



Town of Bristol Byways Improvements Plan 2020 Update

February 28, 2020* **deadline for final draft*



Acknowledgements

This updated Byways Improvement Plan is a collaboration of the efforts of the Bristol Byways (formerly Bicycle-Pedestrian) Committee, Lincoln County Planning Commission, and the Town of Bristol Staff.

Committee Members

James Albright
Chuck Farrell (Co-Chair)
Jack Fitzpatrick
John Lappen
Sandra Lucore
Emile Lugosch
Mary Piasecki
Patricia Porter (Chair)
Todd Richards

Project Assistance

Robert Faunce, former Lincoln County Planner
Colleen Hendricks, Lincoln County Planning Commission Summer Intern

Town of Bristol Staff

Lindsay Currier, Staff Liaison
Christopher Hall, Town Administrator

Table of Contents

Introduction	4
2009 Bristol Bicycle-Pedestrian Plan	4
Bicycle-Pedestrian Improvements Completed Since the 2009 Plan	4
2019 Bristol Byways Committee	5
Benefits of Bicycle-Pedestrian Improvements	7
The Community of Bristol	8
I. Existing Conditions & Facilities	10
Villages of Bristol	12
Trail & Parks Inventory	12
Strava Heat Map Images	14
2019 Survey Results Summary	15
II. Existing State & Local Plans & Ordinances	16
Local Comprehensive Plans	16
Route 129/130 Multimodal Corridor Management Plan	16
MaineDOT Work Plan 2020-2021-2022	18
Stakeholder Non-Profit Organizations Active in Bristol	18
Maine Bicycle & Pedestrian Law	19
III. Recommended Actions	20
Multi Use Paths & Trails	21
Town-Wide Speed Control	23
Bristol Consolidated School	25
Village Improvements	26
Bike Friendly Bristol	28
Pedestrian Path from Hardy Boat Parking to Shaw's Wharf	30
Estimated Costs	31
IV. Funding & Resources	32
Town	32
State	32
Federal	34
Private / Organizations	34
Appendix	37
2019 Bristol Byways Survey Full Results	37
Maps by Colleen Hendricks	46
Bibliography	52

Introduction

2009 Bristol Bicycle-Pedestrian Plan

Over ten years ago the Bristol Bicycle-Pedestrian Committee and Lincoln County Planner Robert Faunce authored the first Bicycle-Pedestrian Plan for the Town of Bristol. With assistance from the Maine Department of Transportation (MDOT), the committee and the county planning office conducted a survey of year-round and seasonal residents and “where they walked, jogged or biked in Bristol, the routes they took, the condition of existing facilities, recommendations, if any, for new or improved facilities, safety concerns and related information” (Faunce, Bike-Ped 2009). One hundred three survey responses were received and a public meeting was held to solicit additional input from the public, which, together with the survey results served as the basis for the plan, with the following recommendations:

- **Install 2-foot shoulders on Route 130 from New Harbor to Pemaquid Point**
- **Install paved shoulder or separate pedestrian walking path within the road right of way between the ballfield parking lot and Shaws/Hardy’s properties**
- **Develop a pedestrian/bike facility within Old Long Cove Road between New Harbor and Chamberlain**
- **Create pedestrian safety and accessibility improvements in New Harbor**
- **Improve the surface of Harrington Road**
- **Install paved shoulders on Route 130 from the point where they end near Samoset Restaurant to New Harbor**
- **Create pedestrian improvements in Bristol Mills**
- **Install paved shoulders on Route 32 between Chamberlain and the Bremen town line**
- **Install bike and pedestrian signage town-wide**

Bicycle-Pedestrian Improvements Completed Since the 2009 Plan

None of the bike-ped-specific recommendations from the 2009 plan have yet been implemented. However, other improvements benefiting bicyclists and pedestrians have been completed in the community. They include:

- **2017 Installation of Share the Road and 3 Feet Law Signs**
- **2018 Paving of Harrington, Huddle, and Snowball Hill Roads** by MaineDOT
- **2018/2019 Paving of 130** by MaineDOT with widened bike lanes, fresh paint, and smoother surfaces: 2018 Pemaquid Loop Road to Huddle Road; 2019 Huddle Road to Bristol/Damariscotta Town Line.
- **2019 Speed Feedback Signs** in Bristol Mills and Chamberlain funded by donors and the Town of Bristol.

2019 Bristol Byways Committee

In response to renewed interest among Bristol residents and visitors in the Town improving bicycle and pedestrian safety, convenience and recreational opportunities, the Bristol Selectboard re-created the Bristol Bicycle-Pedestrian Advisory Committee (now Bristol Byways) with the following guidance.

The Committee was tasked with updating the 2009 Bristol Bicycle-Pedestrian Plan, and to report back to Selectboard not later than February 28, 2020.

The Committee is requested to prioritize recommendations that may involve public expenditure (municipal or state) and to consult with Selectboard not later than January 15, 2020 if any recommendations will seek funding in the 2020 budget (presented at the March 2020 Town Meeting).

The Committee is asked to consider, in particular, needs related to:

- 1. Maine DOT's promotion of bicycle trails along state and town roads in Bristol, including the East Coast Greenway and DOT bicycle Tour 32;*
- 2. Safety of pedestrians in the historic village centers of Bristol Mills, New Harbor and Round Pond, and elsewhere as needs may be identified by the Committee;*
- 3. Increasing access to, and provision of bicycle-pedestrian linkages among, public recreational facilities including Town parks and public lands, and trails maintained by the Coastal Rivers Conservation Trust;*
- 4. Protecting recreational off-road access to public and private lands, including provision for hiking, snowmobiles, cross-country skiing, horse riding and off-road bicycles;*
- 5. Publicizing through signage, maps and online information the availability of bicycle, pedestrian and other recreational activities in Bristol.*

The Committee may co-opt additional members at any time by majority vote. Notice must be given to the Town Office of such co-options and such new members must swear and sign their Oath of Office before they vote in the Committee.

The Committee's recommendations must be approved by a majority vote of the members who have sworn an Oath of Office.

The Committee created the following vision statement to guide its work:

Bristol Byways is a multi-year program to safely connect Bristol's residents and visitors with the beauty of the Pemaquid Peninsula, its communities, and its neighbors.

Bristol Byways, initiated by the Town of Bristol in 2009 as the Bristol Bicycle-Pedestrian Plan, is envisioned ten years later to build on that original work and evolve into a collaborative program embracing Coastal Rivers Conservation Trust, Lincoln Health – Miles Campus, Central Lincoln County YMCA, South Bristol, and Damariscotta.

Bristol Byways, conforming to ADA standards and applicable State and Local Land Use and Development ordinances, will be available year-round to walkers, bikers, wheelchair and walker users, snowshoe and cross-country ski users, baby carriage pushers, joggers, and where applicable, snowmobiles and licensed passenger vehicles.

Bristol Byways will employ existing paths, easements, and road shoulders to connect Bristol's residents and visitors as well as its villages, education and recreation sites, Coastal Rivers' preserves, the East Coast Greenway, and the Maine DOT's Bicycle Tour 32 trail. New easements enabling new pathways to be created and enhanced shoulders installed when road maintenance is undertaken will provide more connectivity to each other and to more destinations.

Adopted by the Bristol Bicycle-Pedestrian-Trail Committee on July 15, 2019

2019 Committee Process & Methods

The committee met monthly from May through December, with several supplementary meetings in November and December to ensure reaching its goals by the deadline. After electing a Chair, Co-Chair, and Secretary, the committee set about gathering as much information as possible to define community needs, update the survey and ultimately the plan.

Representatives from Coastal Rivers Conservation Trust (Steven Hufnagel), MaineDOT (Stephen Cole & Patrick Adams), and the Bicycle Coalition of Maine (Angela King), and the Lincoln County Regional Planning Commission (Elswyth Strassberger) were invited to speak on behalf of their organizations and to listen to the committee's concerns. The committee was also joined by Lincoln County Planning Commission summer intern Colleen Hendricks to assist staff liaison Lindsay Currier with the creation of a set of maps to accompany the plan.

Questions in the public survey were inspired by the 2009 Bristol Bike-Ped Survey and were updated by members of the 2019 committee. Committee staff liaison Lindsay Currier created an online (Google Forms) and offline (pdf) version of the survey. Available from August 25th through October 15th of 2019, the survey was advertised on the Town of Bristol Website, in the Lincoln County News, on the Pemaquid Beach Triathlon Facebook Page, and was available offline at various locations throughout town. All questions were optional and identifying information was not required to participate in the survey.

The data was used to identify priorities and needs in the community relevant to bicycle, pedestrian, and other multi-use access and safety. The recommendations of the 2009 plan were also considered. The committee then voted on nearly 50 recommended actions, categorizing them by time frame: Near, Mid, and Long Term.

In updating the 2009 plan and formulating and prioritizing recommendations, particular attention was given to developing a plan that would reflect, and promote to the public, the current Maine Bicycle and Pedestrian Law.

Benefits of Bicycle-Pedestrian Improvements

Improving safety and access to roads, pathways, and trails has health, social, economic, and environmental benefits for residents and visitors of all ages and abilities.

Health

The availability of bicycle and pedestrian facilities can increase physical activity of residents and visitors. Increased physical activity is associated with decreased rates of obesity, diabetes, and heart conditions and improves mental health and sense of wellness.

Social

Physical activity can bring families and neighbors together to increase positive social interaction, improving health and happiness, and enhancing the sense of well being that comes from being part of a meaningful community.

Economic

Pedestrian and bicycle friendly neighborhoods are in demand and nationwide data shows that proximity to bicycle and pedestrian facilities increases the value and desirability of nearby housing.

Pedestrian and bike facilities can also result in increases in retail spending and can encourage more entrepreneurs to open their own small businesses.

Environmental

Bicycle and pedestrian friendly communities encourage alternative modes of travel, which is beneficial to people, animals, and the environment. Increased people-powered travel reduces greenhouse gases, noise, and air pollution.

Infrastructure for multi-use pathways increases and/or preserves green spaces for wildlife habitat and corridors. Additionally, byways encourage appreciation and awareness of the environment and natural landscape, thereby promoting active participation in efforts to improve and protect the environment, from local to global.

The Community of Bristol

The historic pattern of development in Bristol consisted mostly of modest growth in villages, and in crossroads and coastal areas. While there was some development on rural roads, it typically consisted of farms. Gradually, coastal areas developed with seasonal and vacation residences, primarily in proximity to waterfront fishing activities. Inland development was still limited. The pattern of development began changing significantly from the early 1970s to today, with much denser development along the shore and substantial single-family residential growth along state and town roads. Along with this development came significantly increased traffic volumes on roads, some of which cannot safely handle this increase in traffic. As well, limited sight lines, and narrow travel lanes cannot safely accommodate vehicular, bicycle and pedestrian coincident use.

Recent growth in Bristol has included a large increase in the seasonal population, and increasingly a growth in year round retired residents. This population tends to be older, as is true in general for Lincoln County. Throughout the U.S., rural areas are aging at a faster rate than the general population, and older adults also disproportionately live in rural areas. Maine is among the top ten states with the largest percentages of older rural and small town residents. This trend is projected to continue, calling on communities to address directly the importance of community livability for people of all ages, not least for older residents and visitors. The Bristol Byways Committee has formulated its Improvements Plan and Recommended Actions with these conditions of town growth in mind. Communities with infrastructure that promotes safe and convenient pedestrian and bicycle use of roads and byways are communities that help older adults maintain active and healthy lifestyles. And in an area with few transportation options, that also means ensuring safe road conditions for older drivers, and not only for people who walk and bike our rural roads.

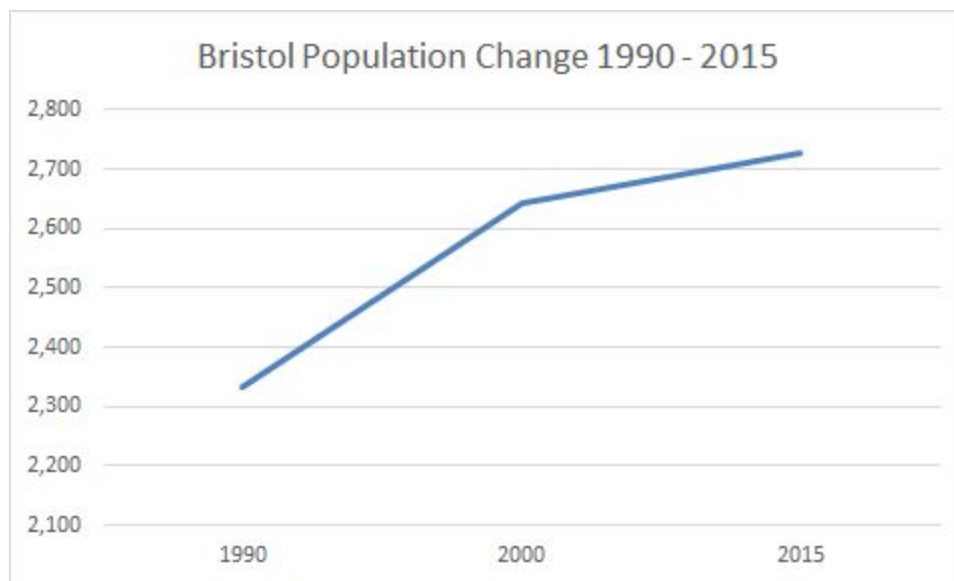
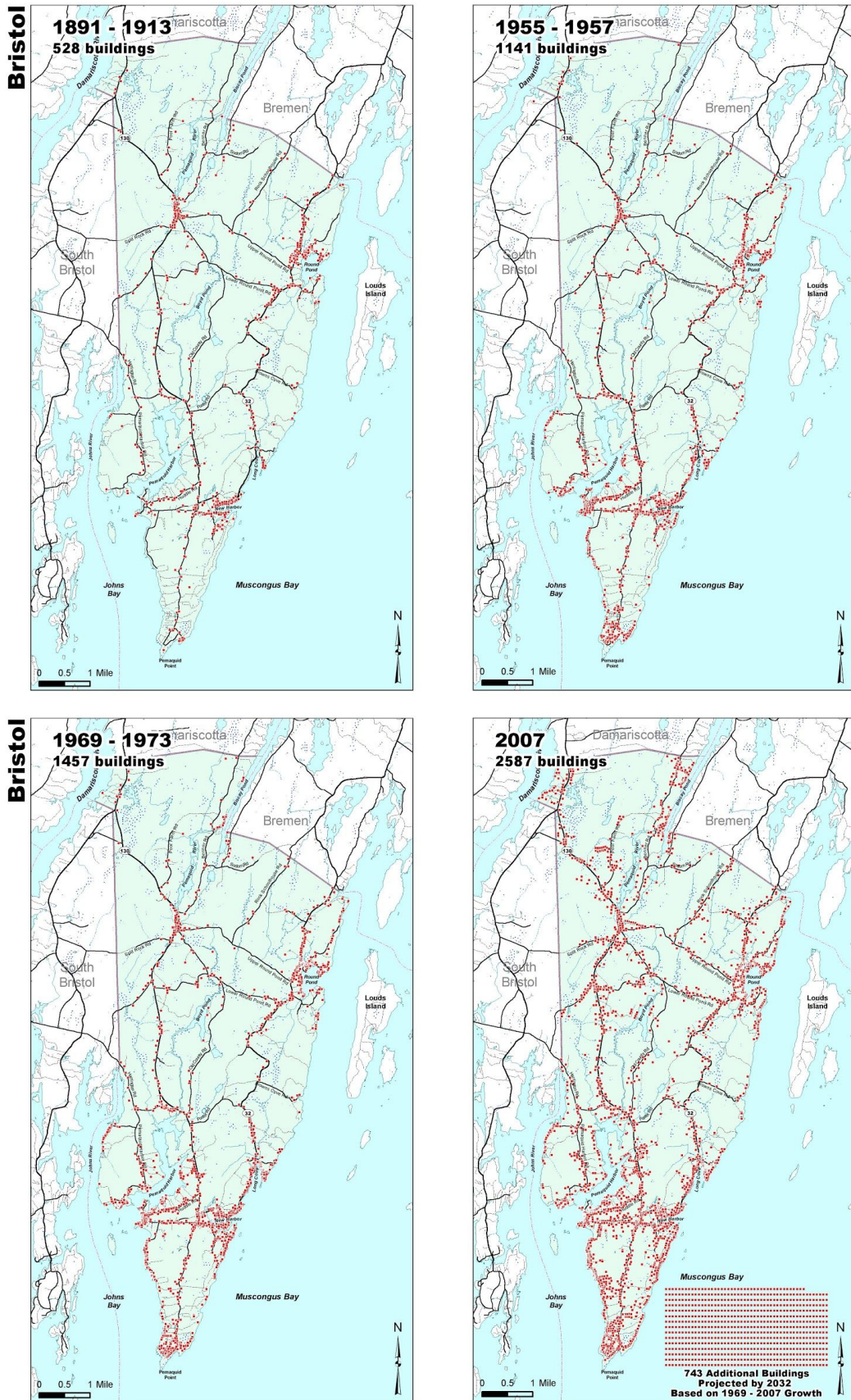


Fig 1: Bristol History of Growth Maps (Lincoln County Regional Planning Commission)



I. Existing Conditions & Facilities

The Town of Bristol has 120 miles of private, local and state roadways. Most roads are paved, while some have dirt/gravel surfaces. State and Town roads are maintained by the local government while private road maintenance is the responsibility of adjacent property owners and associations. Traffic levels peak in the summer with seasonal residents and visitors.

