Appendix A
Existing Conditions Assessment Memos

Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Literature Review**

SWPRC staff compiled and reviewed planning documents and policies relevant to the Ashuelot Rail Trail. Reviewed materials included *The New Hampshire State Trails Plan*, *Southwest Connects: Southwest Region Transportation Plan*, municipal master plans, safe routes to school plans, complete streets policies, and trail maintenance guides, State statutes related to landowner liability for recreational user safety, and cooperative agreements between the New Hampshire Department of Transportation (NHDOT) (title owner of rail trail property) and managing entities (e.g. other state agencies and municipalities). No plan currently exists for the Ashuelot Rail Trail specifically. A full list of collected materials can be found attached to this memo.

Findings

- All four municipalities along the trail's route (Keene, Swanzey, Winchester and Hinsdale) articulate strong support for bicycle and pedestrian transportation in official planning documents, including master plans and complete streets policies.
- In 1998, NHDOT entered into a cooperative agreement with the NH Department of Resources and Economic Development (DRED) that granted DRED the authority to use and maintain the state's rail trail system. In 2017, DRED merged with the NH Department of Cultural Resources to become the Department of Natural and Cultural Resources (DNCR), which continues to manage the majority of the state's rail trails, including the Ashuelot Rail Trail. Only a 0.2-mile trail segment in Keene is managed under a cooperative agreement between NHDOT and the City of Keene.
- The New Hampshire State Trails Plan was adopted in 2005 and has yet to be updated. Although the Plan notes that NHDOT acquired rail corridors to preserve future opportunities to develop railroad transportation, it states that future rail use is not likely on the Ashuelot Branch in the foreseeable future. The Plan recommends that trail improvements focus on segments within downtown areas, that link municipalities, and that connect with other trail segments - all characteristics that describe the Ashuelot Rail Trail.
- New Hampshire state law provides strong legal protection to both owners of property that grant public access for recreational purposes, as well as to groups or individuals that maintain trails for public recreation (as long as a fee is not charged).[1] The strong legal protection should mitigate liability-related concerns of volunteer trail maintenance or improvement groups.

[1] NH RSA 508:14

Recommendations

- Consider developing an online collection of trail-related plans and documents. Such a collection could serve as a valuable resource for grant proposals and project planning, especially for potential projects that span municipal borders.
- Request on-trail municipalities to share any relevant grant application materials, cost estimates, or project plans. Such materials could be included in an online collection of trail-related materials and prove a valuable resource to municipalities who have yet to make significant trail improvements.

Plan for Ashuelot Rail Trail Literature Review

Note: acronyms listed in glossary at the end of document

Title and Date	Description
State Documents	
NH State Rail Trail Plan, Adopted May 2005	This plan was developed by NHDOT in collaboration with NH DRED. (In 2017, NH DRED merged NH DCR to form the NH DNCR.) Chapter One includes an inventory of abandoned rail corridors and includes maps and a summary of existing conditions for each of the 23 abandoned rail corridors owned by the State of New Hampshire. Chapter Two pertains to trails other than State-owned rail trails, e.g. rail trails owned by other entities, other multi-use trails and pathways adjacent to roadways. Chapter Three provides information on state, regional and local plans that relate to trails. Chapter Four includes a set of guidelines for future trail development, maintenance and management. It also includes a summary of public comments received during the public outreach process, including a high volume of comments from the Southwest Region regarding the Ashuelot and Cheshire Rail Trails. A summary of existing conditions for the Ashuelot Branch is included on page 1-21 of the plan. A contentious issue noted in this plan is the potential conflict between non-motorized users, ATV users and snowmobile users of State-owned rail trails.
New Hampshire Statewide Bicycle and Pedestrian Plan, Adopted 2000	This goal of this NHDOT plan was to recognize, support and encourage bicycling and walking as alternatives to motorized forms of transportation and as an element of the state's intermodal transportation system. The plan recognizes recreational trails as a component of such a system and notes that the NHDOT has been purchasing abandoned railroad ROW for future transportation needs, one of which is bicycle and pedestrian use. Objective 6 of the plan states that the NHDOT will work in coordination with the NH DRED to propose a statewide plan for the integration of recreational trails with other bicycle/pedestrian facilities; set standards for their development; and encourage and support their improvement to all season condition. In 2018, the State hired a consultant to update the plan, a process that is still underway as of the summer of 2019. Rail trails, however, is not a focus of the update scope.
2013-2018 NH Statewide Comprehensive Outdoor Recreation Plan (SCORP), Updated 2013	The NH SCORP was developed through the collaborative efforts of the NH OSI and the NH DRED. The purpose of the SCORP is to meet the state's eligibility requirements to participate in the Land and Water Conservation Fund (LWCF) grant program by identifying current needs and trends for outdoor recreation in New Hampshire. A key theme of this plan is creating connections between people and the outdoors in order to promote health and livability. Trails are specifically called out as an important asset for connecting an aging population to outdoor amenities and as opportunities for active transportation.
NH ATV Trail System Plan, Adopted 2003	Adopted by the NH DRED, this plan calls for providing designated seasonal trails for ATVs and trail bikes, identifies major issues related to developing and managing these trails for use by wheeled OHRV during the snow-free months, and offers suggestions for addressing these issues. There are two trail systems designated for OHRV use in Cheshire County: Pisgah State Park and Troy Trails. The plan recommends connecting these trail systems using existing infrastructure whenever possible, such as class VI roads and utility ROW. The Ashuelot Rail Trail is not specifically addressed in this plan

Title and Date	Description
New Hampshire OHRV and Snowmobile Digest of Regulations, Effective July 1, 2016-June 30, 2017	Published by the New Hampshire Fish and Game Department, this digest of regulations includes useful information about licensing, speed limits, road crossing protocol, and trail locations. The included OHRV trail map shows that some OHRV trail networks are located in close proximity to the Ashuelot Rail Trail, perhaps leading to unpermitted use of the trail by OHRV operators.
RSA 215-C: Snowmobiles, Last modified in 2017	Located under Title XVIII (Fish and Game) of the New Hampshire Revised Statutes, Chapter 215-C governs snowmobile licensing, operation, and state highway crossings. Perhaps most notably, Section 215-C:8 specifies that the speed limit on approved snowmobile trails is 45 MPH, where no speed limit is specified.
RSA 508:14, Landowner Liability Limited, Last modified in 2006	Under state law, landowners, including governmental entities, who permit users to use trails free of charge are not liable for personal injury suffered from trail use, unless the harm was caused intentionally. Individuals or organizations that perform maintenance on trails for public recreation are not liable for personal injury, in the absence of "gross negligence or willful or wanton misconduct."
RSA 212:34, Duty of Care, Last modified in 2011	This statute provides both public and private landowners with additional protections when they grant free-of-charge recreational access.
New Hampshire Bureau of Trail Best Management Practices, Revised in 2017	A useful publication for citizen groups interested in performing trail maintenance. Topics covered include but are not limited to permitting, grading, trail surfacing, flagging, and brush clearing.
NHDOT Cooperative Agreements, Executed in 2005 with the City of Keene	NHDOT owns title to the land underlying the entire extent of the Ashuelot Rail Trail. For most of the trail, NHDOT entered into a cooperative agreement with the NH DRED, a defunct agency whose trail-related responsibilities now fall under the purview of NH DNCR. For a small portion of the trail in Keene, NHDOT has entered into a cooperative agreement with the City of Keene. The cooperative agreements specify trail maintenance responsibilities. The agreement with the City of Keene also allows the city to issue special use permits to third parties for purposes of maintenance, construction, or use consistent with recreational purposes of the trail.
NH Trails Bureau Grant-in-Aid Guidelines, n.d.	This presentation slide deck summarizes the NH Bureau of Trails Grant-in-Aid Program, which awards funds to non-profit snowmobile and OHRV clubs for completing projects that will benefit snowmobile and OHRV trails in the state. For the 2017-18 award cycle, the Bureau awarded about $1,650,000 through the program. The program is governed by Agency Rules Chapter Res 8400 and RSA 215-A:3-a, III and 215-C:3, II.
NH SB 80 Legislative Report, Adopted 2016	A legislative study committee chaired by Senator Nancy Stiles investigated issues relative to state-owned abandoned rail corridors and their use by recreational groups.

Title and Date	Description
HEAL NH Recreation Access in NH Communities, Completed 2016	This statewide report, produced by Healthy Eating Active Living (HEAL) New Hampshire, addresses access to recreational spaces in lower income communities in terms of park distribution, quality and access. It also highlights the results of an Active Recreation Inventory completed in ten NH communities by the HEAL NH Active Recreation Workgroup. The report notes that access to walking and bicycling routes that are safe from traffic and crime make it easier to access recreation areas, present less barriers and can influence resident choices to use recreation areas. The results of a community interview process show that low income residents in rural areas tend to live on state routes and rural roads that are not safe for walking and bicycling, which is a barrier to accessing recreational areas. Another major barrier identified for rural areas was distance. Appendix C includes a map of recreational areas in Winchester (p. 33).
Regional Documents	
Monadnock Region Future (MRF), Adopted 2015	The MRF is organized into four over-arching themes: Community Vitality, Economic Prosperity, Stewardship, and Preparedness. Objective 1.b under "Community Vitality" recommends increasing non-motorized transportation options and notes that multiuse paths are integral components of the Region's transportation system (p. 25). Objective 2.c under "Economic Prosperity" is to "Maintain Adequate Infrastructure," and includes a strategy to "Support and develop a well-maintained and diversified transportation system to sustain and grow regional and local economies (e.g. highways, bridges, trails, transit, park and ride lots, sidewalks, airports, rail, etc.)."
Southwest Connects, Adopted 2014	This plan is organized around eight major transportation corridor systems in the region. For each corridor, an arterial highway was identified as the main regional thoroughfare with supporting minor or urban arterials, collectors and multi-modal infrastructure (including rail trails). The Ashuelot Rail Trail is identified as part of the NH 10 South Corridor system. Plan objectives which relate to rail trails in some way include Objectives 2E: "…work to preserve elements of the Region's transportation history including its historic bridges, trestle bridges, railroad depots, rail rights-of-way, and other resources," 3C: "…improve mode of transport choices as well as the quality of existing alternative choices inside the region and with outside destinations," and 3D: "…support and encourage local efforts to improve street, sidewalk, bicycle path, and virtual connectivity as well as land use practices that reduce overreliance on building transportation capacity or requirements for long-distance transportation solutions." Page 74 of the plan includes a table which provides Ashuelot Rail Trail traffic in terms of weekly volume. Most of this data is from October 2014 (Keene is from August 2014), and it shows much higher volumes in Keene than the other communities.
Ashuelot River Corridor Management Plan, Adopted 2006	This plan was funded by NHDES and prepared by the Ashuelot River Local Advisory Committee (LAC) with assistance from SWRPC and the NHDES Rivers Program. It includes a "Summary of Issues" for each segment of the river, which includes existing conditions, locally specific issues and management goals. Four out of the six river segments listed in the plan are impacted by the Ashuelot Rail Trail (see pages 11-24). Specific recommendations that relate to the rail trail include "Monitoring and management of public use of Ashuelot Rail Trail to prevent destruction of resources by overuse or misuse by the public" and "Encourage community support for development and maintenance of the Ashuelot Rail Trail."

Title and Date	Description
The Ashuelot Rail Trail: The ART of Commuting, Completed 2014	This report was produced by KSC geography students as part of a seminar class in 2014. The report includes an assessment of the trail condition (attribute and user data) as well as the commuting viability of the trail. The report concludes that the trail is underutilized as a commuter pathway despite its good condition. The students used two surveys to gather data on commuter viability, an online survey and a paper survey. There are several recommendations within the report to increase the use of the trail, including the following: • Add pull-outs along major roads at access points with signage. • Create a trail map which includes points of interest such as viewsheds, historic rail depots, bridges, rivers, etc. to encourage more people to use the trail. • Develop new trails to connect the Ashuelot Rail Trail to downtown/village centers, other regional trails, schools, shopping centers, neighborhoods, etc. and place signs with maps at these locations. • Place mile markers, information kiosks with year-round trail maps, and other amenities along the length of the trail. • Generate an online mapping service, available as a Public Participation geographic information system (PPGIS).
Local Documents	
Keene Comprehensive Master Plan, Adopted 2010	This plan envisions "a well-developed trail system that provides connections between neighborhoods, open spaces and other communities while simultaneously supporting a healthy lifestyle." One recommendation is to develop a wayfinding system that allows people to find trail linkages that is "consistent in design and clear in purpose" (p. 44). Other strategies include connecting suburban neighborhoods to the trail network (p. 56 & 64), maintaining trails for bicycle & pedestrian access and fill in gaps in the network (p. 57), create programs to retrofit existing flood channels and detention basins with trails and other recreational amenities (p. 92), and make use of the trail system easier (p. 133).
Keene Transportation Master Plan, Adopted 2002	The Keene Transportation Master Plan was adopted by Keene City Council in 2002 and attached as an appendix to the CMP in 2010. The plan references the Keene Bicycle/Pedestrian Path Master Plan and includes recommendations to "*Continue to support the development of off-road bike paths*" (Recommendation 5 of Part 3) and to "*Develop trailhead-parking facilities for access to the state-owned rail corridors located outside of the Downtown*" (Recommendation 9 of Part 3) One of the locations identified for trailhead parking is Krif Road, which can be used to access the Ashuelot Rail Trail.

Title and Date	Description
Kenne Bicycle and Pedestrian Master Plan, Adopted 1999 (update in process)	**Goals and Objectives related to rail trails:** Goal 5 of this plan is "To assure the integrity of the former railroad corridors are developed for transportation enhancement and recreational use." Objective 4 is "To incorporate existing paths, paths approved for construction and former railroad corridors into a city-wide network of bicycle/pedestrian paths," and Objective 8 is "To link the City with neighboring towns, states and regional routes into a network of bicycle/pedestrian paths." **User Groups Described in this Plan:** User groups described in the plan include bicyclists, pedestrians, in-lane skaters/skateboarders, cross-country skiers, snowmobiles, and equestrians. According to this plan, the Keene Sno'Riders have maintenance responsibility of the Ashuelot Branch rail bed from Rt. 101 south of the Bypass through Keene to the Swanzey/ Winchester town line. A primary interest and concern of the Keene Sno'Riders is creating a safe connection between the Cheshire Branch and the Ashuelot rail beds. This is also a concern for the equestrian community. Uses identified for the Ashuelot Rail Trail south of Rt. 101 include pedestrians, mountain biking, cross country skiing, equestrians, and snowmobiles. **Pathway Design, Management & Funding:** Section IV of the plan includes recommended design considerations, pathway rules and regulations, and maintenance considerations. Page 18 of the document includes a "Path System Safety Checklist," and this section also includes a description of trailside amenities which mentions the need for consistent signage of the trail system. **The Pathway System:** This plan is composed of two elements: (1) the Keene Bicycle/Pedestrian Path System consisting of bike paths, bike lanes and "Share the Road" signs; and, (2) the Statewide System of Bike Routes, Multi-Use Paths, and Rail-to-Trail Recreational Corridors. The plan notes that these facilities must be interconnected to enable all non-motorized users to travel to various parts of Keene as well as to adjoining towns and other regional destinations. The Ashuelot Rail Trail - Phase I (between Winchester St. and Rt. 101 to the south) was identified as a "Priority A Corridor," and the Ashuelot Rail Tail - Phase II (south of Rt. 101 to the Keene/Swanzey town line) was identified as a "Priority B" Corridor.
Keene Active/ Passive Recreation Master Plan, Adopted 2012	The purpose of this plan is to guide the development of the City's parks, trails and recreation system, and provide strategic recommendations to measure how the system is meeting the needs of residents. The plan includes 9 key issues. Key issue #5, *Coordinate Active Transportation/Recreation and Trail Connectivity*, includes three recommendations which are described on pages 42 and 43 of the document. Key Issue #6, *Monitor Levels of Service for Parks, Trails, Open Space, and Facilities,* includes two recommendations which are described on pages 43-47. Examples, strategies and action steps listed in the plan include "Design and install consistent signage/kiosks, public art, benches, and way finding markers for important community destinations," "Develop and distribute 'A Walking Guide to Keene' and 'A Bicycling Guide to Keene'," and "Explore the option of including improvements pathways, greenways and trails in the CIP, considering recreation transportation infrastructure as a parks and recreation facility."
Keene Complete Streets Policy, Adopted 2015	This policy directs the City to consider the needs of all users in municipally managed projects and project phases. The policy defines "all users" as bicyclists, motorists, public transportation users, and pedestrians of all ages and abilities. The policy applies to all city-owned transportation facilities in the public ROW, including connecting pathways.

Title and Date	Description
Keene Complete Streets Planning & Design Guidelines, Adopted 2016	This document is meant to be used as a resource for City staff when working within the public ROW. It is organized by a Complete Streets typology system which includes the following street types: Slow Streets, Gateway Streets, Bicycle Streets, Neighborhood Streets, Rural Streets, and a Transit Overlay. The Guidelines note that the City's bicycle network is comprised of Bicycle Streets, Gateway Streets, Slow Streets, and off-road paths.
Swanzey Master Plan, Adopted 2003	The Swanzey Master Plan includes several chapters which relate to the rail trail planning project, notably the Recreation and Transportation chapters. Within the Recreation Chapter, the plan identifies the Ashuelot Rail Trail as a recreational asset and addresses the issue of conflicting user groups, such as OHRV/ATV riders, snowmobile riders and non-motorized users. Under Goal 1, the plan recommends that the Town develop a Plan that accommodates the differing interests of recreation users. Goal 2 directs the town to develop multi-use corridors toward Keene to enable recreational uses such as jogging and biking. The Transportation Chapter includes an objective to "Enhance pedestrian, bicycle and public transit opportunities," and it lists multiple targets which pertain to trails and their use (see pages 72 and 73). One of these targets is to "Coordinate with adjacent towns to ensure inter-municipal pedestrian/trail system connections." The Preservation Chapter includes a goal to preserve the industrial heritage of Swanzey and recommends installing interpretive markers near historic sites. Interpretive signs may be warranted along sections of the Ashuelot Rail Trail.
Swanzey Open Space Plan, Adopted 2004	A key finding of the Open Space Plan is the need to protect or restore resources that provide recreation and public access. The "Swanzey Open Space Plan Project Rating Sheet," which is attached to the plan as an appendix, includes existing trails and potential for trails in the rating system. The plan also lists priority areas for conservation within the town, including the Ashuelot River corridor and agricultural fields in West Swanzey and Westport.
West Swanzey Charrette Report, Complete 2012	Under "Circulation/Connection to the river," the plan recommends the following: "Celebrate and grow pedestrian/bicycle accessibility throughout West Swanzey. Create a West Swanzey River Heritage Trail along both sides of the Ashuelot River between main Street and Denman Thompson Avenue and link it to the Ashuelot Rail Trail to the east and Route 10 to the west." The report also recommends connecting sidewalks in the village to the Ashuelot Rail Trail.
Swanzey Complete Streets Policy, Adopted 2015	This policy directs the Town to consider the needs of all users in municipally managed projects and project phases. The policy defines "all users" as bicyclists, motorists, public transportation users, and pedestrians of all ages and abilities. The focus of the policy is on the street network, however, it encourages the town to give priority to projects that enhance overall connectivity including corridors that provide important continuity or connectivity links to existing pedestrian or bicycle networks.

Title and Date	Description
Swanzey Complete Streets Planning & Design Guidelines, Adopted 2015	This document is meant to be used as a resource for town staff when working within the public ROW. It is organized by a Complete Streets typology system which includes the following street types: Collector Streets, i.e. roads whose primary function is to provide access and link neighborhoods and intersecting local streets to arterial thoroughfares; Compact Neighborhood Streets, i.e. local streets located in medium to high density residential areas; Residential Streets, i.e. local streets located in low density suburban and residential areas; and Rural Streets, i.e. streets located in rural areas. The document also mentions state routes and the importance they play in linking the Town's transportation system.
Description of Dickinson Memorial Forest, n.d.	This online resource provides basic information about the Dickinson Memorial Forest, a protected property in Swanzey that abuts the Ashuelot Rail Trail. The 70-acre property is owned and stewarded by the Society for the Preservation of New Hampshire Forests.
Winchester Master Plan, Updated 2017	This plan was most recently updated in 2017 (Population & Housing, Energy, Economic Development, and Traffic & Transportation chapters). The other chapters of the plan were last updated in 2008. The 2017 Transportation Chapter recommends that the Town adopt a Complete Streets policy and notes that connecting pathways and bike lanes to local destinations will help to avoid conflicts between bikes and vehicles. This chapter also recommends requiring bicycle racks for new developments when appropriate. The Ashuelot Rail Trail is listed as an important recreational facility in the "Cultural and Recreational Resources" chapter of the plan, and the plan notes that the Winchester Trail Riders snowmobile club grooms and maintains the trail during the winter months. One recommendation from this chapter is to increase awareness of recreational and cultural opportunities in town, for example by providing trail maps.
Winchester Complete Streets Policy, Adopted 2017	The Winchester Complete Streets policy, which directs the Town to consider the needs of all users in all transportation projects and project phases, has a strong focus on trails and the role they play in completing the non-motorized transportation network in Winchester. The definition of "all users" includes bicyclists, pedestrians, snowmobiles, equestrians, and motorized users. The preamble to the policy, which establishes the purpose for the policy, specifically mentions the Ashuelot Rail Trail as an integral component of the Town's non-motorized transportation network. The policy applies to town and state owned transportation facilities, including pathways. A performance metric listed in the policy is "The number of new or improved bicycle and pedestrian access points to rail trails."
Winchester Complete Streets Planning & Design Guidelines, Adopted 2017	The Winchester Design Guidelines document is split into five major sections: an introduction section which provides general information about complete streets and the purpose and goals of Winchester's policy; a section which describes the Winchester complete streets typology system; a complete streets toolbox with recommended design treatments for streets in Winchester, a section on opportunities for achieving complete streets, and a section which describes priority implementation areas identified by the Winchester complete streets committee. Goal #5 of the document is "integrate off-road paths and recreational trails with local roads to create a safe network for non-motorized transportation." Priority Implementation Area #5 is the Ashuelot Rail Trail between Ashuelot Village and Elm Street. Specifically, this section of the trail is in need of surfacing improvements and crossing improvements where it crosses NH Rt. 119.

Title and Date	Description
Winchester Charrette Report, Completed 2008	This report recommends developing the rail bed into a multi-use trail for bikes, walking, snowmobiles, snowshoes, etc. A major issue identified during the listening sessions was the need for the downtown to be more walkable, and the need to connect the downtown to the Ashuelot River. The report notes that both sides of the river in the downtown area need to be cleared of brush and non-essential trees to open up visual connections. The report also recommends installing a pedestrian bridge over the Ashuelot River across from the VFW. This would create a walking loop with the Elm Street Bridge, the proposed river walk and the Ashuelot Rail Trail for pedestrians and bicyclists.
Winchester Economic Development Resource Inventory, Completed 2012	The Economic Development Resource Inventory provides an overview of current town resources (as of 2012) in the following categories: Infrastructure; Available Business Sites; Travel, Leisure and Recreation Opportunities; and Historical Sites. It also includes a list of external funding sources for economic development. The Ashuelot Rail Trail is listed within the "Travel, Leisure and Recreation" section of the report (p. 15).
Hinsdale Master Plan, Updated 2014	The Traffic and Transportation chapter of the Hinsdale Master Plan includes an objective to *"Advocate for and encourage alternative modes of transportation within town and within the sub-regional* area of Hinsdale."* This chapter also notes that the rail trails are a unique feature of Hinsdale's transportation system and are available for recreational use and for alternative, off-highway bicycle routes due to the long distance connections they provide cyclists. The Recreation chapter includes a goal to "Provide a range of year-round recreational opportunities for users of all ages and mobility levels to enjoy" and lists the rail trail as a recreational asset.
Hinsdale Complete Streets Policy, Adopted 2016	This policy directs the Town to consider the needs of all users in municipally managed projects and project phases. The policy defines "all users" as bicyclists, motorists, public transportation users, and pedestrians of all ages and abilities. The focus of the policy is on the street network, however, it encourages the town to give priority to projects that enhance overall connectivity including corridors that provide important continuity or connectivity links to existing pedestrian or bicycle networks. A recommended performance metric listed in the policy is "The number of new or improved bicycle and pedestrian access points to rail trails."
Hinsdale Complete Streets Planning & Design Guidelines, Adopted 2016	The Hinsdale Complete Streets Design Guidelines document includes four major sections: Introduction/Benefits of Complete Streets, Components of Complete Streets, Hinsdale Complete Streets Typology, and Priority Implementation Areas. While the guidelines focus on street treatments, within the "Gateway Streets" section the document recommends wayfinding signs to direct pedestrians and bicyclists to recreation areas, which could include the rail trail access points.

Title and Date	Description
Sustainable Strategies for Small Cities and Rural Areas - Next Steps Memo, Completed 2016	In 2016, Hinsdale was selected to participate in the EPA's Office of Sustainable Communities (OSC) Building Blocks Technical Assistance Program. This involved several pre-workshop conference calls and a 2-day workshop in March 2016. During the first day of the workshop, there was a tour of sites within the town and a public meeting was held to gather input from the general public. On the second day, a group of key stakeholders at the local and state level were convened to identify three goals and develop an action plan around those goals. Recreational trails - including the two rail trails in town - were identified as one of Hinsdale's strengths. The need to expand and maintain recreational resources and improve transportation connections with other towns/states were key issues identified in the memo. A major opportunity is to capitalize off of the construction of the new Hinsdale-Brattleboro Bridge to ensure bike/ped connections with Brattleboro and public access to waterways.

List of Acronyms:

ATV	-	All-terrain vehicle
HEAL NH	-	Healthy Eating Active Living – New Hampshire
KSC	-	Keene State College
LWCF	-	Land and Water Conservation Fund
NH DCR	-	New Hampshire Department of Cultural Resources (defunct)
NH DNCR	-	New Hampshire Department of Natural and Cultural Resources
NH DRED	-	New Hampshire Department of Resources and Economic Development (defunct)
NHDES	-	New Hampshire Department of Environmental Services
NHDOT	-	New Hampshire Department of Transportation
NH OSI	-	New Hampshire Office of Strategic Initiatives
OHRV	-	Off-highway recreational vehicle
ROW	-	Right of way
RSA	-	Revised Statutes Annotated (The Laws of the State of New Hampshire)

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DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Rail Trail Base Mapping**

Background and Data Sources

To increase general awareness about the location of the Ashuelot Rail Trail SWRPC created a variety of printed and online maps:

1. The Plan for Ashuelot Rail Trail: A Pilot Project Locator Map (https://arcg.is/WvXvD) was created to show the project area as well as facilitate responses to questions in the project's online resident survey. The map is featured on the project webpage (http://www.swrpc.org/plan-for-ashuelot-rail-trail) and allows users to view the trail alongside aerial photography as well as print and share map views of the trail using social media platforms.
2. Four community-specific poster-sized "Overview" maps were created to assist the Project Advisory Committee, Open House participants and others at various meetings. The maps (Keene, Swanzey, Winchester, and Hinsdale) are available on the project webpage (http://www.swrpc.org/plan-for-ashuelot-rail-trail). An Ashuelot Rail Trail Challenges and Opportunities (https://arcg.is/evvun) online interactive map was created to display feedback received at Project Advisory Committee meetings and at the Open House event.

The following data was created or compiled in GIS format for use during the planning project and beyond. (see the attached map book):

- 2015 aerial imagery provided by NH GRANIT.
- Project Advisory Committee/Open House feedback.
- Rail trail bridge locations and descriptions.
- Ashuelot Rail Trail and other rail trail centerlines provided by the New Hampshire Department of Transportation (NHDOT) Bureau of Planning and Community Assistance.
- Highway centerlines provided by the NHDOT Bureau of Planning and Community Assistance.
- New Hampshire trails provided by NH GRANIT.
- The New Hampshire conservation/public lands layer provided by NH GRANIT.
- Waterbodies, rivers, streams, and wetlands published in the United States Geological Survey National Hydrography Dataset.

Recommendations

- Collect new and/or additional data on formal and informal parking locations, trail access points (beyond road intersections), snowmobile facilities, railroad-related structures, food and water, and bathrooms.

ASHUELOT RAIL TRAIL
AERIAL IMAGERY MAP BOOK

SWRPC

Legend

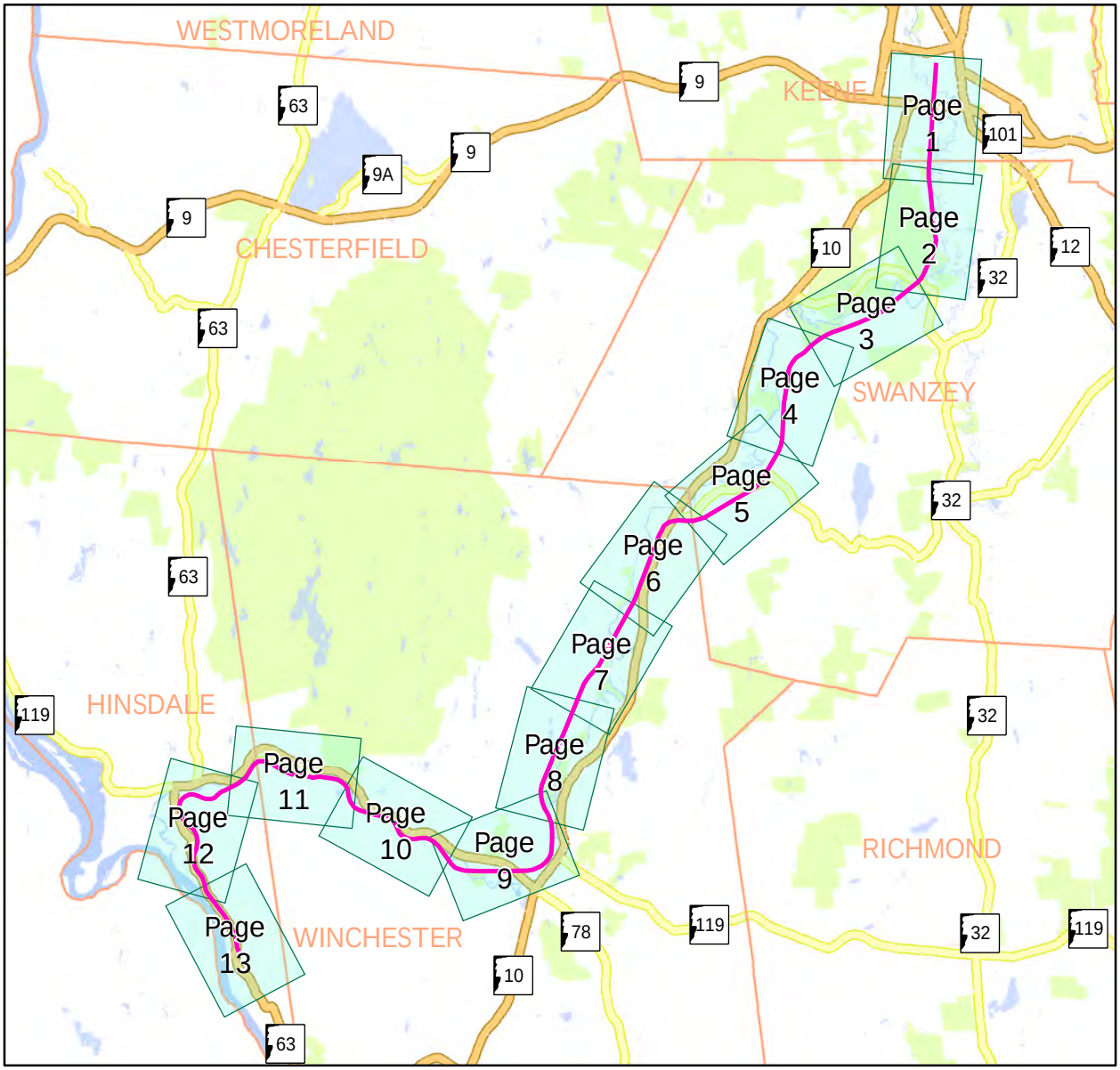
Project Advisory Committee/Open House Feedback
- Challenge
- Opportunity

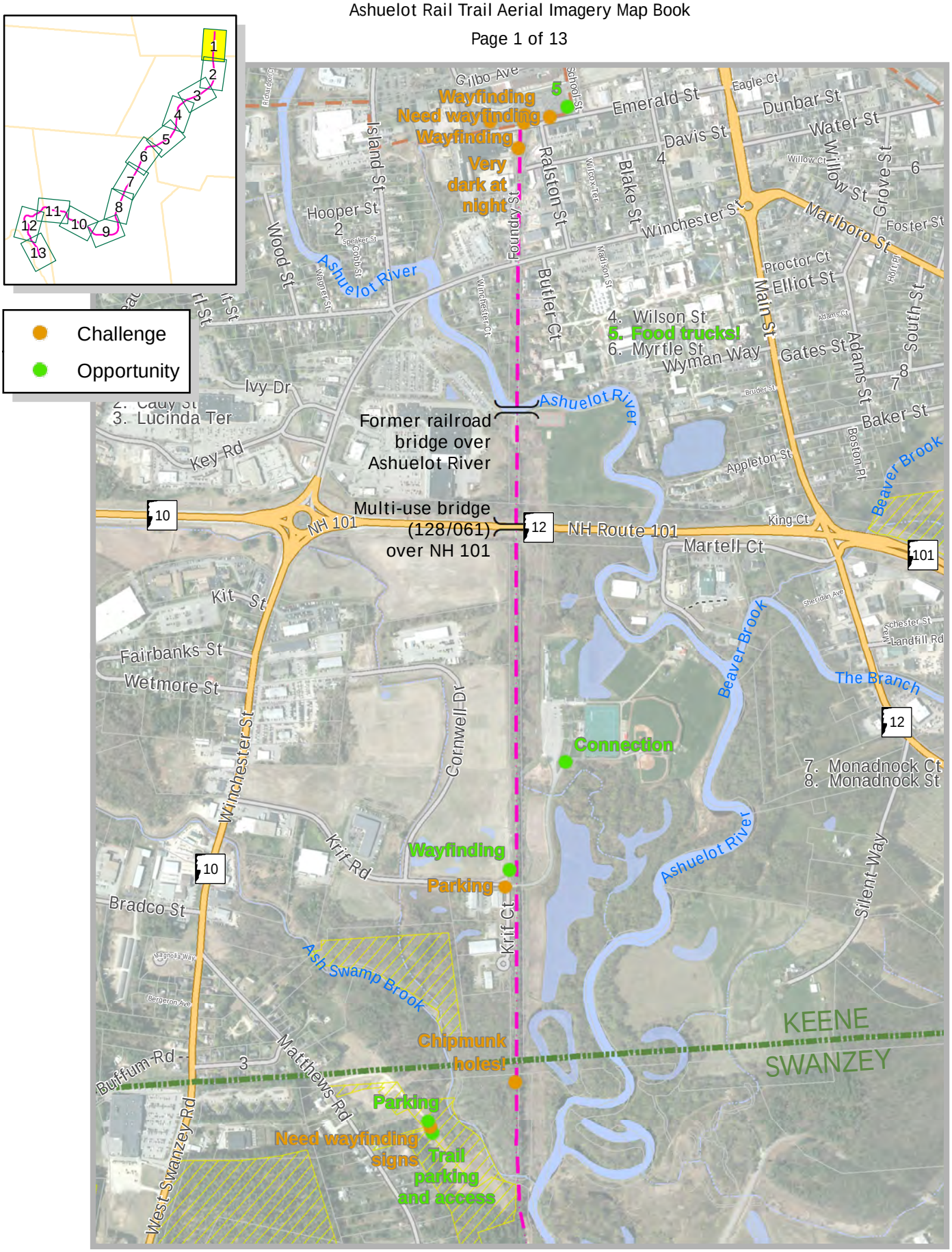
Populated Places
- Summit
- Municipal Boundary
- Ashuelot Rail Trail Bridges
- Ashuelot Rail Trail
- Other Rail Trail

