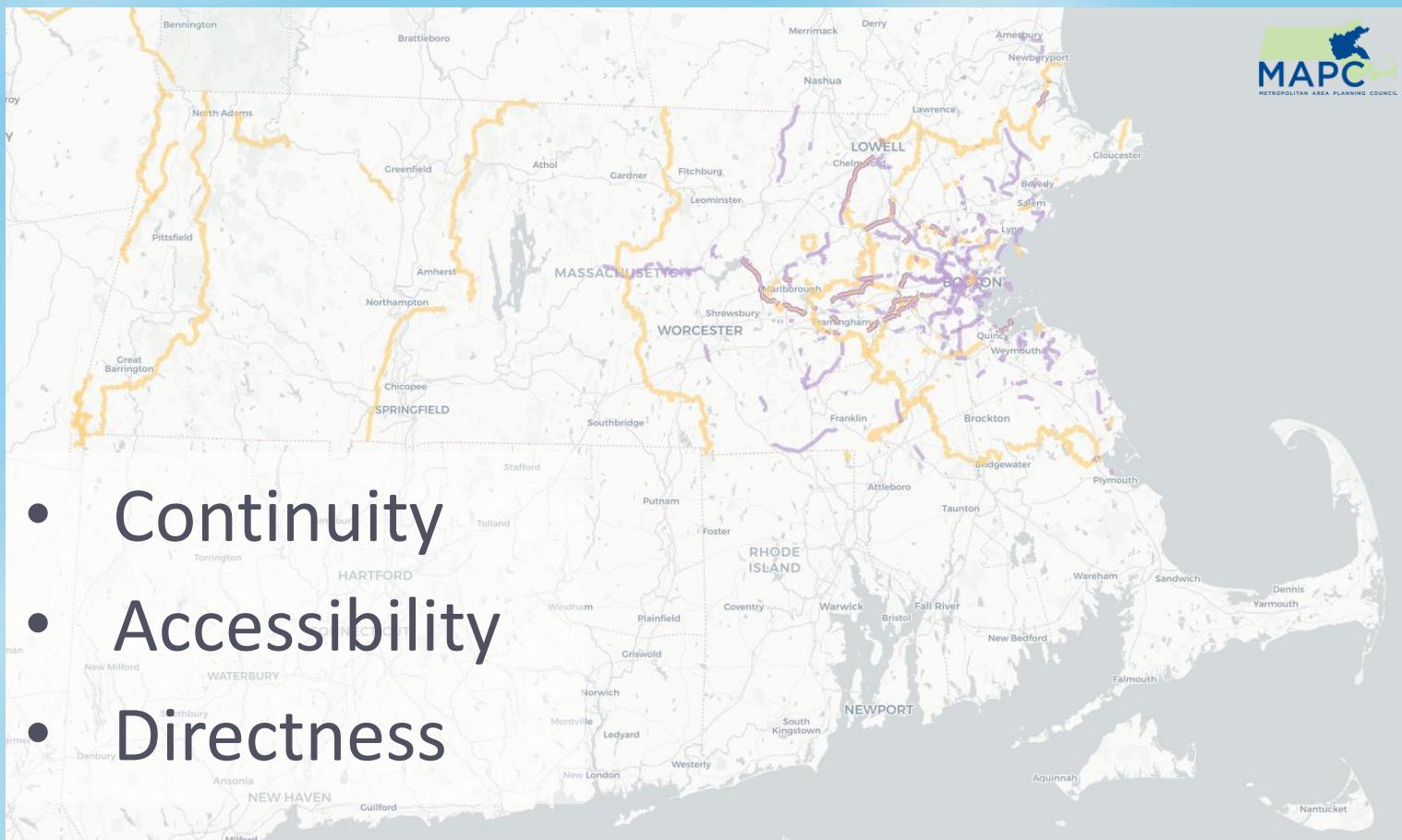
Enjoyable

Inclusive





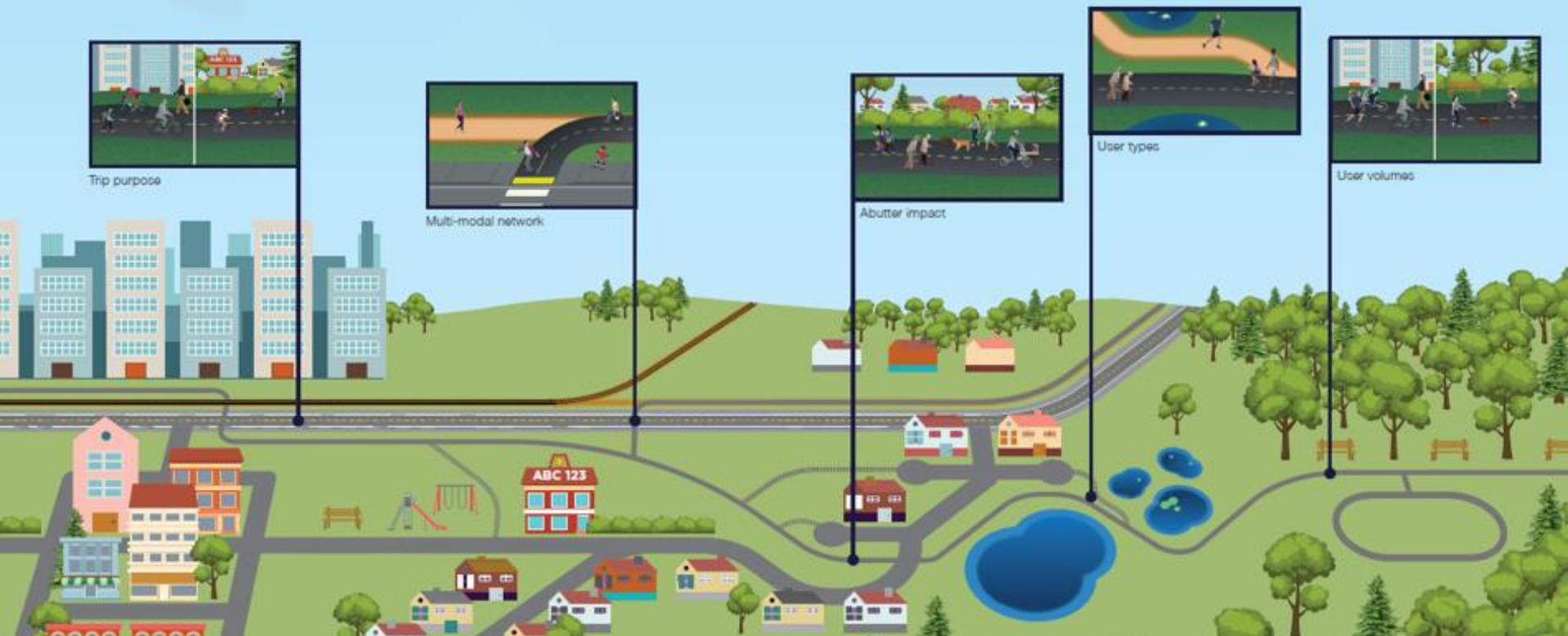
# Planning for Networks





# Planning for Users

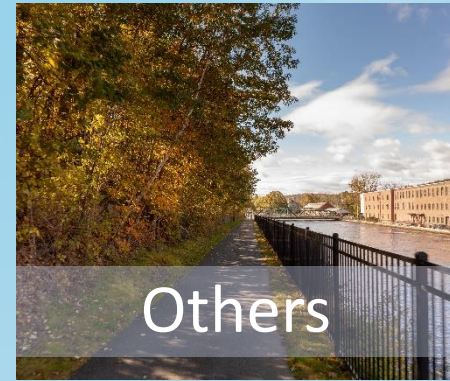
- How will the path expand the multi-modal network?
- Who will use it?
- How will people use it?
- How many people will use it?
- How will it impact abutters?