Several events occur throughout summer utilizing Bristol’s roadways: Pemaquid Beach Triathlon, BikeMaine, Olde Bristol Days Parade and Foot Race, and Round Pond’s July Fourth Parade. Bristol also has a significant number of parks, preserves, and trail systems, as well as suggested routes for cyclists. The 2019 Bristol Byways Survey results indicate clearly that winter also would see an increase in road use for access by more people to improved facilities for cross country skiing, snowshoeing, and the use of snowmobiles and fat bikes.

Refer to Maps in Appendix.

Road Inventory & Surfaces

	Total Miles	Miles Paved	Miles Dirt/Gravel
State	21	21	0
Town	42	36	6
Private	57	unknown	unknown

Road	Status	Length (miles)
Route 130	State	12.4
Route 32	State	11.0
Huddle Road	State Aid	1.1
Snowball Hill Road	State Aid	1.5
Harrington Road	State Aid	1.8
Pemaquid Loop	Townl	0.82
Pemaquid Trail	Town	1.3
Pemaquid Harbor Road	Townl	2.4

Upper Round Pond Road	Town	2.6
Lower Round Pond Road	Town	2.6
Rock Schoolhouse Road to Town line	Town	2.1
Benner Road to Town line	Town	3.6
Split Rock Road to Town line	Town	1.14
Carl Bailey Road to Town line	Town	0.92

Traffic Volumes (Average Annual Daily Traffic)

Location	2013 AADT	2016 AADT
Route 130 south of Route 129	3,830	4,470
Route 130 Bristol Mills		5,480
Route 130 New Harbor	3,840	3,360
Route 130 south of New Harbor	2,090	1,850
Route 32 @ Upper Round Pond Road	1,340	1,600
Route 32 north of Chamberlain	790	800
Route 32 New Harbor	850	
Upper Round Pond Road @ Route 130	560	480
Lower Round Pond Road @ Route 130	920	840
Harrington Road	660	730
Huddle Road	1,190	1,200
Snowball Hill Road	1,230	1,130

Villages

Bristol includes the five villages of Bristol Mills, Pemaquid, New Harbor, Chamberlain, and Round Pond, each with a higher density of residences, businesses, and destinations than elsewhere in the community.

Trail & Parks Inventory

Across Bristol are many parks, trails, and conserved areas. Bristol Parks and Recreation administers several parks, town landings, kayak launches, and a trail. The State of Maine operates Fort William Henry. The Route 66 Snowmobile Club has established primary and secondary trails. Coastal Rivers Conservation Trust manages 11 different preserves with several miles of trails.

Town of Bristol

Bristol Mills Dam Swimming Hole
Bristol Town Recreational Trail
Browns Cove Town Landing
Ellingwood Park and Boat Launch
Ervine School
Hanna Landing Town Landing
Long Cove Picnic Ground
Long Cove Water Hole
Moxie Cove Town Landing
New Harbor Town Landing
Pemaquid Point Lighthouse Park
Pemaquid Beach Park
Rock Schoolhouse
Round Pond Tennis Court
Town Recreation Trail
Town Landing
<http://bristolmaine.org>

State of Maine

Colonial Pemaquid State Historic Site

Route 66 Snowmobile Trails

Route 66
Secondary Trails

Coastal Rivers Conservation Trust

Bass Rock Preserve

Cosima's Preserve

Crooked Farm

Bearce Allen and *NORGAL Preserves

Hatchtown Preserve

La Verna Preserve

Little Falls Brook Preserve

Miller-Clemons Preserve

Moxie Cove Preserve

Old Gravel Pit Trail

Salt Marsh Cove

<http://coastalrivers.org>

The Nature Conservancy - Maine Chapter

Rachel Carson Salt Pond Preserve

<http://nature.org>

MaineDOT Bicycle Tour 32 - Damariscotta - Pemaquid

Suggested routes

<http://www.exploremaine.org/bike/midcoast/damariscotta.shtml>

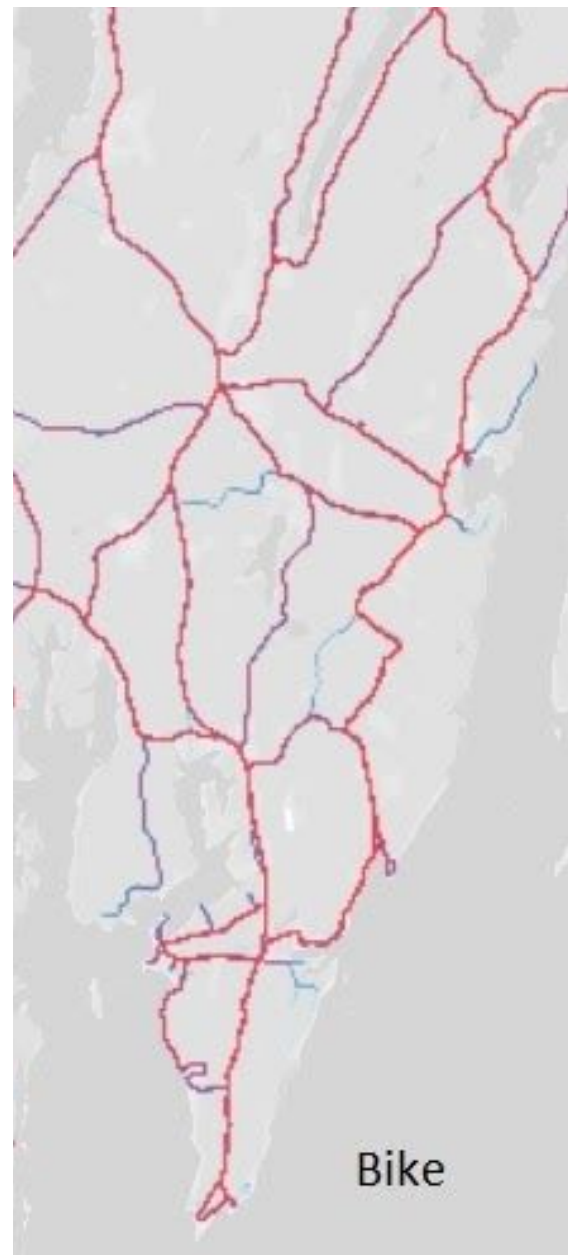
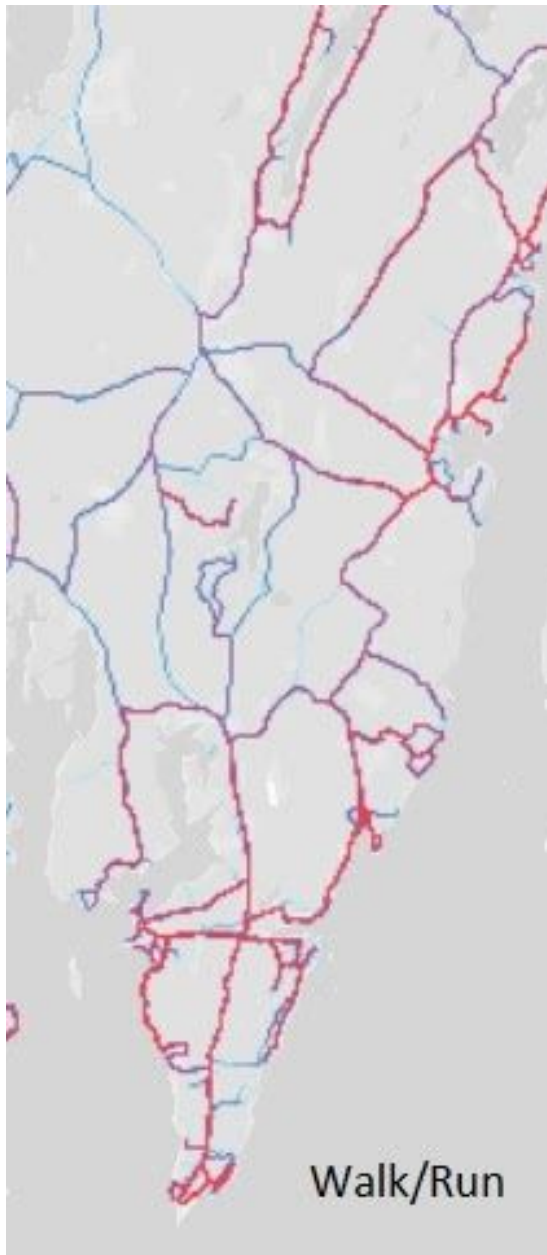
Eastcoast Greenway

The East Coast Greenway connects 15 states and 450 cities and towns for 3,000 miles from Maine to Florida. The Greenway connects to the MaineDOT Bicycle Tour 32.

<http://www.greenway.org/states/maine>

Strava Heat Map Images

Strava is a popular social media application used by pedestrians, cyclists, and other outdoor enthusiasts to track their activities by GPS. The heatmaps below are compilations of public user activities. They do not present a complete picture of usage as not all users utilize the Strava application, not all Strava users make activities public, and not all Strava users track and post every activity. However, the heatmaps can give a good general indication of areas of high (red), medium (purple) and low (blue) use. Refer to Maps in the Appendix for road names.



2019 Survey Results Summary

The 2019 Bristol Byways Committee (Formerly Bicycle-Pedestrian Committee) created a new bike-pedestrian survey to help guide its update of the Bicycle-Pedestrian Plan. While some of the 2019 survey questions were similar to those presented in the 2009 survey, the Committee included other subject areas, such as off-road trails, and potential interest in a town funded multi-use bike-ped facility. Full results are available in the Appendix.

A total of 307 completed surveys were collected (53 submitted offline)

55% Are year-round residents

80% Support a town funded multi-use trail

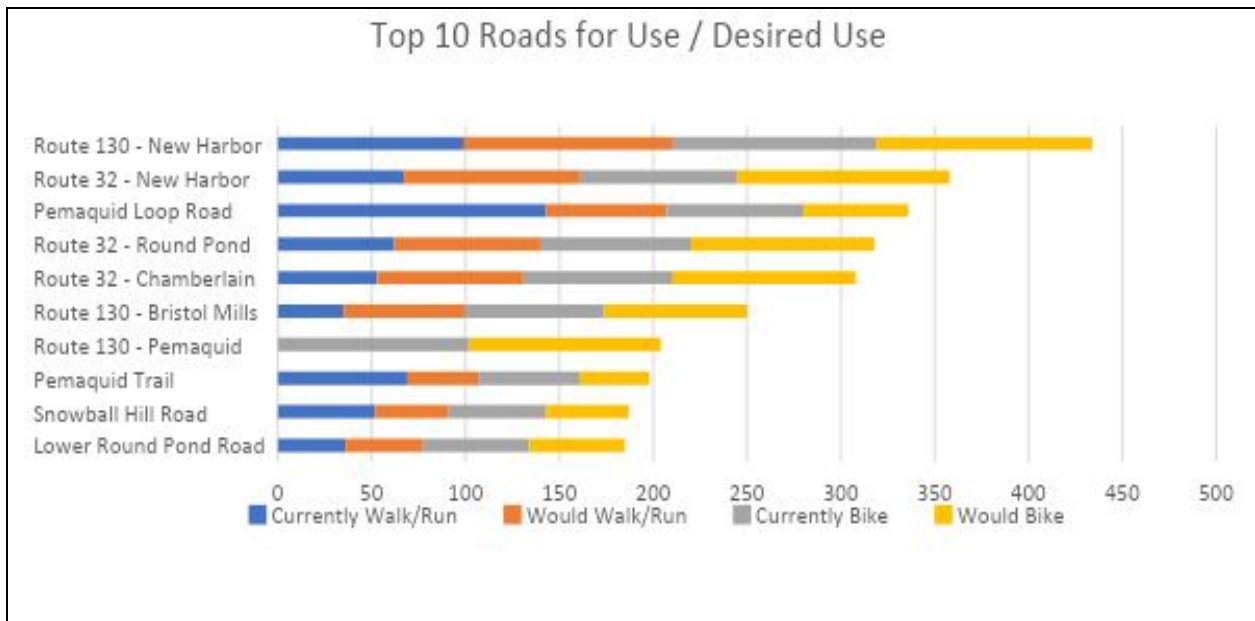
40% Walk less because of concerns with safety

60% Ride less because of concerns with safety

60% of Bristol Consolidated School students' parents were concerned with safety

64% Ride a bike

Overall support for crosswalks/sidewalks in village areas



II. Existing State & Local Plans & Ordinances

Local Comprehensive Plans

Bristol

In 2002 the Town prepared and submitted to the State Planning Office a proposed comprehensive plan. It was found to be inconsistent with state guidelines and it was referred back to the town with suggestions for addressing any deficiencies. The plan was subsequently rejected in a 2003 town meeting vote.

With the exception of state-mandated Shoreland Zoning, the town does not employ a Zoning Ordinance but it does control land use to some extent through a Land Use Standards Ordinance, Flood Plain Ordinance and Subdivision Ordinance.

Damariscotta & Bremen

Damariscotta and Bremen are located north of Bristol but the communities share several highways and roads including Routes 130 and 32, Benner Road (Lessner Road in Damariscotta), and Rock School House Road (Rial Herald Road in Bremen). Damariscotta has a 2014 comprehensive plan and a land use ordinance that have been found consistent with state guidelines. Bremen's 2004 comprehensive plan was adopted by the town but was not found consistent with state guidelines.

South Bristol

South Bristol is located to the west of Bristol and the two communities share Route 129, Harrington Road, Split Rock Road, Walpole Meeting House Road and Carl Bailey Road. South Bristol does not have a land use ordinance. A 2010 comprehensive plan was found to be consistent with state guidelines but was rejected by the town meeting.

Route 129/130 Multimodal Corridor Management Plan

In 2018 MaineDOT, LCRPC and the Towns of Bristol, Damariscotta and South Bristol initiated a multi-modal planning effort to identify assets and transportation deficiencies for the Routes 129-130 transportation corridor with the ultimate goal of recommending and prioritizing improvements within the corridor. Bristol Town Administrator Christopher Hall, resident David Bilski, and Steve Masters of Masters Machine were appointed to the Route 129/130 Multi-Modal Corridor Management Plan Advisory Committee. Route 130 from the Damariscotta town line to Pemaquid Point was the principal area of focus in Bristol. MaineDOT was the principal source of data for the project although the 2009 Bicycle-Pedestrian Plan was included in the planning process (the project was concluded before the 2019 plan was completed).

The MaineDOT travel demand forecasting model indicated that traffic volumes along the Route 129/130 corridor are expected to grow 12% in 20 years and 18% in 30 years. MaineDOT advised that this should be taken into consideration when the town addresses future travel needs, whether preparing to accommodate increased vehicle traffic or encouraging alternative modes of travel.

MaineDOT graded Route 130 for congestion using the A-F CSL grading formula, which employs the ratio of peak traffic flows to highway capacity to estimate travel delay while taking into account peak summer traffic. The entire corridor was graded as either an A or B, suggesting that congestion is not an issue. The study noted that Route 130 through Bristol Mills received a B-rating.

Crash history was evaluated by MaineDOT within the corridor using the lane departure rate within the corridor vs. the statewide average for similar roadways. MaineDOT found that the corridor's lane departure rate was lower than the statewide average for similar roadways but it noted there was a cluster of crashes on Route 130 at the intersections of Upper and Lower Round Pond Roads. While not classified as a High Crash Location, the Department advised that this situation should be taken into account in future town planning (Route 129/130 Multimodal Corridor Management Plan).