Highway
by Legislative Classification
- Class I or IV
- Class II
- Class III
- Class V
- Class VI
- Private
- Recreational Trails in New Hampshire
- New Hampshire Conservation/Public Lands
- Tax Parcel Boundary

River or Stream
Type
- Perennial
- Intermittent

Water Body
Type
- Swamp or Marsh
- Lake or Pond
- Reservoir





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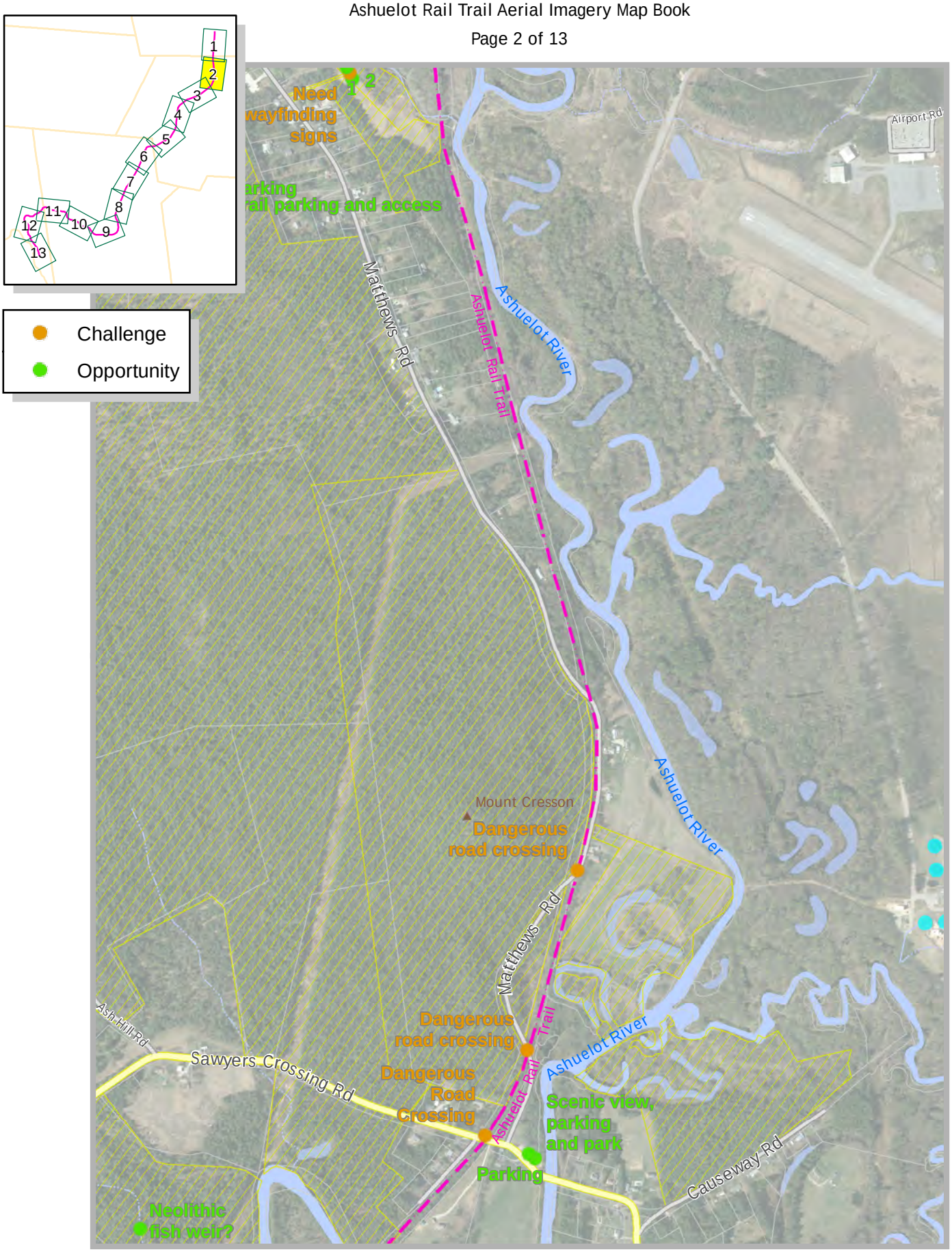

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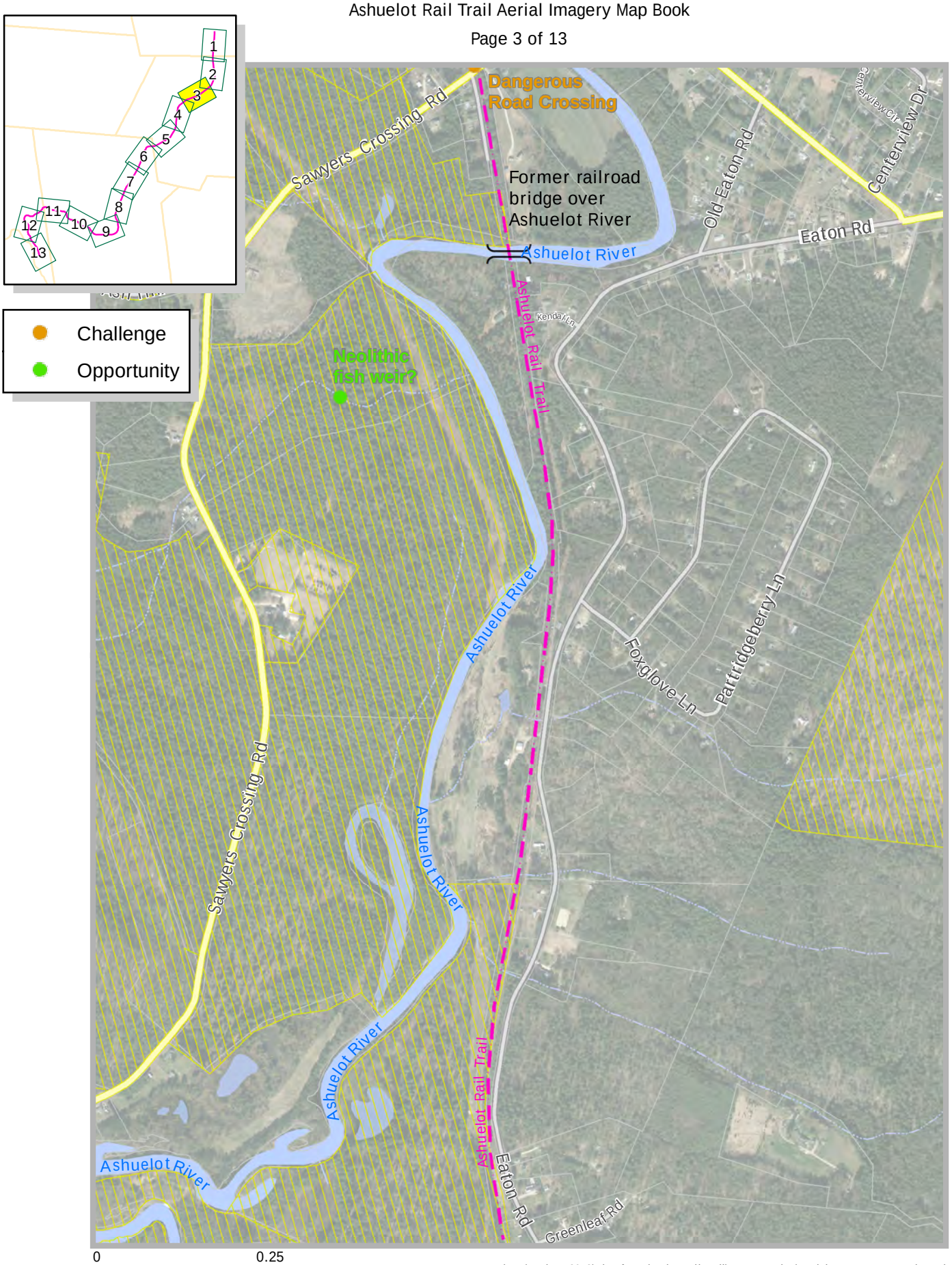

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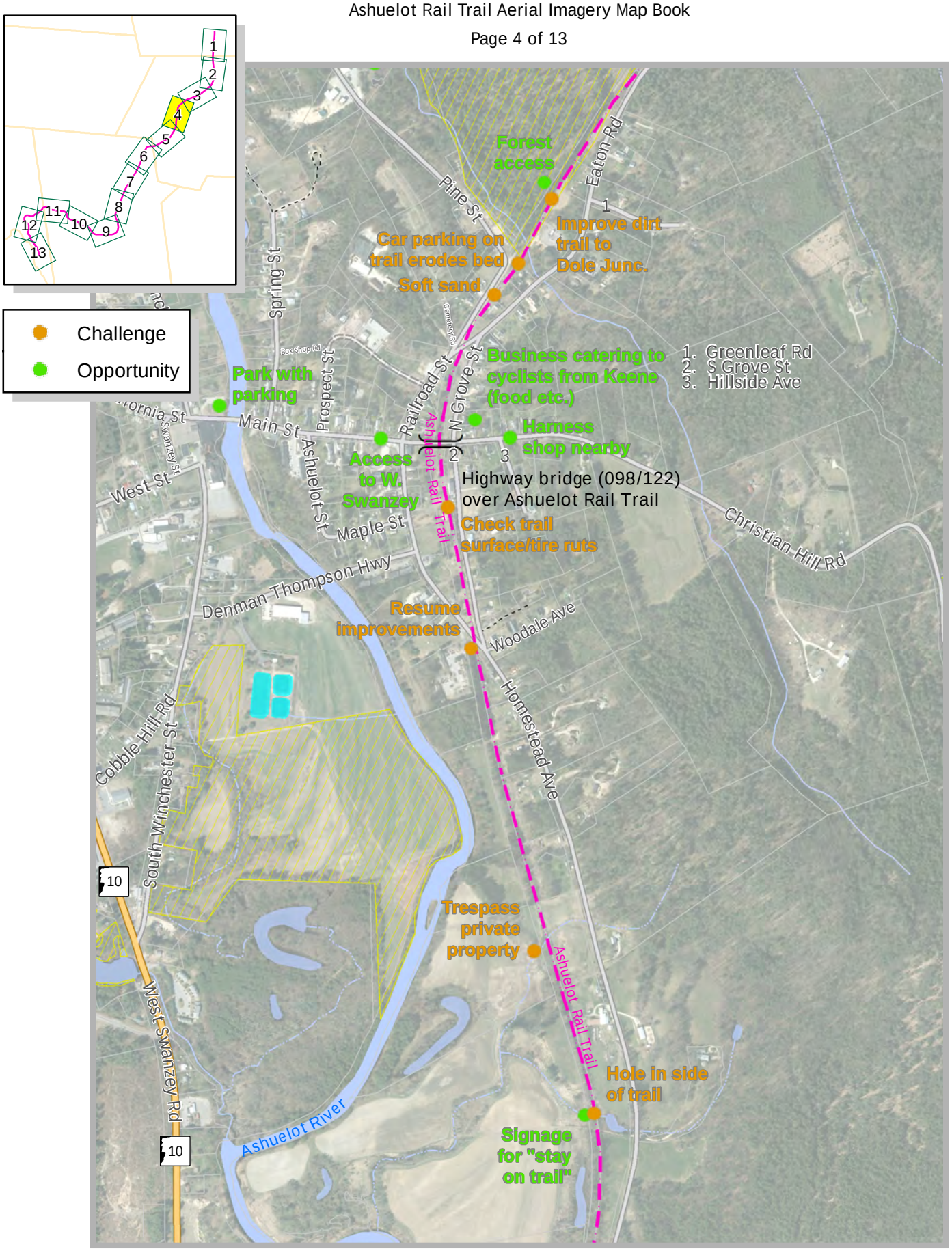

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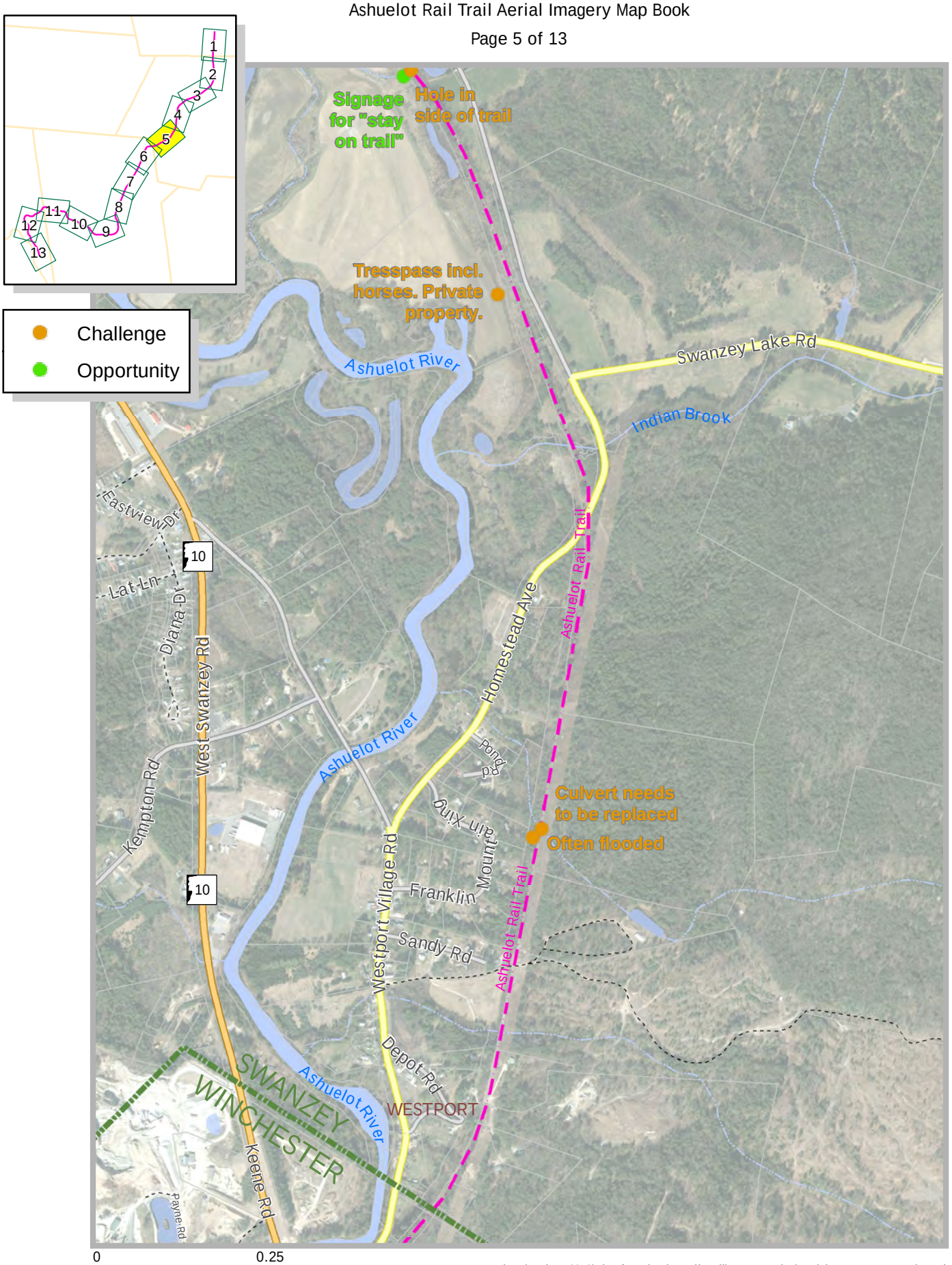

0 0.25
Miles
0 1,000
Feet

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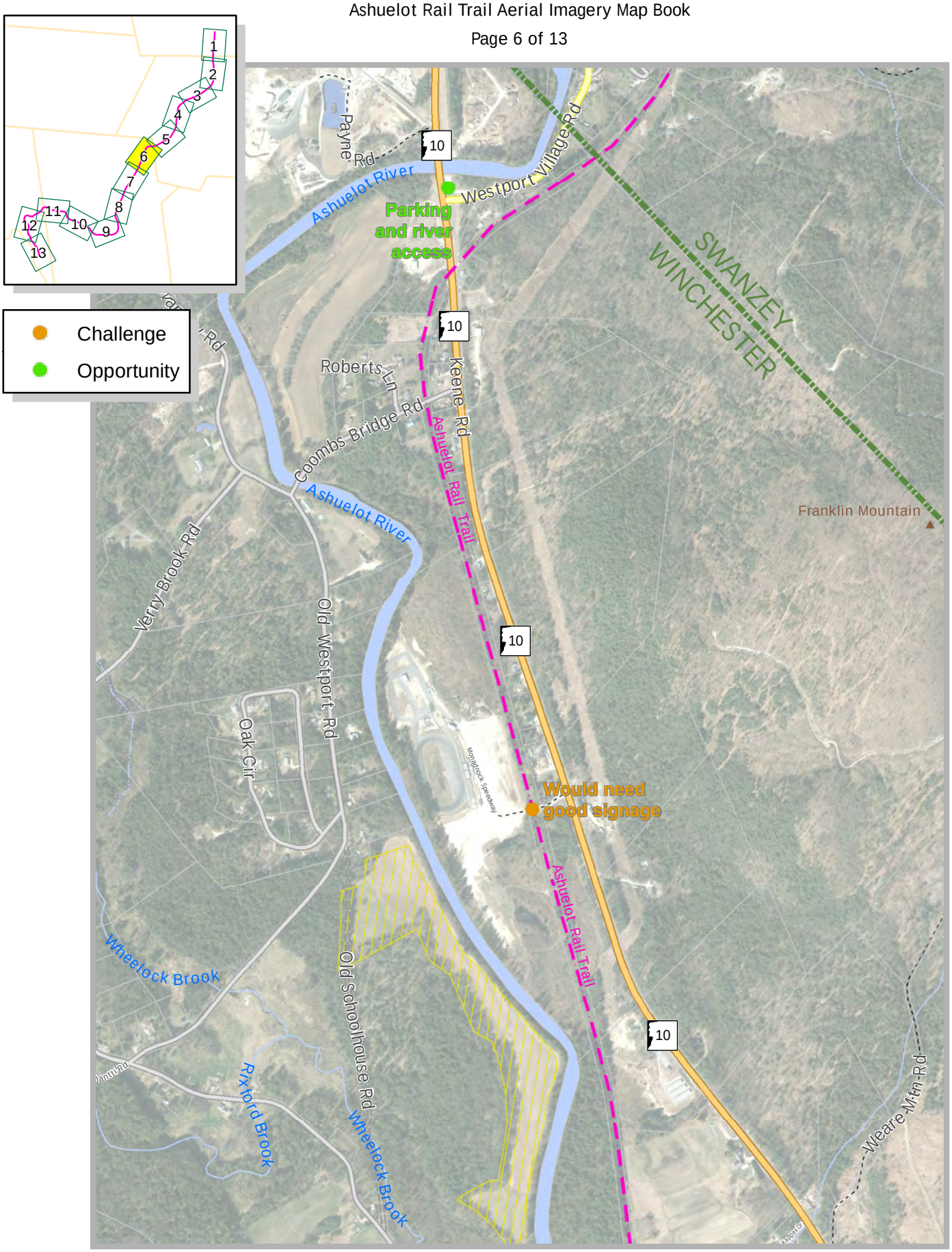

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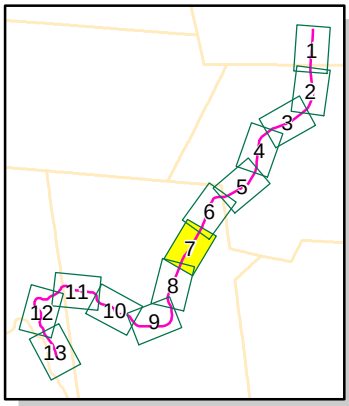
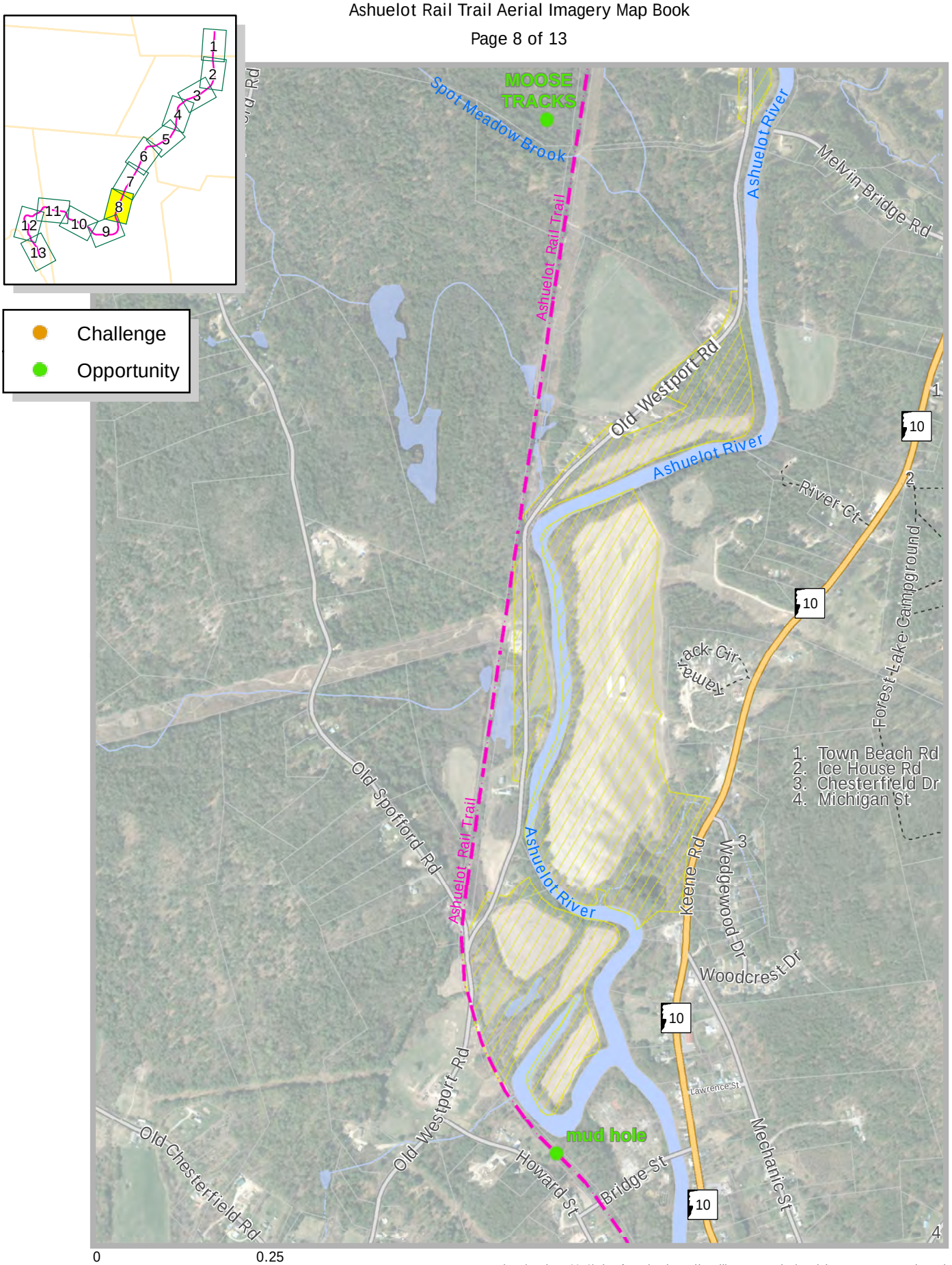


Challenge
Opportunity

Old Schoolhouse Rd
Wheelock Brook
Ashuelot River
Ashuelot Rail Trail
Weare Mtn Rd
Kapper Dr
Old Westport Rd
Fosgate Rd
Bridge repair needed
Former railroad bridge over Ashuelot River
Bridge repair needed
Connect to Pisgah
Keene Rd
10
Ashuelot River
Ashuelot Rail Trail
Ashuelot River
Ashuelot River
Old Spofford Rd
Spot Meadow Brook
MOOSE TRACKS
Melvin Bridge Rd

0 0.25
Miles
0 1,000
Feet

Document Path: Y:\Projects2018\Plan for Ashuelot Rail Trail\Base Mapping\Aerial Imagery Map Book.mxd



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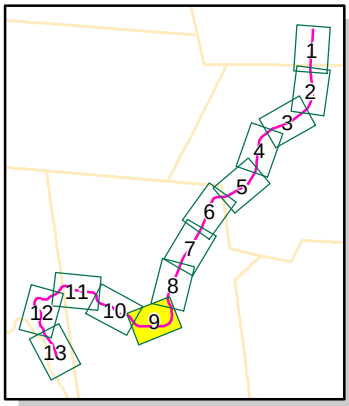


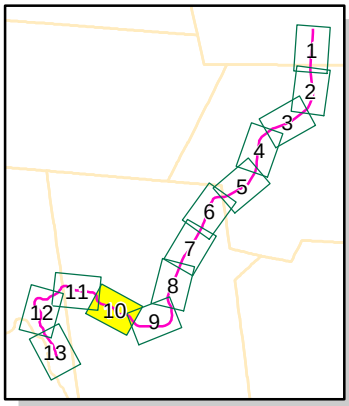
Challenge
Opportunity

Keene Rd
Ashuelot River
Howard St
Hildreth St
Michigan St
High St
Richmond Rd
Union St
Parker St
WINCHESTER
Ashuelot Rail Trail
Good parking
Future Trailhead Parking
Willow Ct
Elm Ct
Miner Ct
Elm St
Dogwood Hill Rd
Birch Cir
Dingman Cir
Westport Rd
Old Chesterfield Rd
Woodard Ave
Clark Rd
Duso Rd
Main St
Mirey Brook
Warwick Rd
Back Ashuelot Rd
Hinsdale Rd
Ashten Rue
Wood Dr
Snow Brook
Ore Mountain Ln
Burt Hill Rd
Ashuelot St
Bridge repair needed!
Former railroad bridge over Ashuelot River
MUD HOLES
Water Bar Area
mud hole
10
119

1. Sunrise Village Rd
2. Old Mill Ct
3. Chapel St
4. Bridge St
5. Redwood Dr
6. Lilac Ln
7. Parkhurst Pl
8. Hawkins Rd
9. Manning Hill Rd
10. Edgewater Way

0 0.25
Miles
0 1,000
Feet

Document Path: Y:\Projects2018\Plan for Ashuelot Rail Trail\Base Mapping\Aerial Imagery Map Book.mxd



Challenge
Opportunity

Water Bar Area
1
Depot is private building on state land
Depot
2
Question? Trailer Parking?
1. Back Ashuelot Rd
2. Elderberry Ln
Dickinson Pond
Ashuelot Rail Trail
Ashuelot River
Hinsdale Rd
Ashuelot St
Fanton Hill Rd
Purcell Rd
Allen Hill Rd
Gunn Mountain Rd
Old Bolton Rd
Old Hinsdale Rd
Fiddle Hill Rd
Broad Brook Rd
Broad Brook
Nurmi Pl
ASHUELOT
119

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Miles
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Feet

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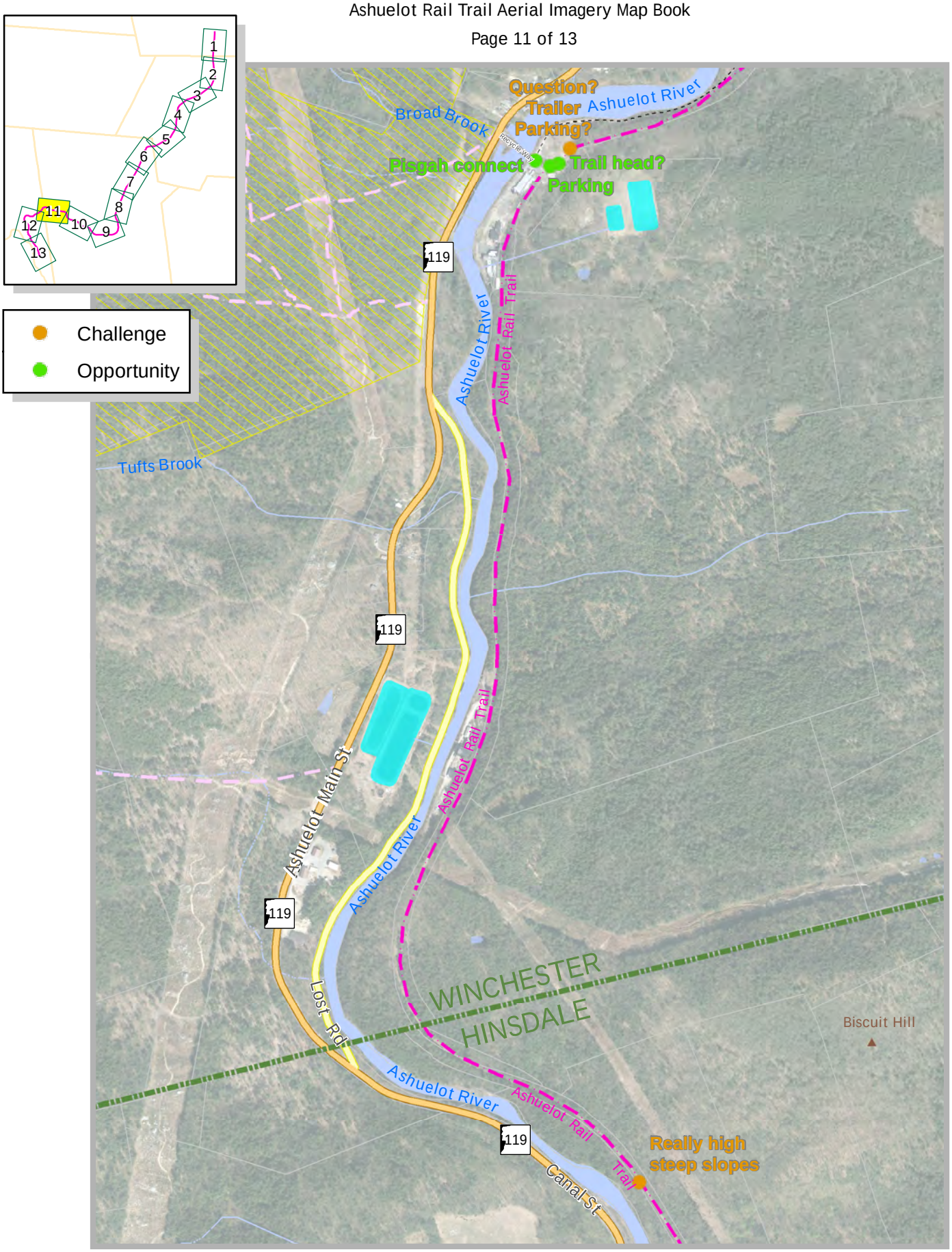

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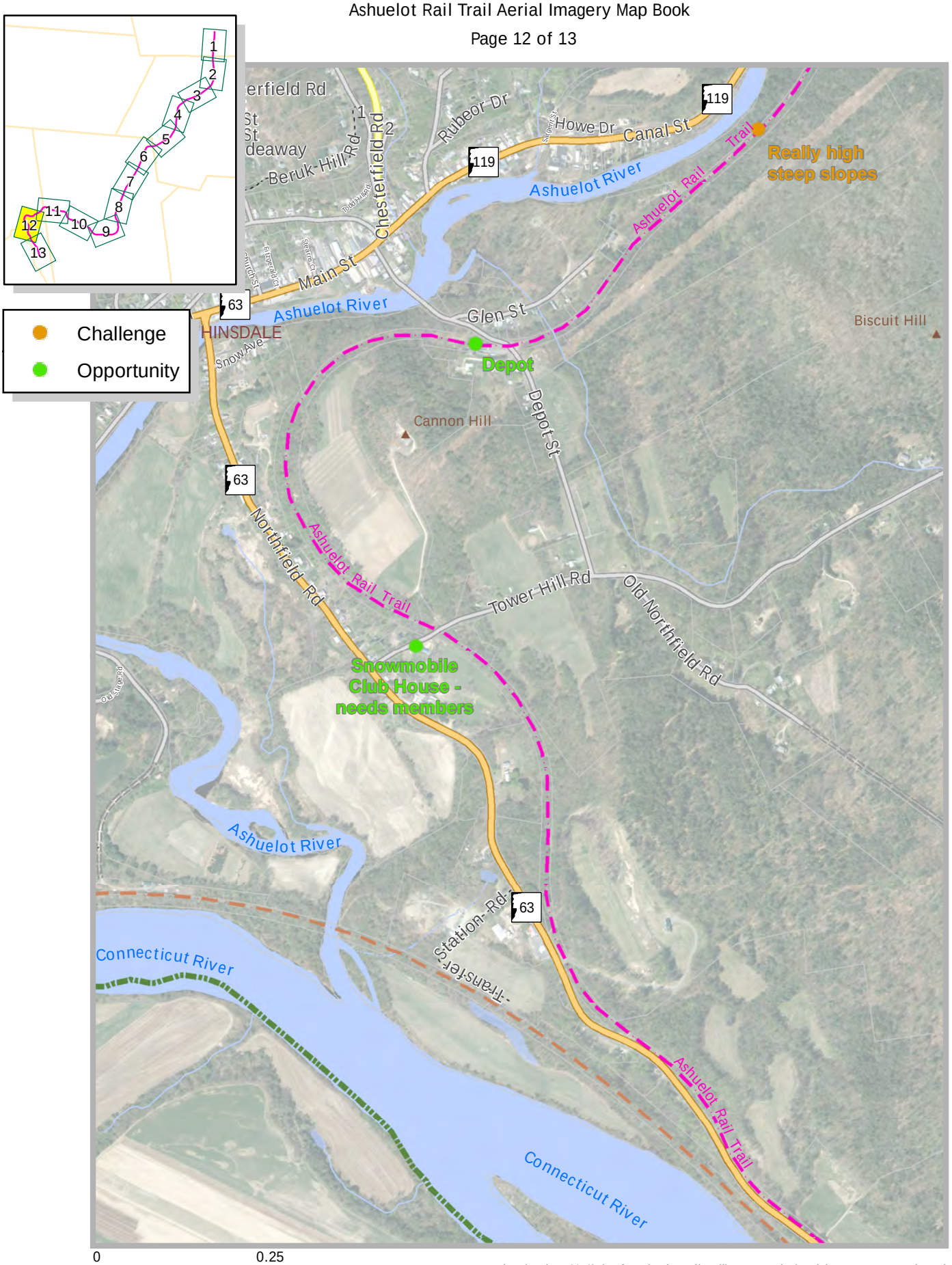

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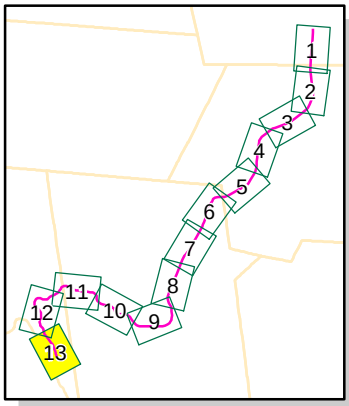


Challenge
Opportunity

Ashuelot Rail Trail
Connecticut River
Plenty of trailer parking for horses
Intersection with another trail
More parking for trailers
Improve dirt track to W. Swanzey
Possible connection /loop MA/VT blocked?
Needs map w/Directions. Signs.
DOLE JUNCTION
1
1. Northfield Rd
2. Barber Rd
2
63
Old Northfield Rd
Connecticut River
Northfield Rd
HINSDALE
WINCHESTER
S Scofield Mtn Rd

0 0.25
Miles
0 1,000
Feet

Document Path: Y:\Projects2018\Plan for Ashuelot Rail Trail\Base Mapping\Aerial Imagery Map Book.mxd

Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Bicycle/Pedestrian Collisions**

Background and Data Sources

Rail trails tend to be safer than roads because trail users have limited exposure to vehicle traffic, however, most rail trails still tend to have at-grade crossings with roads. The Ashuelot Rail Trail includes 30 road crossings including intersections with higher traffic volumes routes at NH Route 10, NH Route 119, and NH Route 63. As part of the Plan for the Ashuelot Rail Trail Project, SWRPC staff compiled and mapped vehicle collisions related to the rail trail, with a focus on collisions between vehicles and people walking or biking using data obtained through the New Hampshire Department of Transportation (NHDOT) Bureau of Planning and Community Development, including the years 2002 through 2017. Sixteen years of data were analyzed due to the relative sparsity of crashes attributed to the study area. No data on crashes was available along the rail trail itself in part because crash records are based on recordings of collisions involving a motor vehicle, which are not permitted on the trail. In addition, the trail itself is not patrolled and reported on by local or State police, as is the case with public highways, but rather by New Hampshire Fish & Game.