# Planning for Design

Core concepts for all paths

- Safety
- Security
- Comfort
- Enjoyability





# Planning for Design

- Land
  - Right-of-Way
  - Environmental
  - Railroads & Utilities
- Route
- Feasibility





- Cost

- Cost Estimator Tool
- Professional Estimates



## CAPITAL INVESTMENT PLAN

- Funding

- MassTrails Grants
- Complete Streets
- Federal/state programs
- Private partnerships



## Recreational Trails Program



# Building a Shared Use Path Design

- Geometry
- Path Experience
- Design Elements





## Path Types and Configurations



## Transitions



## Intersection Design







- ADA & access
- Surfaces/Materials
- Signage & Wayfinding
- Pavement Markings
- Drainage
- Wetlands
- Rail Corridors
- Utility Corridors
- Emergency Access





# Construction and Maintenance

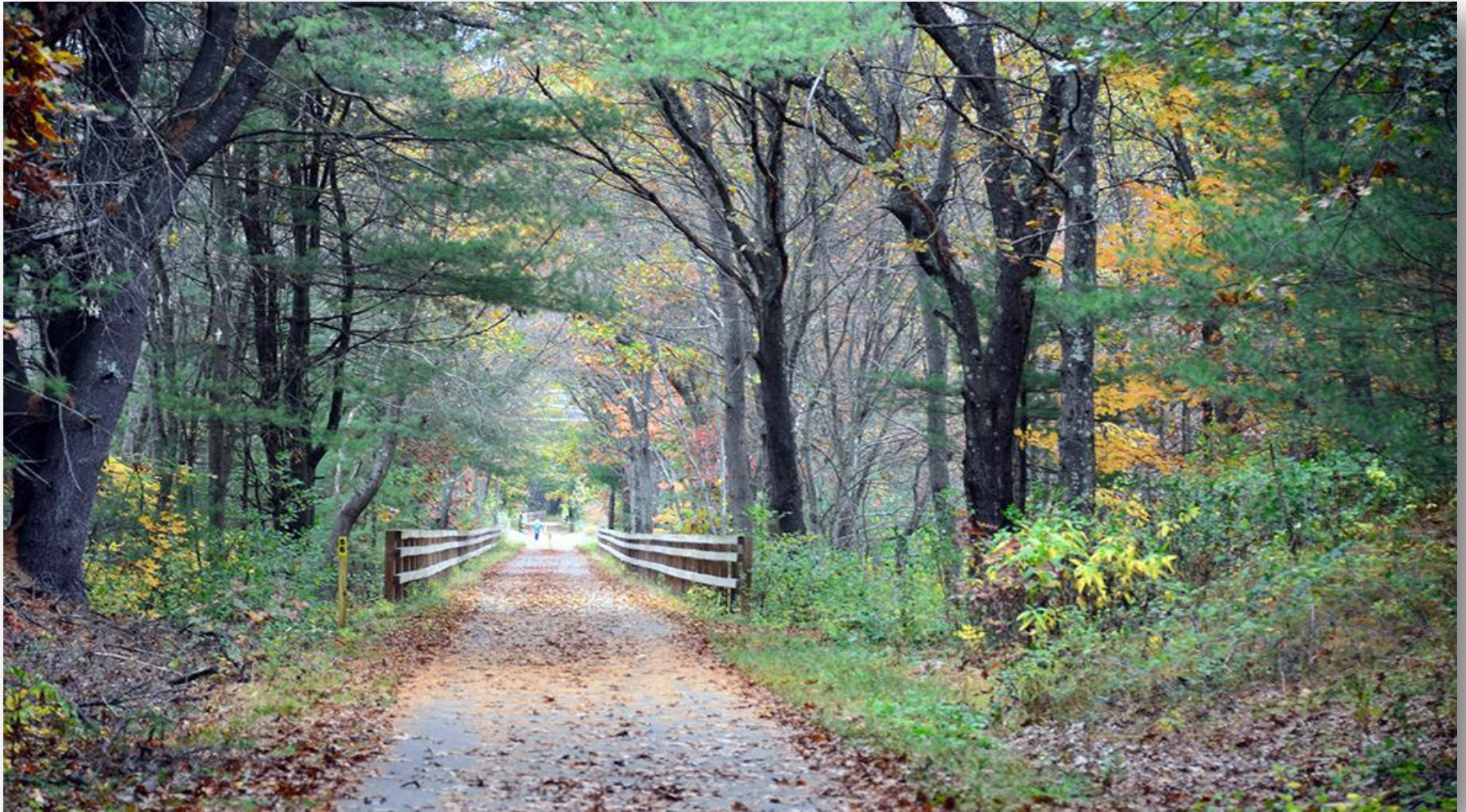




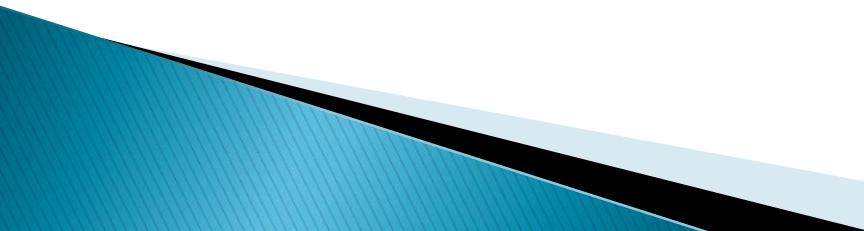
**Michael.Trepanier@dot.state.ma.us**



# Multi-use Path & Trail Permitting under the Wetlands Protection Act

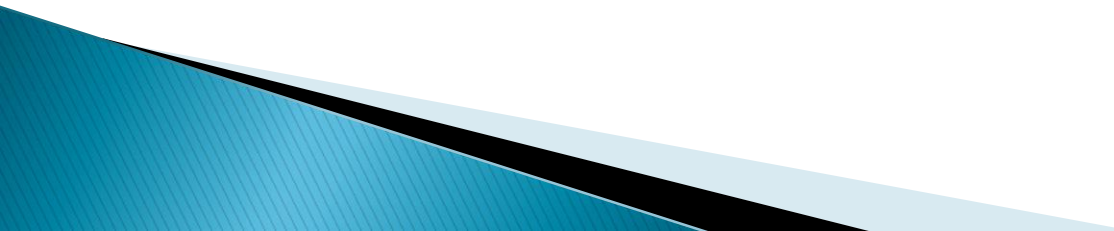


# Regulatory Compliance for Trails

- ❑ Environmental impact avoidance and minimization measures are required by MEPA, the Wetlands Protection Act (WPA), Water Quality Certification (WQC), Chapter 91 and permits under the Army Corps' authority (404 and the Rivers and Harbors Act) require of impacts.
  - ❑ Avoidance includes reasonable alternatives (e.g. route, design dimensions and/or location) and the employment of best management practices (BMPs).
  - ❑ Impacts which cannot be avoided must be minimized through the use of BMPs.
  - ❑ Mitigation must be provided for impacts that cannot be avoided or minimized (i.e. replication, restoration, compensatory flood storage, etc.)
- 



# Regulatory Compliance for Trails

- ▶ **Multi-use trail layouts can impact wetland resources and must meet performance standards.**