The plan included the following bicycle-pedestrian-related recommendations:

- Develop and adopt a multi-modal policy, advocating for the inclusion of bike/ped accommodations in future roadway projects. Each town Selectboard should make a commitment to a multi-modal policy, to consider the needs of all users when planning and developing all future major roadway projects.
- Evaluate the feasibility of improving bike/ped use along the corridor. Towns should conduct an assessment of the corridor for areas that can sustain bike/ped improvements--accounting for right-of-way, travel speed, line of sight, etc.
- Prepare to incorporate bike/ped development along Route 129/130 corridor. Towns should set aside capital funding to dedicate to bike/ped facilities-- crosswalks, sidewalks, trails, etc.
- Improve access and safety near the Bristol Mills village center. Evaluate alternatives to address parking concerns and pedestrian crossings for both sides of Bristol Road.
- Evaluate whether the current speed limit at the specified areas along Bristol Road is appropriate for new conditions. Request and conduct speed study evaluation by MaineDOT in Spring 2019, post-sidewalk installation.
- Improve pedestrian safety at specific high foot traffic areas. Evaluate need, safety considerations, and cost to install ADA and MaineDOT compliant crosswalk.
- Use traffic calming devices to reduce driving speeds and improve bike/ped safety, where necessary. Identify locations and evaluate effectiveness for specific traffic calming strategies at each location.

(For the full plan see <https://www.lcrpc.org/>)

MaineDOT Work Plan 2020-2021-2022

The MaineDOT Work Plan outlines the work that the department plans to perform over the next three years. The Work Plan is calendar year-based and includes all MaineDOT work activities. Projects and activities listed for Calendar Year 2020 have the most definite schedules and estimates, while those for Calendar Years 2021 and 2022 may be more subject to change. MaineDOT resurfaced Harrington, Huddle, and Snowball Hill Roads, as well as a portion of Route 130 in 2018, completing the resurfacing of Route 130 in 2019. MaineDOT intends to resurface Route 129 in 2020, and Route 32 in 2021.

<https://www.maine.gov/mdot/projects/workplan/>

Stakeholder Non-Profit Organizations Active in Bristol

Bicycle Coalition of Maine

The Bicycle Coalition of Maine works to make Maine a better place to bike and walk. Founded by a small group of cyclists in 1992, the Bicycle Coalition of Maine has grown into one of the most effective bicycle and pedestrian advocacy groups in the country

<http://bikemaine.org>

Coastal Rivers Conservation Trust

The mission of Coastal Rivers Conservation Trust is to “preserve and promote the natural, cultural and historical heritage of the Damariscotta-Pemaquid region for the benefit of all.” Coastal Rivers protects and stewards significant land and conservation easements, manages trails, natural areas and islands open to all, as well as provides educational and community programs.

<http://coastalrivers.org>

New England Mountain Bike Association (NEMBA)

NEMBA is a community of mountain bikers committed to creating epic riding experiences, preserving open space, and guiding the future of mountain biking in New England. Six Rivers, Midcoast, and Central Maine are the closest chapters to Bristol. NEMBA provides a volunteer work force for trail building and maintenance.

<https://www.nemba.org/>

Route 66 Snowmobile Club

Snowmobile Trail Maintenance & Grooming. Route 66 Snowmobile Club strives to have the best possible trail system in the midcoast Maine area. Route 66 trails connect with the Jefferson/Nobleboro club trails and then connect to ITS trails for unlimited riding.

<https://www.facebook.com/pg/Route66SnowmobileClub>

Maine Bicycle & Pedestrian Law

Cyclists have the same rights and duties as motor vehicle operators. Pedestrians have the right to walk in the roadway (facing traffic) when no sidewalk or other facilities exist to travel off the road. Additionally, the Town of Bristol has no authority to dissuade the use of any pedestrian or legal vehicle from any Town roads, or even off-road routes. The committee's goal is safety for motorists, cyclists, pedestrians, and even for travel by horse.

From Title 29-A: MOTOR VEHICLES AND TRAFFIC:

Chapter 19: OPERATION

§2056. Pedestrians

- 1. Pedestrian traffic.** *When use of a sidewalk next to a public way is practicable, a pedestrian may not walk on that public way.*
- 2. Pedestrian on way.** *Where sidewalks are not provided, a pedestrian shall walk facing approaching traffic on the left side of the public way or the way's shoulder when practicable. An operator of a motor vehicle who is passing a pedestrian on a public way or the way's shoulder shall exercise due care by leaving a distance between the motor vehicle and the pedestrian of not less than 3 feet while the motor vehicle is passing the pedestrian. A motor vehicle operator may pass a pedestrian in a no-passing zone only when it is safe to do so.*

§2063. Bicycles, roller skis, toy vehicles and scooters

- 5. Rights and duties.** *A person riding a bicycle or scooter or operating roller skis on a way has the rights and is subject to the duties applicable to the operator of a vehicle.*

§2070. Passing another vehicle

- 1-A. Passing bicycle or roller skier.** *An operator of a motor vehicle that is passing a bicycle or roller skier proceeding in the same direction shall exercise due care by leaving a distance between the motor vehicle and the bicycle or roller skier of not less than 3 feet while the motor vehicle is passing the bicycle or roller skier. A motor vehicle operator may pass a bicycle or roller skier traveling in the same direction in a no-passing zone only when it is safe to do so.*

<http://legislature.maine.gov/legis/statutes/29-A>

III. Recommended Actions

Actions recommended by the committee for achieving safer and more accessible byways range from small to large with an equal variance in resources of both time and funding needed to meet goals and complete projects. Estimated costs are presented on page 31. Explanations of terms in reference to timing are as follows:

Near Term: No cost and low-cost items and programs, committee planning for future actions.

Mid Term: Actions needing more planning, a study to occur first, or large amounts of funding, taking place after Near Term Actions.

Long Term: Requiring phases of planning and funding, taking place after Mid Term Actions.

Overall, the committee recommends the creation of a warrant article for the purpose of budgeting for Bicycle, Pedestrian and Highway Safety in Bristol in the amount of \$25,000 for the year 2020. This appropriation will help fund low-cost “Near Term” projects as well as begin working towards “Mid” and “Long Term” initiatives, which include:

- Summer intern to research ROWs for multi-use trails, sidewalks, and other pathways
- Snowmobile Crossing signs
- Village Gateway Improvement materials
- Additional Speed Feedback Signs
- Equipment for a Town based speed study
- 1 Town-owned bike rack
- General planning fees

Costs associated with recommended actions may be offset partially or wholly by other organizations. A comprehensive but not complete list of available funding and resources can be found on page 41. Examples of organizations that may help provide resources include; Route 66 Snowmobile Club, Village Improvement Societies, Coastal Rivers Conservation Trust, local New England Mountain Bike Association chapters, private donors, and local businesses.

Possibly the most impactful benefit of a Town approved warrant article, specific to bicycle and pedestrian improvements in the community is proof of the Town’s support and financial backing when applying for a range of available grants and resource opportunities. These grants and resources are available through state, federal, and private programs and organizations. Resources available include cash funding, materials, equipment use, and a labor force, all of which are crucial for the successful implementation of the Plan.

Multi Use Paths & Trails

Survey respondents expressed strong support (80%) for a multi-use trail or pathway, and the Bristol Byways committee strongly endorsed the concept. Such a trail could be either paved, or surfaced with an aggregate or stone dust and must be ADA compliant. At this time, the committee does not propose a particular location for the path, pending research on land ownership, right-of-way widths, potential funding sources and other factors. It could be a stand-alone facility or a network of several facilities.

Recommended locations thus far have included Old Long Cove Road, along the Pemaquid River from Pemaquid Mills to Bristol Mills, from New Harbor to Pemaquid Point Lighthouse, and other popular areas. Old Long Cove Road was highlighted in particular since a multi-use path in that location would also address some of the serious safety issues concerning Route 32 in New Harbor.

Building a multi-use pathway in any location is a long process and will require a substantial work effort to research, plan, design and implement. The payoff will be a safe, accessible, and enjoyable off-road path (ideally network of paths) for residents and tourists alike to enjoy. The first step of the process is to determine the location of the pathway(s). The possibilities of location are dependent primarily on land ownership and existing rights-of-way (ROWs). The choice of location that most benefits the community should reflect residents' preferences and needs, including pathway points of origin, possible trip destinations, desired overall experience, and other concerns of usage. After determining the location, a consultant will be hired to produce designs and plans. Additionally, significant funding will be required to complete construction of the pathway.

As part of this effort, current trails in the community will be promoted, both to increase use levels and to gain more insight into the best location for a user friendly multi-use trail in Bristol. Promotion includes increasing signage for trail crossings and trailheads, and creating and updating maps to attract more users in order to build community support for existing facilities, and for a new multi-use pathway.

Route 66, the primary snowmobile trail in town, crosses State Route 130 at 3 locations and has 3 town road crossings that need signage for both safety and awareness of the trail. To install signage on the state route crossings, the snowmobile club and/or town needs to apply with MaineDOT to approve the installation as well as pay for the signs and installation (must meet 2009 DOT standards). The signs for crossings of town roads need only to be purchased and installed.

Bristol Parks & Recreation annually produces a paper map free for visitors that includes local preserves, and could also accommodate updates for trail and bike path additions. These maps are available at the Parks and Recreation office and the Bristol Town Hall. Coastal Rivers

Conservation Trust has maps of their trails available on their website, with printed versions available at trail heads.

Further resources include free online map systems and Apps, such as Trailforks, Maine Trailfinder, and AllTrails, which can be updated via crowd-sourced data to include existing trails in Bristol and their usage and conditions.

Near Term Recommendations:

- Research ROWs for Multi-Use Path and Old Long Cove Road Bypass (intern)
- Begin grant applications
- Acquire and produce signs and maps to promote existing trails (working with Coastal Rivers Conservation Trust)
- Purchase and install town snowmobile crossing signs
- Apply with MDOT for Route 66 snowmobile crossings on 130
- Research land ownership of Snowmobile Trail and request owners' permission for broader access

Mid Term Recommendations:

- Research and plan for multi-use path project
- Purchase and install DOT approved snowmobile crossing signs

Long Term Recommendations:

- Hire relevant consultants for multi-use path
- Complete construction of multi-use path

Town-Wide Speed Control

Many survey respondents cited speeding in all areas of Bristol as a major concern. The survey results clearly indicate the extent to which many people are discouraged from walking or biking more frequently because of our unsafe roads, therefore accounting for the overwhelming support for an off-road, multi-use pathway. Yet walkers and bikers are not the only users who would benefit from safer road conditions. As Bristol's population continues to age, and until the town might be able to provide additional transportation options, the result will be an increasing number of older drivers on the roads. By our 50s, both our eyesight and our reaction time have begun to decline significantly, so many older drivers are more comfortable and safer with lower speeds, more lighting, fewer left turns, sufficient and clearly visible signage, etc. Thus even non-biker older drivers and walkers and bikers can be natural allies in efforts to reduce speeds and make other road safety improvements, affording older residents opportunities to contribute more fully to the safe and healthy development of Bristol's communities.

The Town does not have a police department and relies on the Lincoln County Sheriff's Office to regulate the speed of motorists. Four permanent speed feedback signs have recently been installed (seasonally), and mobile feedback signs, on loan from Maine DOT, have been used to inform motorists of their current speed in relation to the posted limit. The committee recommends installing additional feedback signs and speed limit signs, undertaking speed studies to document speed in congested areas, and implementing a more effective scheduling of deputies to enforce the law.

Currently, permanent speed feedback signs are located at the entrances to the villages of Bristol Mills and Chamberlain, from both North and South. The committee recommends the installation of two additional signs: one southbound on State Route 32 entering the village of Round Pond and another southbound on State Route 130 entering the village of New Harbor. Potential locations for the MaineDOT mobile feedback sign include; State Route 130 between the Lighthouse Park and Bradley Inn, State Route 130 by Bristol Consolidated School, and other sections of State Roads with proven concern from survey respondents and without permanent installations of feedback signs.

The committee furthermore recommends purchase of a Strat Trak Speed Sensor or equivalent speed sensor, to obtain data on current conditions and the effectiveness of implemented traffic calming methods, and to determine if further methods are needed. Locations of study could include Pemaquid Loop Road, Route 130 between Bristol Consolidated School and the Bristol Library, and the village areas of Bristol Mills, New Harbor, and Round Pond. These town based studies would also be used to inform MaineDOT of local conditions and to document the need for various speed related improvements.

Pemaquid Loop Road, located at the tip of the peninsula and adjacent to the Pemaquid Point Lighthouse ranked highest in the 2019 survey for current pedestrian use, 7th for bike use, and 3rd overall for current and desired foot and bike traffic combined. This roadway is currently

two-way, narrow (14.5ft) and is frequented by sight-seers, as well as residents and visitors traveling to their homes. The committee considered several potential projects for Pemaquid Loop Road including a one-way designation, temporary summertime speed bumps, and installation of an advisory lane but voted to delay any specific recommendation until traffic speed data is collected.

Committee discussion touched on the feasibility and efficacy of the use of roundabouts (low speed, as opposed to higher speed rotaries) as traffic calming installations on Bristol roads. It was agreed that this was a measure best addressed by Maine DOT, so no specific recommendations were made. Roundabouts are commonly used in many European countries, with verifiable effects on traffic speed and road safety, and they are now gaining greater acceptance across the U.S., including in Maine, as their positive influence on traffic safety is increasingly documented. The Maine DOT highlights the traffic calming effects of roundabouts, and we considered how effective they could be in slowing down traffic as motorists enter Bristol's village areas. For example, a roundabout at the intersection of Route 130 and Huddle Road in New Harbor would ensure that drivers reduce their speed to 25mph before they arrive at the center of New Harbor. The Maine DOT furthermore promotes the aesthetic improvements roundabouts can bring to communities, and one could imagine a prominent roundabout as possibly a fitting location for Bristol's (eventual) Veterans Memorial. Or a location for public art, as an expression of the inspiration that many artists find in the incomparable natural resources of our area.

Near Term Recommendations:

- Purchase speed sensor to assess current conditions
- Install additional speed limit feedback signs
- Request additional mobile speed feedback signs from MaineDOT
- Request Town Ordinance change to allow 24/7 operation of feedback signs
- Work with local law enforcement to achieve a more flexible and effective speed monitoring schedule
- Assess efficacy of traffic calming methods with speed sensor
- Assist LCRPC with white paper speed setting study

Mid Term Recommendations:

- Request MaineDOT speed studies of designated State Roads
- Undertake Town speed study on Pemaquid Loop Road
- Install additional speed limit signs
- Implement a randomized schedule of speed monitoring by law enforcement
- Assess efficacy with Speed Sensor

Long Term Recommendations:

- Implement speed changes in designated areas
- Implement increase in hours of law enforcement for speed control based on study outcome
- Implement speed control where necessary

Bristol Consolidated School

Survey results show Bristol parents are too concerned about safety to allow their children to walk or bike to school. Bristol Consolidated School is within 800 feet of the Bristol Library, and yet is not safely accessible to children due to the necessity of crossing Route 130 where the speed limit is 45mph. The reduction of speed to 40mph, along with the addition of a sidewalk or off-road pathway along Route 130, could make the crossing eligible for a crosswalk.

In the interim, educating Bristol's students concerning traffic safety, and increasing motorists' awareness of highway safety, is attainable in the near future. Bristol Fire and Rescue hosted their inaugural Bike Rodeo in June of 2019, with the help of town office staff and the Lincoln County Sheriff's Department. The rodeo's purpose was to teach children traffic safety, and in future years the event can be grown to accommodate more children and provide broader education by inviting volunteers from the Bicycle Coalition of Maine (BCM) to participate. BCM also supports Kites in Sight, a demonstration program aimed at informing motorists through visual cues of the possibility of pedestrians and cyclists on the roadway. For this, students create giant "kites" that are installed strategically so they appear to be "flown" in village areas, alerting drivers to slow down.