Inventory of Trail/Road Intersections

The thirty trail crossings with a road (either public or private) are shown in Table 1, Figure 1. A variety of attributes were collected to assist with future strategic or capital improvement planning including information about each road's ownership status and whether it is a federal aid eligible road. Intersections selected for analysis included any segment of road with the potential for public or private through traffic. Sections of road that lead up to the trail but did not cross the trail were excluded from the inventory and analysis (such as Depot Street in Winchester).

Table 1 - List of Ashuelot Rail Trail Intersections

#	Label	Municipality	FHWA Functional Classification	NHDOT Tier	Ownership	Highway Eligible for Federal Aid?
1	Emerald Street	Keene	Local	5	Local	No
2	Winchester Street	Keene	Minor Arterial	5	Local	Yes
3	NH Route 101	Keene	Principal Arterial - Other	2	State	Yes
4	Unnamed Road	Keene	No Functional System	0	Private	No

#	Label	Municipality	FHWA Functional Classification	NHDOT Tier	Ownership	Highway Eligible for Federal Aid?
5	Matthews Road (first crossing heading south)	Swanzey	Local	5	Local	No
6	Matthews Road (second crossing heading south)	Swanzey	Local	5	Local	No
7	Matthews Road (third crossing heading south)	Swanzey	Local	5	Local	No
8	Sawyers Crossing Road	Swanzey	Local	4	State	No
9	Eaton Road	Swanzey	Local	5	Local	No
10	Christian Hill Road	Swanzey	Local	5	Local	No
11	Homestead Avenue (first crossing heading south)	Swanzey	Local	5	Local	No
12	Homestead Avenue (first crossing heading south)	Swanzey	Minor Collector	4	State	No
13	Unnamed Road	Swanzey	No Functional System	0	Private	No
14	Unnamed Road	Swanzey	No Functional System	0	Private	No
15	Keene Road (NH 10)	Winchester	Minor Arterial	2	State	Yes
16	Coombs Bridge Road	Winchester	Local	5	Local	No
17	Monadnock Speedway	Winchester	No Functional System	0	Private	No
18	Old Westport Road (first crossing heading south)	Winchester	Local	5	Local	No
19	Old Spofford Road	Winchester	Local	5	Local	No
20	Old Westport Road (second crossing heading south)	Winchester	Local	5	Local	No
21	Bridge Street	Winchester	Local	5	Local	No
22	Elm Street	Winchester	Local	5	Local	No
23	Ashuelot Street	Winchester	Local	5	Local	No
24	Hinsdale Road (NH 119)	Winchester	Major Collector	3	State	Yes
25	Unnamed Road	Winchester	No Functional System	0	Private	No
26	Back Ashuelot Road (first crossing heading south)	Winchester	Local	5	Local	No
27	Back Ashuelot Road (second crossing heading south)	Winchester	Local	5	Local	No
28	Back Ashuelot Road (third crossing heading south)	Winchester	Local	5	Local	No
29	Depot Street	Hinsdale	Local	5	Local	No
30	Tower Hill Road	Hinsdale	Local	5	Local	No

The following maps depict the locations of intersections relative to the rail trail, the location of motor vehicle crashes in the vicinity of intersections with the trail (defined as 300 feet from the geometric center of the intersection), and the total number of motor vehicle crashes reported for the period 2002 through 2017.

Figure 1 - Overview Map of Ashuelot Rail Trail Intersection Locations

Document Path: Y:\Projects2018\Plan for Ashuelot Rail Trail\Collisions Analysis\Collisions Analysis Overview Map.mxd

Figure 2 - Map of Crashes Involving Someone Walking or Biking in the Vicinity of Ashuelot Rail Trail/Road Intersections

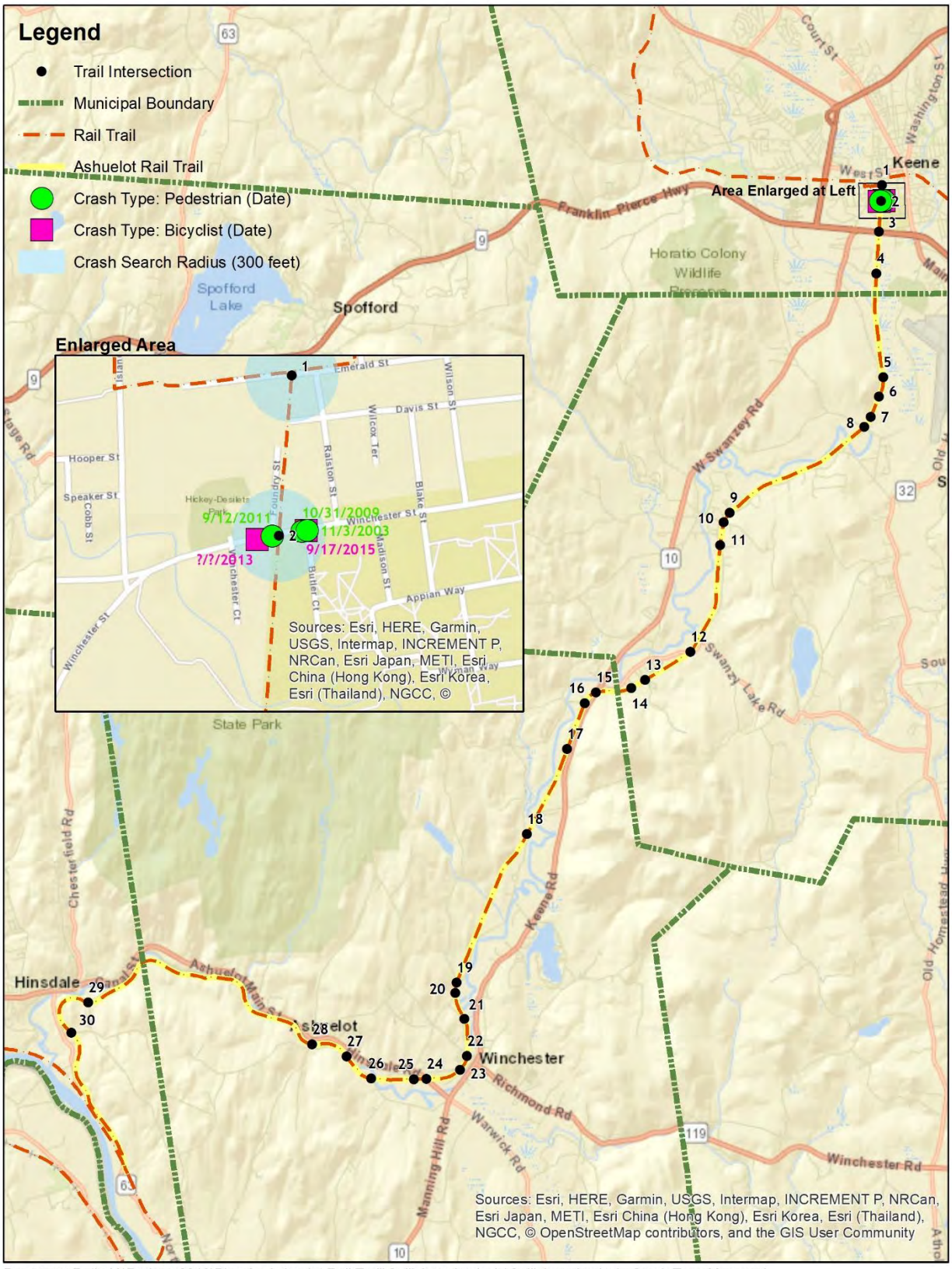
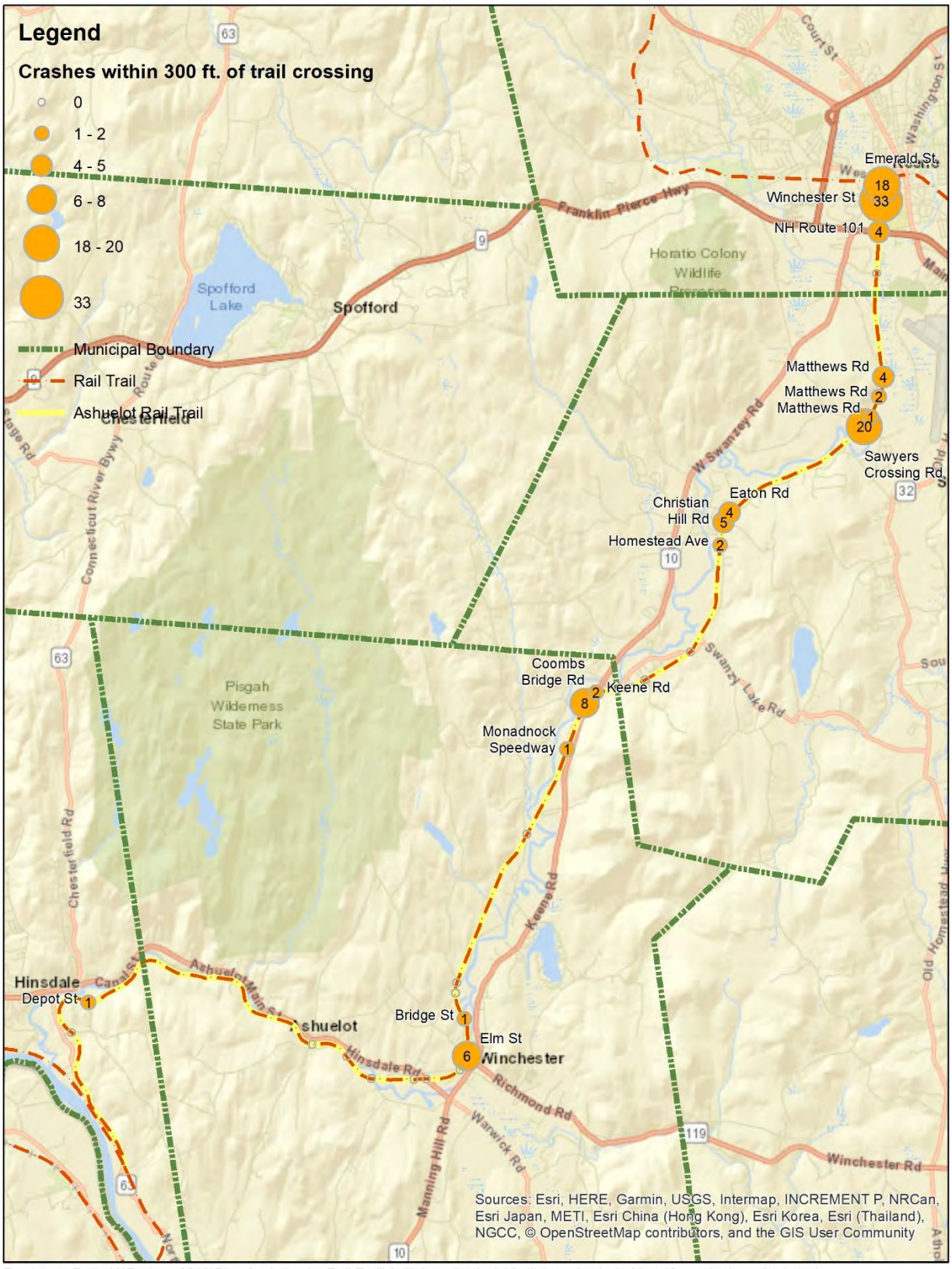


Figure 3 - Map of Total Crashes in the Vicinity of Ashuelot Rail Trail/Road Intersections



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Findings

- For the period 2002 through 2017, the Keene intersection of the Ashuelot Rail Trail with Winchester Street was the only intersection with a history of crashes involving people biking and walking (within 300 ft.). More work may be needed to understand these five incidents, some of which may be associated with nearby Butler Court. It should also be noted that some or all of these incidents precede the installation of a rectangular rapid flashing beacon (RRFB) system dedicated to the Ashuelot Rail Trail crossing at Winchester Street.
- There are a number of areas that have a history of crashes in the vicinity of rail trail crossings. Although most of these do not involve bicycle and pedestrian crashes, the crashes provide context about the relative safety of each crossing area, which serves as useful context for each crossing area and could be used as a way to prioritize safety assessments of crossings in the future.

Recommendations

- Determine if crash trends at the Winchester Street crossing in Keene are related to a crossing design flaw, related to higher incidence of walkers and bicyclists and/or other factors.
- Perform field assessments of the crossings to determine if there are any site distance or other design issues exacerbating safety risks. During investigations consider some of the guidance used for road safety audits (ie. consider different times of day, different seasons, different user groups).
- Work to better understand the type, severity and remedies for collisions and other user conflicts not being captured by motor vehicle crash reports through consultation with New Hampshire Fish and Game, local police departments and others.
- Compile best practices related to potential safety countermeasures appropriate to State, local and private road intersections with rail trails.
- Identify ways to inform drivers and trail users of trail intersections and appropriate actions to cross these areas in a safe and comfortable manner.
- While collision information is helpful, determine if there is other safety related data associated with trail use, such as emergency response data.
- Consider investigating opportunities for the trail as a recommended detour to biking and walking within or alongside a public road as a way to reduce vehicle conflicts and their associated injuries.

Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Bicycle/Pedestrian Counts**

During 2018, SWRPC conducted nine bicycle and pedestrian technology studies using pneumatic tube and infrared sensors (Table 1, Figure 2). The purpose of this memo is to summarize the traffic counts recorded at each location (Figure 1). Reports that differentiate between types of users (people walking versus biking) are forthcoming. The data depicted below represent counts of both user groups together. Detailed reports are attached. SWRPC has planned a recount for 2019 at location 7 to confirm the unexpectedly high result.

Table 1 - List of Ashuelot Rail Automatic Count Locations

#	Municipality	Description	Study Start	Study End
1	Keene	North of Winchester Street	6/1/2018	6/20/2018
2	Keene	North of NH 101	6/22/2018	7/10/2018
3	Keene	South of Krif Road	8/4/2018	9/12/2018
4	Swanzey	North of Sawyers Crossing Road	7/12/2018	7/31/2018
5	Swanzey	North of Pine Street	6/1/2018	6/20/2018
6	Winchester	North of Elm Street	6/1/2018	6/20/2018
7	Winchester	East of Gunn Mountain Road/Back Ashuelot Road	7/31/2018	9/16/2018
8	Winchester	East of Recycle Way	8/2/2018	9/16/2018
9	Hinsdale	East of Depot Street	7/12/2018	7/31/2018

Figure 1 - Count Location Summary (Trips per Day)

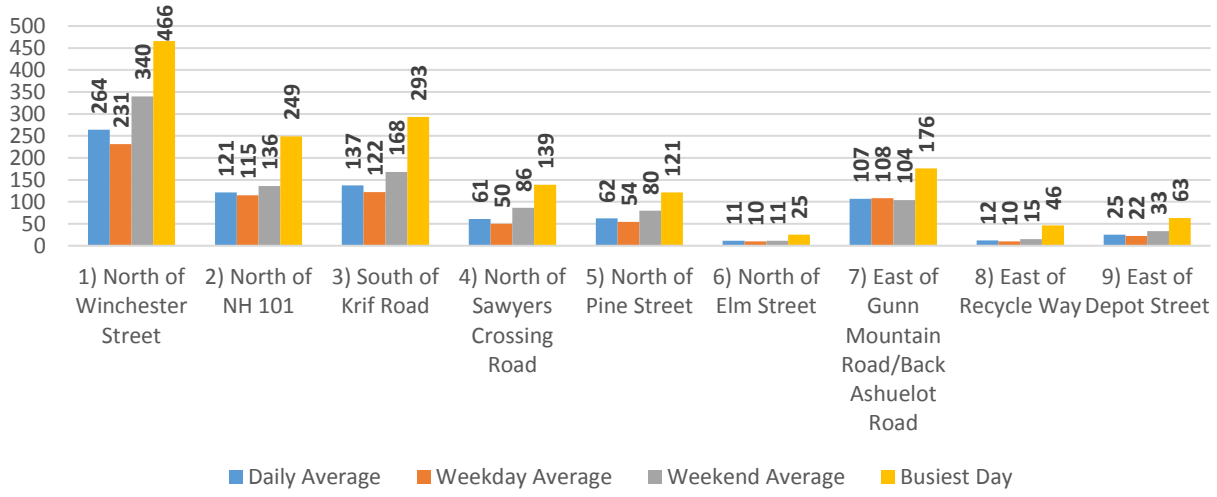
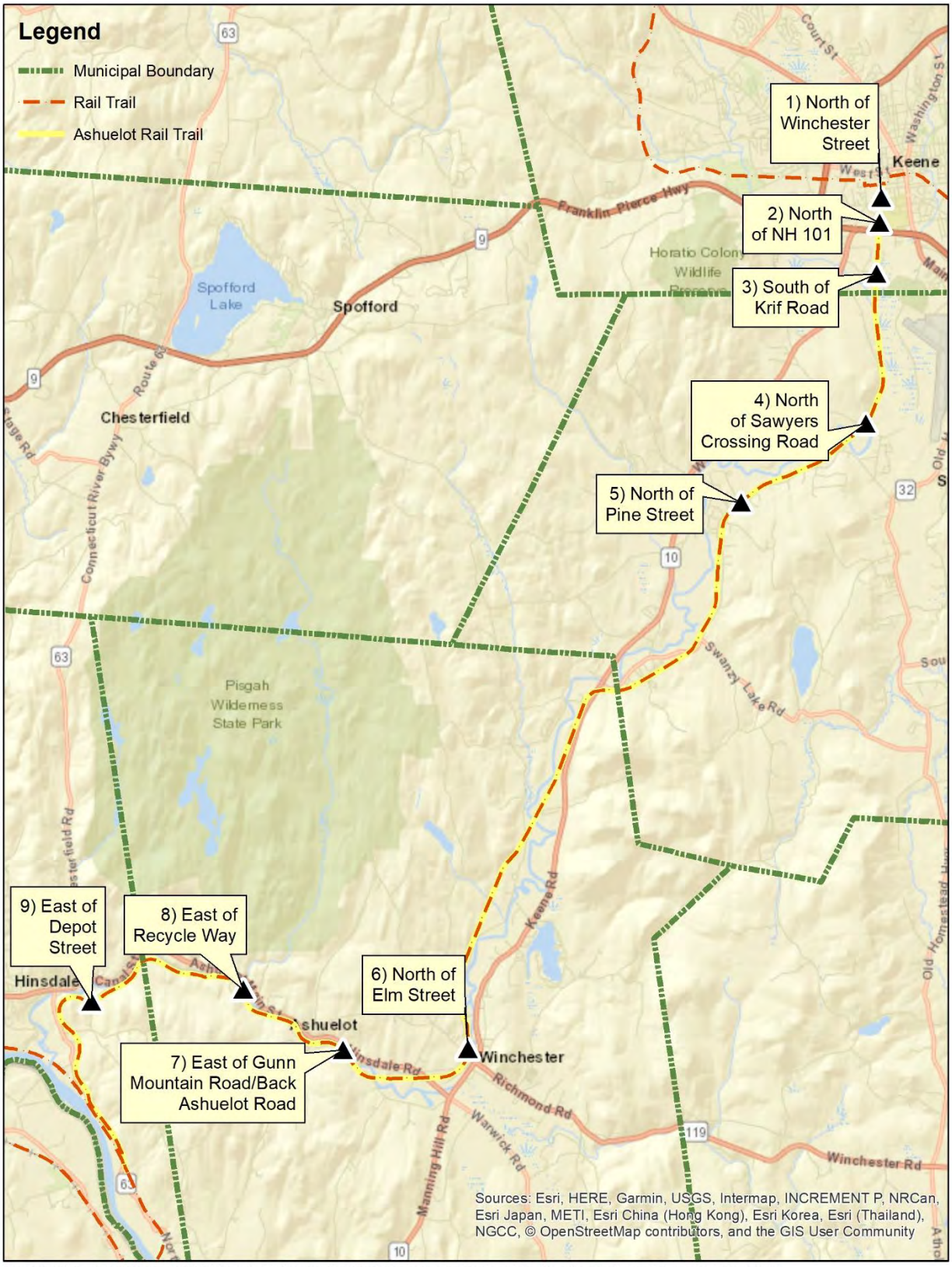


Figure 2 - Overview Map of Ashuelot Rail Automatic Count Locations



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Preliminary Recommendations

- Consider methods to quantify use of trail by equestrians and snowmobiles, which are not currently differentiated by available counting equipment (including manual methods).
- Ensure that collected data is centralized to facilitate sharing and analysis.
- In coordination with trail owners, consider appropriate locations and funding resources for permanent counting equipment to facilitate understanding of long-term trends in use (including seasonal trends) and the connection between use and trail improvements.
- Continue to utilize established in-person counting and survey methods, such as those made available by the National Bicycle and Pedestrian Documentation Project, as part of future counting initiatives.
- Regularly review and share collected data with trail stakeholders to facilitate future planning and prioritization.
- Assess count locations and provide justification for removing, moving, or adding count locations in the future.
- Become familiar with Strava Metro data, its relationship to physical counts, and its ability to supplement automatic counts.
- Apply data to decision-making about improvements as well as grant applications.

Ashuelot Rail Trail north of Winchester ...

Period Analyzed: Friday, June 01, 2018 to Wednesday, June 20, 2018

Key Figures

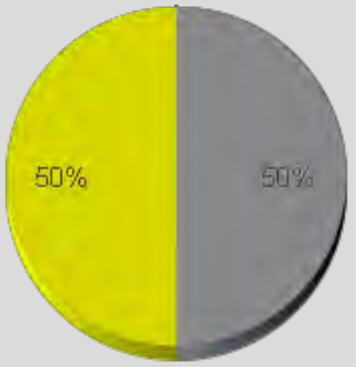
- Total Traffic for the Period Analyzed: 5,272
- Daily Average: 264

  Weekdays: 231 / Weekend days: 340
- Busiest Day of the Week: Sunday
- Busiest Days of the Period Analyzed:

  1. Sunday, June 10, 2018 (466)
  2. Sunday, June 03, 2018 (357)
  3. Saturday, June 09, 2018 (347)
- Distribution by Direction:

SB: 50%

NB: 50%

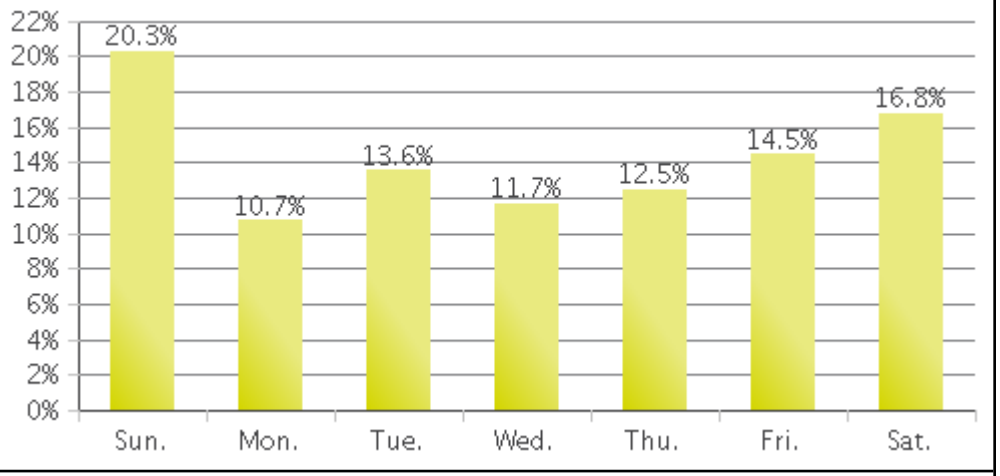


Ashuelot Rail Trail north of Winchester ...

Period Analyzed: Friday, June 01, 2018 to Wednesday, June 20, 2018

Daily Data

Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend

Ashuelot Rail Trail north of NH 101

Period Analyzed: Friday, June 22, 2018 to Tuesday, July 10, 2018

Key Figures

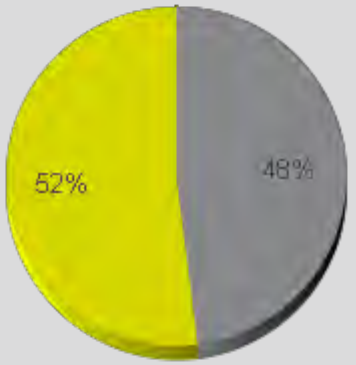
- Total Traffic for the Period Analyzed: 2,306
- Daily Average: 121

  Weekdays: 115 / Weekend days: 136
- Busiest Day of the Week: Sunday
- Busiest Days of the Period Analyzed:

  1. Sunday, July 08, 2018 (249)
  2. Saturday, July 07, 2018 (223)
  3. Monday, June 25, 2018 (215)
- Distribution by Direction:

IN: 52%

OUT: 48%



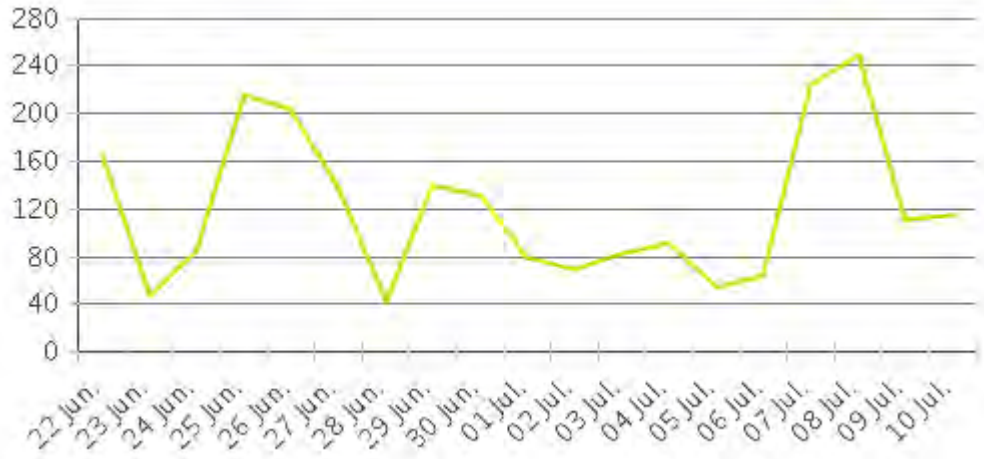
Ashuelot Rail Trail north of NH 101

Period Analyzed: Friday, June 22, 2018 to Tuesday, July 10, 2018

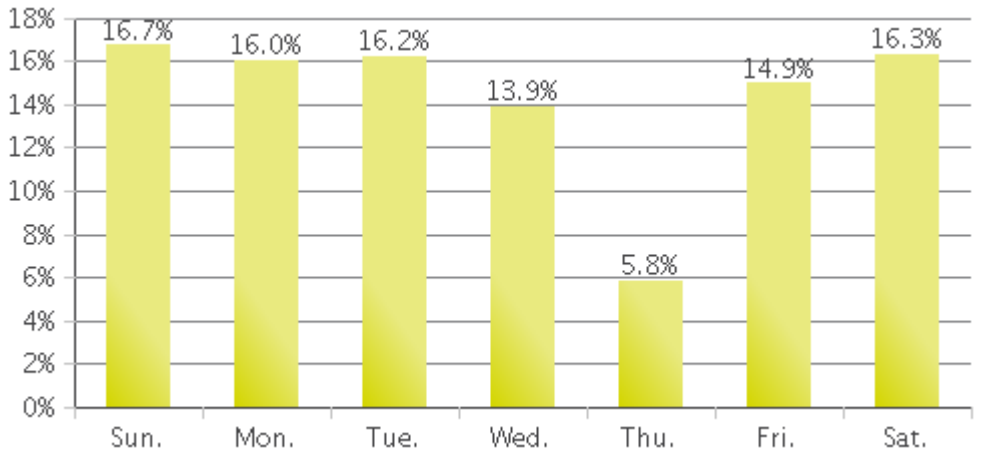
SWRPC

eco counter
COUNTING PEOPLE, ANALYSING DATA

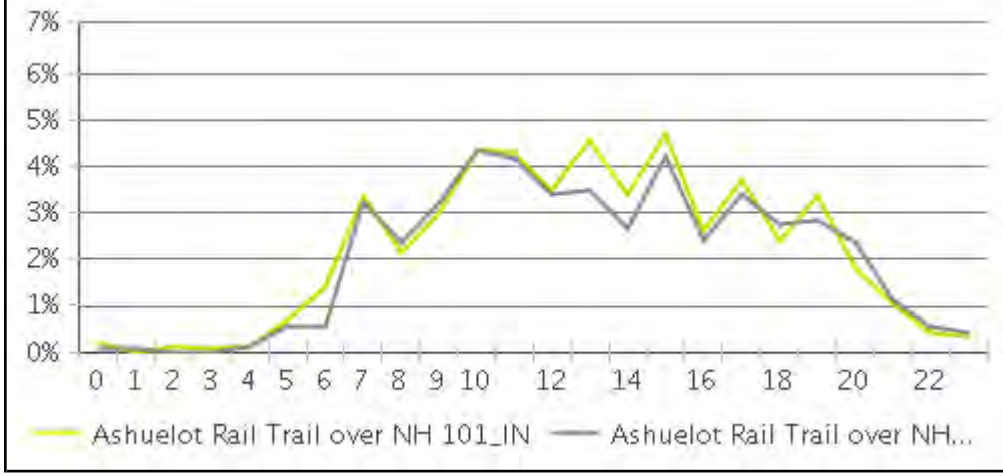
Daily Data



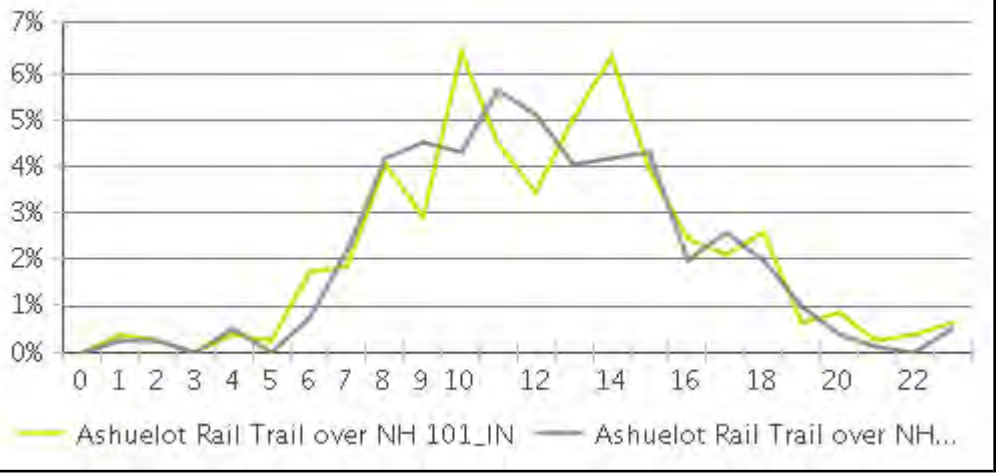
Weekly Profile



Hourly Profile during Weekdays

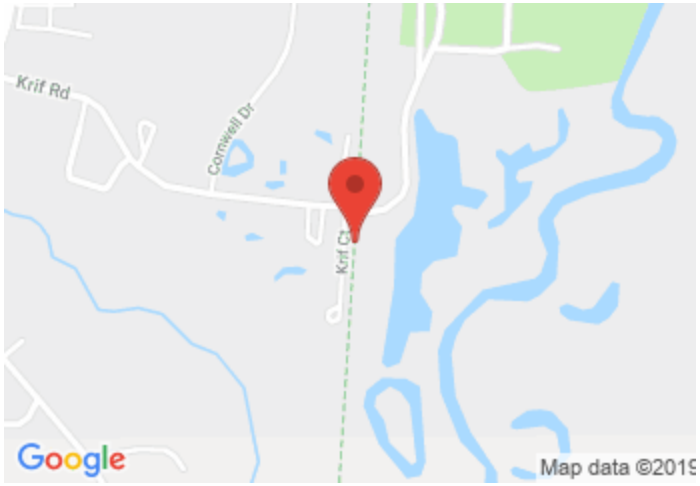


Hourly Profile during the Weekend

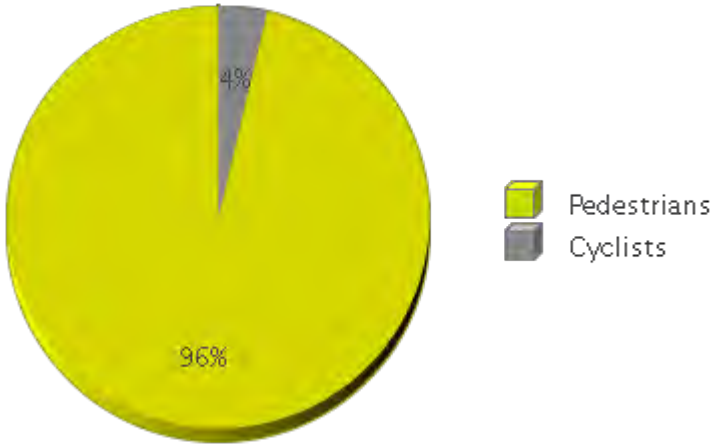


Ashuelot Rail Trail south of Krif Road

Period Analyzed: Saturday, August 04, 2018 to Wednesday, September 12, 2018



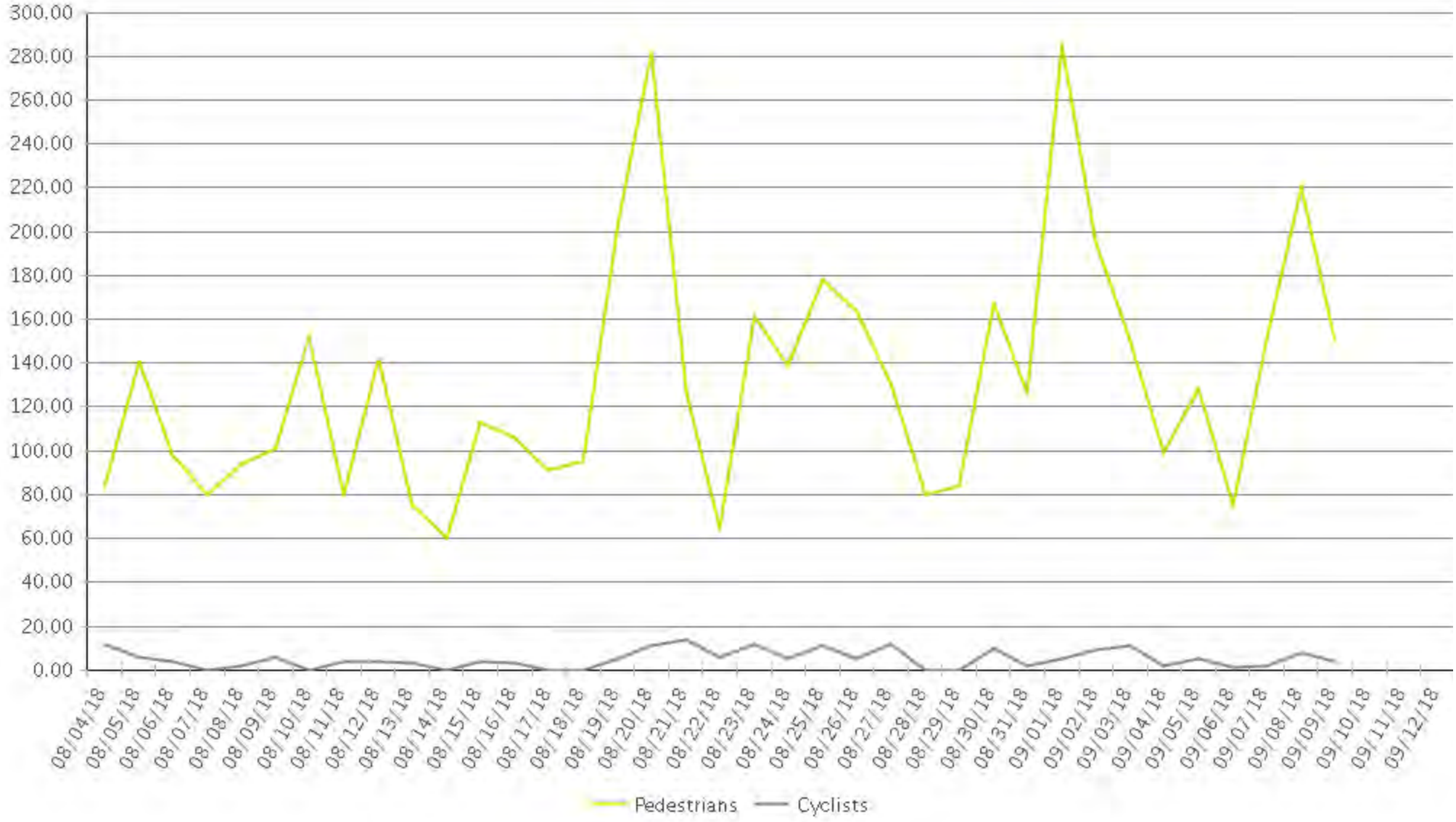
	Total Traffic for the Analyzed Period	Daily Average	Busiest Day of the Week	Distribution	
				IN	OUT
Pedestrians	4,873	132	Sunday	50	50
Cyclists	188	5	Monday	56	44



SWRPC

Ashuelot Rail Trail south of Krif Road

Period Analyzed: Saturday, August 04, 2018 to Wednesday, September 12, 2018



SWRPC

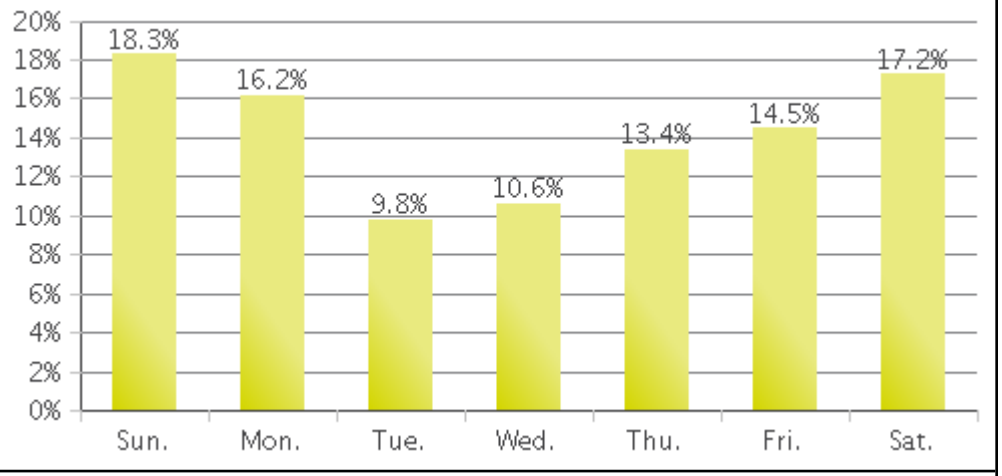
Ashuelot Rail Trail south of Krif Road (...

Period Analyzed: Saturday, August 04, 2018 to Wednesday, September 12, 2018

eco counter
COUNTING PEOPLE, ANALYSING DATA

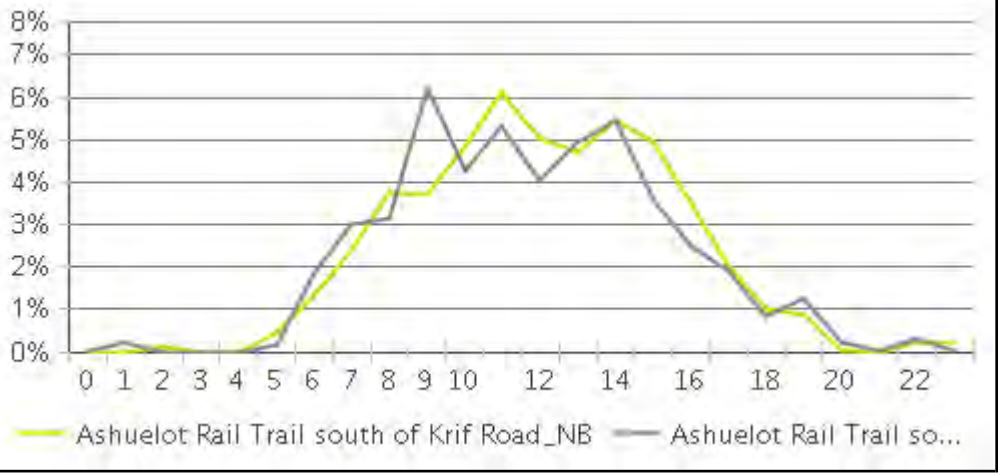
Daily Data

Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend



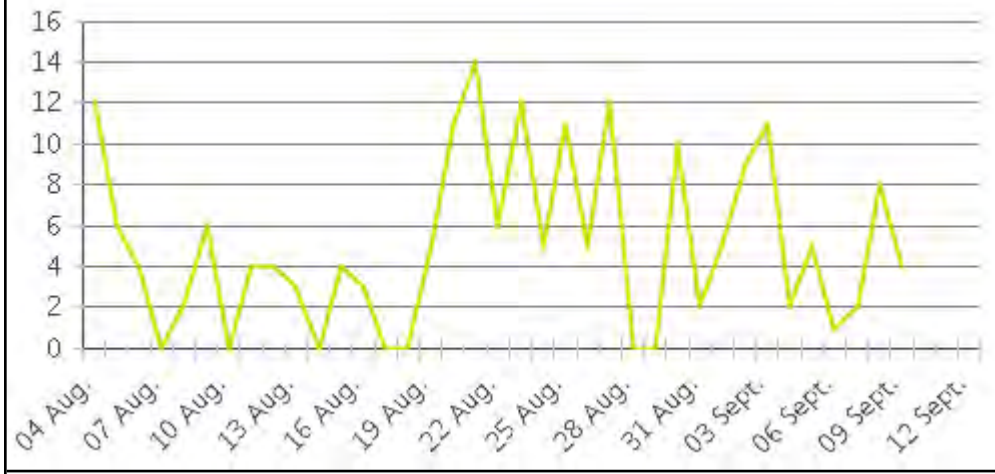
SWRPC

Ashuelot Rail Trail south of Krif Road (...

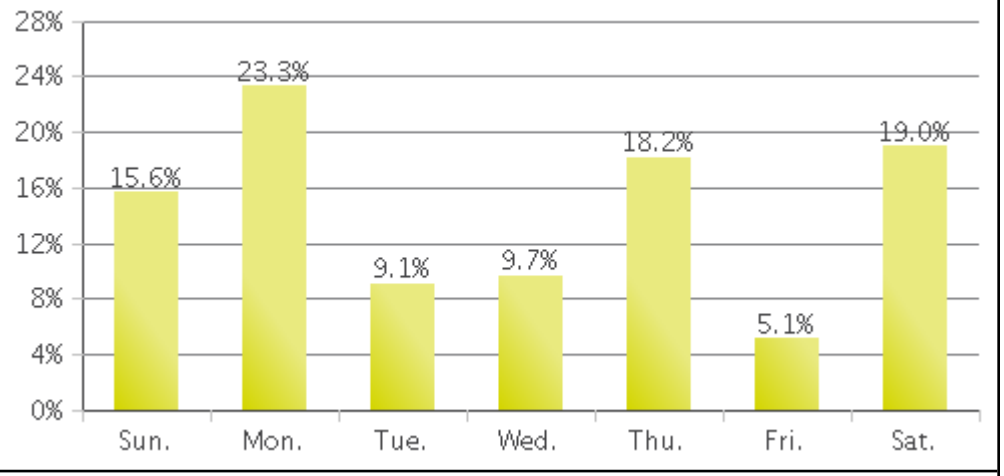
Period Analyzed: Saturday, August 04, 2018 to Wednesday, September 12, 2018

eco counter
COUNTING PEOPLE, ANALYSING DATA

Daily Data



Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend

Ashuelot Rail Trail north of Sawyers Cro...

Period Analyzed: Thursday, July 12, 2018 to Tuesday, July 31, 2018

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

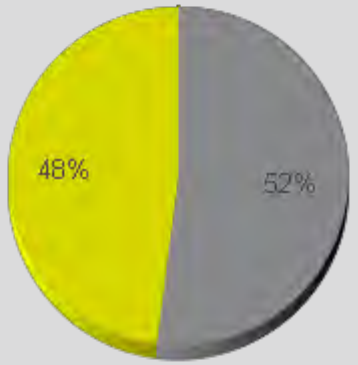
- Total Traffic for the Period Analyzed: 1,210
- Daily Average: 61

  Weekdays: 50 / Weekend days: 86
- Busiest Day of the Week: Saturday
- Busiest Days of the Period Analyzed:

  1. Sunday, July 29, 2018 (139)
  2. Saturday, July 21, 2018 (109)
  3. Wednesday, July 18, 2018 (92)
- Distribution by Direction:

IN: 48%

OUT: 52%



SWRPC

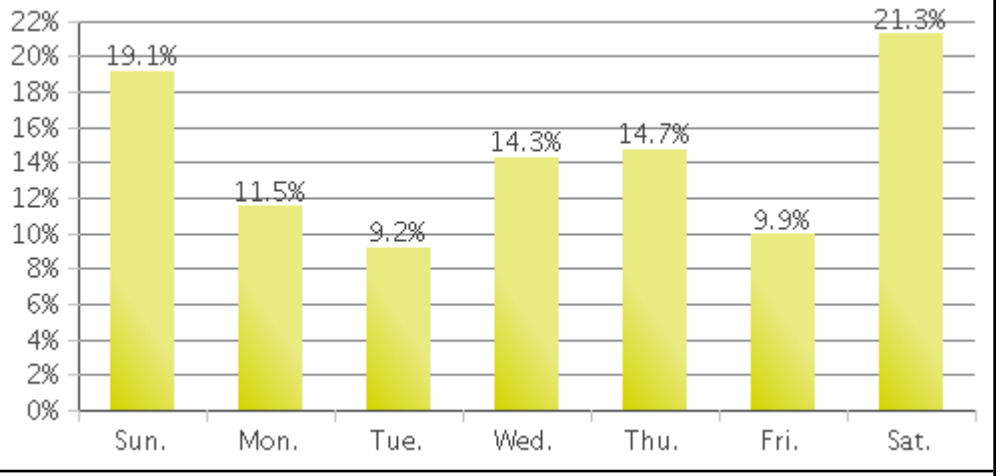
Ashuelot Rail Trail north of Sawyers Cro...

Period Analyzed: Thursday, July 12, 2018 to Tuesday, July 31, 2018

eco counter
COUNTING PEOPLE, ANALYSING DATA

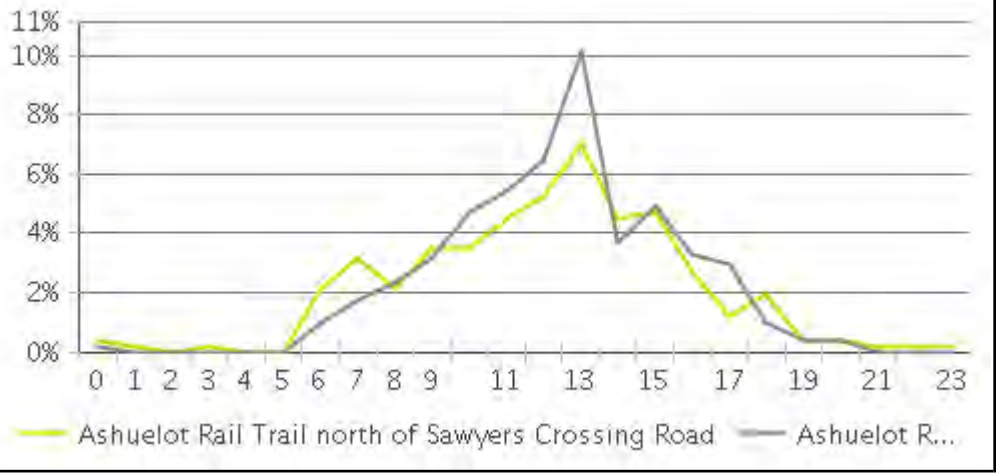
Daily Data

Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend



Ashuelot Rail Trail north of Pine Street

Period Analyzed: Saturday, June 02, 2018 to Wednesday, June 20, 2018

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

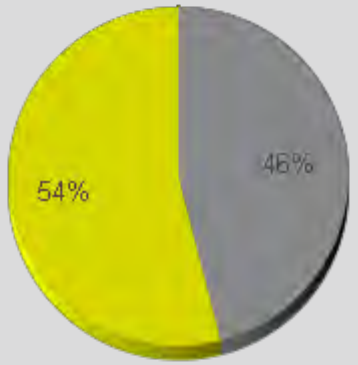
- Total Traffic for the Period Analyzed: 1,183
- Daily Average: 62

  Weekdays: 54 / Weekend days: 80
- Busiest Day of the Week: Sunday
- Busiest Days of the Period Analyzed:

  1. Tuesday, June 12, 2018 (121)
  2. Sunday, June 03, 2018 (106)
  3. Sunday, June 10, 2018 (104)
- Distribution by Direction:

IN: 54%

OUT: 46%

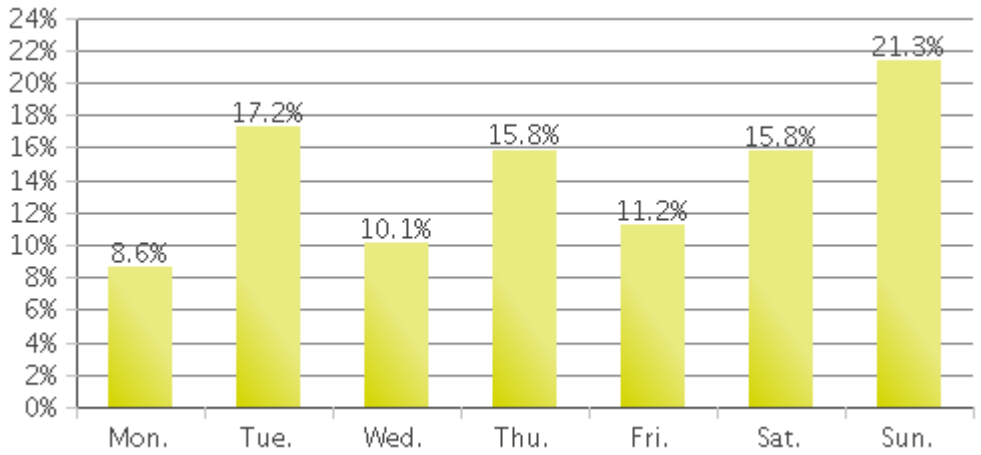


Ashuelot Rail Trail north of Pine Street

Period Analyzed: Saturday, June 02, 2018 to Wednesday, June 20, 2018

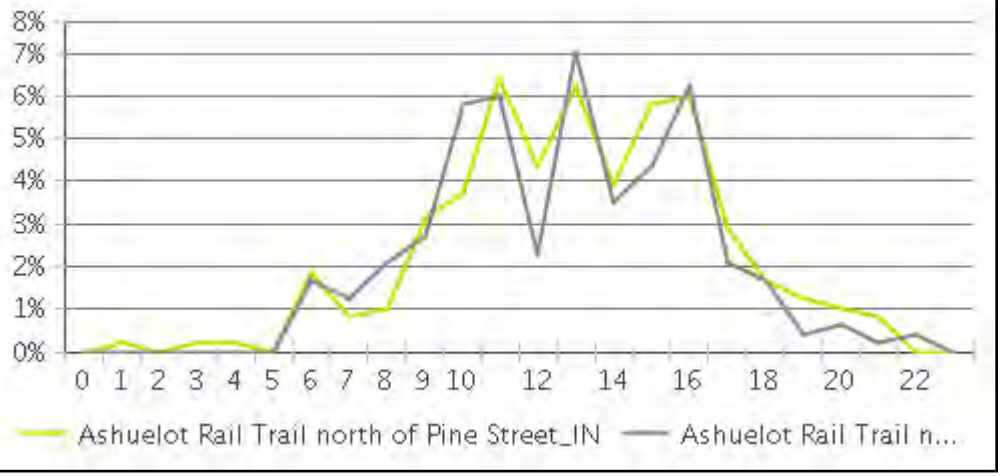
Daily Data

Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend



Ashuelot Rail Trail north of Elm Street

Period Analyzed: Friday, June 22, 2018 to Tuesday, July 10, 2018

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

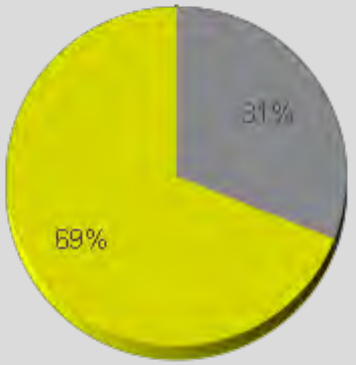
- Total Traffic for the Period Analyzed: 202
- Daily Average: 11

  Weekdays: 10 / Weekend days: 11
- Busiest Day of the Week: Tuesday
- Busiest Days of the Period Analyzed:

  1. Tuesday, July 10, 2018 (25)
  2. Saturday, June 30, 2018 (19)
  3. Friday, June 22, 2018 (19)
- Distribution by Direction:

IN: 69%

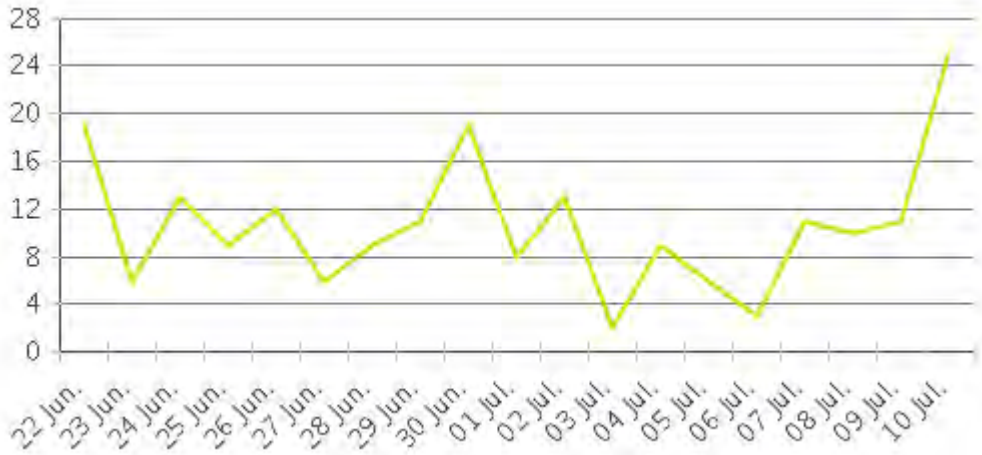
OUT: 31%



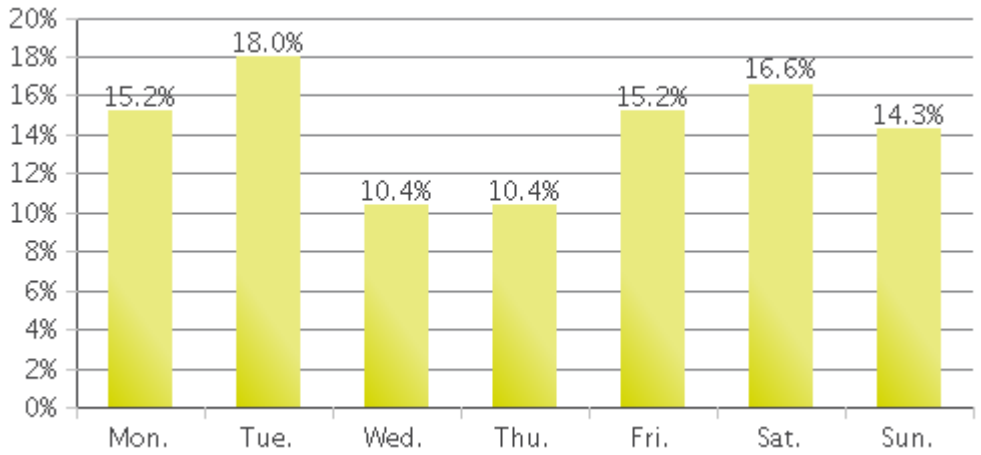
Ashuelot Rail Trail north of Elm Street

Period Analyzed: Friday, June 22, 2018 to Tuesday, July 10, 2018

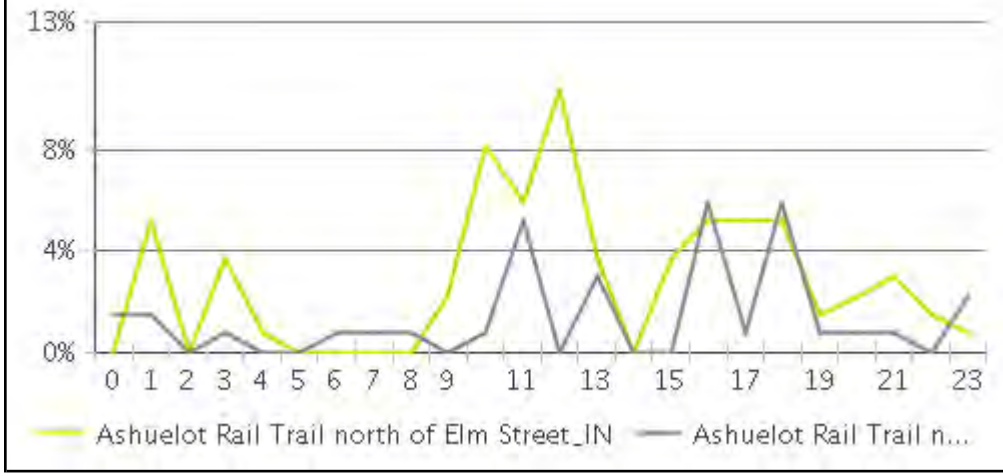
Daily Data



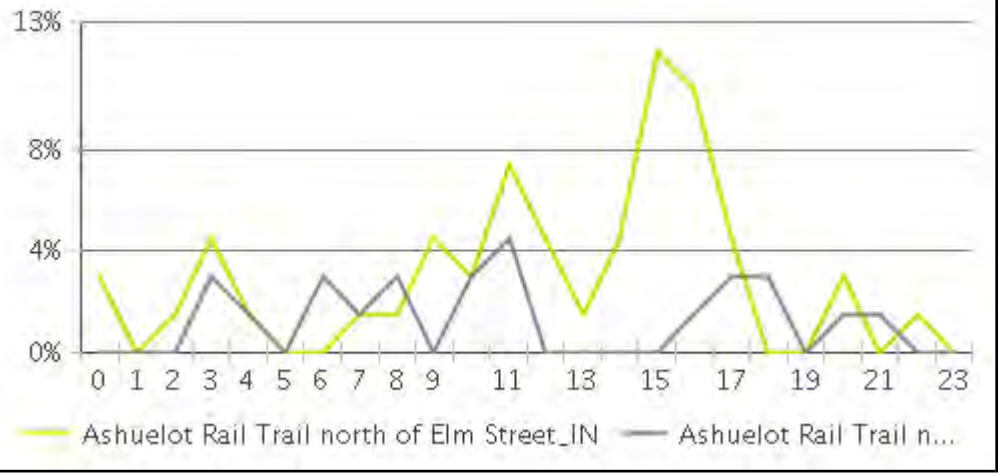
Weekly Profile



Hourly Profile during Weekdays



Hourly Profile during the Weekend



Ashuelot Rail Trail east of Recycle Way

Period Analyzed: Thursday, August 02, 2018 to Sunday, September 16, 2018

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

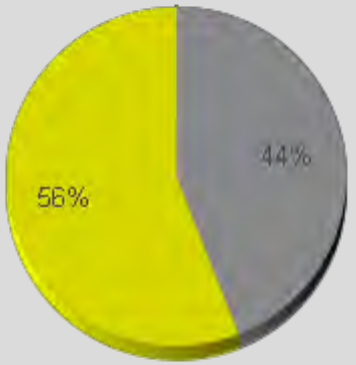
- Total Traffic for the Period Analyzed: 534
- Daily Average: 12

  Weekdays: 10 / Weekend days: 15
- Busiest Day of the Week: Sunday
- Busiest Days of the Period Analyzed:

  1. Sunday, August 19, 2018 (46)
  2. Monday, August 27, 2018 (37)
  3. Thursday, August 09, 2018 (35)
- Distribution by Direction:

IN: 56%

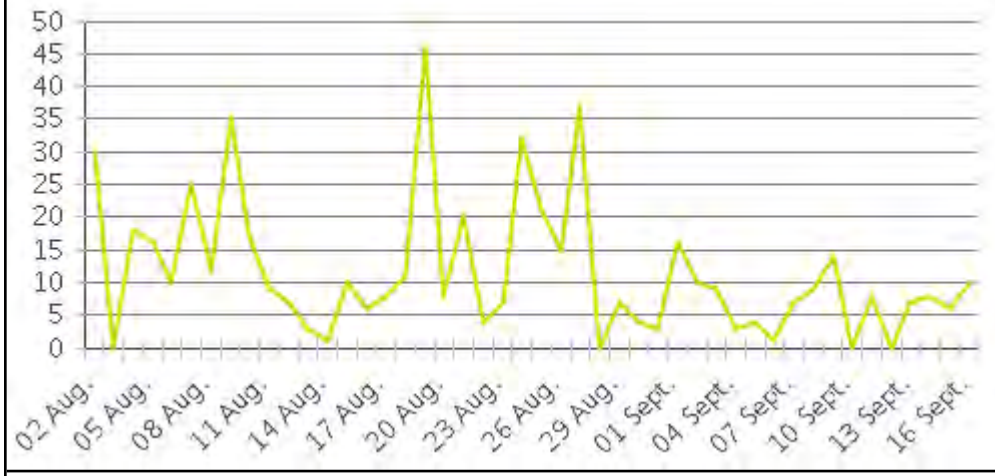
OUT: 44%



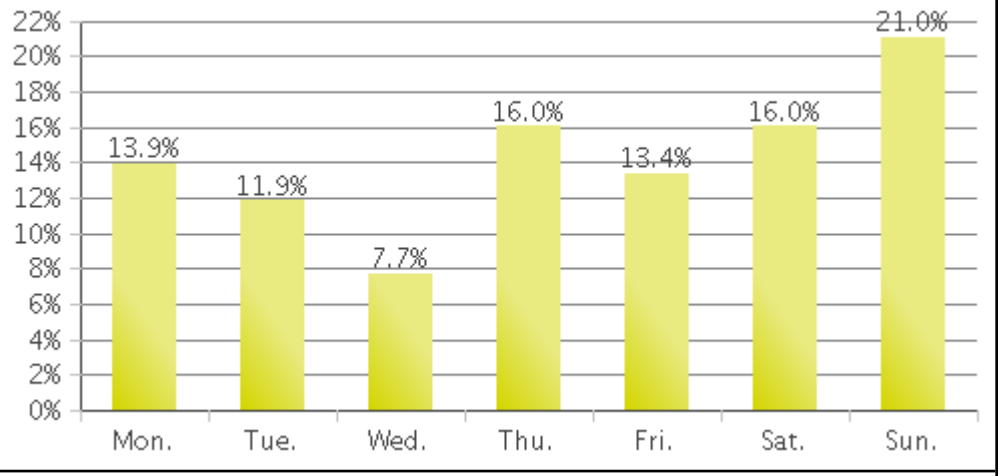
Ashuelot Rail Trail east of Recycle Way

Period Analyzed: Thursday, August 02, 2018 to Sunday, September 16, 2018

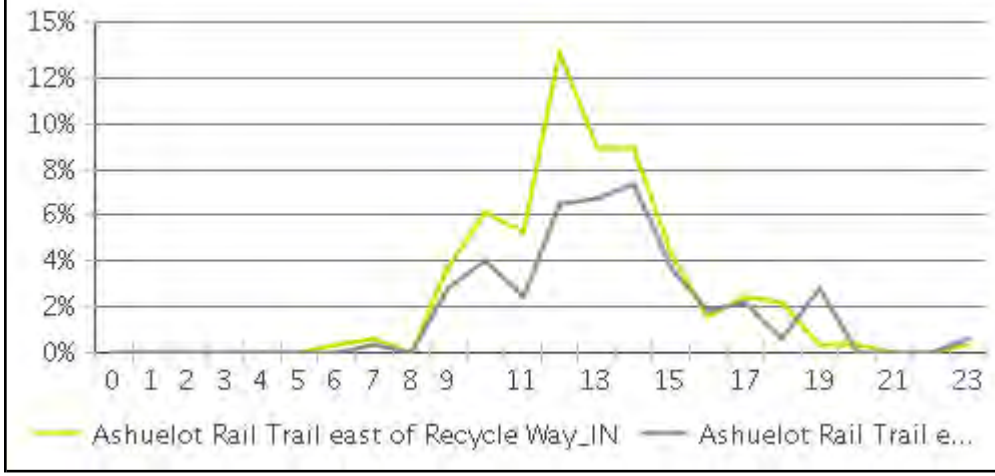
Daily Data



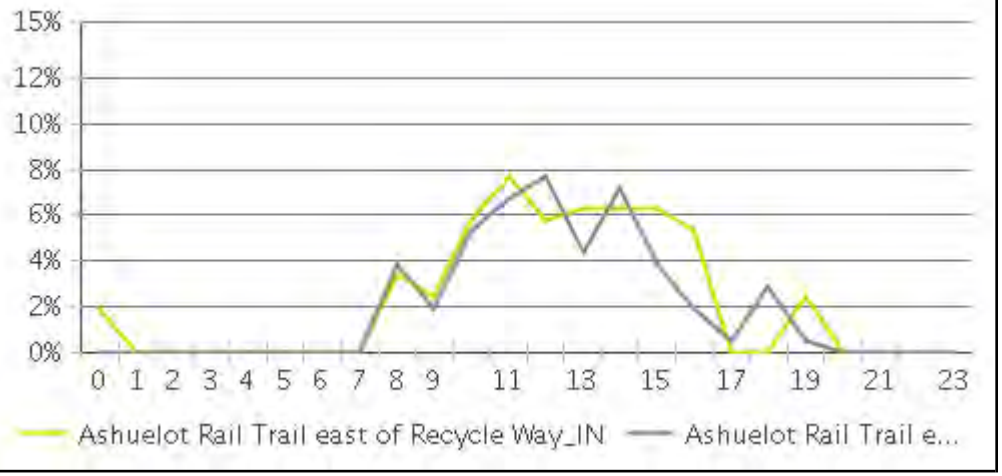
Weekly Profile



Hourly Profile during Weekdays



Hourly Profile during the Weekend



Ashuelot Rail Trail east of Gunn Mountai...

