Background

The following document outlines a project completed by students in ENV 310A: Environmental Planning at SUNY Plattsburgh. The goal of the project was to prioritize the desired future trails for the community of Williston, VT. The Williston Conservation Commission (WCC) provided SUNY Plattsburgh students with a shapefile of existing trails within the town, a shapefile of desired trails within the town, and list of criteria for ranking the desired trails. The students then collected information from a range of sources; created a system for numerically ranking trails; and ranked the desired trails to determine where the town should consider prioritizing resources. The methods and outcomes are outlined in the sections below.

Methods

It is the understanding of the students in this class that the volunteer members of the WCC developed the criteria for consideration of new trails collaboratively. Those criteria appear in the first column of Table 1. The students then collected relevant data for use in assessing trails by the criteria provided.

To assess connectivity, the students examined a shapefile provided by Melinda Scott, Conservation Planner for the town of Williston, which included existing trails and recreational paths. They also examined the locations of town natural areas, as detailed on the town's website. Finally, they used GoogleMaps to determine where neighborhoods exist throughout the town.

To address the criterion of access, the students used Google Maps to understand where the most developed part of town exist, and where major community centers are located. They identified schools, places of worship, senior centers, and town buildings, all of which are relevant to considerations of access. The specific locations are listed below:

- Schools/Daycares:
    - Kinder Start: 143 Windridge Dr.
    - Allen Brook School: 497 Talcott Rd.
    - Little Lambs Preschool: 300 Trinity Dr.
    - Williston Child Care Center: 44 N Williston Rd.
    - Vermont Technical College: 201 Lawrence Pl.
- Churches:
    - New King Church:
    - Ignite Church: 1037 S Brownell Rd.
    - Immaculate Heart of Mary: 7415 Williston Rd.
    - Williston Federated Church: 44 N Williston Rd.
    - Williston Church of the Nazarene: 30 Morgan Pkwy.
    - Williston Seventh-day Adventist Church: 5330 St George Rd.
    - Christ Memorial Church: 1033 Essex Rd.
- Senior Centers:
    - Falcon Manor Senior Housing: 104 Falcon Manor
    - Eagle Crest Senior Housing: 315-353 Blair Park Rd
    - Taft Farms Senior Living Community: 10 Tyler Way

- ○ Gazebo Senior Living: 1510 Williston Rd
- Dorothy Alling Memorial Library: 21 Library Ln

To assess desired areas, the students used three online services to determine where people are already recreating in Williston. Those three services are below:

- Alltrails (www.alltrails.com)
    - ○ Used to find popularity of trails, comments about trail conditions, and types of use
    - ○ Pulled most popular user uploaded gpx routes in Williston area
- Strava (https://www.strava.com/heatmap#12.88/-73.08679/44.42445/hot/all)
    - ○ Used to find popularity of trails
    - ○ Mostly biking and running use
- Ride with GPS (www.ridewithgps.com)
    - ○ Pulled most popular user uploaded gpx routes in Williston area

Table 1: Criteria for New Trails and Methods of Measuring

Criteria Provided by WCC	Methods of Measuring Criteria
1. Tier One Criteria	
a. Connectivity	
i. Parks and conserved areas	Shapefile provided by Melinda Scott Williston Town website
ii. Trails	Shapefile provided by Melinda Scott
iii. Neighborhoods	Google Maps
iv. Recreational Paths	Shapefile provided by Melinda Scott
b. Access	
i. Proximity to people	Google Maps
ii. Underserved areas	Google Maps
iii. Desired areas (social trails)	Strava, Alltrails, RideWithGPS
2. Tier Two: Acceptance	
a. Public safety	
i. Traffic	Google Review
ii. Stability	USGS Flood Hazard Data
iii. Cleanliness	Google Review
b. Ecological Impact	
i. Flood	USGS Flood Hazard Data
ii. Deer yards	BioFinder (state of Vermont)
iii. Forest connectivity	BioFinding (state of Vermont)
c. Economics	
i. Cost of construction and maintenance, including Act 250 related expenses	N/A
ii. Benefits to local businesses	N/A

To assess public safety, the students read reviews of current trail networks on Google Review. This helped to inform an understanding of individual citizens' perceptions of the traffic and cleanliness at existing trails and natural areas in town, so that the students could make recommendations about linking new trails to those that already exist and have been reviewed on Google Review. The students also examined USFS Flood Hazard Data to assess the stability of the desired trail segments.

To assess the ecological impacts of the desired trails, the students pulled geospatial data from USGS (to examine flood hazards) and from the State of Vermont's BioFinder website (to assess core habitat and forest connectivity).

The students did not have the time or resources to evaluate each trail in terms of economic impact. The ranking and recommendations presented in this report does not include an assessment of those factors.

Once the students had collected and reviewed the information described above, they created a process for ranking the desired trails outlined in the shapfile provided by Melinda Scott. Based on the information available, the students assessed potential new trails in terms 5 overarching factors: Connectivity, Accessibility, Desired Areas, Habitat Conservation, and Resilience to Flooding. The students did not feel confident in ranking the trails in terms of public safety or economic impact. Potential trails were given a score from 0-2 for each of the 5 factors, resulting in final scores out of the possible 10 total points.

Results

Based on the assessment and ranking, the following four trails (each composed of multiple trail segments from the desired trail shapefile) scored at 6 points or higher out of the possible 10 points. These trails appear in red on the PDF map and shapefile that the students have created to accompany this executive summary. Each of these four possible new trails would 1) connect existing trails and natural areas, 2) connect to areas that are already highly used, 3) provide access to population centers within Williston, 4) avoid interior forest and core wildlife habitat, and 5) avoid flood hazard areas.

Trail Segment	Connectivity	Accessibility	Desired Areas	Habitat Conservation	Resilience to Flooding	Total(out of 10)
Lincoln Rd. to Isham Farm.	2	1	2	1	2	8
Village to Whales' Tails	2	2	2	2	2	10
Village to Mud Pond via East Hill	2	1	2	1	2	8
Village to Catamont to Bin Ridge to Talcott	1	2	1	1	1	6

Limitations and Recommendations

As stated above, the students did not consider economic impacts, as collecting such data was outside the scope of this project. Additionally, the students did not feel confident the in the data they collected regarding public safety; information beyond what is available on Google Review is need to make a better assessment of public safety. The data from Strava, Alltrails, and RideWithGPS, are beneficial to estimate

how many people are using a particular trail. However, it may not represent the total population that uses the trails, since not all people use these platforms when they recreate. In addition, Strava shows how many attempts are made at a particular trail, meaning the numbers are not unique to individuals (i.e. it could be just one person doing 10 or 20 attempts). If possible, Williston should do a survey asking what trail people in the town are using.

Limitations aside, this ranking provides a useful starting points for the WCC to begin considering what trails it would like to see developed in the town of Williston. The students recommend the WCC begin with the 4 trails highlighted in this executive summary, and build a trail development plan from that starting point.