Near Term Recommendations:

- Involve Bicycle Coalition of Maine in Bristol Consolidated School Bike Rodeo for 2020
- Approach Bristol Consolidated School about implementing Bicycle Coalition of Maine's "Kites in Sight" Program
- Apply for MDOT Bicycle and Pedestrian funding for an off highway pathway

Mid Term Recommendations:

- Request DOT Speed Study of this area of Route 130 to reduce speed
- Plan for pathway/sidewalk & crosswalk between school and library

Long Term Recommendations:

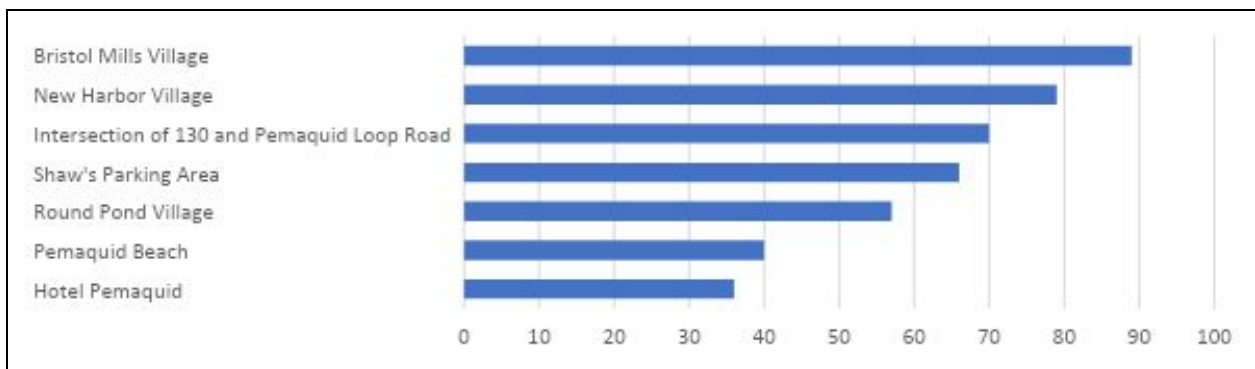
- Installation of sidewalk/pathway and crossing facility from Bristol Consolidated School to Library

Village Improvements

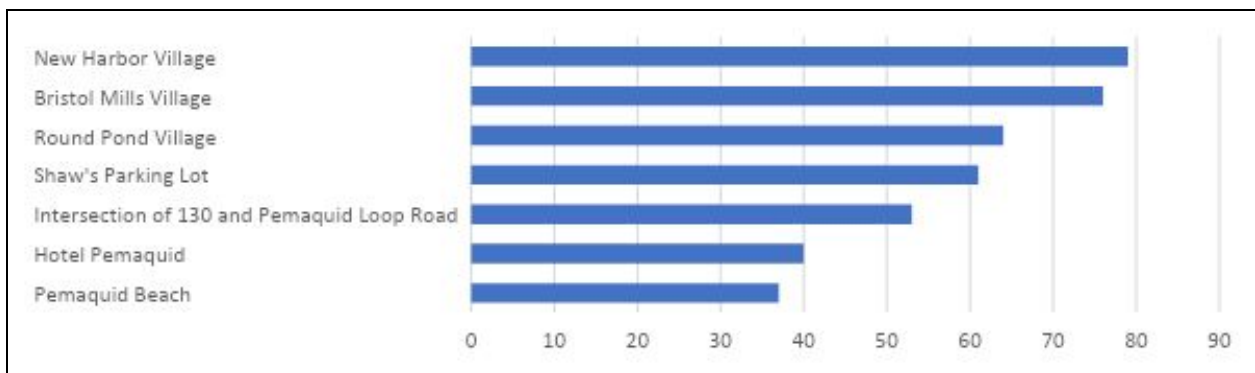
Bristol consists of five villages, all transected by state highways. The three most densely populated with businesses and residences are Round Pond, New Harbor, and Bristol Mills. Survey responses indicate that more pedestrians would walk or ride bicycles in these three village areas if improvements were made to increase safety and accessibility. This could be achieved by increasing motorists' awareness of the upcoming village areas, utilizing visually appealing traffic calming techniques, controlling motor vehicle speed, and studying the need for and implementing crosswalks, sidewalks, and/or pathways within the villages.

Most of the villages have an Improvement Society, which could take the lead in creating roadside planters or similar features to better define village entrances. The Improvement Societies could also help create Museum in the Streets programs (heritage discovery trails/walks) and assist in surveying residents and local businesses regarding their interest in these and similar projects.

Top 7 desired crosswalk locations. 169 responses.



Top 7 desired sidewalk locations. 172 responses.



Near term Recommendations:

- Speed Sensor Study
- Complete crosswalk/sidewalk in Bristol Mills
- Purchase & install new/updated Village Ahead Signs
- Approach Improvement Societies about collaborative project to define village entrances using planters

Mid Term Recommendations:

- Create Improvement Plan for each village
- Conduct a study to determine where other sidewalks/crosswalks are needed in Bristol Mills, Round Pond, and New Harbor Villages

Long Term Recommendations:

- Implement planters
- Work with MaineDOT to implement planned sidewalks/crosswalks

Bike Friendly Bristol

The Pemaquid Peninsula is a popular route for cyclists, residents and visitors alike. The Peninsula hosts major cycling events, such as BikeMaine and the Pemaquid Beach Triathlon, and it is included in several commercial and self-guided bike touring routes. 2019 Bristol Byways Survey data indicated that 64% of participants use bicycles, with 92% of those biking for exercise, 39% biking a few times a week, and 73% biking less frequently than they would like to due to safety concerns. From this data and the information provided by the Strava Heatmap for cycling use, it is safe to conclude that Bristol is an important location for the cycling community at large. The committee therefore recommends the Town prioritize making Bristol more bike friendly through the installation of bike racks, the planning and implementation of bicycle travel lanes, and by inviting the Bicycle Coalition of Maine to join opportunities to educate residents on bicycle rights and safety.

Bicycle rack installations throughout the community support cycling by advertising the community's support of cycling, deterring theft and property damage, increasing individual safety, and encouraging courtesy when parking bicycles. Cyclists can lock their bicycles to racks, encouraging them to ride instead of drive to points of interest. Bike racks reduce the incidence of bicycles leaning against buildings or other property, which can cause damage. Additionally, the availability of bike racks to cyclists prevents bicycles from taking up parking spaces individuals would otherwise utilize.

Bicycle racks can be temporary or permanently installed and are available in a range of materials and styles. Bristol Parks and Recreation has already installed seasonal bike racks at Pemaquid Beach and Pemaquid Point Lighthouse Park. These racks are made of recycled plastic, are warranted for 50 years, have an appearance of weathered wood, and can accommodate most bicycle styles.

The committee recommends that the Bristol Parks and Recreation Department purchase additional racks to be located in other parks, including the Swimming Hole. The committee has reached out to Maine Bureau of Parks and Recreation to recommend the purchase of a rack for Colonial Pemaquid as well as to the Bristol Consolidated School and Bristol Library for installation of racks on their premises. Additionally the committee will reach out to Coastal Rivers Conservation Trust, requesting a rack for the La Verna parking area, to encourage hikers to ride to the popular trailhead instead of driving.

The committee recommends purchasing one rack in the near term to be used experimentally, with an additional rack purchased in the mid-term. Location possibilities include the Town Office, Town Water Trough, and the Granite Hall Store in Round Pond,

Bicycle lanes are designated portions of the roadway for cyclists. A painted line or buffer area separates bicycles from vehicles. Bicycle lanes can promote cycling instead of driving, increase

cyclists' predictability for motorists, and reduce wrong-way riding, but they require planning and funding to implement. Designated bike lanes require a 4ft minimum shoulder to accommodate the 3ft passing rule without a car having to cross the yellow center line to overtake the cyclist.

However, research suggests that an off-highway, separated pathway is much safer and that sharrows do little to protect cyclists, and may in fact cause confusion. There is also data showing that a painted bike lane is less safe than no bike lane at all. This is attributed to the fact that a driver overtaking a cyclist on a road without a painted bike lane must make a conscious effort when passing, whereas a painted bike lane can inadvertently cause drivers to think they do not need to pay attention to the cyclist.

The Bicycle Coalition of Maine (BCM) offers educational programs for adults, teaching traffic safety for cyclists, pedestrians, and motorists. The committee recommends inviting BCM to an annual community event, such as Olde Bristol Days and/or the Pemaquid Beach Triathlon, to connect with and educate the public. Additionally the committee recommends BCM educational materials (brochures, flyers, etc) to be made available at the Town Hall, Parks and Recreation Office and other public locations throughout town.

Near Term Recommendations:

- Purchase bicycle rack experiment with locations, and assess use
- Recommend Parks & Recreation, Bristol Consolidated School, Bristol Library, and Coastal Rivers Conservation Trust purchase additional bicycle racks
- Invite Bicycle Coalition of Maine for Ongoing Adult Education at community events

Mid Term Recommendations:

- Purchase additional bicycle racks if study deems necessary
- Plan bicycle paths, lanes, and/or sharrows

Long Term Recommendations:

- Implement bicycle paths, lanes, and/or sharrows

Pedestrian Path from Hardy Boat Parking to Shaw's Wharf

Voyaging on the Hardy Boat from Shaw's Wharf in New Harbor is a popular tourist attraction in summer. The operation has a parking lot on Route 32 north of the Wharf. Customers park and then walk south on Route 32 to the wharf. The narrow width of the highway, tight curves, and pedestrians frequently walking on both sides of the road have made this section of Route 32 dangerous for all parties involved. The 2009 plan and the 2019 committee recommend working with the owners of the Hardy Boat and Shaw's Restaurant to identify and assess ways to make this area safer for all involved.

Near Term Recommendations:

- Meet with Hardy Boat and Shaw's Restaurant owners about pedestrian safety concerns
- Assess path from parking lot to Wharf in terms of needed signage and walkway

Mid Term Recommendations:

- Develop plan for increasing safety in this area
- Purchase and install signage

Long Term Recommendations:

- Implement plan for increasing safety in this area

Projected Estimated Costs:

The committee researched and compiled an estimate of overall costs of Recommended Actions. Estimates were calculated from various sources including MaineDOT Bike-Ped, Federal Highway Administration, and a variety of Bike-Ped plans and organizations from other communities. This spreadsheet will serve as a useful reference when applying for grants and resources as well as assist in future planning.

	Near Term		Mid Term		Long Term	
Multi Use Paths & Trails	Intern \$12/hr ROW research for Multi Use Paths & Trails	\$ 2,500.00	Consultant for Multi-Use Path	\$ 5,000.00	Engineering/ Design for Multi Use Path	\$ 175,000.00
			Escrow for Multi-Use Path	\$ 50,000.00		
	6 Snowmobile Signs (\$150ea)	\$ 900.00	6 MDOT Snowmobile	\$ 1,050.00		
Bristol Consolidated School	Kites in Sight Materials	\$ 600.00	Consultant/ Engineering Crossing to Library	\$ 5,000.00	Installation of Crossing Facility to Library	\$ 150,000.00
Town Wide Speed Control	2 Speed Feedback Signs	\$ 6,000.00			Increased Law Enforcement	\$ 30,000.00
	Strat Trak Speed Sensor Initial unit cost + annual subscription	\$ 5,500.00	Strat Trak Subscription Renewal	\$ 950.00	Strat Trak Subscription Renewal	\$ 950.00
Village Improvements	Six Village Ahead Signs (\$150/ea)	\$ 900.00	Garden Materials	\$ 900.00		
	Completion of Bristol Mills cross/sidewalks + signage	\$ 5,600.00	Consultant/ Engineering for walks	\$ 5,000.00	Implementation of Walks	\$ 12,000.00
Bike Friendly Bristol	Purchase 1 Bike Rack	\$ 400.00	Purchase 1 Bike Rack	\$ 400.00	Painting of Bike Lane Icons	\$ 2,000.00
Pedestrian Path from Hardy Boat Parking to Shaw's Wharf			4 Signs (\$150ea)	\$ 600.00		
Planning	Planning	\$ 15,000.00	Planning	\$ 15,000.00	Planning	\$ 15,000.00
	Legal	\$ -	Legal	\$ 4,500.00	Legal	\$ 30,000.00
Totals	Near Term	\$ 37,400.00	Mid Term	\$ 88,400.00	Long Term	\$ 414,950.00

Cost References:

Speed Feedback Signs

<https://ledlighting-solutions.com/led-solar-power-radar-speed-sign.html>

Bike Racks

<https://www.kirbybuilt.com/standard-recycled-plastic-bike-racks>

Strat Trak Speed Sensor

<https://www.alltrafficsolutions.com/products/stattrak-portable-vehicle-counter-classifier>

Bike-Ped Infrastructure Costs

<http://walkinginfo.org/download/pedbikecosts.pdf>

http://www.nirpc.org/media/3539/appendix_b_trailcosts.pdf

IV. Funding & Resources

Town

Donations from Seasonal or Year-Round Residents

Town Budget

Warrant Article to appropriate funds towards Bicycle, Pedestrian and Highway Safety.

Capital Improvement Programs (CIP) and Projects

Many municipalities budget a portion of their yearly CIP budget to sidewalk improvements.

Many of the roads that are improved through the CIP also include shoulders and sidewalks that benefit pedestrians and bicyclists.

State

MaineDOT Future Road Improvements

MaineDOT plans transportation improvements on a rolling three-year cycle. The Department no longer directly solicits local improvement requests but there are opportunities to request specific improvements through MaineDOT's regional transportation planner. The Committee recommends that the Bristol Selectboard submit the Byways Improvements Plan to the regional planner with specific project requests.

MaineDOT Bicycle and Pedestrian Program Funding

MaineDOT funds bicycle and pedestrian improvements in communities throughout the state through its federally-funded competitive programs. The program uses a variety of funding sources to provide funding assistance to communities to improve the quality of the community environment. MaineDOT accepts applications on an ongoing basis. The program provides federal funding assistance for bicycle and pedestrian projects that meet the transportation purpose of connecting neighborhoods, schools, downtowns and village areas. Municipalities that apply to the program must show that the project serves a transportation purpose, has community support, is buildable and environmentally feasible, and will improve safety.

MaineDOT Bicycle and Pedestrian Program Funding (formerly the Transportation Alternatives Program (TAP), Transportation Enhancements, Quality Communities, and Safe Routes to School Funding programs) provides up to \$400,000 for bicycle and pedestrian facilities and requires a minimum 20% local match.

<https://www.maine.gov/mdot/pga/funding/>

Maine Conservation Corps - AmeriCorps

http://www.maine.gov/dacf/parks/get_involved/conservation_corps/index.shtml

Land and Water Conservation Fund

The Land and Water Conservation Fund Act of 1964 (LWCF) was established to assist federal, state and local governments in the acquisition and/or development of public outdoor recreation facilities. Administered at the federal level by the National Park Service and at the state level by the Bureau of Parks and Lands in the Maine Department of Agriculture, Conservation and Forestry, LWCF grants can provide up to 50% of the allowable costs for approved acquisition or development projects for public outdoor recreation. The next grant round will be in March 2020 with applications due in November.

https://www.maine.gov/dacf/parks/grants/land_water_conservation_fund.html

Maine Department of Conservation Recreational Trails Program

This program provides funding for the maintenance of existing or construction of new recreational trails in communities throughout the state. The program allows funding for both motorized and non-motorized trails and requires 20% in matching funds.

Applications are due in September.

https://www.maine.gov/dacf/parks/grants/recreational_trails_program.shtml

Land for Maine's Future

Land for Maine's Future provides funds for the acquisition of undeveloped land or farmland open space. LMF aims to protect land across the state and all LMF parcels are open to the public except for areas reserved for specific waterfront activity or wildlife protection. The Town must have a willing seller of land to be acquired with a clear title at the market appraised value. The land could be undeveloped parcels, waterfront access or working waterfront or productive farmland. LMF funds are also available for parcels purchased within the past two years. LMF provides 50% matched funding for any project. If recreational facilities are desired on a property, LMF may provide up to 5% of the appraised value for such infrastructure.

<https://www.maine.gov/dacf/lmf/applying.shtml>

Snowmobile Municipal Grant

This grant is available to municipalities or counties to help with the cost of the construction and maintenance of snowmobile trails. It differs from a club grant in that an application must be submitted by the town, city, or county and requires local matching funds. The deadline is December 1st every year.

https://www.maine.gov/dacf/parks/grants/snowmobile_grants/municipal.html

SpotME

SpotME is a joint program of the Maine Department of Transportation and the Bicycle Coalition of Maine. The SpotME program is designed to address low cost road improvements to State roads that will enhance bicycle and pedestrian safety and access (maintenance work, signs and striping, and small construction projects.)

<https://www.maine.gov/mdot/bikeped/spotme/>

Federal

National Park Service Rivers, Trails, and Conservation Assistance Program

The RTCA Program works with nonprofit organizations, community groups, tribes or tribal governments, and local, state, or federal government agencies to conserve rivers, preserve open spaces, and develop trails and greenways. In Maine, the majority of the work has been helping communities develop trails ranging from hand-built, natural-surface walking trails to paved shared-use paths. Rivers and Trails has worked on many of Maine's long distance trails that connect multiple communities for walking and biking.

The application deadline is August 1 every year.

<https://www.nps.gov/orgs/rtca/apply.htm>

Community Forest Program, US Forest Service

The Community Forest Program, run by the US Forest Service, provides funds for the acquisition of the titles to identified private forest lands in municipalities so that the land can be maintained as a publicly accessed resource. Land must be at least 5 acres and 75% forested to be eligible. The US Forest Service will fund 50% of the project with a 50% match from non-federal funding.

<https://www.fs.fed.us/managing-land/private-land/community-forest>

Private / Organizations

American Endurance Ride Conference (AERC) Trails Grants

AERC has grant funds available for projects as well as educational opportunities for learning to design, build, maintain, and improve current trails.