Period Analyzed: Thursday, August 02, 2018 to Sunday, September 16, 2018

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

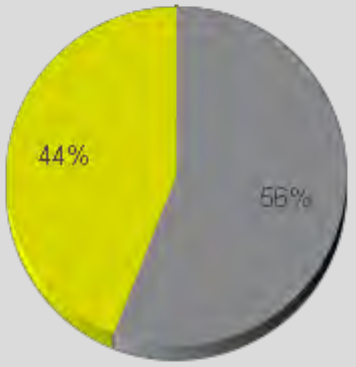
- Total Traffic for the Period Analyzed: 4,919
- Daily Average: 107

  Weekdays: 108 / Weekend days: 104
- Busiest Day of the Week: Thursday
- Busiest Days of the Period Analyzed:

  1. Thursday, August 09, 2018 (176)
  2. Friday, August 31, 2018 (173)
  3. Monday, August 06, 2018 (171)
- Distribution by Direction:

IN: 44%

OUT: 56%



SWRPC

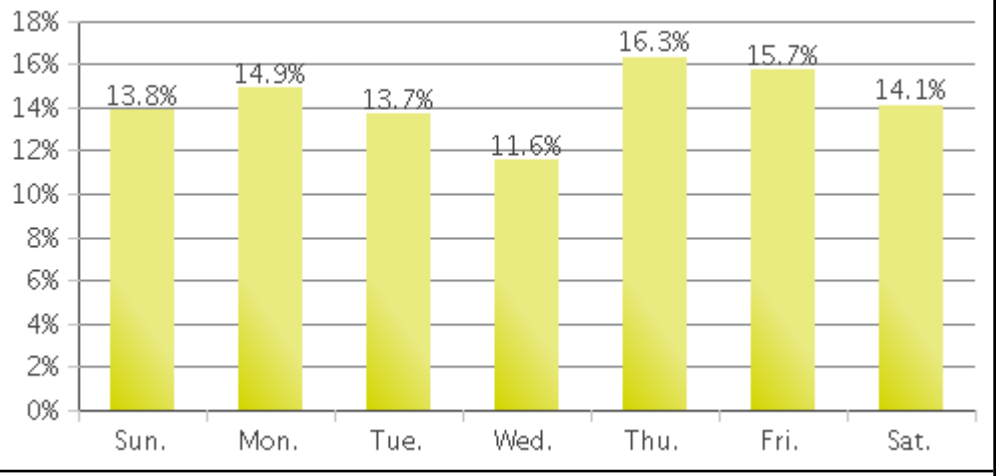
Ashuelot Rail Trail east of Gunn Mountai...

Period Analyzed: Thursday, August 02, 2018 to Sunday, September 16, 2018

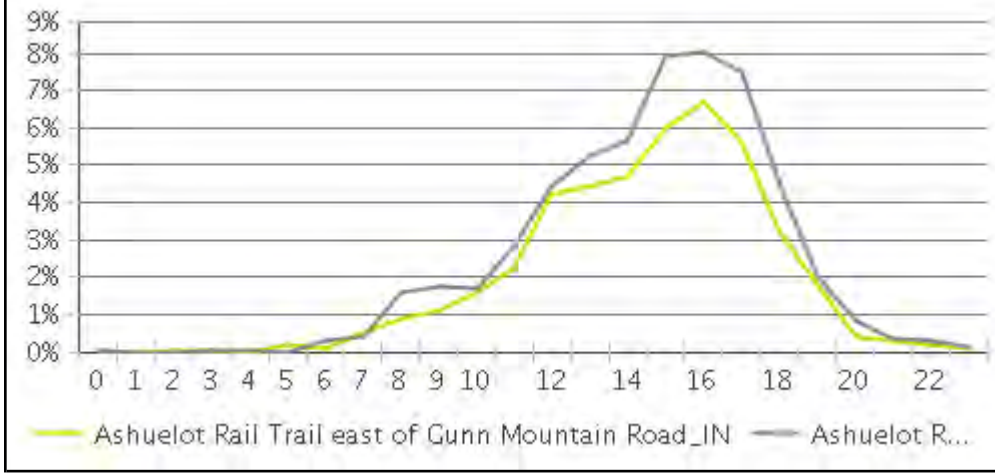
eco counter
COUNTING PEOPLE, ANALYSING DATA

Daily Data

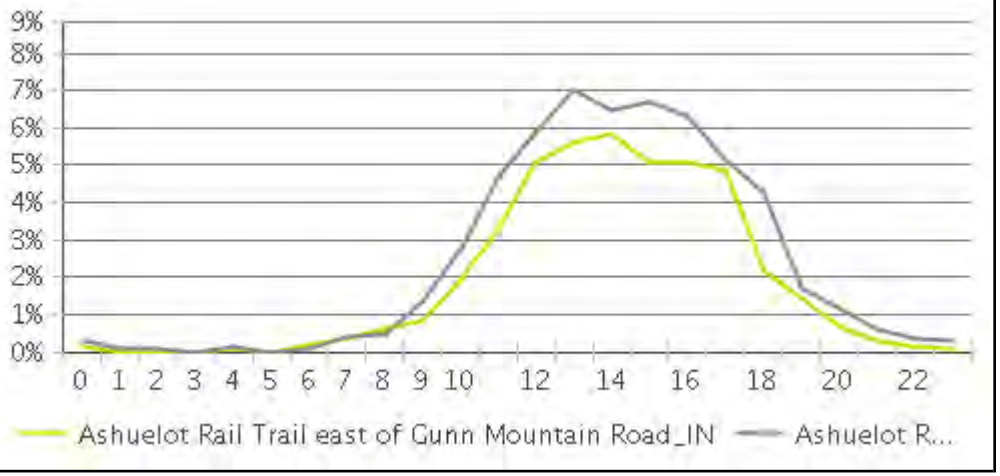
Weekly Profile



Hourly Profile during Weekdays



Hourly Profile during the Weekend



Ashuelot Rail Trail east of Depot Street

Period Analyzed: Thursday, July 12, 2018 to Tuesday, July 31, 2018

The resource of this report item is not reachable.

No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

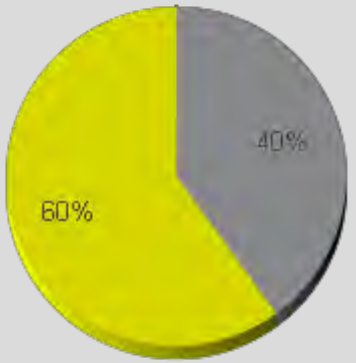
- Total Traffic for the Period Analyzed: 505
- Daily Average: 25

  Weekdays: 22 / Weekend days: 33
- Busiest Day of the Week: Saturday
- Busiest Days of the Period Analyzed:

  1. Sunday, July 15, 2018 (63)
  2. Thursday, July 19, 2018 (49)
  3. Saturday, July 21, 2018 (42)
- Distribution by Direction:

IN: 60%

OUT: 40%

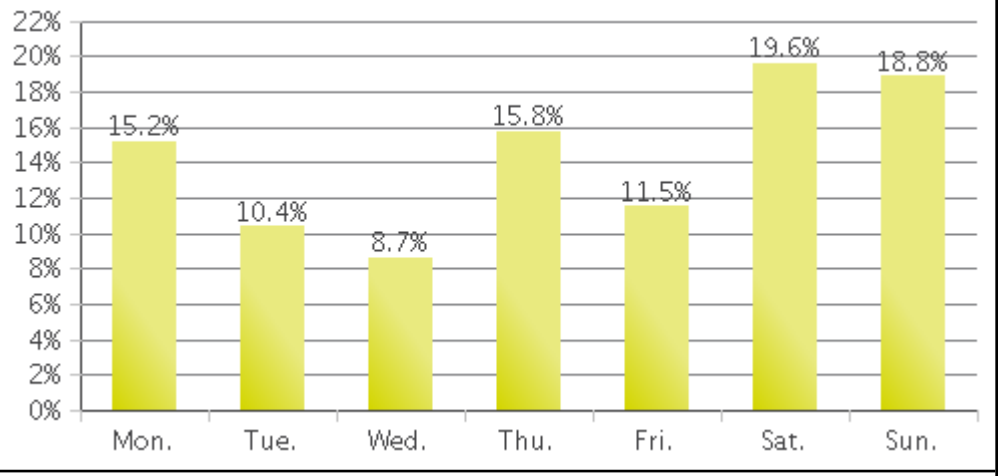


Ashuelot Rail Trail east of Depot Street

Period Analyzed: Thursday, July 12, 2018 to Tuesday, July 31, 2018

Daily Data

Weekly Profile



Hourly Profile during Weekdays

Hourly Profile during the Weekend

Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment - Trail Condition Assessment**

Background

Trail condition is a fundamental consideration for all users of the Ashuelot Rail Trail. As condition deteriorates, so does its utility as a transportation and recreational asset. Every trail user has their own expectations about what constitutes acceptable condition. This is also influenced by an individual's sensitivity to defects in the trail and how they plan to travel (on foot, by bike, horseback, snowmobile, etc.). Whereas an individual on vacation seeking an experience in the outdoors may tolerate ponded water, erosion, and uneven terrain; these same features are a barrier to individuals with mobility needs, less capable bicycles, etc. Another aspect to trail condition is the snow surface, which is maintained by area snowmobile clubs. Wintertime users likewise have similar preferences when it comes to their comfort and safety when walking, riding their bike, snowmobile, skiing, mushing, etc. The focus of the trail condition assessment task in the context of this project is to understand the existing conditions of the former rail bed ballast and improved (gravel and paved) segments. Wintertime maintenance may be discussed during Project Advisory Committee meetings or later in the project and is not the subject of this memorandum.

Unlike assessments of paved roads, trail assessment methods are less sophisticated and there are fewer examples. However, Keene State College, through its Department of Geography, Outdoor Recreation, and Planning developed and implemented an assessment in 2014 of the Ashuelot Rail Trail in consultation with SWRPC staff, town officials and others[1]. The trail condition assessment results and findings of this project were part of SWRPC's rationale for conducting additional planning activities in this area.

Methods

As part of the 2014 assessment, trail condition was surveyed by bicycle and compiled using a Geographic Information System (GIS). The trail itself was attributed based on points where there was a change in surface type (stone dust, gravel, dirt, sand, and grass), moisture (wet or dry), or texture (smooth to rutted). Rankings based on the observed attributes included seven categories: excellent, very good, good, average, needs improvement, poor, and impassable.

[1] Fournier, J., Gaudette, S., Johnson, M., & Lapsley, J. (2014). *The Ashuelot Rail-Trail: The ART of Commuting.* Keene: Keene State College Department of Geography. Retrieved from http://sites.keene.edu/geography/files/2015/04/2014_SeminarFinalReport_AshuelotRailTrail.pdf

Findings

- The Ashuelot Rail Trail was found to be underutilized as a commuter pathway, despite its good condition.
- The Keene portion of the Ashuelot Rail Trail was found to be in excellent condition, in part because much of the surface is paved or maintained with gravel or stone dust. It was also observed that the shoulders are regularly cleared of brush and there was clear signage for identifying road crossings and hazards. Culverts appeared to provide adequate drainage.
- The majority of the Swanzey portion of the trail was found to be in excellent condition. At the time of the assessment, a four-mile section of trail was newly resurfaced with stone dust. The areas closest to Winchester were found to need improvements to surface condition. Standing water and washouts were observed in this area.
- Winchester surface condition was described as varied (ranging from very good to average condition), with a need to remove brush and improve drainage.
- Hinsdale was found to have even more varied surface condition and relative rideability.
- The project identified trail condition as the least common reason why the trail was not utilized for commuting.

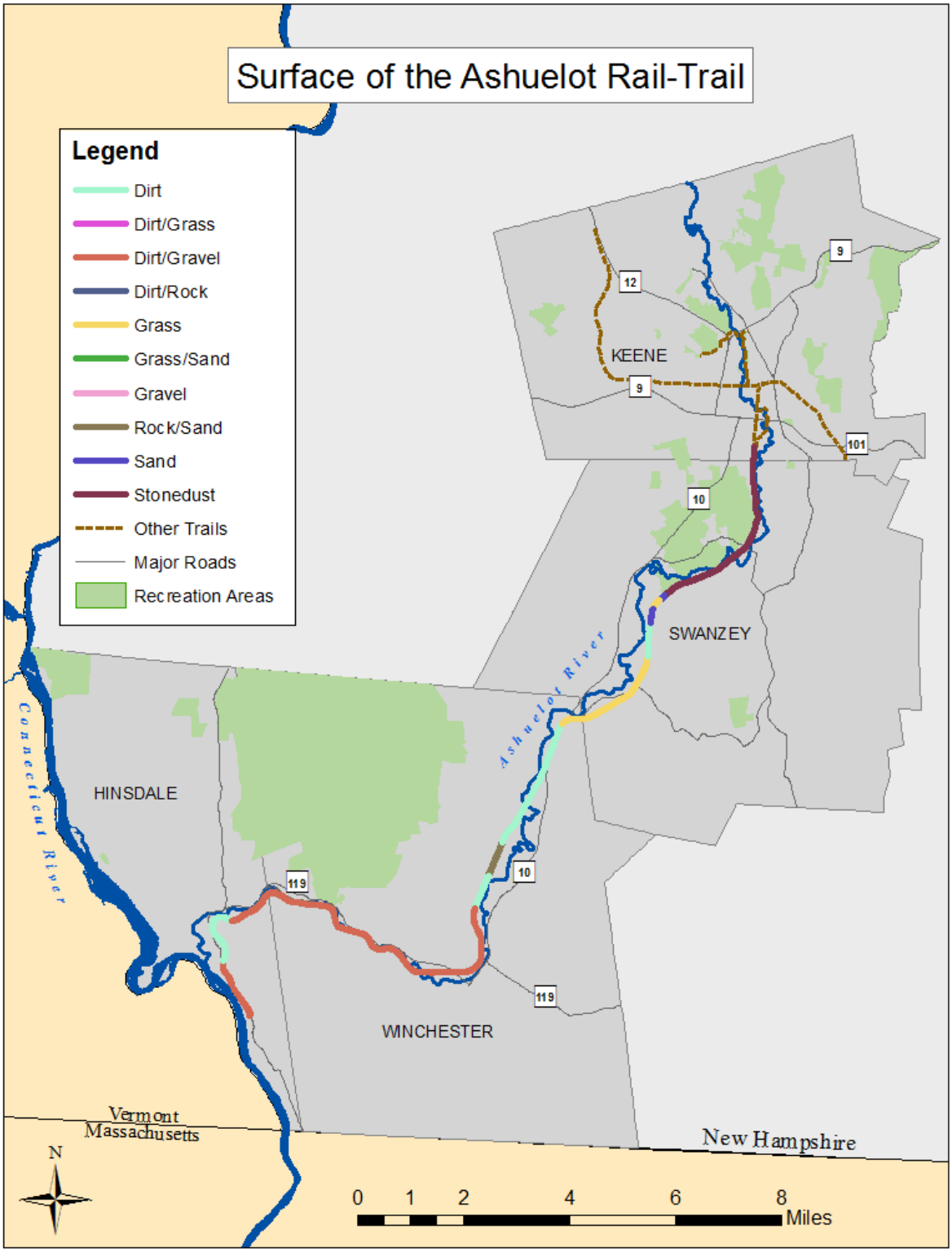
Please see the attached excerpt from the 2014 assessment for maps of the trail based on surface type, texture, moisture, and overall rideability.

Recommendations

- Compile feedback relative to the strengths and weaknesses of the condition assessment for future use.
- Consider applicable funding options that may be used to support improvements to trail condition, including those that have already been utilized by regional partners as well as those with the potential to be used.
- Review and identify inconsistencies between the results of the 2014 project and existing conditions.

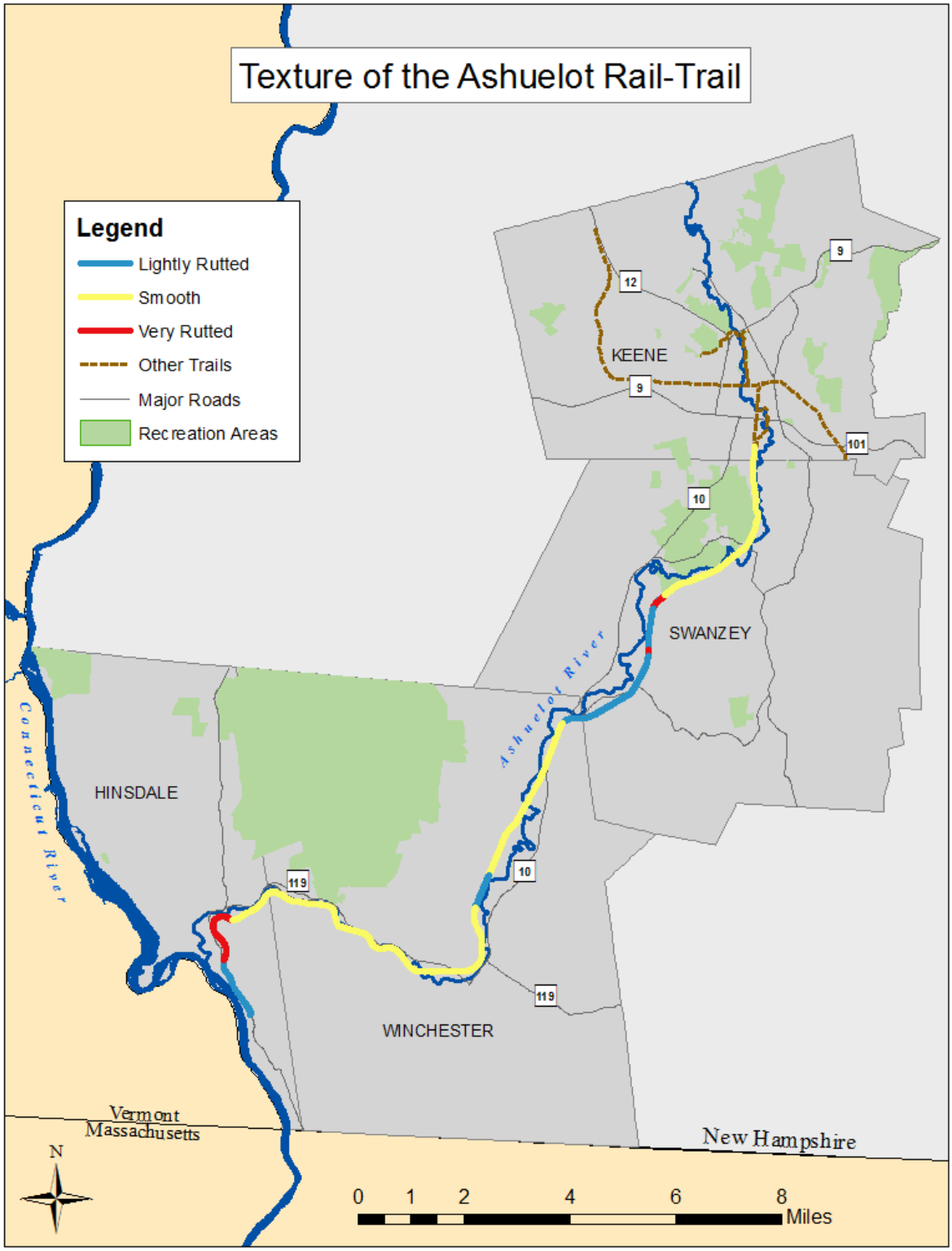
Excerpt

Appendix C-2: Map of Surface Material on ART



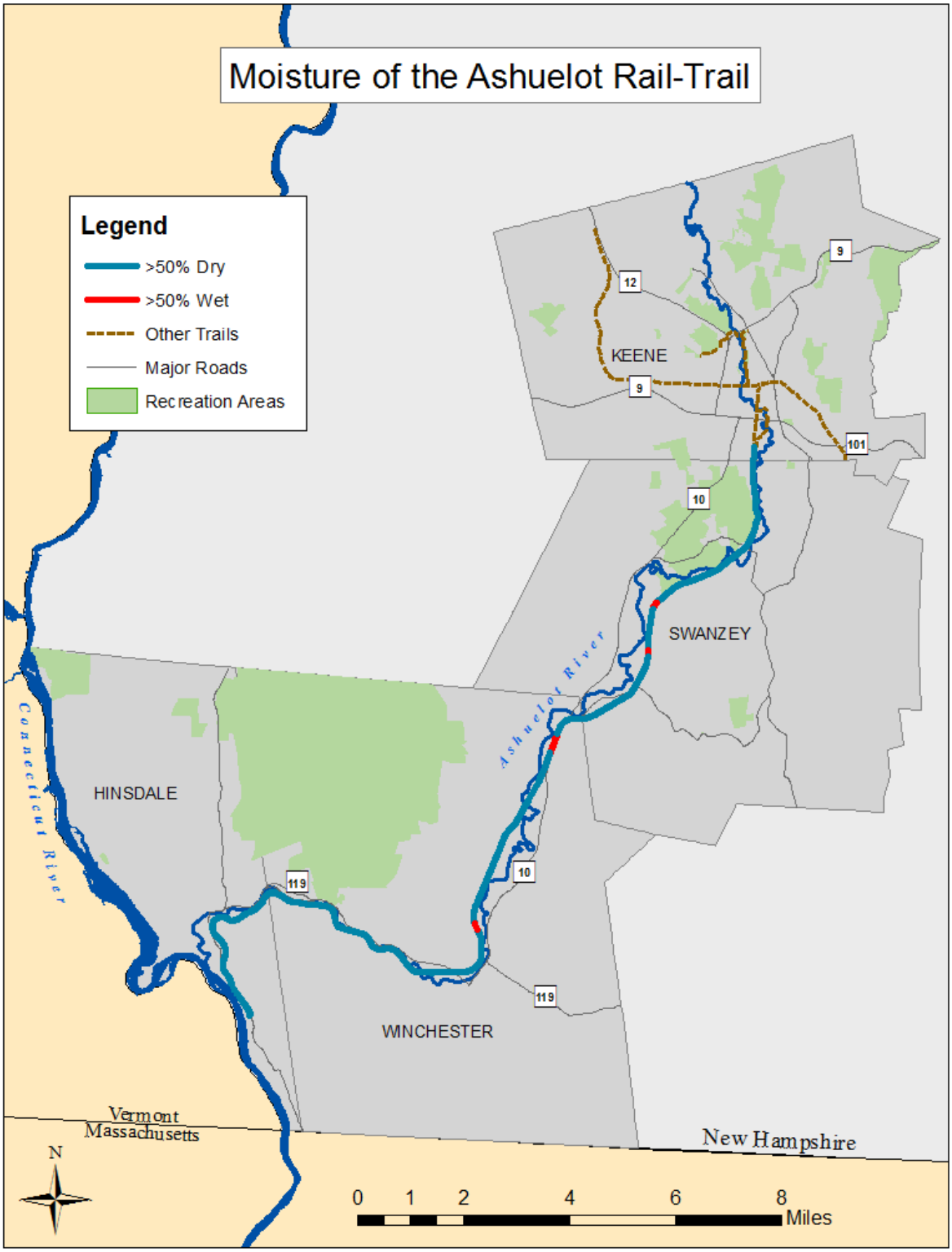
Excerpt

Appendix C-3: Map of Surface Texture on ART



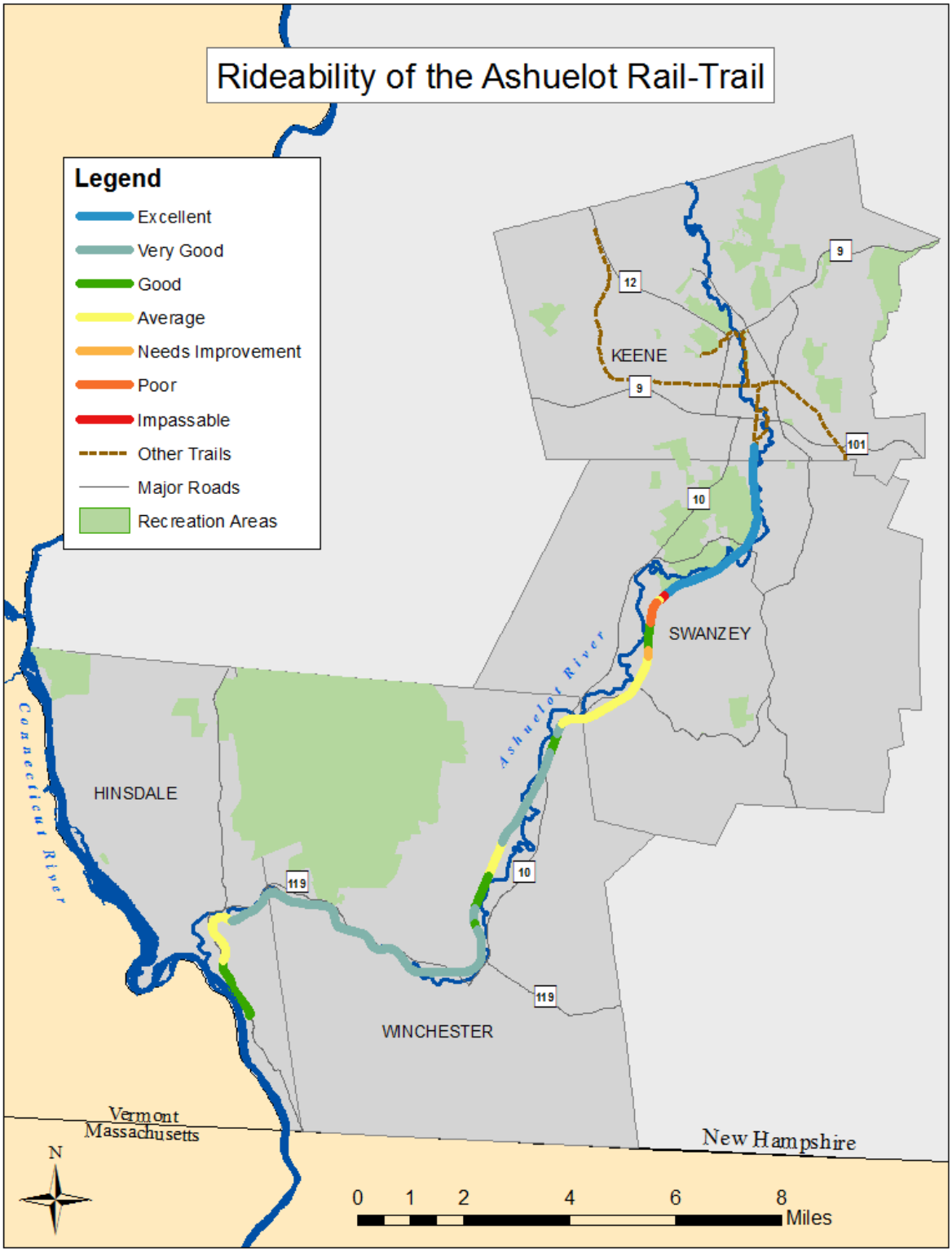
Excerpt

Appendix C-4: Map of Surface Moisture on ART



Excerpt

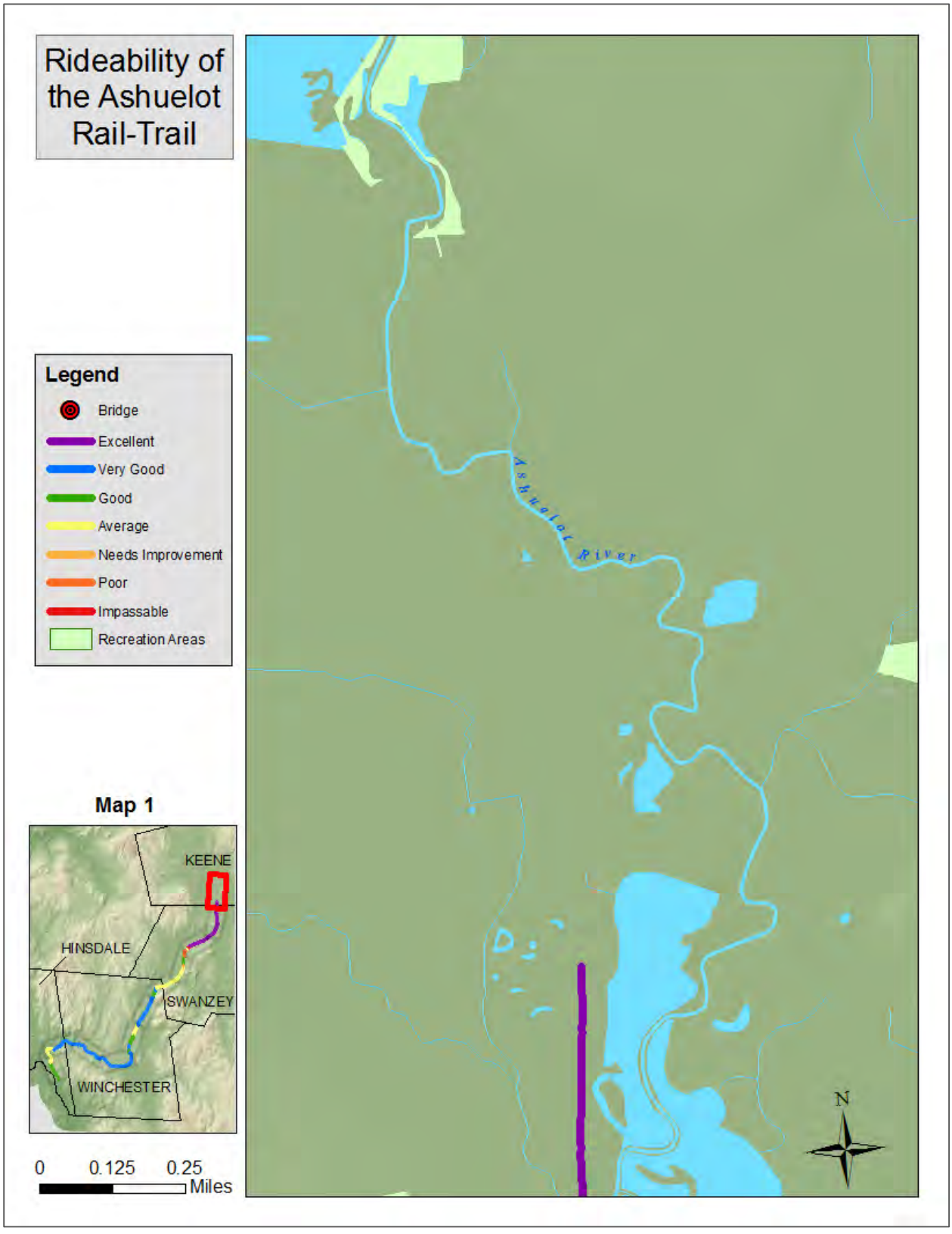
Appendix C-5: Map of Overall Rideability on ART



Excerpt

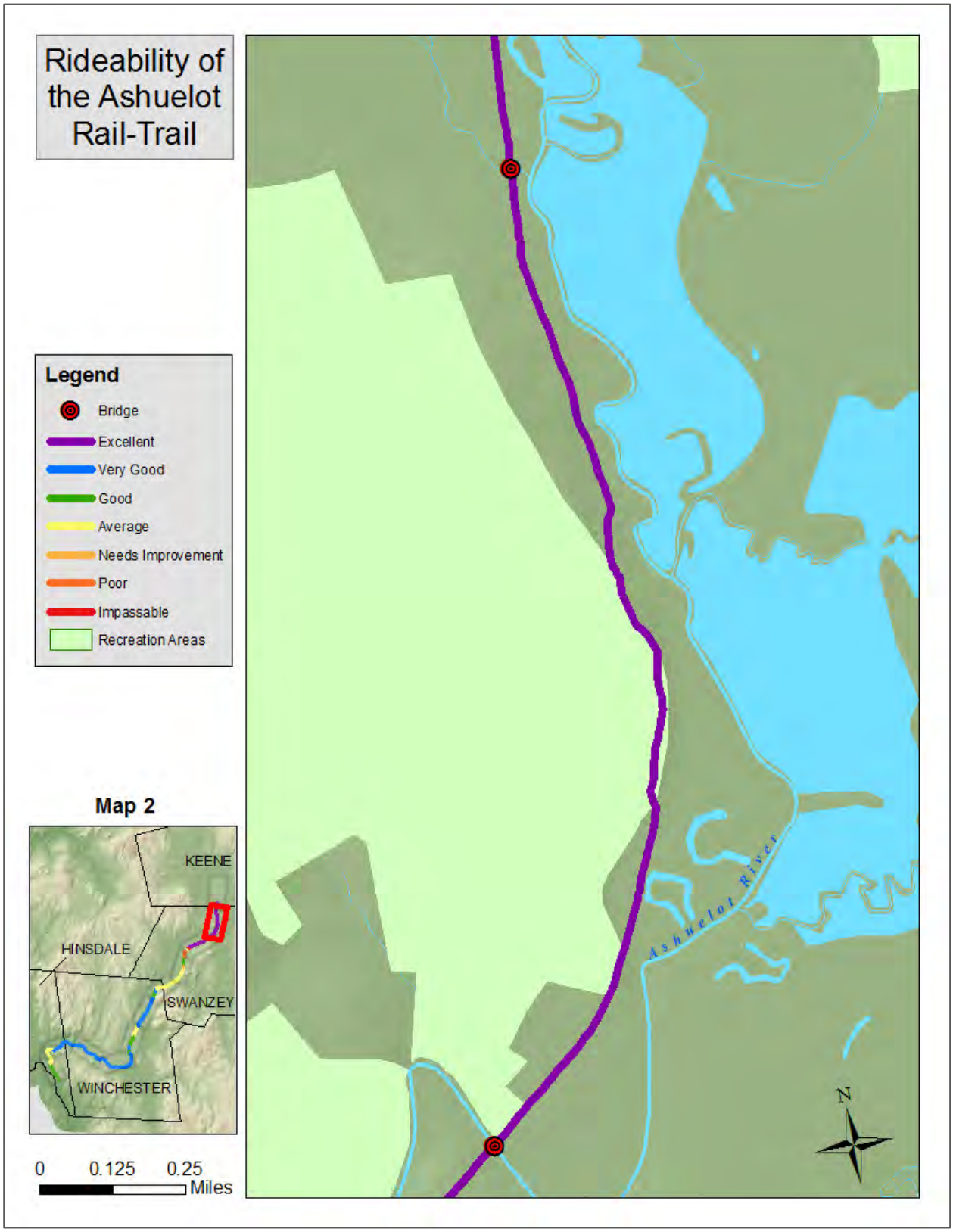
Appendix C-6: Strip Map of Rideability on ART