  - ▶ **Multi-use trails are subject to stormwater regulations to the maximum extent practicable. 310 CMR 10.05(6)(m).**
- 

# Regulatory Compliance for Trails

- ▶ Performance standards for “limited project” may be waived at the *discretion* of the issuing authority in these circumstances:
- ▶ As maintenance and improvement of existing public roadways and shoulders 310 CMR 10.53(3)(f) provided the improvement is widening less than a single lane.

# Regulatory Compliance for Trails

- ▶ Within a resource area, bike paths and trails are elevated on pilings and permit the “reasonably unobstructed flowage of water and adequate light to maintain vegetation”, 310 CMR 10.53(3)(j).
- ▶ Bike paths within Riverfront Area and outside of other resource areas provided:
  - Adverse impacts are minimized, generally paved area not to exceed 10’ except in previously altered areas
  - Access is not located in vernal pools or fenced in a manner to impede the movement of wildlife. (310 CMR 10.53(6))



# Recommendations: Inter-agency Coordination

- ▶ MassDEP, MassDOT and DCR have agreed to collaborate during the planning phase. Early project coordination will help identify problem areas and explore potential solutions. Selection of paths which are most likely to succeed will avoid wasted time, effort and money.
- ▶ MassDOT and DCR could collaborate early with local Conservation Commissions on projects.
- ▶ Roll out coordinated communication with Conservation Commissions about this Trails Initiative (as part of the Shared Design Guide & otherwise).
- ▶ MassDEP will:
  - Contribute to MassDOT's Shared Use Path Design Guide
  - Communicate with Conservation Commissions via MACC.
  - Offer guidance to Conservation Commissions where warranted.

# Next Steps and Questions

- ▶ Trail Guide to be completed and circulated
- ▶ Continued collaboration between agencies
- ▶ Continued Collaboration with MACC.
- ▶ Questions?