<https://www.aerc.org/static/TrailsGrants.aspx>

American Hiking Society - Volunteer Vacations - Host a Trail Crew

Volunteer Vacations are week-long trail building/maintaining projects organized by American Hiking Society & hosted by BLM, NPS, USDA-FS, USFWS, state parks, trail organizations and other nonprofit partner groups across the country. Most projects are one-week or shorter in length, consist of 6-15 crew members, and involve trail maintenance and building tasks on hiking trails on public lands. Host applications are due in November.

<https://americanhiking.org/volunteer-vacations/host-information/>

The Conservation Alliance Grants

The Conservation Alliance seeks to protect threatened wild places throughout North America for their habitat and recreational values. As a group of outdoor companies, they recognize their responsibility to help protect the wild lands and waterways on which customers recreate and wildlife thrives. To achieve that goal, the alliance provides grants to nonprofit organizations working to protect the special wild lands and waters in their backyards.

<http://www.conservationalliance.com/grants/>

International Mountain Bicycling Association (IMBA) Trail Accelerator Grants

IMBA offers both Single-Site (\$5,000 - \$15,000) and Community-Wide (\$15,000 - \$30,000) Trail Plan Grants Annually. Both grants provide non-cash assistance with planning and phasing recommendations (not cash) from the international leader in mountain bike trail building. Projects considered include trails with mountain bikers as the primary users, and include multi-purpose human powered trails. Applications open in September.

<https://www.imba.com/trails-for-all/trail-accelerator-grants>

Maine Community Foundation Fund for Maine Land Conservation

The Fund for Maine Land Conservation seeks to support projects that encourage the preservation of Maine's land. This grant program has four objectives: help preserve traditional uses of land and working landscapes; provide for continued public access and recreational use; protect sensitive ecological areas; and promote greater appreciation of the environment.

This grant program does not provide support for land purchases, easements, or other costs associated with those transactions. Projects that involve collaboration are strongly encouraged.

<https://www.mainecef.org/apply-for-a-grant/available-grants-deadlines/fund-for-maine-land-conservation/>

New England Mountain Bike Association (NEMBA) Trail Grant

Each year, NEMBA awards between \$4000 and \$5000 in grants for projects around New England. Only grant requests between \$100 and \$500 will be accepted. NEMBA grants provide financial support to enable mountain bikers and trail stewardship partners to perform trail projects on public land where mountain biking is allowed. Preference is given to projects that build or improve trails, but all projects will be considered. Grants may also be awarded to land managers and non-profit organizations.

Application Deadlines

Spring: March 15 (Awarded March 30)

Fall: August 31 (Awarded September 15th)

<https://www.nemba.org/nemba-trail-grants>

People for Bikes Community Grants

The PeopleForBikes Community Grant Program provides funding for important projects that build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives.

<https://peopleforbikes.org/our-work/community-grants/>

Polaris T.R.A.I.L.S. Grant

The T.R.A.I.L.S. program makes funds available to national, state and local organizations in the United States to ensure the future of ATV riding. The grant program encompasses two main objectives: promoting safe and responsible riding and preserving access. Funds can be used by

organizations for trail development and maintenance projects, safety and education initiatives, lobbying and other projects to increase and maintain land access.

<https://www.polaris.com/en-us/trails-application/>

Santa Cruz Bicycles Paydirt Fund

PayDirt is Santa Cruz Bicycles' commitment to increasing access to trails by supporting the work of people who make it happen. SCB is pledging to donate \$1 million over the next three years (2020 - 2022) towards trail projects, local organizations, and events and programs that are geared towards creating and strengthening opportunities for people to get out on the trails. Applicants must be non-government organizations or individuals, making it necessary for the Town to apply through a local trail organization (ex. NEMBA or Coastal Rivers Conservation Trust). Applications are reviewed four times a year.

<https://www.santacruz bicycles.com/en-US/paydirt>

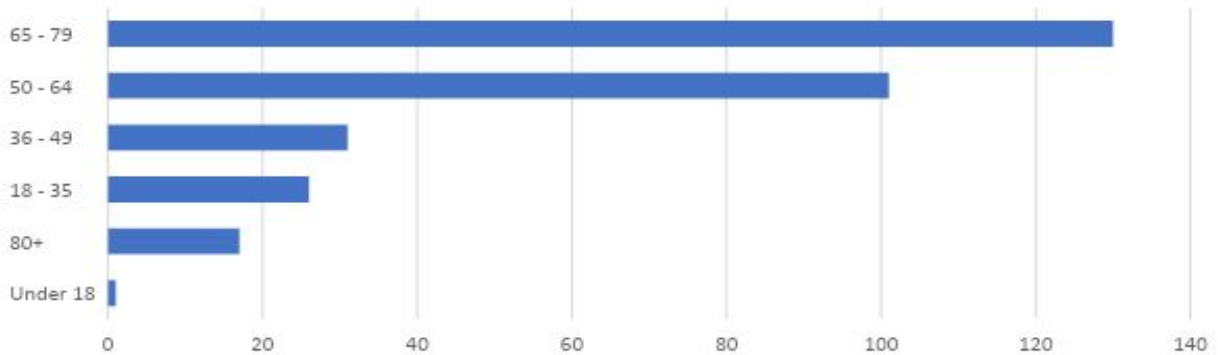
Appendix

2019 Bristol Byways Survey Full Results

A total of 158 e-mail addresses were collected at the option of participants in order to receive project updates or participate in bike-ped planning and implementation. Full results are available at <http://bristolmaine.org/byways>

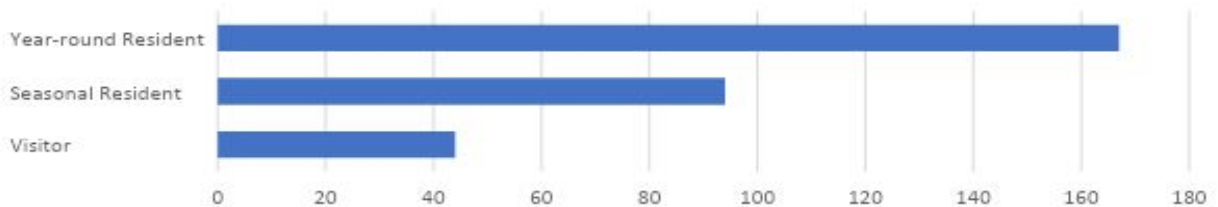
How old are you?

306 responses



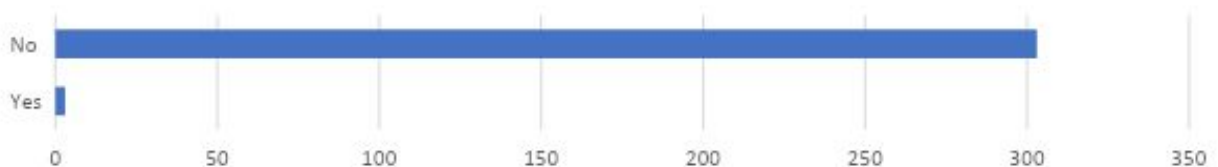
Are you a year-round resident, seasonal resident, or visitor?

305 responses



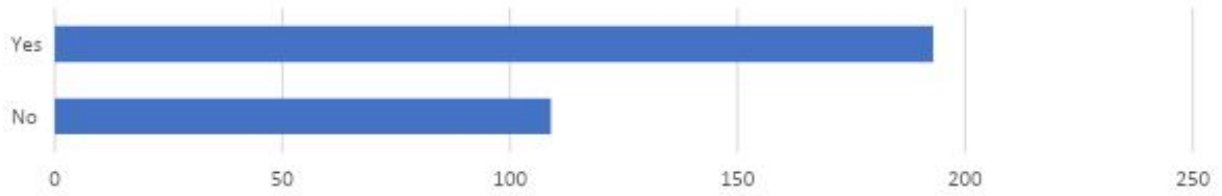
Do you use a wheelchair, walker, or electric scooter?

306 responses



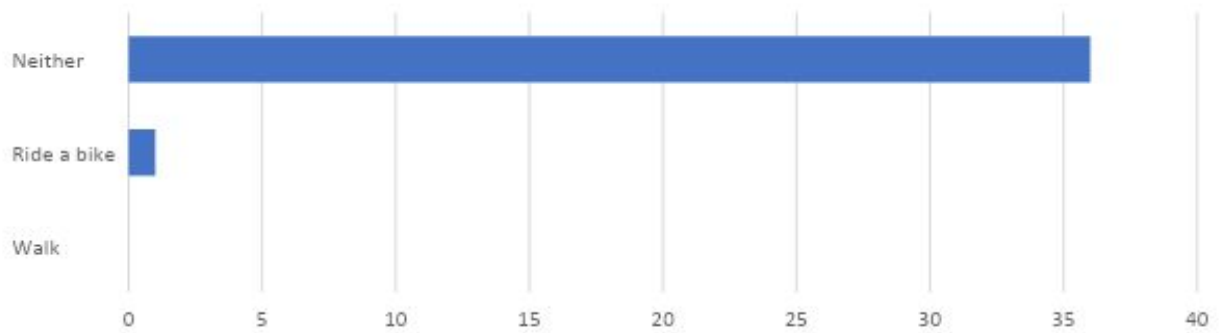
Do you use a bike?

302 responses



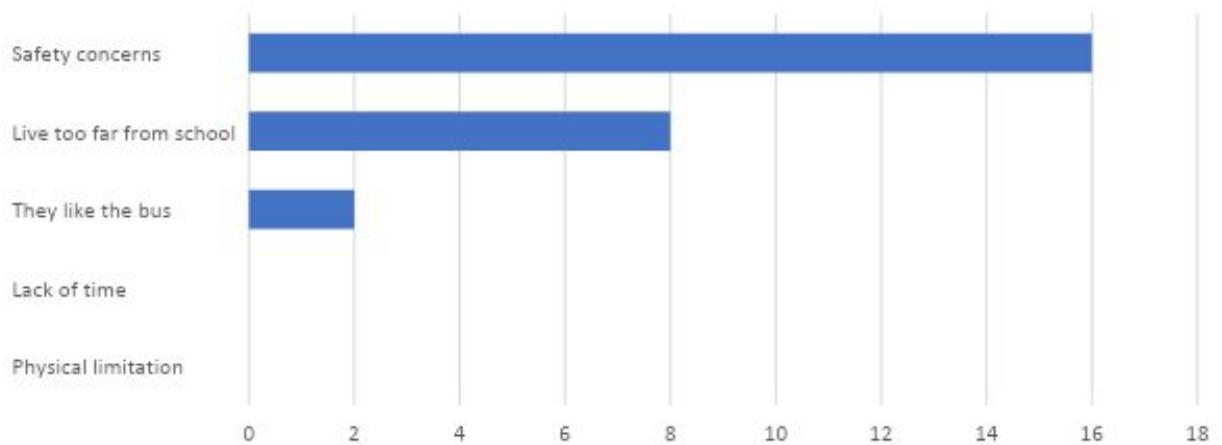
RESIDENTS ONLY: If you have children who attend Bristol Consolidated School, do they walk, or ride a bike to school? Check all that apply.

37 responses



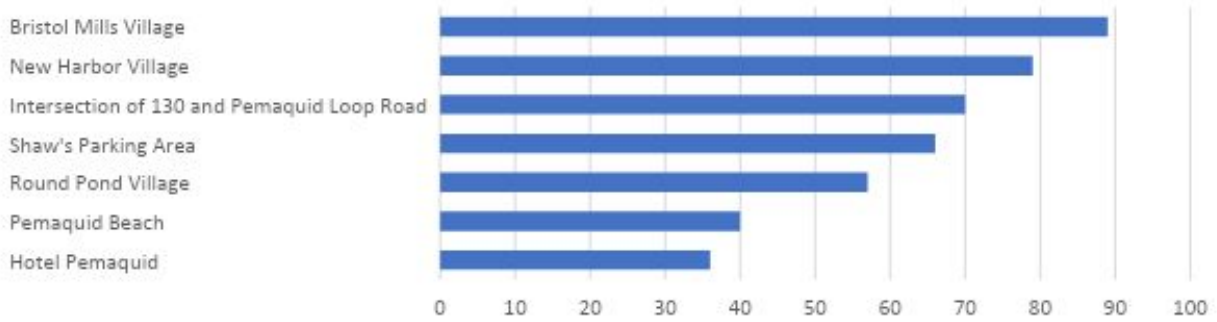
If neither, why not? Check all that apply.

26 responses



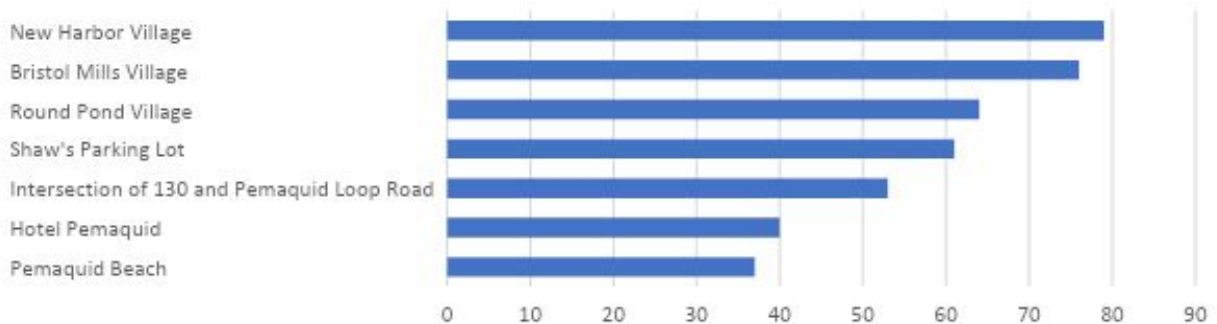
Are there locations where you would recommend a crosswalk? Check all that apply.

169 responses. Top 7 locations included in chart.



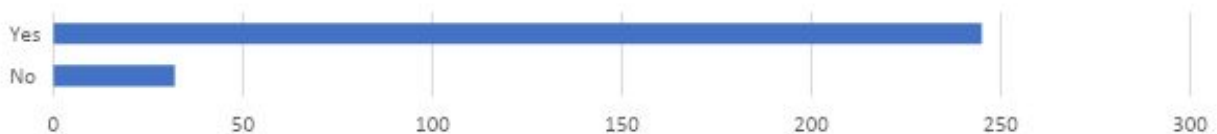
Are there locations in the community that you feel need a sidewalk? Check all that apply.

172 responses. Top 7 locations included in chart.



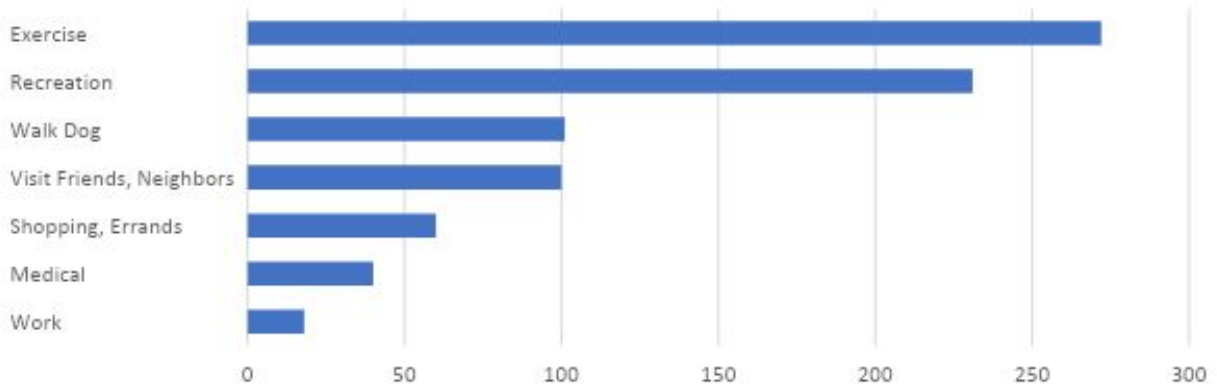
Would you support an investment by the Town of Bristol on a paved, multi-use pathway that is family and dog friendly and removed from existing roads?