Map 1



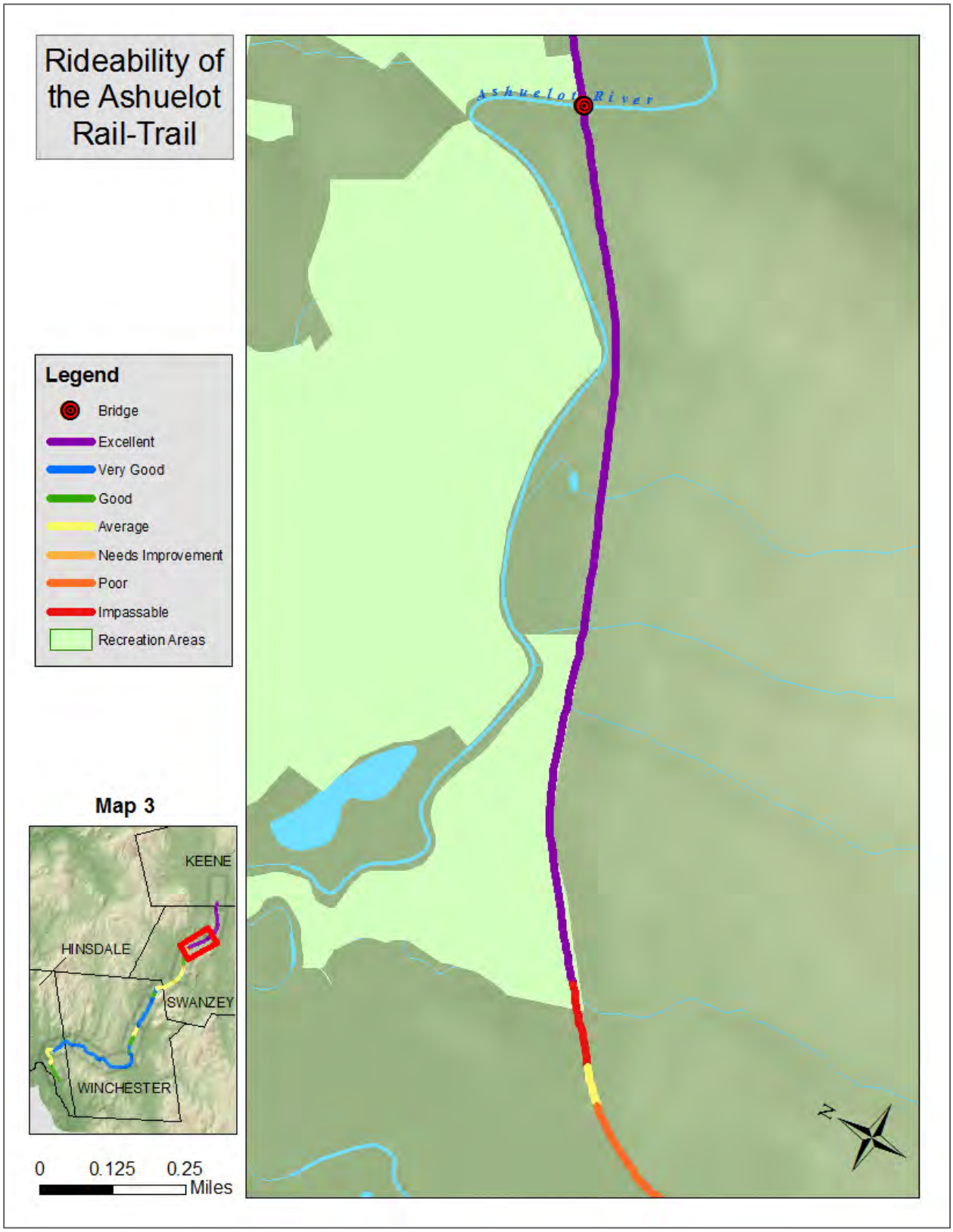
Excerpt

Strip Map of Ashuelot Rail Trail: Map 2



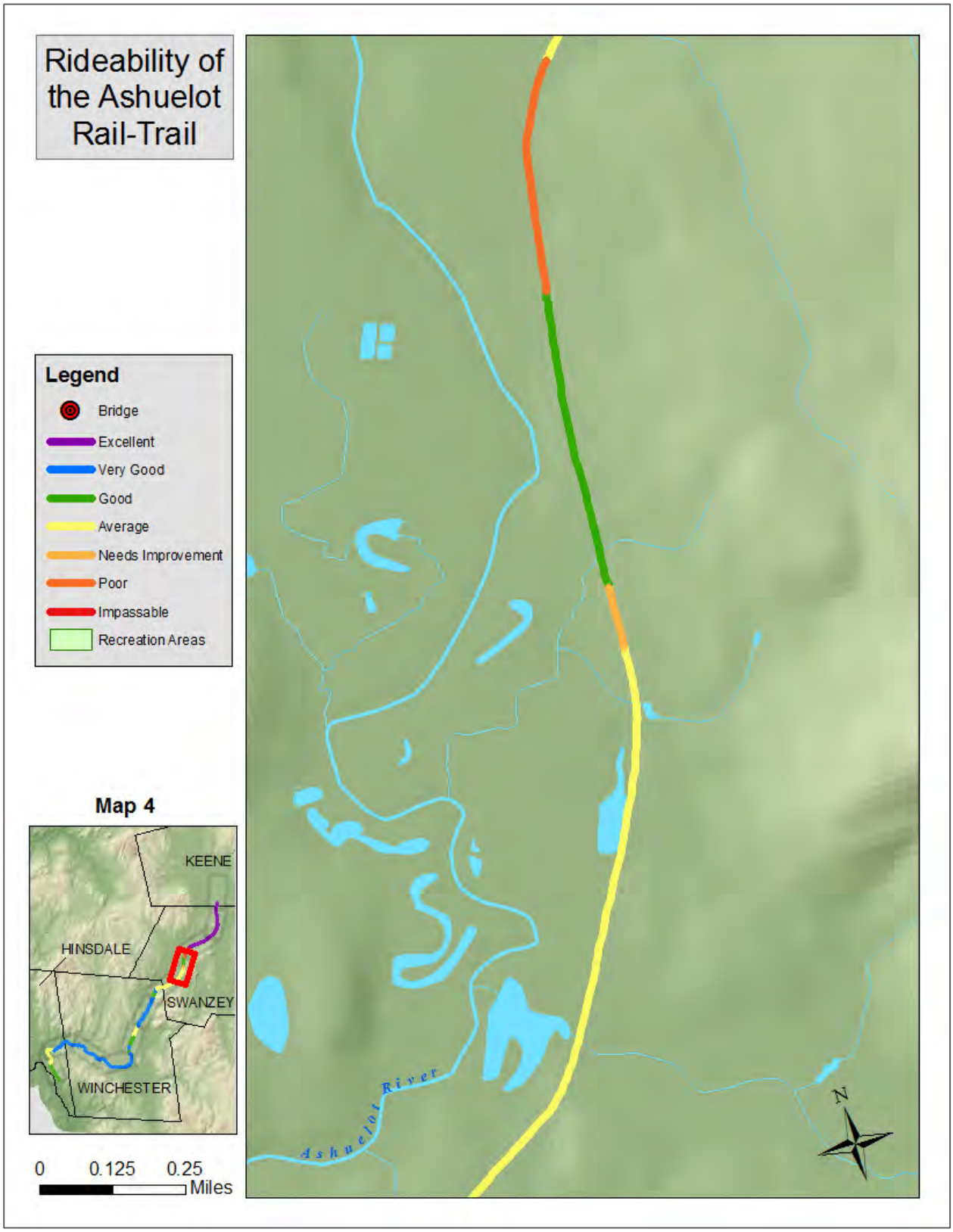
Excerpt

Strip Map of Ashuelot Rail Trail: Map 3



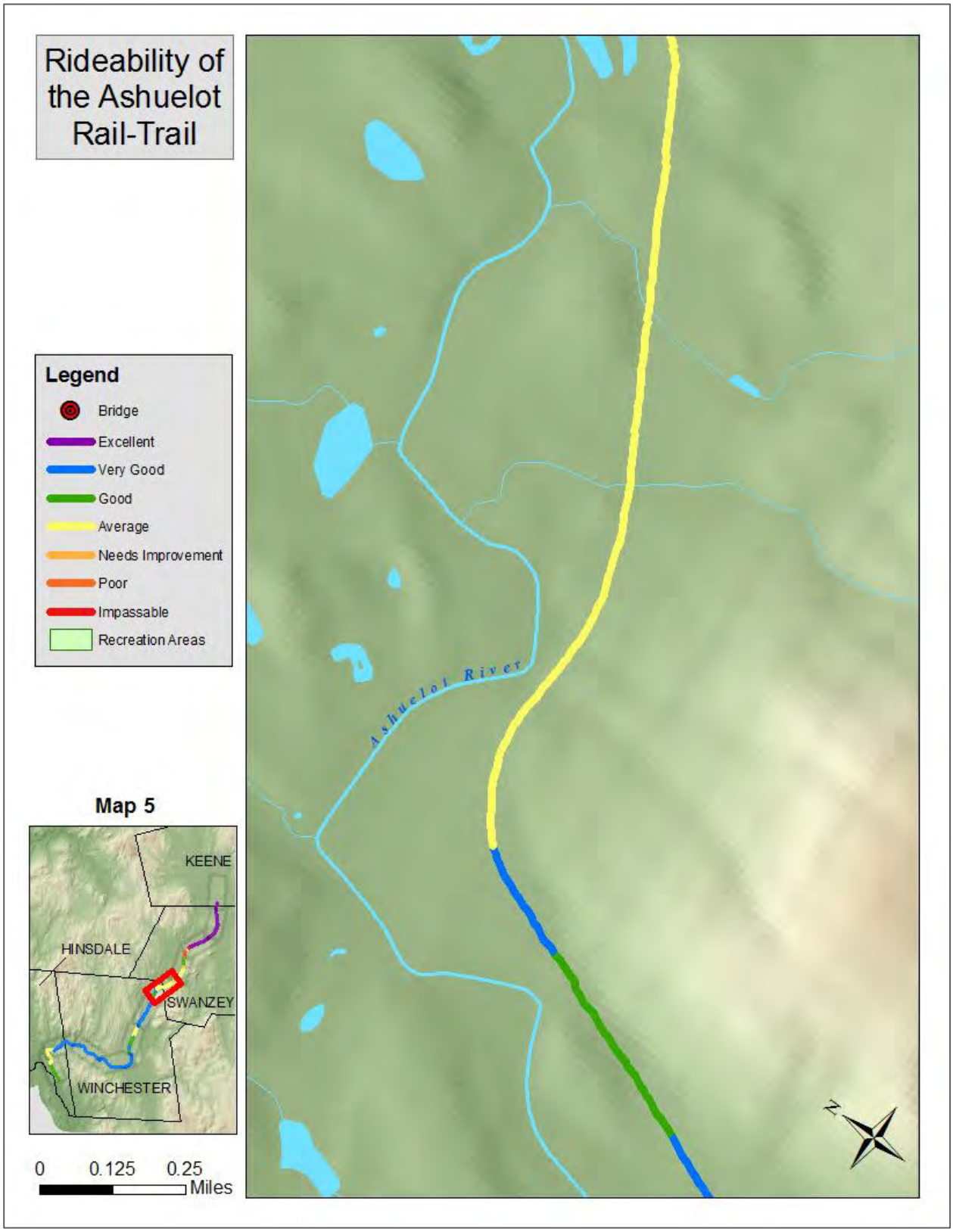
Excerpt

Strip Map of Ashuelot Rail Trail: Map 4



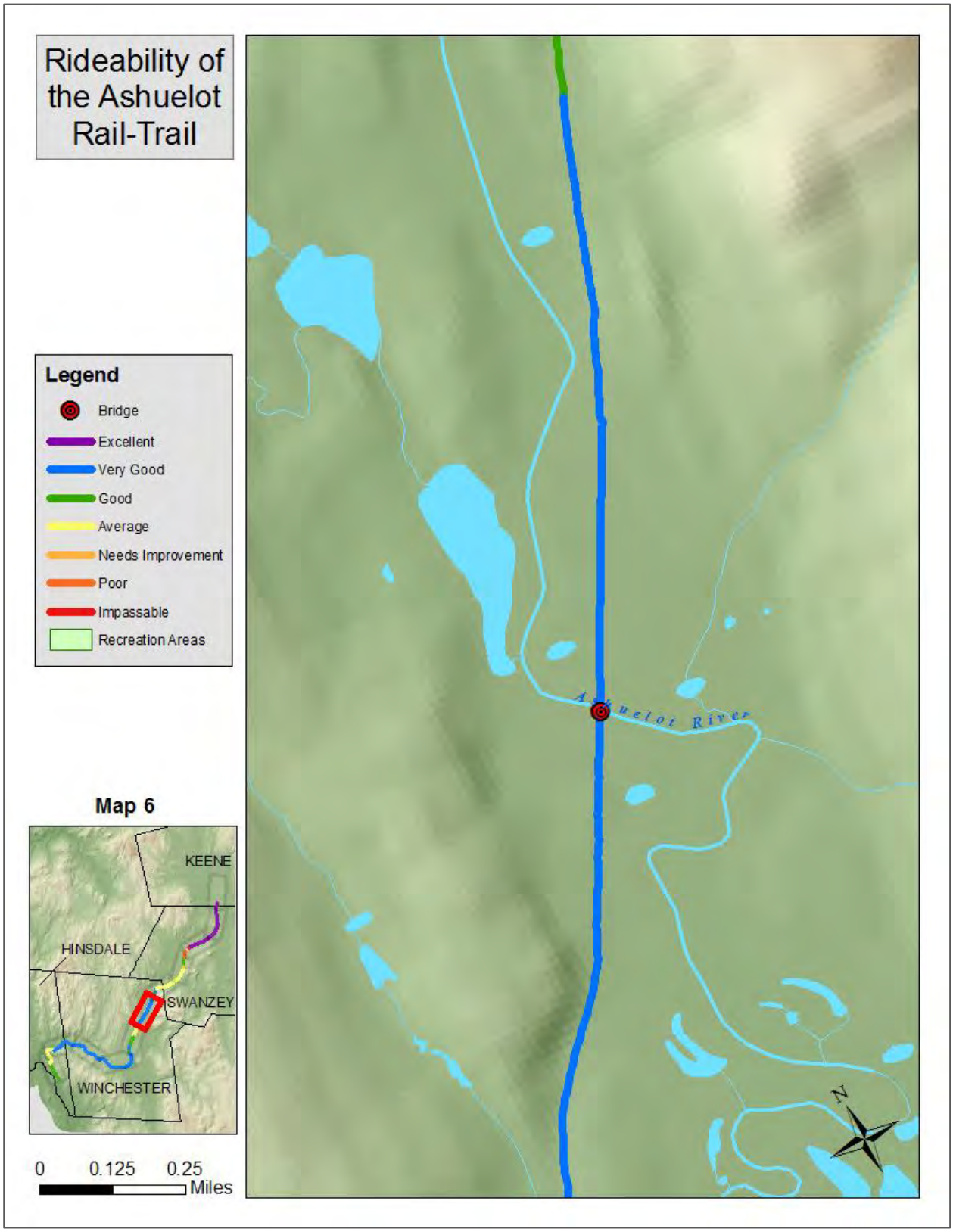
Excerpt

Strip Map of Ashuelot Rail Trail: Map 5



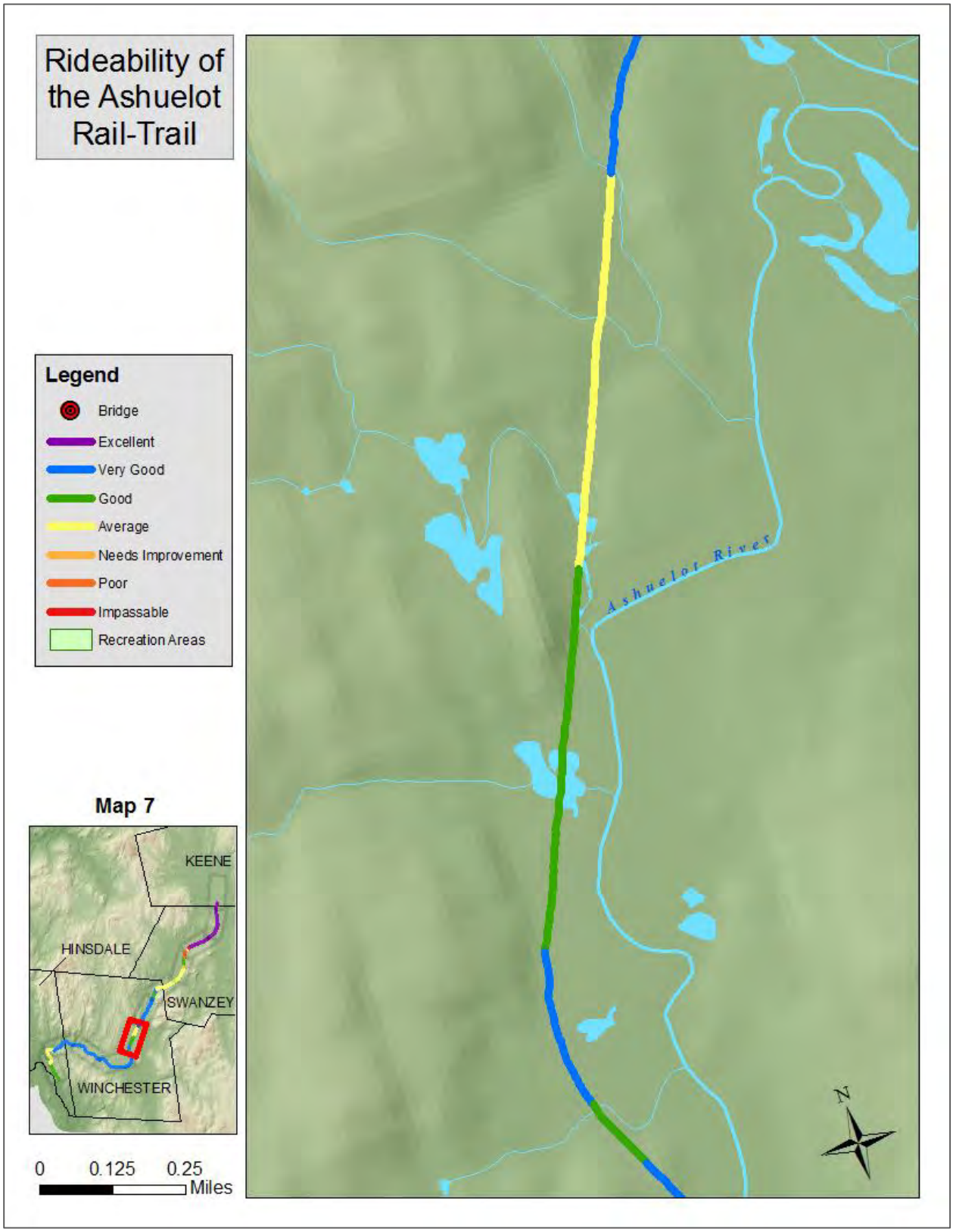
Excerpt

Strip Map of Ashuelot Rail Trail: Map 6



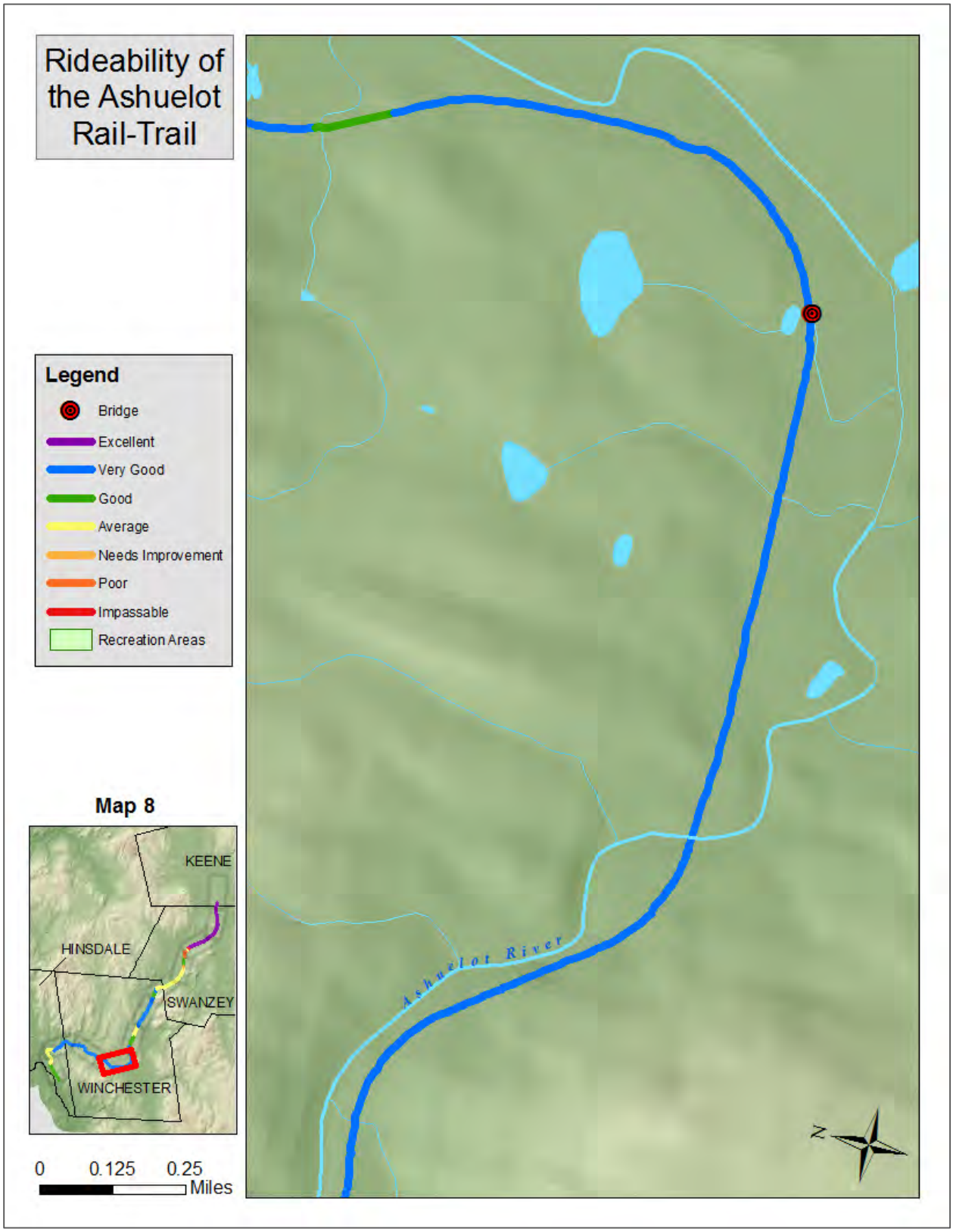
Excerpt

Strip Map of Ashuelot Rail Trail: Map 7



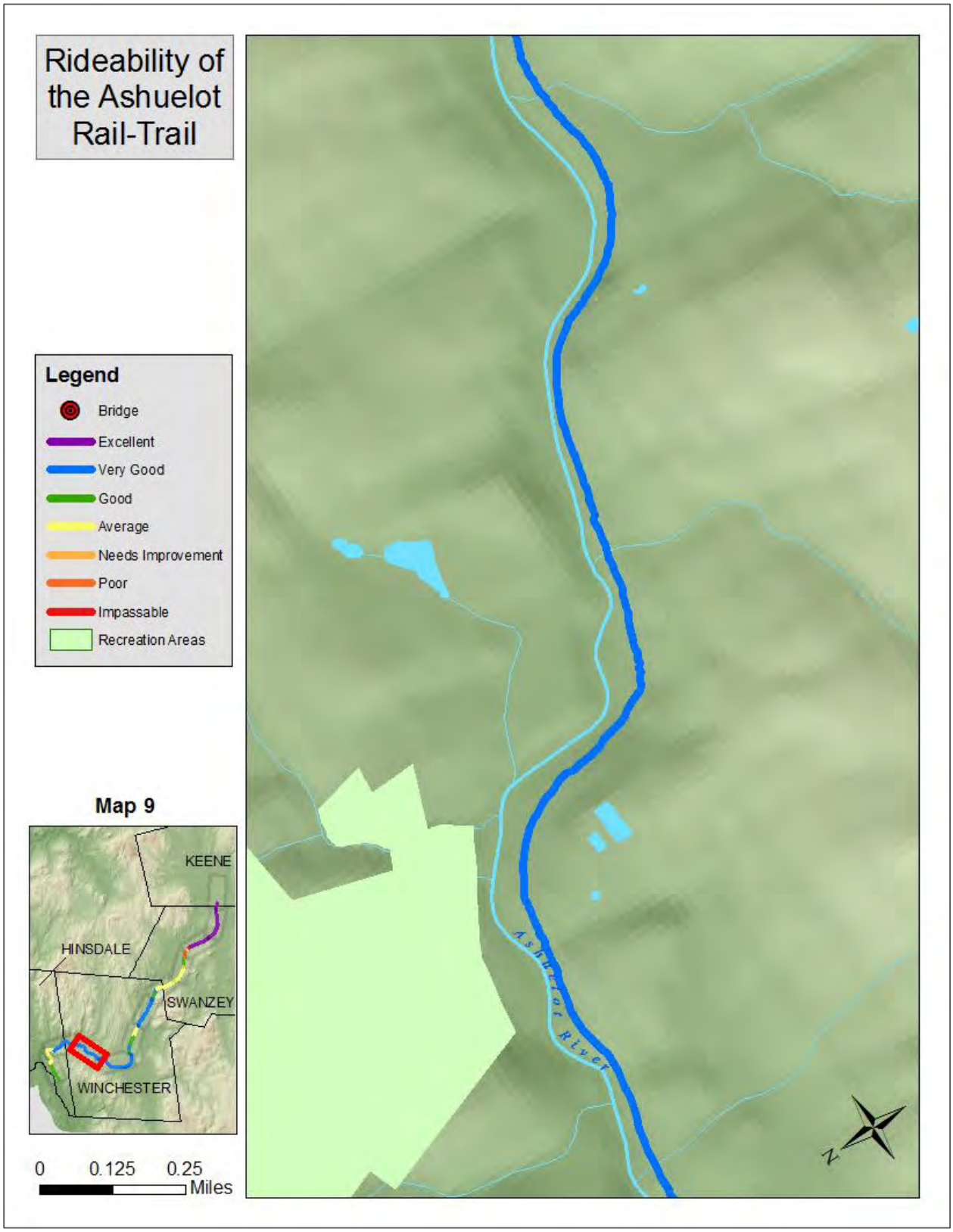
Excerpt

Strip Map of Ashuelot Rail Trail: Map 8



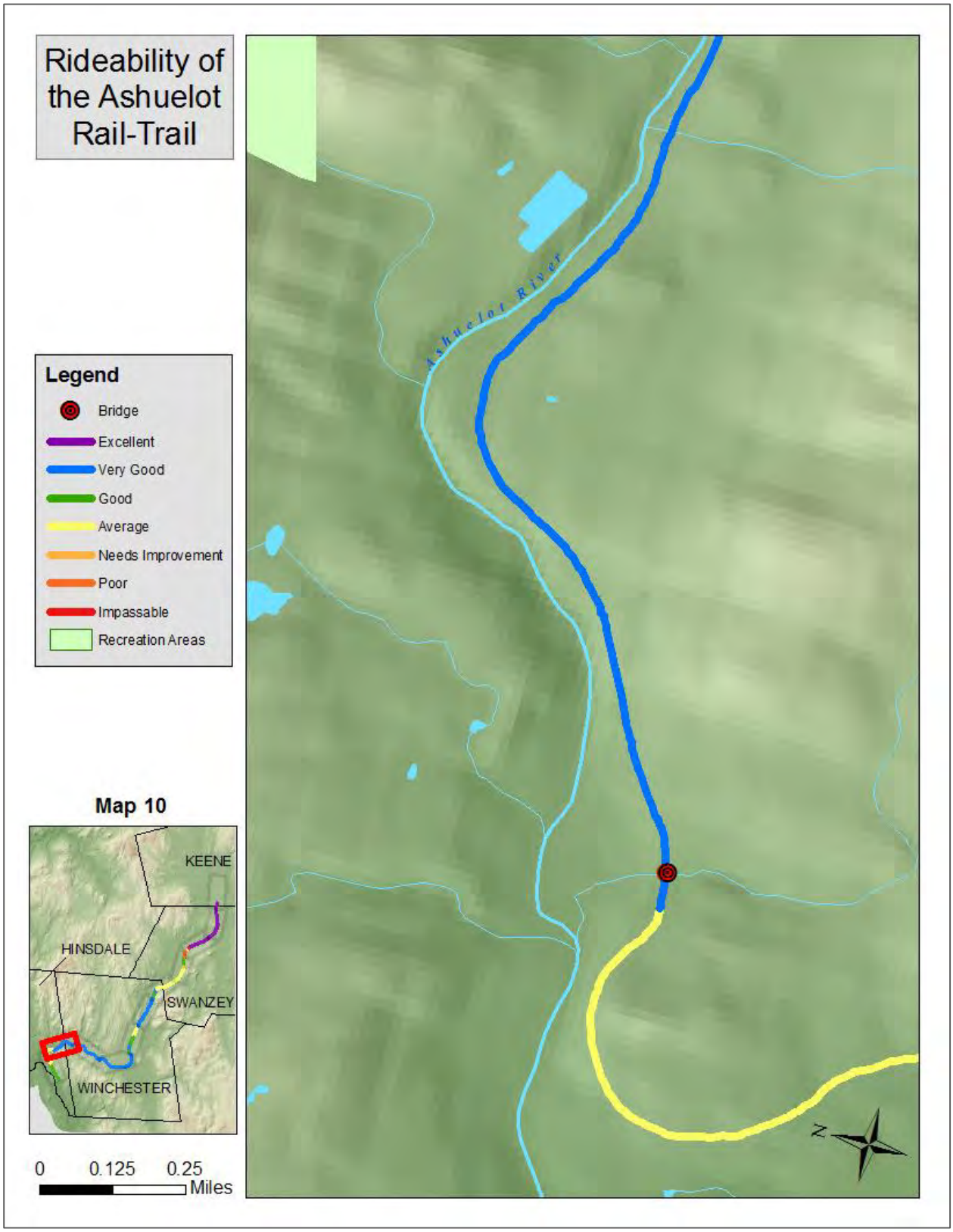
Excerpt

Strip Map of Ashuelot Rail Trail: Map 9



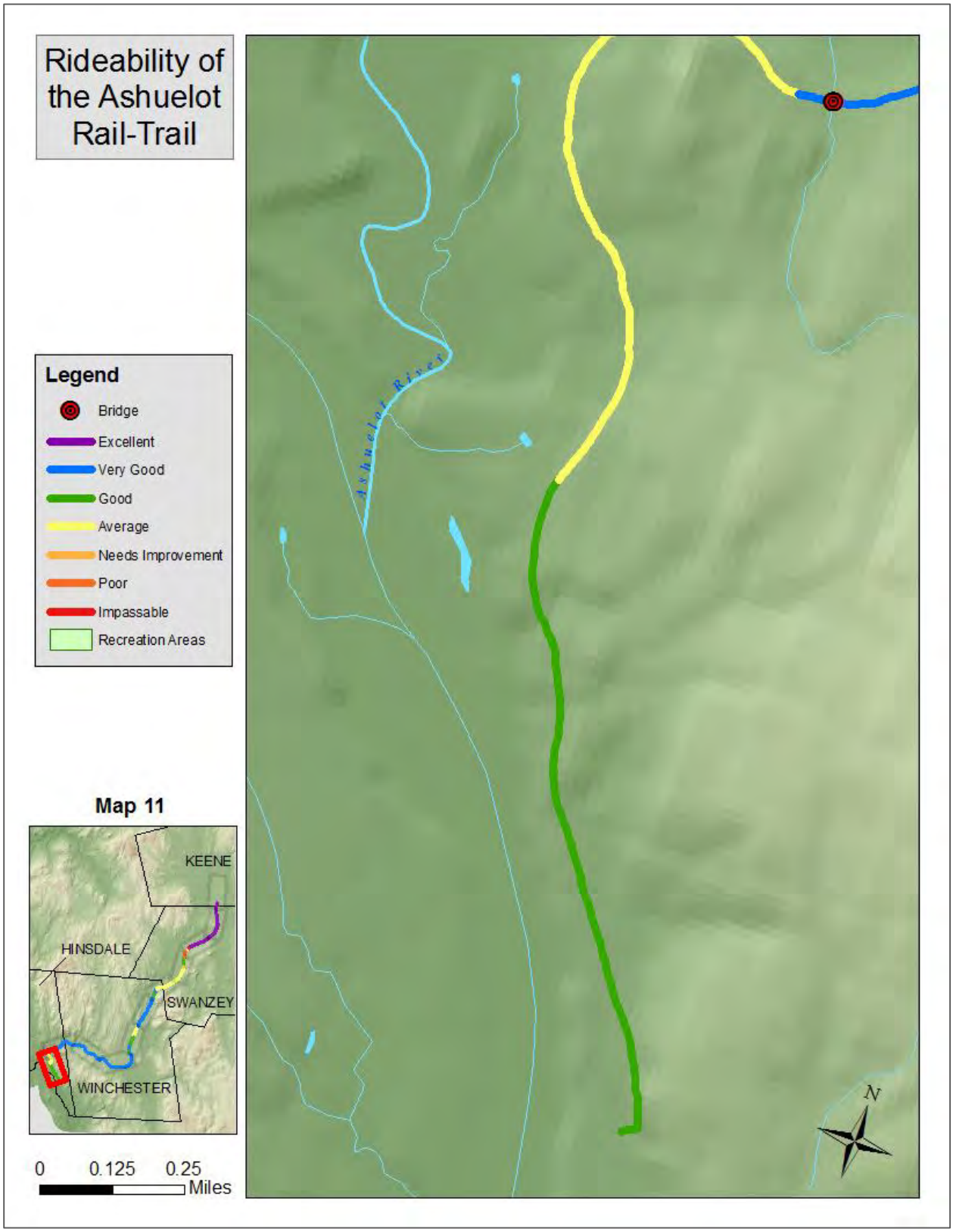
Excerpt

Strip Map of Ashuelot Rail Trail: Map 10



Excerpt

Strip Map of Ashuelot Rail Trail: Map 11



Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Programs and Health Analysis**

Physical exercise supports health and wellness in multiple ways. It helps control weight, reduces the risk of type 2 diabetes, reduces the risk of some cancers, can improve mental health, and contributes to a number of other positive health outcomes.[1] Rail trails and trails for non-motorized uses offer opportunities for physical activity. They can also facilitate social activities that in turn often contribute to improvements in mood and mental health.