277 responses



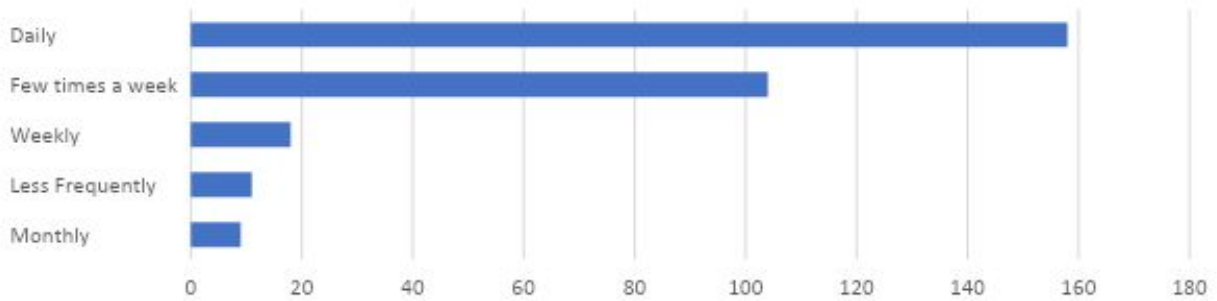
Why do you walk or run? Check all that apply.

295 responses



How often do you walk or run?

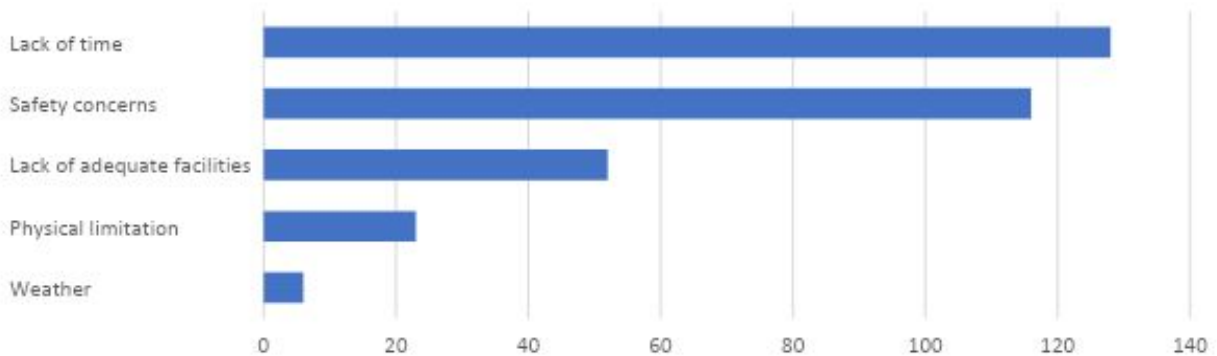
300 responses



What prevents you from walking or running more frequently?

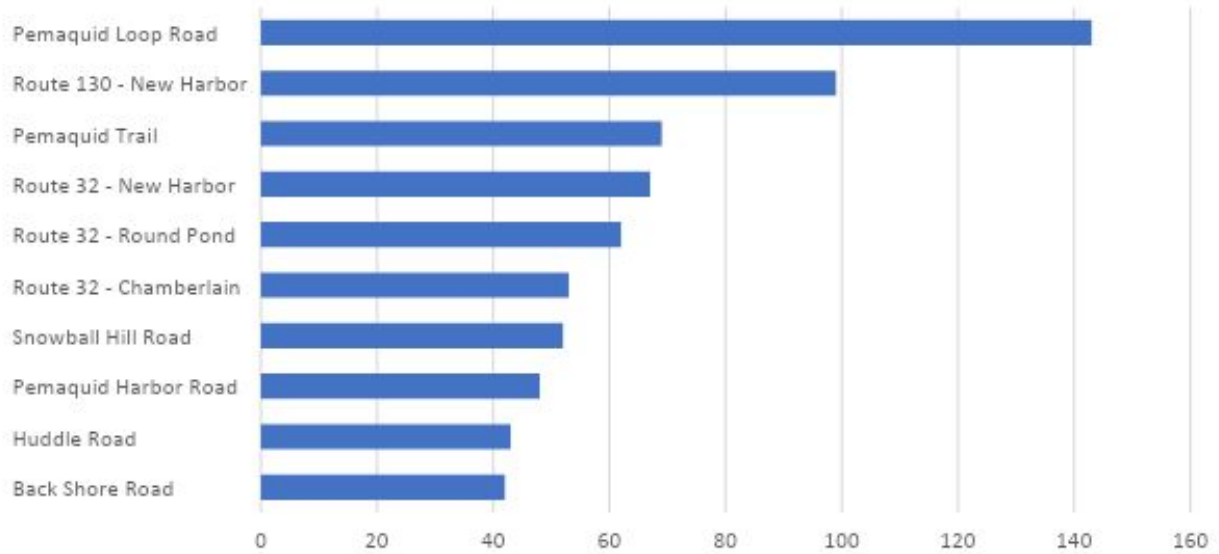
Check all that apply.

247 responses



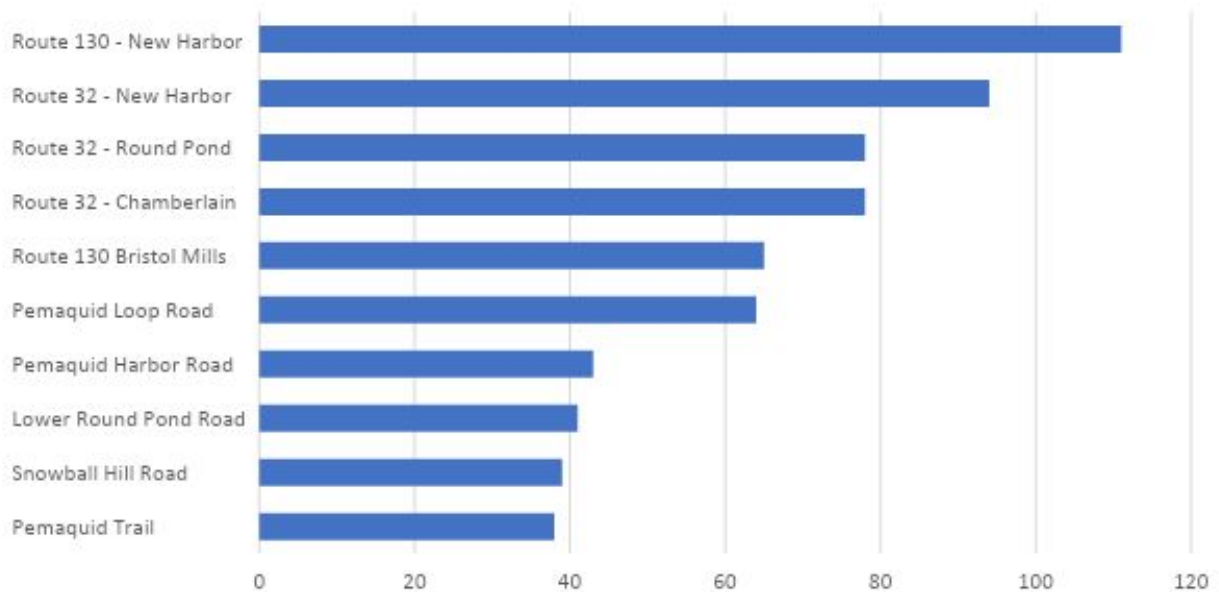
On what roads do you walk or run? Check all that apply.

263 responses. Top 10 locations included in chart.



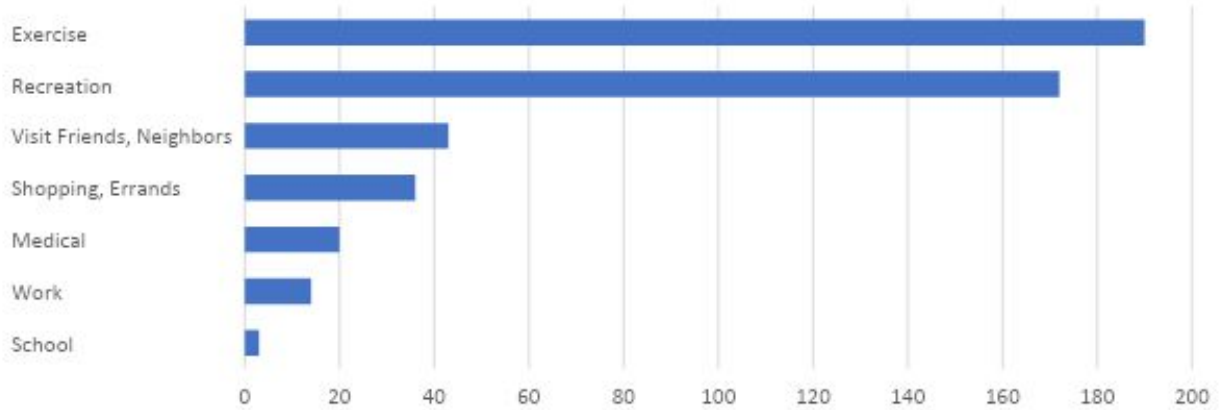
What roads would you more frequently walk or run on if improvements were made (ex. wider shoulder, better signage, reduced vehicle speeds, etc.)? Check all that apply.

212 responses. Top 10 locations included in chart.



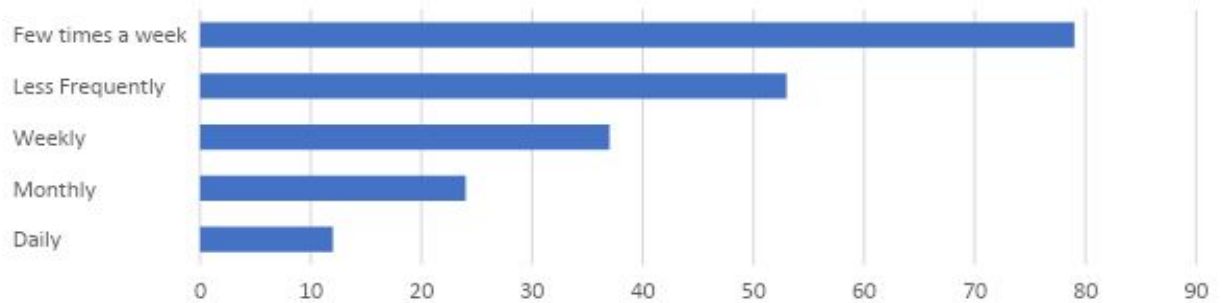
Why do you bike? Check all that apply.

207 responses



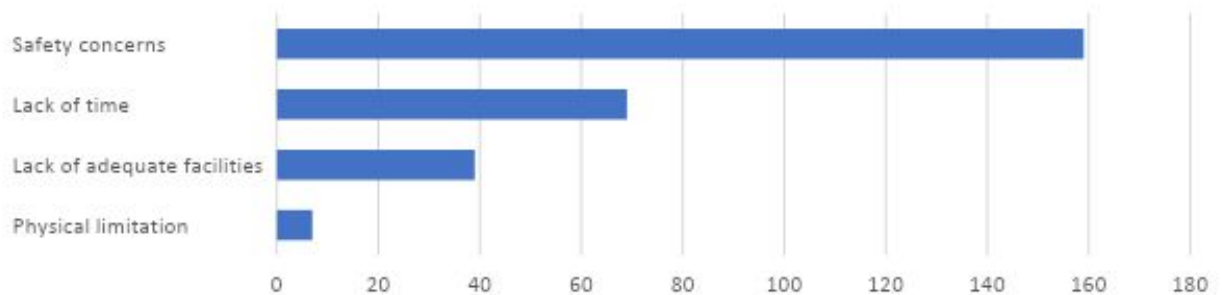
How often do you bike?

205 responses



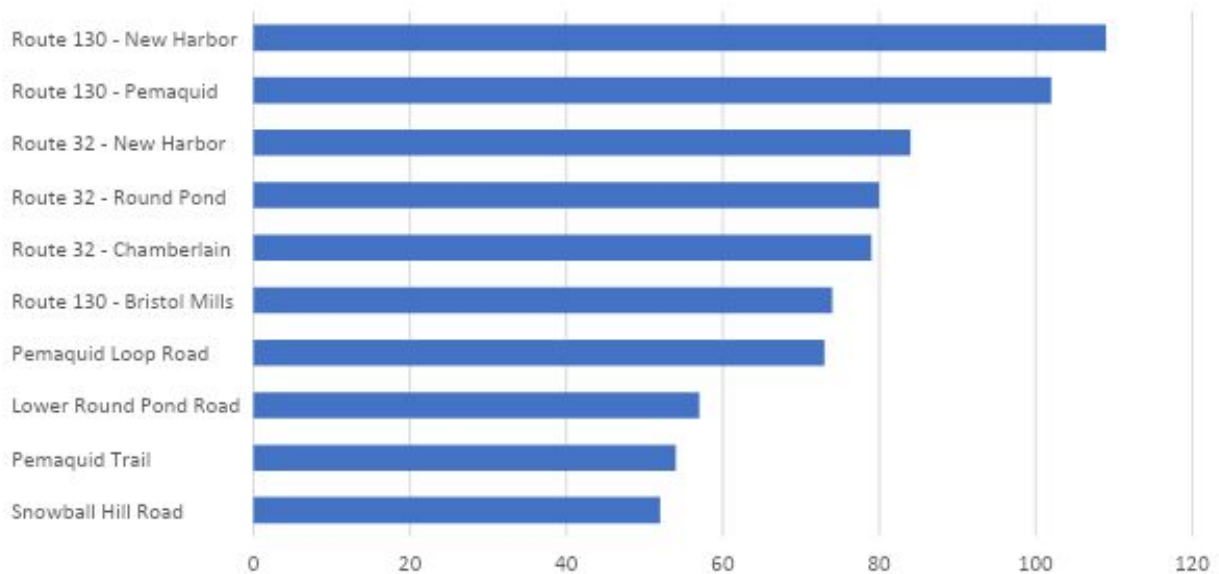
What prevents you from biking more frequently? Check all that apply.

219 responses



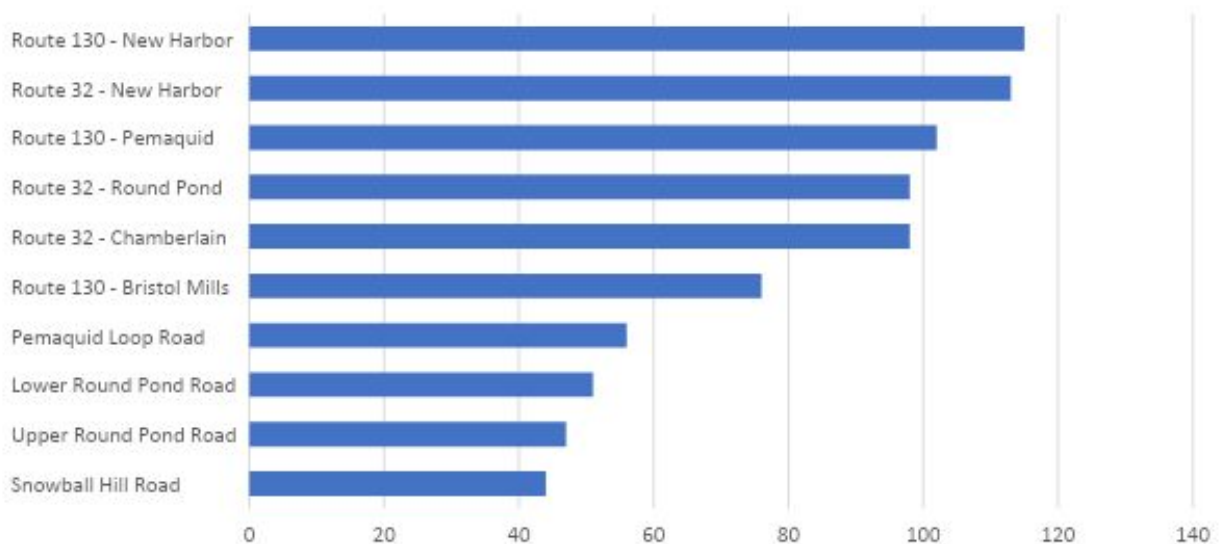
Where do you bike? Check all that apply.

178 responses. Top 10 locations included in chart.