In order to better understand the links between rail trails and public health, SWPRC staff examined previous research that documented health benefits of rail trails or trails more generally. They also compiled information about programs or activities known to occur on the Ashuelot Rail Trail in particular. Finally, staff studied programs and activities that occur on other rail trails and that hold potential for promoting increased use of the Ashuelot Rail Trail.

Documented Health Benefits of Trails

There is a growing body of scholarly literature that investigates the connections between trails and public health. What follows is a brief overview of findings from reports and peer-reviewed articles that have examined the topic from various perspectives.

- **Trails support increased physical activity.** Through the use of on-trail intercept surveys, a 2005 study in Morgantown, West Virginia concluded that a substantial portion of trail users did not exercise regularly prior to using paved recreational trails. About 23 percent of survey respondents (n = 93) indicated that they did not exercise on a regular basis before they started using the trails and about 60 percent (n = 250) indicated that their physical activity increased after they began using the trails.[2]
- **Trails may help promote physical exercise among various demographic groups, including those most at risk for physical inactivity.** A study in 2000 that relied on telephone interviews found that trail users that were women, low-income individuals, and individuals with a high-school education or less were more likely to report increased physical activity than trail users overall.[3]
- **Cycling on rail trails produces health benefits that in turn lead to economic savings.** A 2018 study found that cycling activity in Northwest Arkansas led to about $86 million

[1] National Center for Environmental Health. https://www.cdc.gov/healthyplaces/healthtopics/parks.htm#.
[2] Abildso, C., S. Zizzi, S. Selin, and P. Gordon. 2012. "Assessing the cost effectiveness of a community rail-trail in achieving physical activity gains." Journal of Park
and Recreation Administration 30(2): 102-113.
[3] Brownson, R., R. Housemann, D. Brown, J. Jackson-Thompson, A. King, B. Malone, and J. Sallis. 2000. "Promoting Physical Activity in Rural Communities:
Walking Trail Access, Use, and Effects." American Journal of Preventive Medicine 18(3): 235-242.

in health benefits, from avoided health care costs and reduced mortality rates.[4] Cycling on shared-use paths formed a significant component of overall cycling activity.

- **Bike/pedestrian trails can have a positive cost-benefit ratio, when trails costs are weighed against health care savings from on-trail physical activities.** A 2005 study in Lincoln, Nebraska estimated that every $1 invested in trails yielded $2.94 in direct medical benefits. Trails included in the study were predominately surfaced with concrete and included several bridges. Annual trail costs were calculated by combining construction costs (amortized over a 30-year lifespan) and annual maintenance costs. Direct health benefits were estimated by multiplying the number of "active" trail users by the healthcare savings those users were expected to experience.[5]
- **Trails can serve as an important social setting that supports physical activity.** A number of social factors can influence an individual's decision to exercise or not. As demonstrated in a 2001 study on the social and policy determinants of physical activity, one of those factors is access to a facility where other people are exercising.[6] While some may be able to afford gym memberships or exercise classes, trails offer free access to a facility where people can exercise together.

Programs and Activities on the Ashuelot Rail Trail

SWRPC staff reached out to a variety of trail stakeholders most likely to use the trail for regularly organized activities. Staff made inquiries to parks and recreations departments in all four municipalities along the trail's route, nearby schools, conservation groups, camps, cycling groups and health organizations. Some of these activities may yield direct health benefits, mental health benefits, or both. What follows is a summary of feedback received, organized by municipality.

- **Keene**
  - According the Keene Parks and Recreation Department, the department performs maintenance on the trail, but doesn't use it for organized activities.
  - The Center for Population Health at Cheshire Medical Center noted that Healthy Monadnock, one of its programs, organizes several 5k races from the Medical Center campus. Race routes likely utilize the Ashuelot Rail Trail. The organization collaborates with employers to promote worksite wellness, which includes promotion of nearby rail trails.
  - The Bicycle Mayor of Keene organizes occasional group rides, which sometime use the Ashuelot Rail Trail. For example, in May of 2019, she organized a ride that started at the Krif Rd. trailhead in Keene (at the driveway of the Keene State College athletic complex). She led a group of about a dozen riders south along the trail into Swanzey, and followed a route that visited each of the town's five covered bridges. At each bridge, she gave a brief description of the bridge's history and architectural features. She also emphasized best practices for safe group riding. Several ride participants expressed interest in future opportunities to bicycle in a non-competitive group environment. The bicycle mayor program is an international initiative aimed at supporting bicycling advocates across the world. The Bicycle Mayor of Keene has

[4] BBC Research and Consulting. Economic and Health Benefits of bicycling in Northwest Arkansas. March 21, 2018. Prepared for the Walton Family Foundation and PeopleforBikes. https://peopleforbikes.org/wp-content/uploads/2018/10/march-2018-nw-arkansas-final-report.pdf

[5] Wang, G., C.A. Macera, B. Scudder-Soucie, T. Schmid, M. Pratt, and D. Buchner. 2005. "A cost-benefit analysis of physical activity using bike/pedestrian trails." Health Promotion Practice 6: 174-179.

[6] Ross C. Brownson, Elizabeth A. Baker, Robyn A. Housemann, Laura K. Brennan and Stephen J. Bacak, "Environmental and Policy Determinants of Physical Activity in the United States," American Journal of Public Health, Vol. 91 No. 12, pg. 1995-2003, 2001.

worked with the City on several projects, including Safe Routes to School programming.

- **Swanzey**
  - The Director of Parks and Recreation in Swanzey reported that the Town occasionally holds a trail awareness day on the rail trail, usually after completing new improvements. He also noted that the Elijah Barret Memorial Half Marathon uses the trail for a segment of the race. According to the most recent route map, the race picks up the trail at Sawyers Crossing Road and departs from the trail at Railroad Street. In the past, turnout has reached 500 entrants. In 2018, the race was scheduled for September 2nd.
  - Swanzey's Director of Parks and Recreation also suggested that the local equestrian club uses the trail with some frequency.
  - A council member for Friends of Pisgah reported that the organization has not planned events for the trail, but equestrian groups that she's involved with have organized rides. Most notably, the Monadnock Happy Trails Association organizes an annual ride in April or May that starts by Matthews Bridge in Swanzey. They usually ride 3-4 miles south and turn around. She noted that, with recent bridge upgrades, trail footing is safe even for old or green horses. Parking presents an issue for equestrian users who need to park trailers. Monadnock Happy Trails Association is an adults-only group, with an annual membership of about 30. For each ride, about fifteen members participate.
  - The president of the Monadnock Happy Trails Association reported that the group organizes the Matthews Bridge-Pine St ride in Swanzey both in the spring and the fall. During the summer, the trail is too busy to use. The trail is narrow at points and bikes and dogs can spook the horses. The groups used to ride from West Swanzey to Route 10, but the trail is in such poor condition that the group no longer does the ride.
  - The principal at the Cutler Elementary School in Swanzey reported that the school's running club uses the trail one or twice in the spring and fall.
- **Hinsdale**
  - The guidance counselor at Hinsdale Middle/High School noted that the students use the trail to walk to school, but t the Middle/High School is less involved than the Elementary School in Safe Routes to School programming. The track and field and cross country teams use the trail on a daily basis in the spring and fall. Biology classes use the trail to access and study the river. English classes have also walked the trail as part of literature and nature lesson plans. Physical education classes use the trail in the winter for snowshoeing.
  - The Executive Assistant and Wellness Coordinator at the Hinsdale School District noted that an employee walking group used the trail on a weekly basis during May and June of 2018. The weekly walks weren't well attended (with busy schedules at the end of the school year, it's difficult to recruit school staff for additional events). The walking group has yet to discuss weekly walks during the fall.
- **Winchester**
  - President of the Winchester Trail Riders (snowmobile club) didn't indicate that the rail trail is used for any club-organized rides, although riding parties can range in size significantly.

- The President of the Friends of Pisgah reported that the organization focuses on trail maintenance inside of Pisgah State Park. They don't organize activities on the rail trail.

- **Other**
  - The president of the NH Rail Trails Association reported that since the association is currently in the process of reactivating after a long period of dormancy, the group has yet to organize events on any rail trail in the state. Currently the group functions primarily as a contact point for parties interested in the rail trail. It also advocates for rail trail-related legislation.
  - A member of the New England Mountain Bike Association (the Keene-Brattleboro chapter) reported that the only rail trail that group uses is the northern section of the Cheshire Rail Trail. The group uses the rail trail primarily to access single-track mountain biking trails.
  - A member of the Ashuelot River Local Advisory Committee reported that, in the past, the group has organized hikes and walks using the rail trail, typically with board members participating. It has been years since an organized hike has occurred, due mostly to the change in board makeup and diminished interest in holding such events.

Programs and Activities on other Rail Trails

In addition to researching currently organized activities or events on the trail, SWRPC staff assembled a list of potential trail activities or events. The list draws from examples from other locations, focusing on suburban and rural areas. Potential trail activities include:

1. **Events targeting bike commuters**. For example, in the Pioneer Valley of western Massachusetts, multiple municipalities host events for bike commuters, often in coordination with Baystate Bike to Work Week, a statewide bike commuting initiative. Activities have included commuter breakfasts held on or near well-traveled rail trail routes; "coffee with helmet" meet-ups; trailside bike maintenance clinics; and after-work pub tours.
2. **Events that highlight trailside wildlife and ecology**. As part of bike commute week in Amherst, Massachusetts organizers held a twilight bird and beaver observation tour along a rail trail with extensive wetland areas.
3. **Walking school buses.** A walking school bus is simply a group of students that walk to school together, accompanied by adult chaperones. The group picks-up additional students as it walks along its route to school. A variation on the walking school bus is the bicycle train, where adults supervise students biking to school along a fixed route. The idea is simple, but can make a walking or biking commute to school more fun. The group of walkers or bikers can also convince additional students to walk or bike to school. Considering that the Ashuelot Rail Trail runs by several schools along its route, it could become a safe, care-free segment of a walking school bus route.
4. **Leaf-peeper tours**. The Ashuelot Rail Trail passes through and along large expanses of deciduous forest, representing an opportunity for foliage-related tourism. Each year, thousands of tourists flock to rural New England to witness the explosion of natural color. The majority of leaf-peeping occurs via automobile, but there's increasing interest and market demand for experiencing fall color on bicycle or on foot. For example,

according to a 2009 New York Times article, bike tourism companies in Vermont organize rides tailored for leaf-peepers venturing north from more urban areas.[8]

Findings

- The connections between increased physical activity and improved health are well established. A growing body of scholarly literature demonstrates that multi-use trails such as rail trails promote physical activity. The health care savings that result from increased physical activity can far outweigh the costs of constructing and maintaining trails.
- The Ashuelot Rail Trail accommodates a wide range of activities. Some have more obvious direct health benefits, while others provide opportunities for building social connections, which in turn can support improved mental wellbeing. Activities often yield combined physical and mental health benefits.
- Documented activities suggest that certain segments of the Ashuelot Rail Trail are utilized more extensively for organized programming than others. For example, no organized activities were identified to occur in Winchester.
- No identified programs or activities focused on wintertime uses, e.g. snowshoeing or skiing.

Recommendations

- Further develop a list of on-trail programs and activities. Additional programs and activities may be identified through PAC discussion and/or the municipal surveys included in the Plan scope. A comprehensive inventory of on-trail activities could prove useful in a number of ways. Municipalities and non-profit organizations could use it when crafting grant proposals for trail improvement funding. Such an inventory could prove a useful tool for community organizers interested in building a multi-sector coalition for trail improvement advocacy. It could also prove a resource to Chambers of Commerce, municipalities, or economic development organizations interested in marketing trail-related assets and activities.
- Consider emulating previous academic research in order to quantify the direct medical benefits produced by rail trail use. The 2005 study in Lincoln, Nebraska by Wang et al. (cited above) serves as a good model. Developing and implementing an effective research design may require collaboration with researchers from institutions of higher education, state agencies, or private consulting firms. Direct medical benefits could be compared with trail construction and maintenance costs, which would likely demonstrate a positive cost-benefit ratio.
- Consider developing a toolkit for groups interested in organizing larger, high-profile on-trail events, such as the Elijah Barret Memorial Half Marathon in Swanzey. Such a toolkit could include a checklist and information about how to work with municipal staff/officials and state agencies. The checklist could specify appropriate municipal/state contacts and any approvals needed to host on-trail events. It could also establish safety measures and other best practices.

[8] Zezima, Katie. *Pedal peepers in Vermont.* October 14, 2009. https://www.nytimes.com/2009/10/18/travel/18bike.html

Southwest Region Planning Commission
37 Ashuelot Street Keene, NH 03431 603-357-0557 Fax 357-7440

DATE: **October 17, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment – Economic Benefit Analysis**

Investment in active transportation infrastructure can attract spending in local economies as well as support jobs, increase the local tax base, and create cascading indirect benefits for the economy. Both in urban and rural economies, recreational amenities have been documented to lead to increases in property values of anywhere from 2-10%. In New Hampshire alone, the recreational economy accounts for $8.7 billion in consumer spending and directly employs more workers than the state's high-tech sector. With many local and national examples of economic studies on the recreational economy and trails, this memo aims to find applicable lessons for the current and potential economic impact of the Ashuelot Rail Trail.

SWRPC staff compiled and reviewed a list of comparable studies to recommend future actions for an implementation plan as well as to create findings of similar or comparable projects and their economic impact on the rural economy. Documents reviewed include reports on the recreational economy, economic impact studies for trail projects in New England and nationally, studies regarding real estate and local business in connection to bicycle infrastructure, and general studies connecting active transportation to the economy. A full list of collected materials, along with findings and recommendations for future actions and study can be found in this memo.

Findings

- Active transportation's highest economic impact on local businesses comes from non-local, overnight visits.
- Spending profiles for visitors are key to understanding the economic impact of active transportation infrastructure improvements.
- Bicycle infrastructure can have significant impact on real estate and local business in rural economies as well as urban, with examples in Washington State showing a 10% premium on homes within a quarter mile of trails.
- New Hampshire itself currently has a substantial recreational economy with $8.7 billion annually in consumer spending supporting over 77,000 jobs.
- There are a wide variety of models and methodologies to estimate the impact of active transportation infrastructure on the local economy. Vermont has a well-established and maintained statewide model that may be beneficial to New Hampshire.
- It is a goal of the State of New Hampshire to "[l]everage the benefits of trails and other connectivity projects as they relate to social and economic vitality among local and non-local users" according to the 2019-2023 Statewide Comprehensive Outdoor Recreation Plan.

- A “critical mass” of trails in a region significantly increases the benefit of additional active transportation infrastructure on the local economy, especially through increased overnight and out of state visitors.
- Comprehensive, regional trail systems can leverage significant consumer spending for a greater economic impact than a singular trail.
- Snowmobiles and off highway vehicles represent a significant portion of consumer spending in Northern New Hampshire, especially Coos County.
- Amenities for bicyclists and hikers that facilitate overnight stays, such as the AMC huts associated with the Appalachian trail, have been proven to have significant economic impact in the tri-county area of Grafton County, Carroll County, and Coos County in New Hampshire.
- Templates, including survey questions, currently exist for creating economic impact studies for trail systems.
- Both Plymouth State and the University of New Hampshire Cooperative Extension have been active partners for agencies wanting to estimate the impact of recreational amenities on the

Recommendations

- Consider creating a survey of trail users for both the Ashuelot Rail Trail and other regional trails to create an overall spending profile for local and non-local visitors in the Monadnock region.
- Create or adopt a high-level model that identifies economic indicators by which to study economic impact.
- Utilize the People for Bikes template for an expedient economic impact study process.
- Compile a list of businesses in the Monadnock region that are tied into the recreational economy and consider a separate business survey touching on the activities and spending businesses observe in relation to regional trails.
- Gather regional data related to the recreational economy to understand what industry and employment is tied to recreation in comparison to state level data.
- Consider reaching out to other New England recreational entities such as the Upper Valley Trails Alliance and Vermont Trails and Greenways Council to gain insights into conducting a larger scale economic impact study for the Ashuelot trail.

Economic Impact Literature Review

Title and Date	Description
New Hampshire Examples	
New Hampshire Recreational Economy Report, **2017**	This report, published by the Outdoor Industry Association, outlines several statistics for the outdoor economy in New Hampshire and the nation including: • 69% of New Hampshire Residents participate in outdoor recreation each year. • More jobs in New Hampshire depend on outdoor recreation (79,000) than the state's high-tech sector (44,000). • In New Hampshire, outdoor recreation creates $8.7 billion of consumer spending annually and $2.7 billion in wages and salaries. • Outdoor recreation creates $528 million in state and local tax revenue.
Strengthening Connections: Downtowns and Trails, Bristol, New Hampshire, **2019**	A study done by UNH Extension in partnership with the town of Bristol summarizes the community perception and current assets and opportunities surrounding an existing multi-use trail passing through town. The trail currently connects Newfound lake with downtown Bristol, and a significant aim of the study was to create a geographic index of assets and challenges along that stretch. In addition, the report created a spending profile of local and non-local visits to Bristol. Overall, the report found several recommendations with many involving specific infrastructure improvements (bathrooms and sidewalks) as well as wayfinding and marketing efforts.
Nature Economy: The Economic Benefit of Trails, **December 2018**	This factsheet, published by the University of New Hampshire Extension office, covers the economic benefit of trails as it defines the "nature economy". The "nature economy" is defined by UNH Extension as "connect[ing] the environment and natural resources with community goals to create vibrant economies and high quality of life for all". The factsheet outlines how the nature economy for bicycle trails can lead to higher property values and dollars diverted to local businesses and main streets as cyclists utilize trails that go through downtowns. In particular, this resource contextualizes the Ashuelot Rail Trail as part of a 558 mile statewide rail trail network, in addition to thousands of miles of hiking and OHV trails throughout the state.
The Economic Impact of Spending by Snowmobilers on New Hampshire's Economy, **2011**	Created by researchers at Plymouth State University for the New Hampshire Snowmobile Association, a mail survey to 1,000 registered snowmobilers estimated the impact snowmobiling has on the New Hampshire. Similar to other studies, it focused on the impact of residents versus non-residents, and found that non-residents spend $1,179 on "hard costs" and had an average visitor spending of $114 daily. Residents spent slightly more on "hard costs" at $1,307 but had an average daily spending of $79. The total impact of the activity on the state's economy was $586 million. Total fees and taxes from snowmobile activity totaled $20.7 million, while $2.7 million was paid to local governments in tax revenue.
Impact of the Appalachian Mountain Club's Huts and Lodges in New Hampshire, **2015**	This report produced by the Center for Rural Partnerships at Plymouth State University for the Appalachian Mountain Club estimates the economic impact of specifically non-local visitors who stayed overnight and came particularly to use AMC huts. It follows a similar methodology to Vermont models in prioritizing "net-new" spending and focusing particularly on overnight visits. In the three-county area of Coos, Carroll, and Grafton County it was estimated that the huts supported $15.6 million in activity between June of 2014 and May of 2015, 64% of which were directed to businesses other than the AMC. This investment subsequently supported 169 jobs in the area, 54% of which were employed by businesses other than the AMC. Total income from labor was $5.7 million and tax revenue in the tri-county area totaled $1.15 million.

New Hampshire 2019-2023 Statewide Comprehensive Outdoor Recreation Plan**, 2019**	The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is one of the requirements for utilizing Land and Water Conservation Fund Act (LWCF) funding, and is also submitted to the US Department of Interior and updated every 5 years. The SCORP establishes priorities and data sources to help guide partnerships in distributing LWCF, which is done through a statewide competitive grant process. The study cites many statistics and studies referenced above, but of particular interest is the fact that local parks contribute $155 million to the local economy and are often in the top three factors for businesses when considering relocation. Perceived degradation of water clarity and purity was also estimated to cost the state $18 million in lost income and over 800 jobs. In general, the State of New Hampshire has 5 goals in relation to economic vitality and recreation: • Facilitate cooperative efforts among private and public entities to secure sustainable funding sources for existing and future resources. • Collaborate with recreation organizations and communities to foster and create business and program enterprises associated with outdoor recreation in the State of New Hampshire. • Engage in dialogues with healthcare organizations and residents to further explore and explain the economic health benefits of an active community. • Leverage the benefits of trails and other connectivity projects as they relate to social and economic vitality among local and non-local users. Expand upon the "LIVE FREE" brand to emphasize the flexibility of economic opportunity and overall welcoming business culture of the state of New Hampshire.

Title and Date	Description
New England Regional Examples	
Economic and Fiscal Impact Analysis of the Vermont Trails and Greenways Council, **2016**	This report prepared by the Vermont Trails and Greenways Council outlines the fiscal impact of four trail systems in Vermont by asking "What would change in the State if the trails ceased to exist?". Particular attention was paid to the "net-new" impacts, which is spending done by outside non-Vermont residents that would not happen sans the trails. Overall the trails had 410,000 visitors annually across multiple forms of use (bicycling, hiking, and ATV vehicles primarily) leading to a total impact of $30.8 million. Food & drink and lodging were the predominant forms of spending, although transportation, equipment, recreation, and gifts all had around $1-2 million in impact. Annual visitor counts from member organizations were paired with survey data and statistical modeling software to estimate the usage for each category of visitor resulting in a spending profile for said categories. Impacts and spending per visitor was also broken down by trail system. Important to note is the indirect impacts that were identified in the report, calculated by modeling the impact of direct spending on the local economy.
Potential Economic Impact of Outdoor Recreation in the Barre Town Forest, Vermont, **2012**	This study, published by Headwaters Economics, covers the possible economic impacts of a new 370 acre Barre Town Forest in Barre, Vermont. Based off of conservative 10% growth rates and a typical dollar amount per visit of $100 for mountain biking purposes, the study identified about $6.5 million for the local economy in a decade and over 100 jobs. It is important to note that the site currently includes over 70 miles of trails and that the potential forest is a mountain-bike based recreation area. The majority of dollars spent in the local economy would be directed towards the restaurant and hotel industries, indicating that many visitors would be either eating in the area or staying overnight.
Health Impact Assessment: Quequechan Rail Trail Phase 2, **2012**	Although a document primarily focused on the health impacts of a rail trail extension in Fall River, Massachusetts, the assessment details the economic impact of the urban trail extension through the city. The study assessed the background information and studies done on other rail trails in Massachusetts, and then analyzed the current employment, housing, and income characteristics in a mile radius from the trail to come to the conclusion that the rail trail extension can bring property values up to the city's average and that the trail connects major employers and tourist destinations.
Economic Impact of Bicycling and Walking in Vermont, **2012**	A follow up on an existing and well maintained economic impact model, this report consists of a survey and analysis of existing data to quantify four main factors: the jobs created from bicycle/pedestrian infrastructure, the labor earnings from those jobs, output for local businesses, and the state budget fiscal impact. The three factors that are analyzed as inputs in the study include capital investments into infrastructure, bicycle and pedestrian related businesses, and visitor spending related to bicycle and pedestrian infrastructure/events. Indirect benefits from the reduction of vehicle miles traveled and real estate costs are estimated, but not included in the model. Overall, over 1,400 jobs were supported statewide, leading to $41M for labor earnings and an overall impact on the local economy of $83 million.

Pine Hill Partnership Economic Impact Analysis**, 2019**	An infographic created by the Pine Hill Partnership, an association in charge of Pine Hill Park in Rutland, Vermont, describes the economic impact of the trail system in Pine Hill Park on the local economy. In total, the trail system was estimated to have a $1.3 million dollar impact on the Rutland economy. Like similar studies, it found that the vast majority of that impact was estimated to stem from overnight, non-local visitors and non-local day users. Data for this infographic was collected through trail counters and a 7 month long survey process.

Title and Date	Description
National Examples	
The Outdoor Recreation Economy, **2017**	Published by the Outdoor Industry Association, this document is a high level overview of the national recreational economy. Some key statistics of the national recreational economy include: • $887 billion in consumer spending annually • 7.6 million jobs involved in the industry • $65.3 billion in federal tax revenue • $59.2 billion in state and local tax revenue In the New England region, this translates to $51.5 billion in spending, 432,000 jobs, $4.1B in federal revenue and $3.5B in state revenue.
Active Transportation and Real Estate, **2016**	A report from the Urban Land Institute, the document covers several case studies of real estate projects and development surrounding active transportation around the country. The report covers a variety of real estate projects, citing increased property values and economic development tied to bicycle trail expansions. Bicycle tourists were found to spend more than regular tourists, and those who access businesses via bicycle were shown to have more frequent trips to these businesses. Overall, bicycle infrastructure is shown to be spurring major investment nationally and abroad and investments in trails and other infrastructure has significant return on investment.
Measuring Trails Benefits: Business Impacts, **2016**	Part of a series created by Headwaters Economics, this fact sheet covers some of the basics of estimating the impact of trails on local businesses. In general, it is noted that overnight visits generate the largest impacts, and that non-local spending needs to be differentiated from local resident spending. Overall, visitor counts and spending profiles of visitors need to be determined through models like IMPLAN or REMI, and in places that attract high numbers of non-local visitors or overnight trips capital investment in trails can leverage many times more spending in the local economy.
Measuring Trails Benefits: Property Value, **2016**	Another fact sheet in the series by Headwaters Economics, this document provides several examples of the impact of trails on property values in a variety of contexts. In urban contexts, trail premiums on home values can range anywhere from 2-10% depending on the trail user profile and access to the trail. In an example in rural Washington, a 10% premium was observed for homes within a quarter mile of the trail. Overall, statistical analysis analyzing the impact of the trail, while holding for other factors, can provide insights into the real estate impact of trails on the local economy.
Ghost Town Trail Survey and Economic Benefit Analysis, **2009**	Ghost Town Trail, a multi-use path in Southwestern Pennsylvania, was studied by the Rails to Trails Conservancy in 2009 through a user survey. The trail has similarities to the Ashuelot given moderate use and an older user base, and it was found that bicycling was the predominant use of the trail. The study surveyed consumers' about their "hard" costs (bicycles and equipment) and "soft" costs (drinks, meals, services, etc.). The trail is similar in length (36 miles) and overall the economic impact could be similar for Ashuelot trail given improvements. With an annual user base of 75,600, the trail ultimately had an economic impact of over $2.3 million that took into account consumers' hard costs, soft costs, and accommodation.

Economic Impacts of MVSTA Trails and Land Resources in Methow Valley**, 2005**	Prepared by private consultants for the Methow Valley Sports Trails Association, this report highlights how the Methow Valley, Washington, a rural region with lower population and economic growth rate than the state average, benefits significantly from the largest Nordic trail system in the country. Although the primary industry is skiing, trails are used year round in a diverse array of activities. Total direct economic impacts included: • Over $200 per visitor in spending • Support for 128 full time equivalent positions • Over $12 million total for the local economy In addition to direct economic impacts, it was measured that a 10% premium on properties within .5 miles of a trail in the network and several tens of thousands of dollars of hotel/motel tax was recorded. Overall, the trail network is able to provide significant economic benefits to a rural economy otherwise facing distress and lower growth rates than average.

Title & Date	Description
Resources & Templates	
Evaluating Non-Motorized Transportation Benefits and Costs, **November 2011**	This report, created by the Victoria Transport Policy Institute, describes a variety of indicators to evaluate the benefits of non-motorized transportation in contrast to traditional transportation valuation. Of particular interest to the project is the value estimates as it relates to reduction of vehicle miles.
People for Bikes Economic Impact Templates, **2018**	A series of Microsoft Excel spreadsheets provides survey questions and analysis tools to help measure the economic impact of cycling such as: cycling events, resident spending, bicycle business, and tourism. Originally used as part of an economic impact study commissioned by the Walton Foundation in Northern Arkansas, this resource can be used to estimate current and potential economic impacts of the trail.
Bicycle Level of Service Model, **2007**	This document, created by Sprinkle Consulting, outlines a mathematical model to calculate the level of service for bicycles on urban roadways. Although the project is primarily pertaining to an off-road multi-use trail, with road crossings being major concerns nearly universally as indicated by our survey this model can provide an insight into ranking the "barrier effect" of roadways as it relates to the Ashuelot Rail Trail.

Southwest Region Planning Commission
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DATE: **June 28, 2019**

TO: **Plan for Ashuelot Rail Trail Project Advisory Committee**

FROM: **SWRPC Staff**

RE: **Existing Conditions Assessment - Policy Integration**

In order for the Ashuelot Rail Trail to achieve its full potential as a recreation and transportation asset, it needs to be integrated with the surrounding roadway network. Many local trail users reach the trail via non-motorized transportation modes, like walking and bicycling. Considering their journey before and after using the trail is equally important as evaluating their on-trail experience. Even trail users who initially travel to the trail by car may wish to visit off-trail destinations, like businesses or tourist attractions, while traveling along the trail on foot, by bicycle, or via another permitted transportation mode. The presence, character and quality of pedestrian and cyclist facilities in between the Trail and nearby points of interest can play a critical role in encouraging trail users to visit those destinations. Similarly, nearby organizations, including camps, schools, and daycare facilities, may be more inclined to develop on-trail programming if a safe, convenient route exists by which their campers or students can access a trailhead.

Municipal policies and guidelines can help communities work towards better integrating the Ashuelot Rail Trail with the surrounding street network. This memo focuses on how a particular type of policy framework, "complete streets," is already helping guide communities to develop streets that serve all users, especially pedestrian and cyclists. It also addresses how complete streets policies and guidelines could serve as an important tool to improve connections between the Ashuelot Rail Trail and important origins and destinations along its route.

Before examining how complete streets can complement rail trail facilities, it is important to establish what a complete street is. A "complete street" is a street that serves everyone, regardless of age, ability, or how people get around. Complete streets emphasize safety, mobility and accessibility for a wide variety of transportation modes, including walking, cycling and public transit. A complete street's ideal design depends on a number of factors, including where the street is located, the character of nearby land uses and who uses the street. Common complete street elements include things like sidewalks, crosswalks, bicycle lanes, and traffic calming features such as narrowed travel lanes and raised intersections.

As an initial step towards implementing complete streets principles, a municipality can adopt a complete streets policy, which establishes a local government's support for developing and maintaining a road network that serves all users. In addition to affirming support for complete streets principles, complete streets policies often lay out steps that the municipality will take to carry out those principles, such as reviewing and modifying roadway design standards and project selection criteria. Complete streets policies often extend beyond the street network itself, considering also how off-street pathways, including rail trails, play an integral role in supporting pedestrian and cyclist mobility.

All four towns along the Ashuelot Rail Trail have adopted complete streets policies. Together, Keene, Swanzey, Winchester, and Hinsdale make up the largest contiguous cluster of municipalities statewide with a documented commitment to complete streets. This hotbed of complete streets policymaking represents a unique opportunity for integrating a regional rail trail with local transportation networks.

In addition to adopting complete streets policies, all four municipalities along the Ashuelot Rail Trail have also developed complete streets planning and design guidelines. These planning and design guidelines identify the role each street plays in the surrounding roadway network and suggest design elements that would enhance street performance for all users. For example, certain streets may function as primary corridors for vehicle traffic while others are low-volume streets in residential areas. Streets with different functions will benefit from different improvements.

Examining each municipality's complete streets policy, as well as their planning and design guidelines, helps determine how the Ashuelot Rail Trail currently fits into the wider transportation network. It also helps identify where and how connections might be improved between the rail trail and important origins and destinations, such as a residential neighborhood, businesses and schools. The Ashuelot Rail Trail is a valuable asset for transportation and recreation, but it will not reach its full potential unless it is fully integrated with its surrounding context.