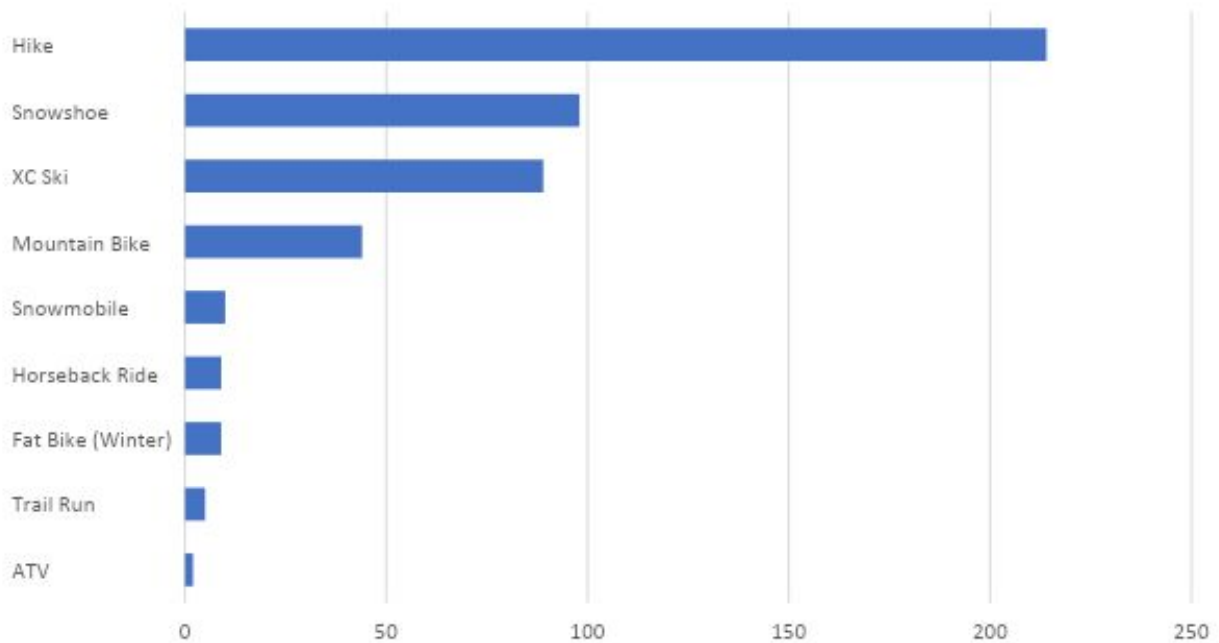
What roads would you more frequently bike on if improvements were made (ex. wider shoulder, signage, reduced speed, etc.)? Check all that apply.

182 responses. Top 10 locations included in chart.



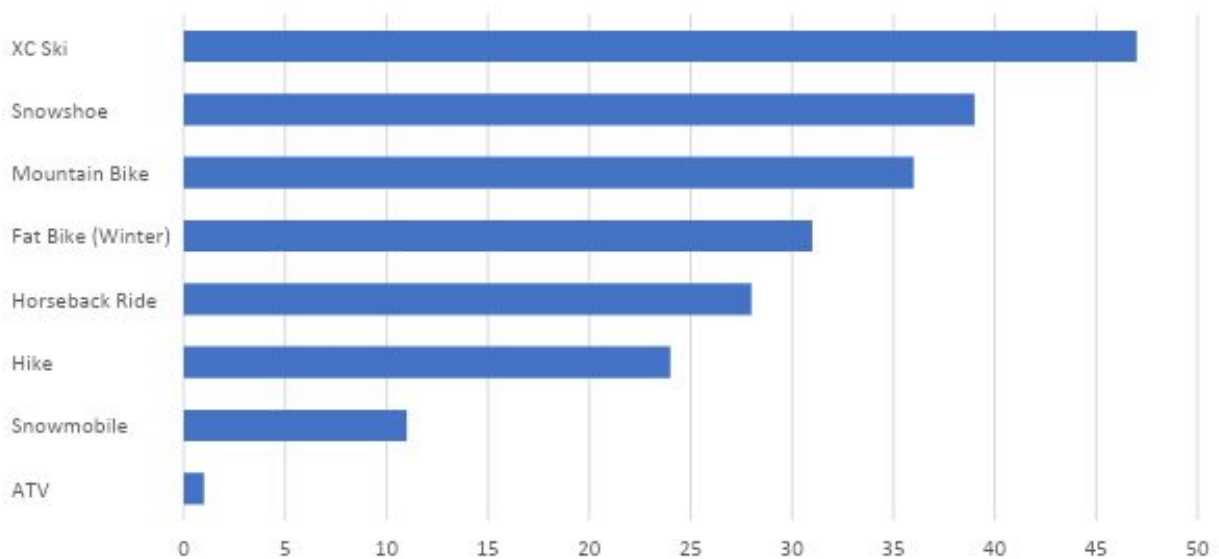
What type of off-road activities do you do? Check all that apply.

232 responses



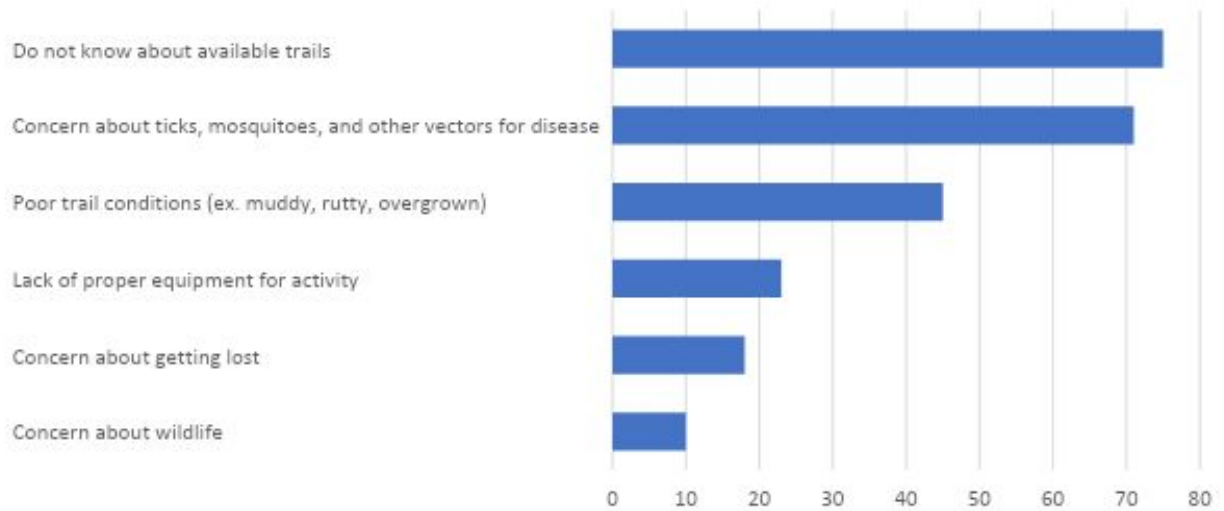
What type of off-road activities do you not yet do, but WOULD LIKE to do? Check all that apply.

123 responses



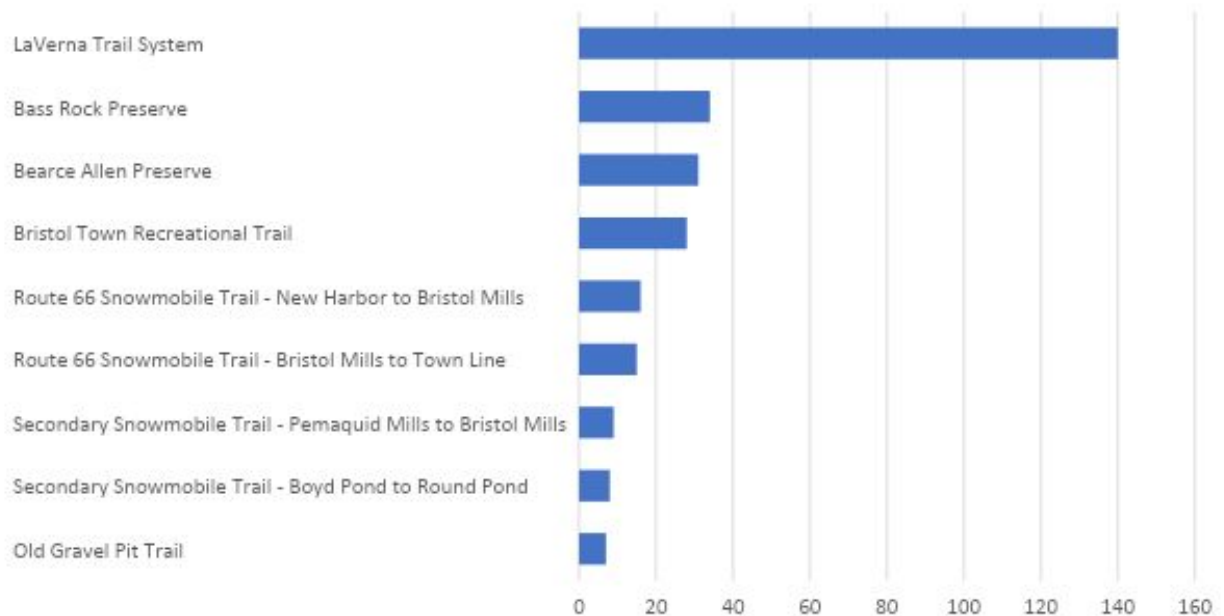
If you do not yet participate in off-road trail use, why not? Check all that apply.

139 responses



What off-road trails do you frequently travel on? Check all that apply.

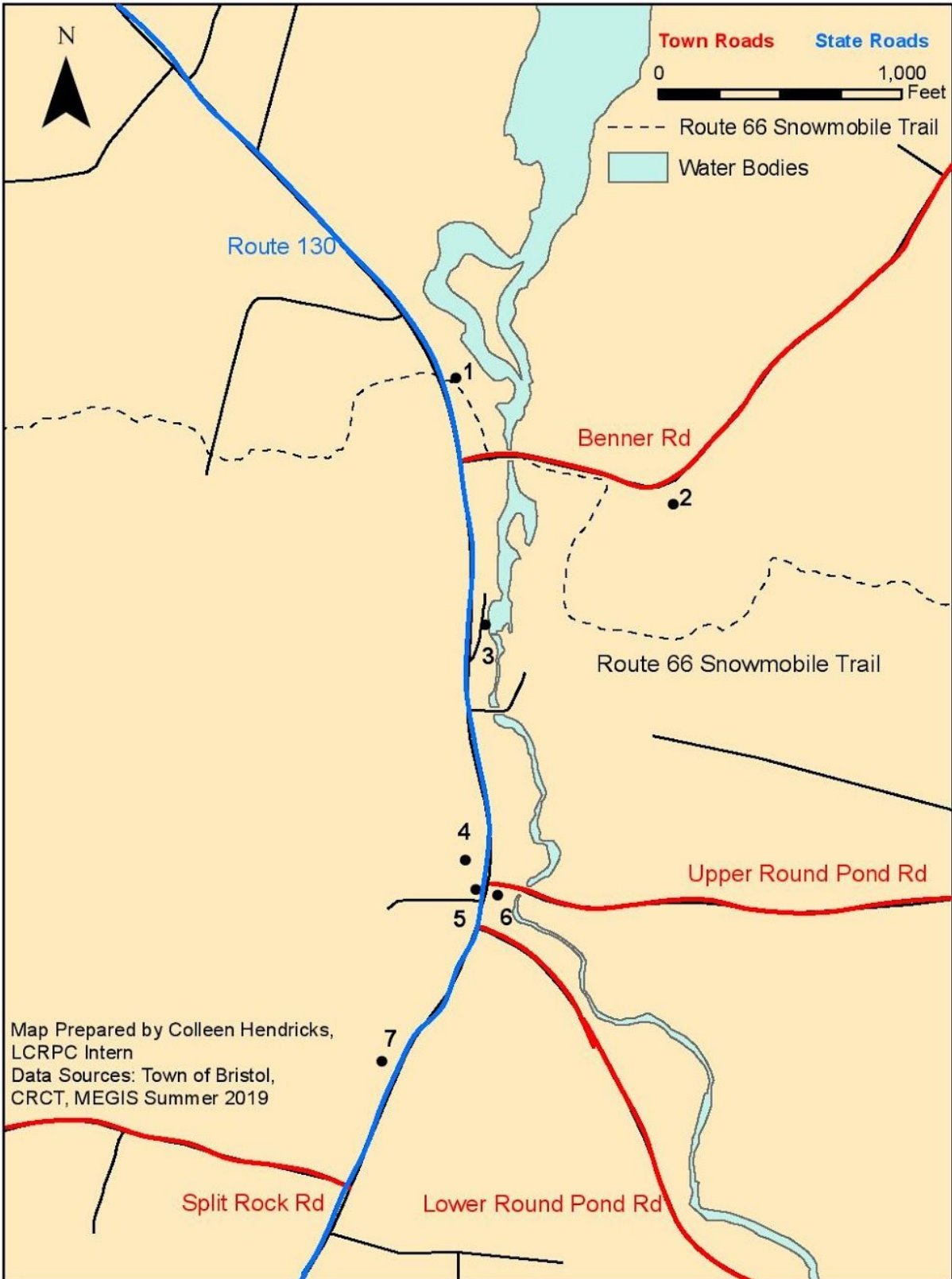
167 responses



Bristol Byways Feasibility Study Map



Bristol Mills

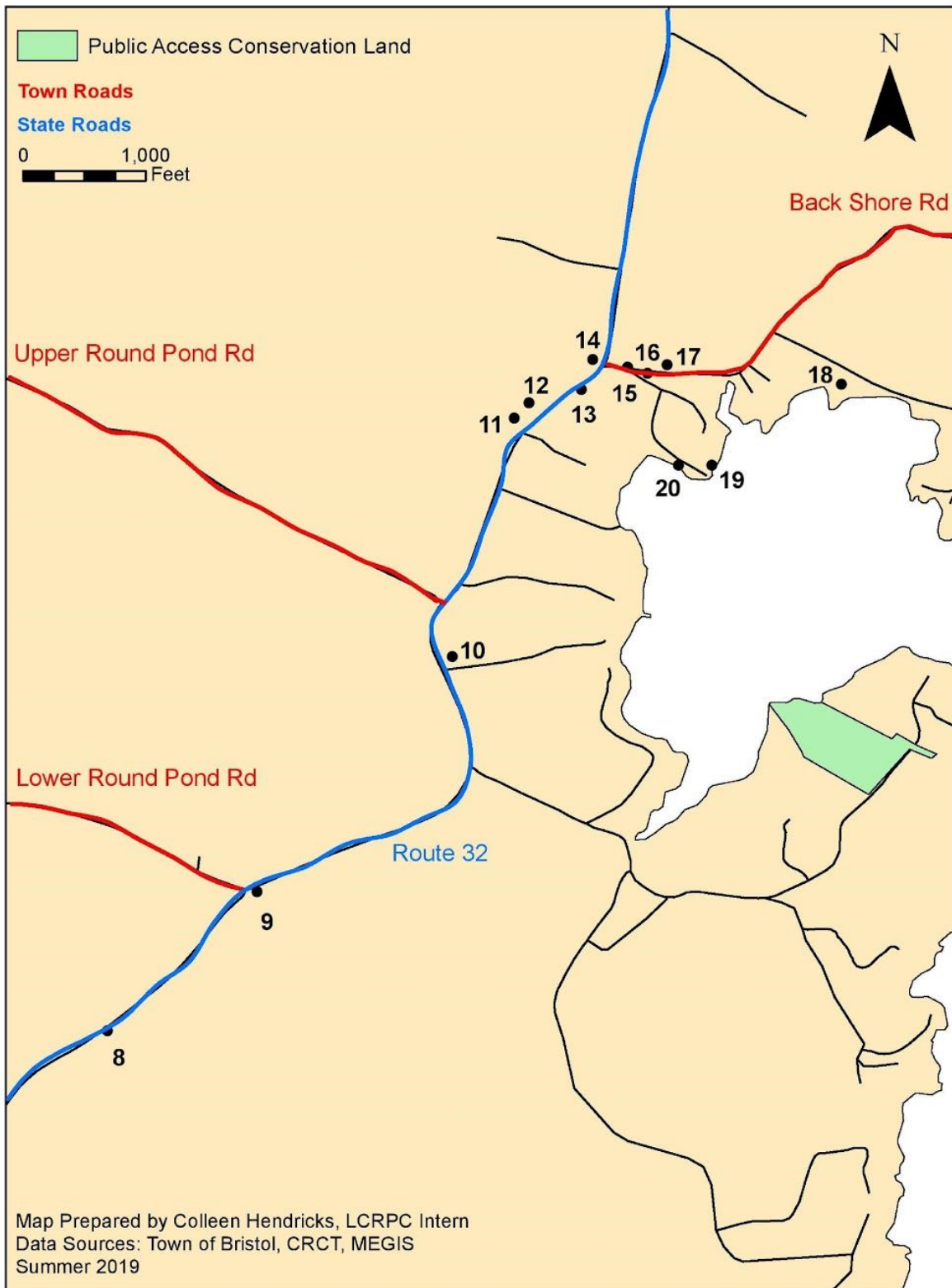


Map Prepared by Colleen Hendricks,
LCRPC Intern
Data Sources: Town of Bristol,
CRCT, MEGIS Summer 2019

Points of Destinations/Origins

- | | | |
|-----------------------|--|-------------------|
| 1 - Ellingwood Park | 4 - Congregational Church of Bristol UCC | 7 - The 1812 Farm |
| 2 - Broad Arrow Farm | 5 - Deb's Bristol Diner | |
| 3 - Bristol Mills Dam | 6 - Bristol Town Office | |

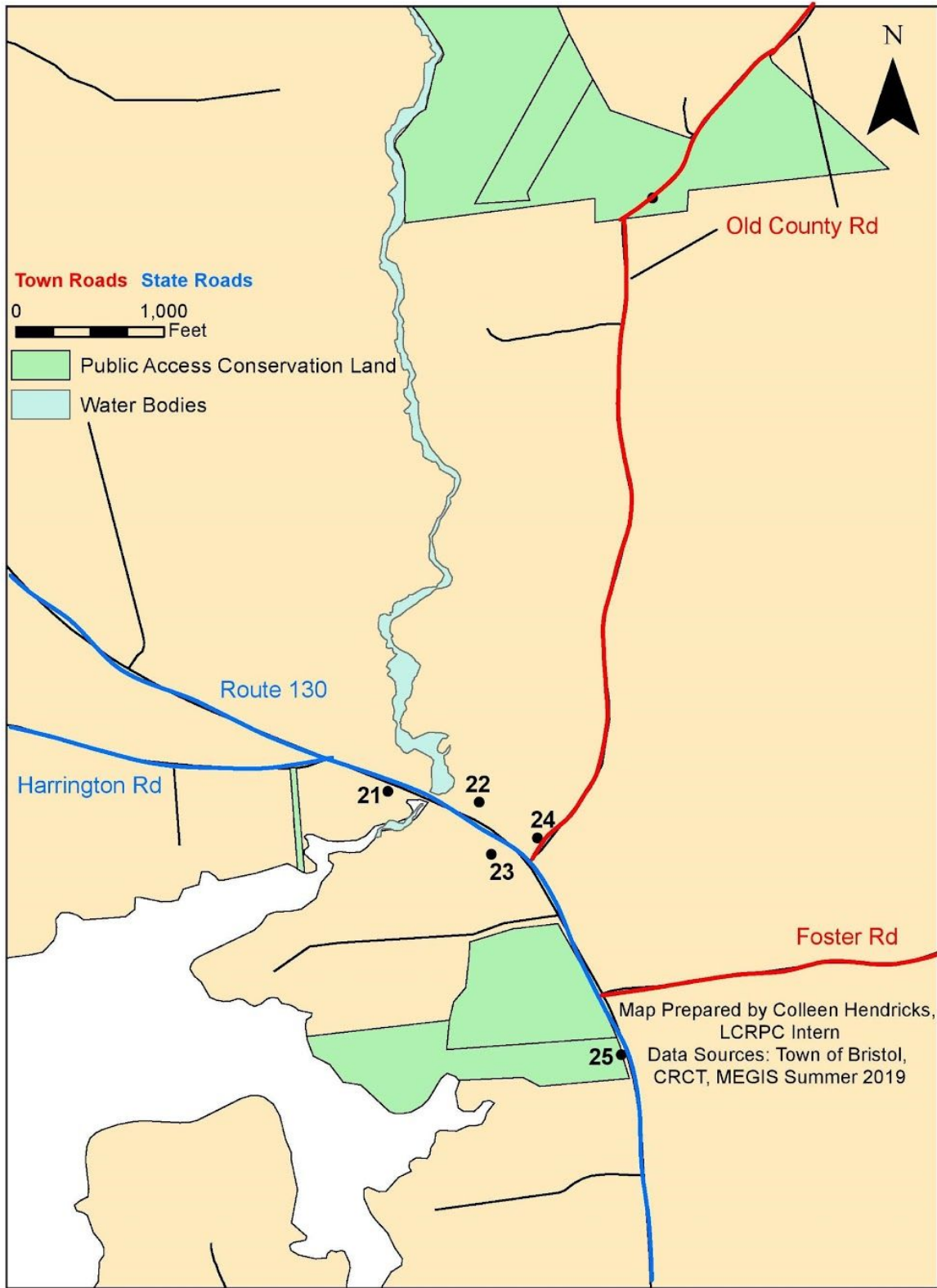
Round Pond



Points of Destinations/Origins

- | | | | |
|-------------------------------|---|----------------------------|-------------------------------|
| 8 - Julie's Greenhouse & Farm | 12 - Round Pond United Methodist Church | 16 - Granite Hall Store | 20 - Round Pond Lobster Co-Op |
| 9 - Dot's Bakery | 13 - The Little Brown Church | 17 - Paul Landry | |
| 10 - Round Pond Post Office | 14 - Round Pond Coffee | 18 - Lupine Field | |
| 11 - King Ro Market | 15 - The Art of Antiquing | 19 - Muscongus Bay Lobster | |

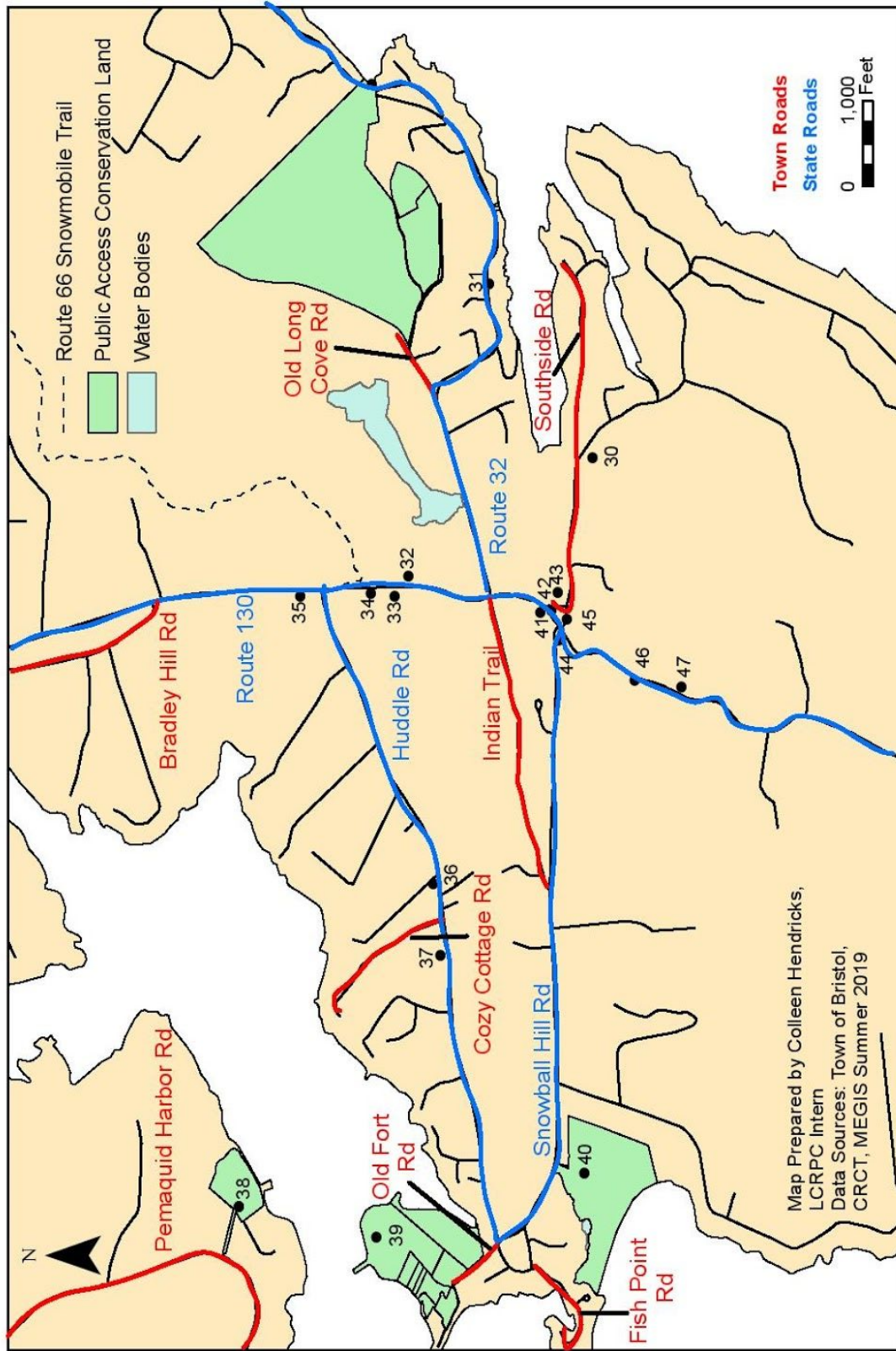
Pemaquid Falls



Points of Destinations/Origins

- | | |
|--------------------------|--------------------------------------|
| 21 - Pemaquid Mill | 24 - Bristol Library |
| 22 - The Good Supply | 25 - Bristol Town Recreational Trail |
| 23 - Pemaquid Falls Farm | |

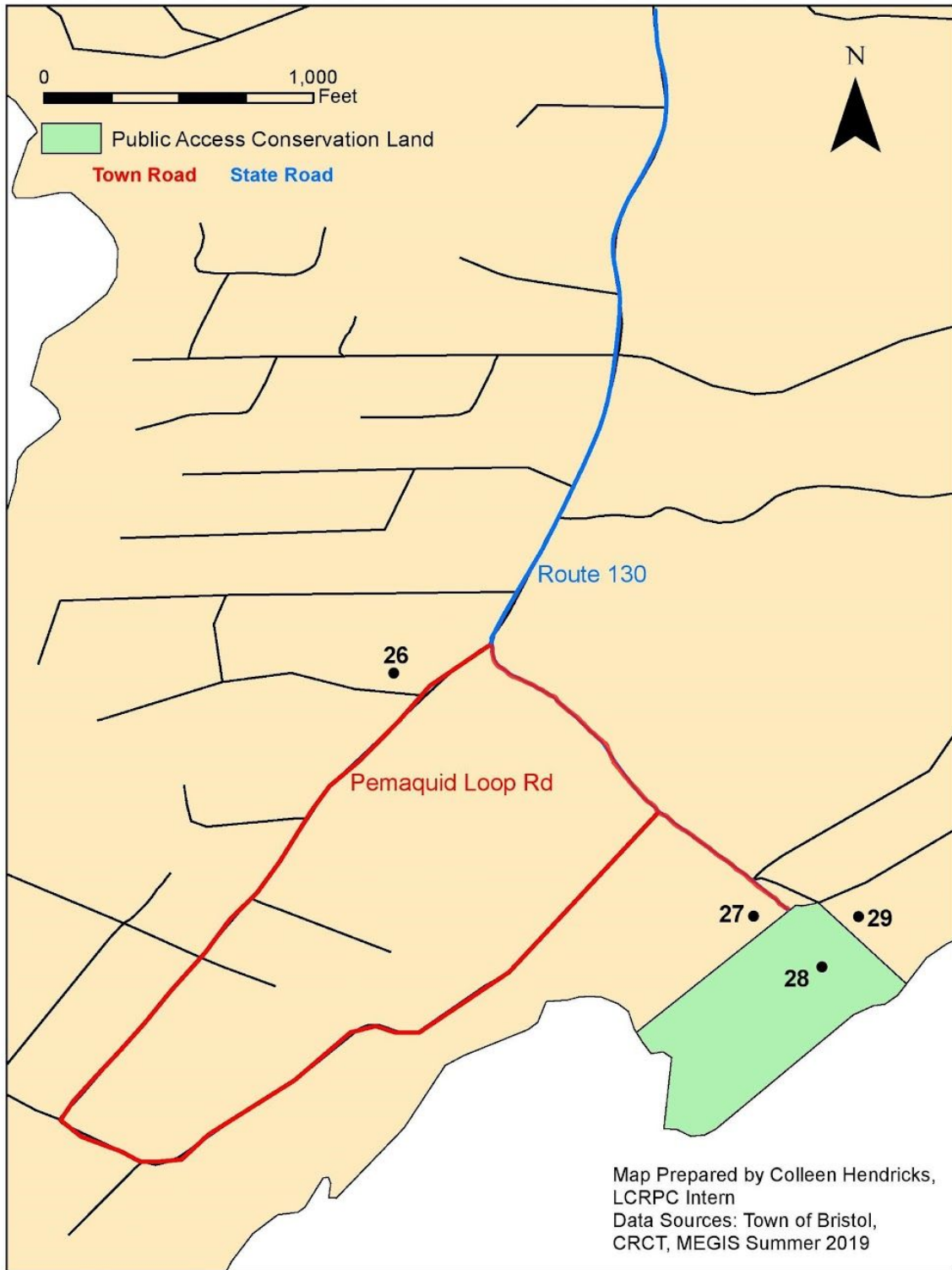
New Harbor and Pemaquid Villages



Points of Destinations/Origins

- 30 - Abundant Bread Bakery
- 31 - Shaw's Fish & Lobster Wharf
- 32 - New Harbor Post Office
- 33 - New Harbor Cemetery
- 34 - The Harbor Room
- 35 - Dee's Variety
- 36 - Maine Kayak
- 37 - The Cuboard Cafe
- 38 - Pemaquid Seafood
- 39 - Colonial Pemaquid State Park
- 40 - Pemaquid Beach Park
- 41 - Pemaquid Craft Co-Op
- 42 - Harbor Ice Cream
- 43 - New Harbor Methodist Church
- 44 - Hannas Gas
- 45 - C.E. Reilly & Son
- 46 - Willing Workers Hall
- 47 - Sugar Spell Sweets

Pemaquid Point



Points of Destinations/Origins

- 26 - Bradley Inn
- 27 - Pemaquid Art Gallery
- 28 - Pemaquid Point Lighthouse Park
- 29 - Seagull Restaurant & Gift Shop

Bibliography

Barnes, Ryan et al. "Town of Brunswick Bicycle Pedestrian Improvement Plan 2020 Update"

"Biking and Walking in Maine." Maine Department of Transportation.

<https://www.maine.gov/mdot/bikeped/>

Blakemore, Erin. "Want a good life as you age? Book says finding purpose, maintaining social inclusion are some of the keys." The Washington Post, January 18, 2020.

https://www.washingtonpost.com/health/want-a-good-life-as-you-age-book-says-finding-purpose-maintaining-social-inclusion-are-some-of-the-keys/2020/01/17/035d567e-37f7-11ea-9541-9107303481a4_story.html

Bolitzer, B., & Netusil, N. R. (2000). The impact of open space on property values in Portland. *The Journal of Environmental Management*, 59(3), 185–193.

Bushell, Max; Poole, Bryan; Rodriguez, Daniel; Zegeer, Charles. (July, 2013). *Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners and the General Public*.

Charron David. "Walkable Neighborhoods Provide Health, Environmental and Financial Benefits." The Washington Post, October 9, 2017

Correll, M. R., Lillydahl J. H., & Singell, L. D. (1978). The effects of greenbelts on residential property values: some findings on the political economy of open space. *Land Economics*, 54(2), 207–218.

Evenson, K. R., Herring, A. H., & Huston, S. L. (2005). Evaluating change in physical activity with the: building of a multi-use trail. *American Journal of Preventive Medicine*, 28(2S2):177–185.

Ibrahim, H., Cordes, K.A. *Outdoor Recreation: Enrichment For a Lifetime*. Champaign, IL. Sagamore Publishing - 2015

Irwin, E. G. (2002). The effects of open space on residential property values. *Land Economics*, 78(4), 465–481.

Faunce, Robert. "2009 Bristol Bike-Ped Plan."

Krizek, K. J. (2006). Two approaches to valuing some of bicycle facilities' presumed benefits. *Journal of the American Planning Association*, 72(3), 309–320.

Lincoln County Regional Planning Commission <http://lcrpc.org/data-resources/data2>

"More than a stripe of paint needed to keep cyclists safe." Monash University. April 11, 2019

"Roundabout Artist Selected (July 17, 2019)." City of Portland, Maine.

<https://www.portlandmaine.gov/560/Public-Art-Committee>

"Roundabouts: You Can Get There From Here." Maine Department of Transportation.

<https://www.maine.gov/mdot/publications/docs/brochures/roundaboutflyer08052015.pdf>

"Route 129/130 Multimodal Corridor Management Plan." Lincoln County Regional Planning Commission

Short, Aaron. "Separated Bike Lanes Mean Safer Streets, Study Says." Streetsblog USA. May 29, 2019

"Trail Costs Analysis," Ped & Pedal 2010.

"Title 29-A: Motor Vehicles and Traffic" Maine Legislature. Maine Revised Statutes.

Walljasper, Jay. "Focusing on Rural Livability." AARP website (2019).

<https://www.aarp.org/livable-communities/tool-kits-resources/info-2019/rural-livability-focus-group.html>