I. Keene

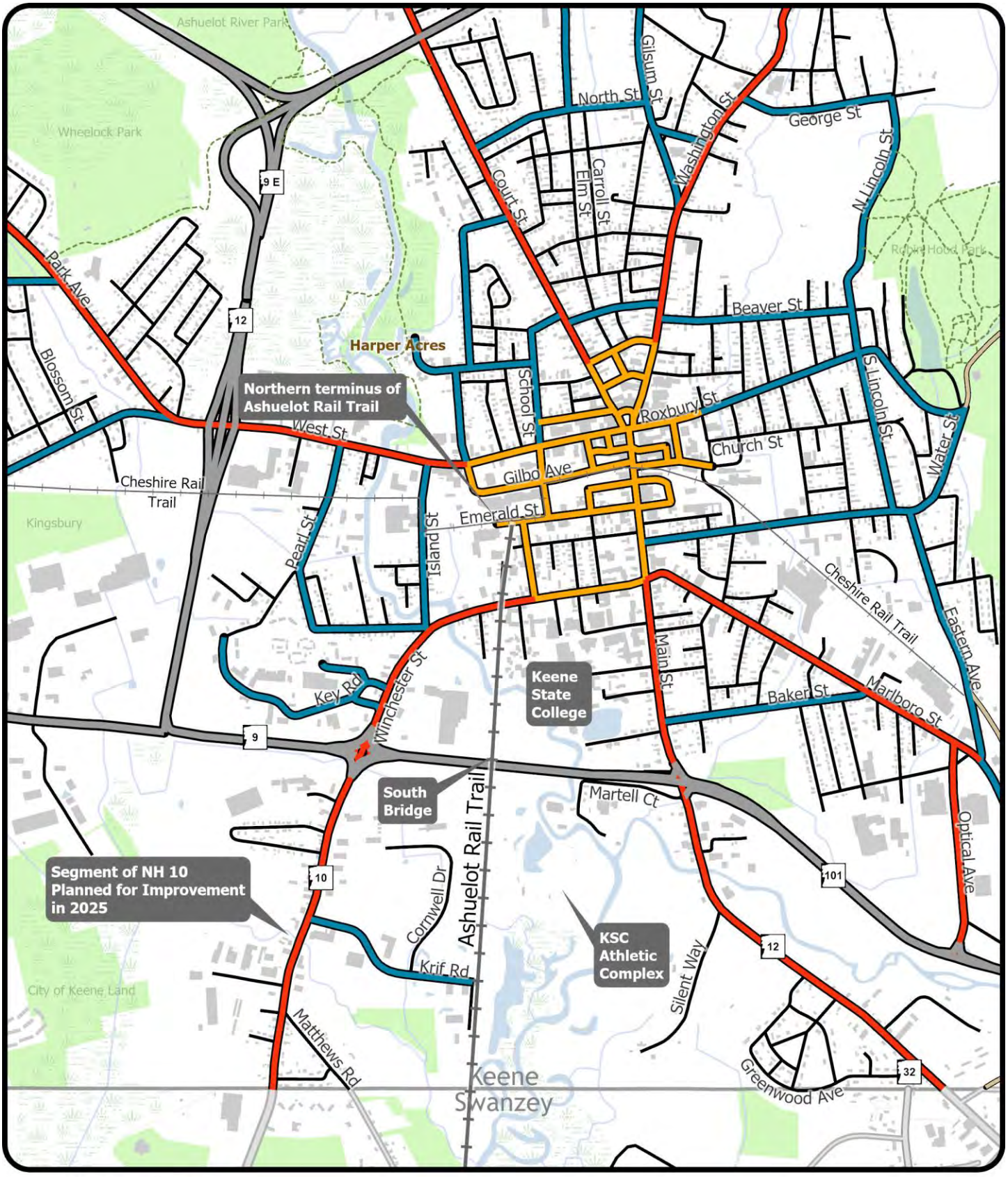
The City of Keene adopted its Complete Streets Policy in 2015, marking an official commitment to incorporate complete streets principles into maintenance and development of the City's transportation network. Later that year, the City of Keene Public Works Department and Planning Department partnered with Southwest Region Planning Commission to develop the Keene Complete Streets Planning and Design Guidelines. The Guidelines established a complete street typology, which classified streets by roadway function and surrounding land use context. The complete street types can be summarized as follows:

- **Slow streets** concentrate in downtown Keene and are characterized by mixed land use and multimodal activity. Pedestrians, bicyclists, public transit, and passenger vehicles all place high demand on slow streets.
- **Gateway streets** are arterial connectors that emanate from the city's downtown to state routes.
- **Bicycle streets** give bicycles priority treatment through street improvements like bike lanes and racks.
- **Neighborhood streets** are primarily side streets in medium to high density residential neighborhoods that experience low traffic volumes.
- **Rural streets** are local and collector streets in rural parts of the City.
- **Transit overlay** streets are currently served by fixed-route public transportation services. Transit overlay streets are also categorized as one of the previously listed complete street types.

By applying the complete street typology to the City's road network, the City aims to develop an integrated bicycle and pedestrian network that includes both on-street facilities and the rail trail system. The Ashuelot Rail Trail serves as an important component of that network. It functions as a corridor that connects downtown Keene, Keene State College, and points south of NH 101 (Figure 1). It is one of the few routes that pedestrians and cyclists can use to cross NH 101 safely.

The Trail's northern terminus is located on Emerald Street, where it connects with the system of slow streets that pervade the central core of downtown Keene. According to the City's Complete Streets Planning and Design Guidelines, slow streets should give priority to pedestrian convenience. Specific slow street features include wide sidewalks (8-10'), street furniture, safe pedestrian crossings, pedestrian-scaled lighting, and landscape elements. The guidelines also call for narrow travel lanes, which help reduce traffic speeds. If slow streets guidelines are fully implemented, trail users arriving on foot in downtown Keene will be able to walk safely and comfortably throughout the area.

Figure 1 – Keene Complete Street Types



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Many pedestrian-oriented design elements are already present on slow streets in downtown Keene. On upper Main Street, for example, street trees, broad sidewalks and frequently marked pedestrian crossings work together to create a pedestrian-friendly environment. Recent installation of concrete ADA-compliant sidewalks on Emerald Street also represents a significant step towards fully realizing slow street design guidelines.

Despite the lack of on-street bicycle facilities required by slow street design guidelines, some slow streets in downtown Keene currently include bicycle-friendly features. Two intersections in Central Square, for example, include bike boxes, which were funded in part by a complete streets implementation grant provided through the NH Charitable Foundation. Bike boxes are marked areas at the head of a traffic lane that allow bicyclists to position themselves in front of traffic queuing at a red light (Figure 2). Bike boxes may improve the riding experience of confident cyclists, but, taken alone, they do not create a street environment that adequately supports less experienced riders.

Figure 2 – Bike box at the intersection of Main Street, Roxbury Street, and Central Square

In addition to serving as an important connection point to downtown Keene, the Ashuelot Rail Trail serves as a vital bicyclist and pedestrian route to residential and commercial development along the segment of NH 10 south of the Winchester Street/NH 9/NH 10 roundabout. Pedestrians traveling across the roundabout must navigate four lanes of constantly moving traffic. Bicyclists must do the same or share the roadway with motorists traveling at high speeds. The Ashuelot Rail Trail presents a much safer alternative, since pedestrian and cyclists can cross NH 101 using South Bridge, a footbridge that spans the highway. Trail users can then reach NH 10 via Krif Road, a designated bicycle street. The bicycle street design guidelines recommend both sidewalks and bike lanes. From the Winchester Street/NH 9/NH 10 roundabout to the Swanzey town line, NH 10 is classified as a gateway street. Like the bicycle street design guidelines, the gateway street guidelines recommend both sidewalks and bike lanes. If the City fully implements the complete street guidelines assigned to Krif Road and NH 10, the Ashuelot Rail Trail will be well-linked to an important corridor of retail businesses, significant employers and residential neighborhoods.

Today, implementation of the complete streets guidelines on Krif Road and NH 10 has been only partially realized. Krif Road lacks bike lanes or sidewalks, as called for by the bicycle streets design guidelines. It does, however, have wide striped shoulders, which provide demarcated areas for cyclists and pedestrians to travel (Figure 3). Although not a strategy specified in the bicycle street design guidelines, pedestrian and cyclist prioritization along roadway shoulders could be better established by painting cyclist and pedestrian icons on the road shoulder surface.

Figure 3 – Krif Road, looking west from the Ashuelot Rail Trail

NH 10 currently lacks any pedestrian or cyclist facilities and is quite dangerous for either cyclist or pedestrian travel (Figure 4). The City of Keene, however, plans to improve pedestrian and bicyclist facilities during a project scheduled for construction in 2025.[2] Preliminary engineering is set to begin in 2022. The project represents an important opportunity to connect an area that is currently quite inaccessible on foot or by bike to the Ashuelot Rail Trail and, as a consequence, to other commercial and population centers within the City.

[2] NHDOT Ten Year Plan Project #40666

Figure 4 – NH 10, looking south from Krif Road

a. **Swanzey**

Like the City of Keene, The Town of Swanzey has also adopted a complete streets policy and developed complete streets planning and design guidelines. The street typology differs somewhat from that of Keene's. It includes the following street types:

- **Collector Streets** link neighborhoods and local streets to arterial roadways. Although designed primarily to accommodate vehicle through-traffic, they are used by bicyclists and pedestrians and serve as important connector routes for all modes of transportation.
- **Compact Neighborhood Streets** are local streets located in medium to high density residential areas of Swanzey, exhibit low traffic volumes and speeds, and experience higher volumes of pedestrian and bicycle activity.
- **Residential Streets** are located in low density residential areas, with houses spaced further apart and set back from the roadway.
- **Rural Streets** are located in areas with very low density residential development, agriculture, forestry, or open space. Rural Streets are exempt from Swanzey's Complete Streets Policy.
- **State Routes** are not owned or regulated by the Town of Swanzey. They provide essential connections between local streets and neighborhoods. The Town, to the extent feasible, will work with NHDOT to implement complete streets principles on State Routes within the Town.

The Ashuelot Rail Trail interfaces with several different complete street types in Swanzey. As the trail progresses from the Keene-Swanzey town line to Swanzey Station, the trail crosses Matthews Road three times (Figure 5). Matthews Road traces a sinuous path through a predominately forested area, and is characterized by several blind curves, many of which occur at intersections with the Ashuelot Rail Trail. It is classified as a Collector Street. The Swanzey Complete Streets Planning and Design Guidelines recommend that Collector Streets include sidewalks, bike lanes, crosswalks, and a variety of other pedestrian and cyclist facilities. Such

pedestrian and cyclist facilities would provide better access to the Ashuelot Rail Trail from residences along Matthews Road as well as denser residential development near the junction of Matthews Road and NH 10. Market Basket is located on NH 10, just south of Matthews Road. Implementation of Collector Street design guidelines would enhance cyclist and pedestrian access to groceries and other basic necessities from the Ashuelot Rail Trail.

Today, cyclist and pedestrian facilities are absent from Matthews Road. Given the rural character of the road segment, implementation of all the guidelines may not be cost-effective, but strategic enhancements at key locations could provide valuable benefits. Marked crosswalks, for example, could work in tandem with already present pedestrian warning signs to enhance safety at trail road crossings. Narrowing travel lanes from twelve feet to ten feet would help calm traffic speeds and provide a wider shoulder for cyclists. Although installation of sidewalks along all of Matthews Road may be cost-prohibitive, a sidewalk from the public parking lot east of Matthews Road may be worth considering. The lot connects with the Ashuelot Rail Trail and its driveway is located less than 1,500 feet southeast of the Matthews Road/NH 10 intersection (Figure 6). A sidewalk along this road section, in combination with the Ashuelot Rail Trail, would provide a safe pedestrian route from areas of central Swanzey to Market Basket and other businesses along NH 10. A bike lane would provide an improved cycling route.

Figure 5 – Swanzey Complete Streets Guidelines

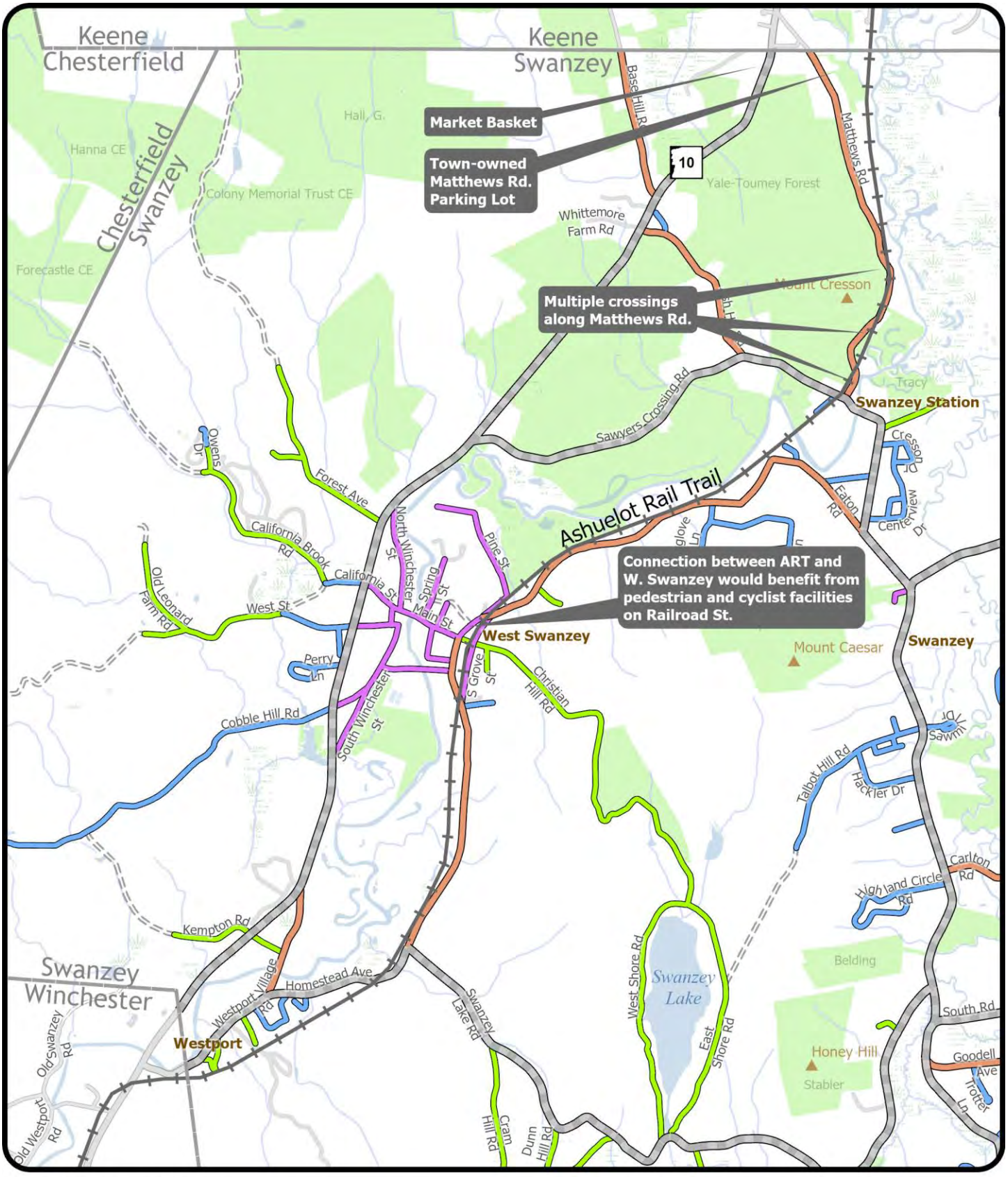

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Figure 6 – Matthews Road, looking north. The Ashuelot Rail Trail is accessible via the driveway and public parking lot to the right

Further to the south, in West Swanzey, the Ashuelot Rail Trail comes into close contact with a system of Compact Neighborhood Streets that pervade the village center. The Compact Neighborhood Street design guidelines recommend sidewalks, marked share lanes in areas with high bicycle volumes and preferred shoulder widths of four feet. If fully implemented, residents in West Swanzey would enjoy safe pedestrian and cyclist access to a premier recreational asset. Trail users would also be able to travel safely to the Stratton Free Library, the West Swanzey Community Church and Whitcomb Hall, a town-owned building frequently used for events.

Although sidewalks currently line Main Street in West Swanzey, both pedestrian and cyclist facilities are absent from Railroad Street, which connects Ashuelot Rail Trail to the center of West Swanzey (Figure 7). Less than 500 feet of sidewalk would be required to connect the Ashuelot Rail Trail with an existing sidewalk further south on Railroad Street. An extended sidewalk on Railroad Street, together with new crosswalks and shared lane markings, would create a valuable connection between the Ashuelot Rail Trail and one of Swanzey's residential and cultural centers.

Figure 7 – Intersection of Easton Road, Pine Street, and Railroad Street, looking south from Pine Street towards Railroad Street. The Ashuelot Rail Trail appears to the left of Railroad Street.

b. Winchester

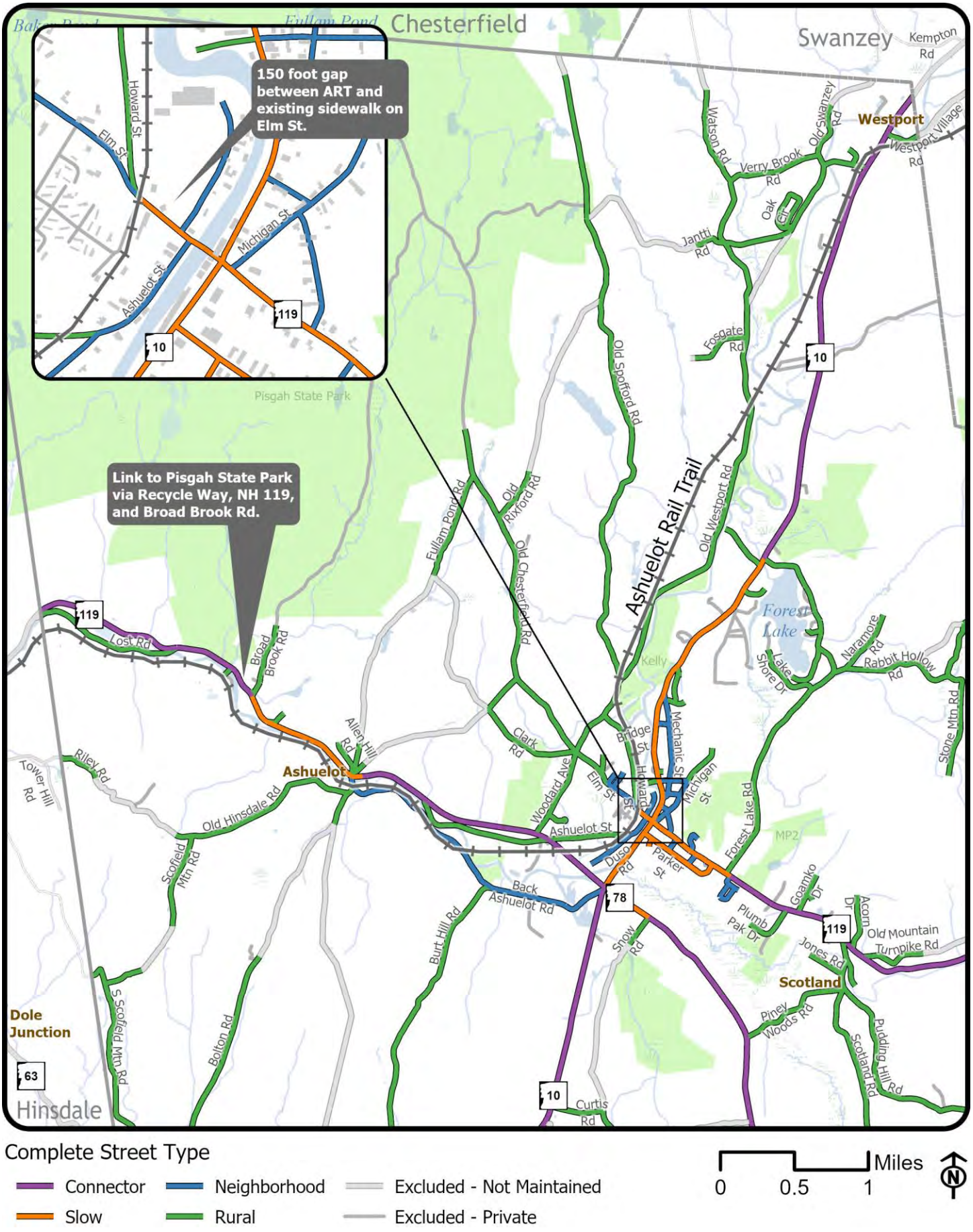
Winchester adopted a Complete Streets Policy and developed Planning and Design Guidelines in 2017. The preamble of the Policy explicitly mentions the importance of integrating local streets with the Ashuelot Rail Trail. The Policy also includes as a performance measure the "number of new or improved bicycle and pedestrian points on the rail trail."[4] The Planning and Design Guidelines share many similarities to those of Keene and Swanzey, with some slight differences. The Guidelines establish the following complete street types:

- **Slow Streets** are located in downtown and village areas. They are characterized by mixed land use and are located in areas where pedestrian safety and convenience should be given special attention.
- **Neighborhood Streets** are located in more densely developed residential areas or near downtown and villages areas. They experience low traffic volumes. Special attention should be given to pedestrians and bicyclists, especially near multi-family housing.
- **Connector Streets** are arterial roadways that pass through the Town. Although designed for motor vehicle traffic, they are also used by bicyclists and pedestrians and function as important connector routes.
- **Rural Streets** are located in low-density residential, natural, or agricultural areas.

The Ashuelot Rail Trail interacts with a variety of complete street types in Winchester (Figure 8). Perhaps most significantly, the Trail intersects with Elm Street, less than one thousand feet from the principal intersection in downtown Winchester (NH 10/NH 119/Elm Street). The short segment of Elm Street represents an excellent opportunity to connect the Rail Trail with downtown businesses and residences. The Planning and Design Guidelines classifies the segment as a Slow Street, a street type for which a variety of pedestrian and bicycle features are recommended, including sidewalks and bicycle lanes. It should also be noted that the Planning and Design Guidelines recommend wayfinding signage for key intersections and near rail trails. Wayfnding signs help guide roadway or trail users to key destinations and amenities, like businesses, cultural attractions, or parking.

[4] Section III.C.6

Figure 8 – Winchester Complete Street Types



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Today, a sidewalk runs along the south side of Elm Street for most, but not all, of the segment between the Ashuelot Rail Trail and NH 10. The sidewalk, with one section constructed out of concrete, another out of asphalt, continues past Hildreth Street, but stops approximately 150 feet east of where the Ashuelot Rail Trail intersects Elm Street (Figure 9). Bike facilities and wayfinding signage are absent from the road segment. Given that the Rail Trail passes within such close proximity of the Town's economic and cultural heart, pedestrian and cyclist enhancements along this section of Elm Street likely represent some of the most cost-effective complete streets investments the Town could make. Wayfinding signage alone would help integrate the rail trail with downtown Winchester. Complete streets improvements along Elm Street would also be a logical next step to the sidewalk improvements the Town is planning to implement through a private complete streets implementation grant and Town-appropriated funds.[5] Sidewalk improvements are planned for the west side of Main Street (NH 10), running 200 feet south from the NH 10/ NH 119/Elm Street intersection.

Figure 9 – Elm Street, looking east from the intersection with the Ashuelot Rail Trail

Further to the east, the Ashuelot Rail Trail passes by Recycle Way, from which trail users can access Pisgah State Park, via NH 119 and Broad Brook Road. These three road segments offer the quickest link between the Ashuelot Rail Trail and southwest New Hampshire's largest property in the New Hampshire state park system. The property totals 21 square miles and offers an extensive trail system for both motorized and non-motorized uses. The Winchester Complete Streets Planning and Design Guidelines categorize both Recycle Way and Broad Brook Road as Rural Streets. Given that Rural Streets experience low traffic volumes, the Guidelines recommend minimal roadway treatments, such as striped shoulders. The segment of NH 119 that connects Recycle Way and Broad Brook Road experiences relatively higher levels of traffic (3,201 AADT) and is classified as a Connector Street.[6] The Planning and Design Guidelines recommend a variety of pedestrian and bicyclist facilities, including sidewalks and bike lanes.

Currently, the segment of NH 119 that connects Recycle Way and Broad Brook Road lacks pedestrian and bicycle facilities (Figure 10). Narrow shoulders and blind curves render the road

[5] The private complete streets implementation grant was made available by the NH Charitable Foundation and was administered by the Monadnock Alliance for Sustainable Transportation and SWRPC.
[6] Annual Average Daily Traffic. Source: NHDOT Transportation Data Management System.

segment inhospitable to both pedestrians and bicyclists. Widened shoulders, sidewalks, marked crosswalks, and pedestrian warning signs may improve pedestrian and cyclist safety along the road segment. Both Recycle Way and Broad Brook Road, considering their low traffic volumes, likely require no more than wayfinding signage to enhance the connection between the Ashuelot Rail Trail and Pisgah State Park.

Figure 10 – NH 119, in between Recycle Way and Broad Brook Road, looking east.

c. Hinsdale

The Town of Hinsdale adopted its Complete Streets Policy and developed Complete Streets Planning and Design Guidelines in 2016. The Complete Streets Policy recognizes the importance of integrating rail trails and the roadway network. The number of new or improved pedestrian and cyclist connection points with rail trails is included as a policy performance measure. Like the complete streets planning and design guidelines in Keene, Swanzey, and Winchester, the guidelines in Hinsdale establish a compete street typology that includes several complete street functional types:

- **Town Center Streets** are located in the historic center of Hinsdale where there is a mix of land uses and destinations. Special attention should be given to pedestrian safety and convenience.
- **Gateway Streets** are arterial roads that pass through town. They should accommodate all travel modes and help signal to motorists that they are arriving at the historic center of Hinsdale.
- **Neighborhood Streets** are located in relatively densely developed residential neighborhoods. Special attention should be given to accommodating pedestrian and bicyclists, especially near multifamily and manufactured housing.
- **Rural Connector Streets** are located in low-density residential, natural and agricultural areas.

- **Rural Residential Streets** are located in low-density residential subdivisions where destinations are frequently farther apart. Traffic calming to encourage slower, safer vehicle speeds is a major consideration on these streets.

Depot Street is perhaps the most significant connection point between the Ashuelot Rail Trail and the Hinsdale street network, considering that it links the Trail to Hinsdale's historic downtown. Where it crosses the Rail Trail, Depot Street is classified as a Rural Connector Street (Figure 11). Traveling north, it becomes a Residential Street after intersecting with Glen Street and then a Town Center Street after crossing the Ashuelot River. In total, the Depot Street trailhead is located about 1,200 feet southwest of the Depot Street/Main Street (NH 119) intersection in downtown Hinsdale.

The Planning and Design Guidelines recommend various bicyclist and pedestrian treatments for the complete street types found on Depot Street. Facilities along Rural Connector Streets are simple, relatively low-cost and include features like paved or unpaved shoulders and "share the road" signs. The guidelines for Residential Streets place greater emphasis on pedestrian facilities, recommending a sidewalk on at least one side of the street. The guidelines for Town Center Streets recommend even more extensive pedestrian facilities, calling for sidewalks on both sides of the street. The guidelines also promote bike lanes or sharrows on Town Center Streets.

Today on Depot Street, pedestrian and bicycle facilities do not yet meet the recommendations of the planning and design guidelines. For example, at the Depot Street trailhead, no shoulders are present, forcing pedestrians or cyclists to share the travel lane (Figure 12). North of the Ashuelot River, where either bicycle lanes or sharrows are recommended by the Town Center Street guidelines, neither are present. Crosswalks, broadly recommended for various complete street types, are also absent from the entire road segment.

It is worth noting that the Planning and Design Guidelines establish a Priority Area for the implementation of complete streets principles. In designating the Priority Area, the Town recognizes that funding for complete street implementation is limited and, given the concentration of key destinations along Main Street, Hinsdale's historic center should be prioritized for improved multimodal facilities. Only a portion of Depot Street - from the Ashuelot River to Main Street - is included in the Priority Area. A modest expansion of the Priority Area along Depot Street (< 1000 feet), would include access to the Ashuelot Rail Trail. Given the transportation, recreation and economic benefits that an improved connection to/from the Trail could yield, such an expansion of the Priority Area might be worth considering.

In addition to considering how complete streets implementation could help connect the Rail Trail with specific points in the Town of Hinsdale, implementation should also consider how complete street improvements might help form loops attractive to recreational users. For example, the southern terminus of the Ashuelot Rail Trail is located across NH 63 from the southern end point of the Fort Hill Recreational Trail. In conjunction with Prospect Street, Main Street and Depot Street, these two rail trails could from a loop that features stunning vista of the Connecticut River as well as access to downtown businesses in Hinsdale's historic center.

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Figure 11 – Hinsdale Complete Street Types

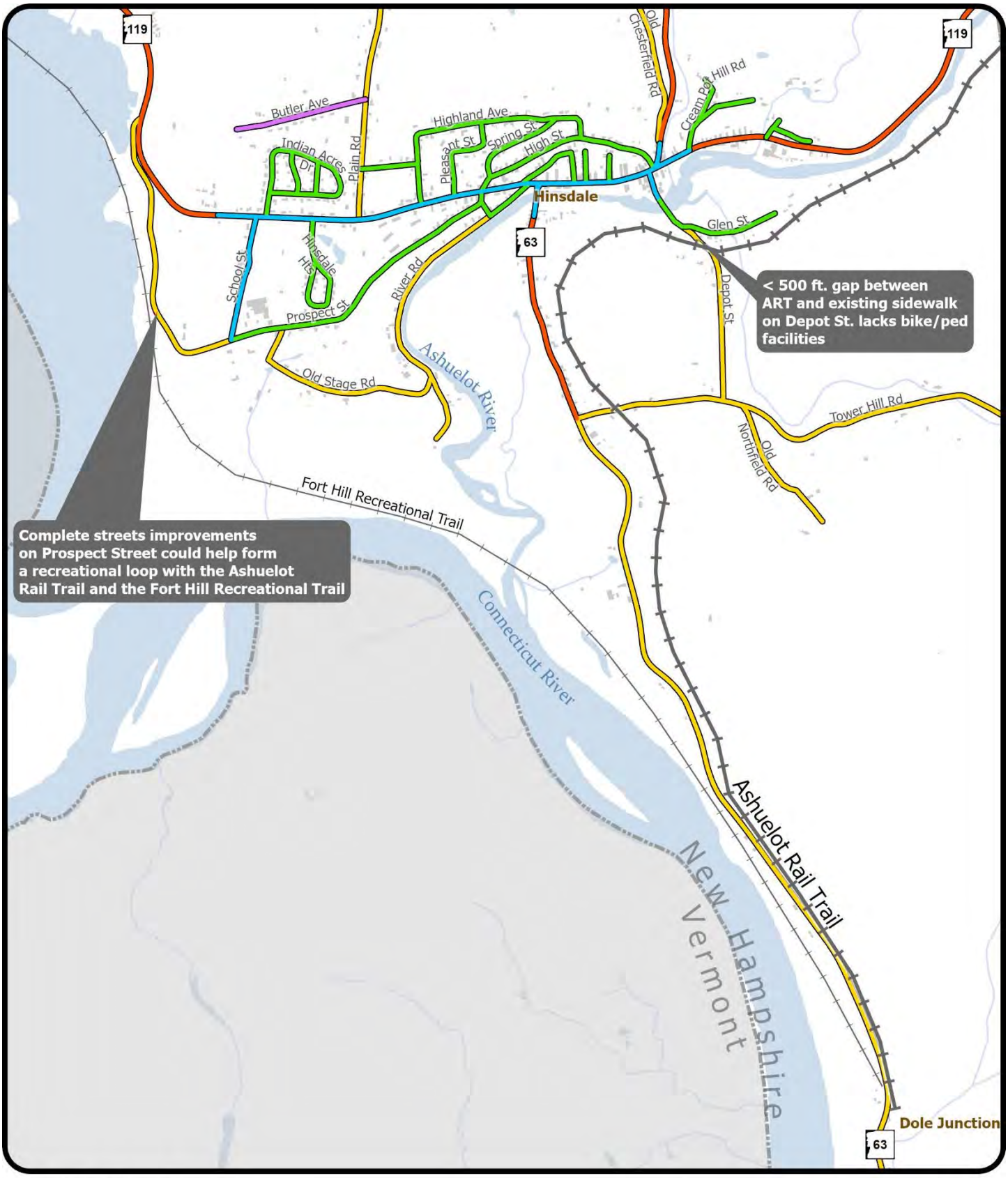

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Figure 12 – Depot Street, looking north towards the Ashuelot Rail Trail Crossing

Findings:

1. The Ashuelot Rail Trail is the only rail trail in the state where every trailside municipality has adopted both a complete streets policy and complete streets planning and design guidelines. Consequently, a unique opportunity exists to integrate a rail trail and on-street facilities into a cohesive pedestrian and bicyclist network.
2. All of the trailside municipalities have made progress towards implementing their complete streets planning and design guidelines, but numerous opportunities exist to improve complete street facilities on roadways that form key connections with the Rail Trail.
3. At several locations, the Rail Trail passes within close proximity of town/village centers. In most instances, the connecting roadways do not yet meet the pertinent complete street planning and design guidelines. Improvements to pedestrian and cyclist facilities along these relatively short road segments would improve trail access to/from important commercial and residential areas.
4. Some complete street planning and design guidelines may warrant revision to accommodate all roadway users. For example, planning and design guidelines for streets in the City of Keene may benefit from the addition of bicycle facility recommendations.

Recommendations:

1. Rail trail project prioritization should include not only on-trail facilities but also potential complete streets improvements to connecting roadways. In some cases, like in locations with dense residential development or commercial activity, improvements to connecting roadways may yield larger increases in trail utilization than would improvements to the trail itself. A project prioritization process is expected to occur as part of implementation plan development. The project prioritization process should consider both important origins and destinations as well as loops that could be formed by combining the rail trail, connecting streets and other trails. Loops would provide attractive routes for recreational users planning round trips from trailheads or nearby starting points.

2. Municipalities should consider where complete streets measures could be implemented incrementally. Although in some cases comprehensive roadway construction may be the best approach, in others, small steps could yield large benefits. For example, some of the examined complete streets planning and design guidelines recommend wayfinding signage as a strategy that could be implemented on a number of different roadway types. Wayfinding signage and maps represent a low-cost, high-return investment that could help attract trail users to nearby points of interest and, vice versa, help draw nearby residents, workers and visitors onto the trail. Trailside businesses may be interested in helping fund sign design and installation. Wayfinding signage could drive increased travel activity between the Rail Trail and nearby origins and destinations, which, in turn, could demonstrate to decision makers that there is public demand for further complete streets improvements.
3. Municipalities should work across departments to ensure that capital improvement plans and/or street paving plans incorporate complete streets principles. In some cases, pedestrian and cyclist safety could be improved at low or minimal cost during routine pavement maintenance. For example, after repaving, travel lanes could be restriped at narrower widths, calming traffic and opening space for widened shoulders.