

Vermont Municipal Recreation Resources Database



Center for Rural Studies (CRS) at the University of Vermont
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Introduction

Recreation is a broad term – it's any activity, pastime, or exercise that is done for enjoyment. It could be something as simple as sitting on a park bench or as involved as organized sports. Recreation is, essentially, any leisure activity.

However, don't let the word "leisure" fool you. In terms of building social capital, providing a safe and productive outlet for kids, improving health and diminishing loneliness, and establishing shared community spaces, recreation is invaluable. Even more importantly, public recreation infrastructure provides these benefits for *all* members of a community, contributing to community health equity.

Municipal recreation infrastructure in Vermont includes the physical spaces and programs designed to bring recreation opportunities to Vermont communities. Each town oversees its own recreation infrastructure, usually through a town recreation committee or department. Towns own and manage places like parks, trails, conservation land, courts, fields, and recreation centers that are available for free or low-cost public use. Public school facilities, such as tracks and playgrounds, are available to members of the public outside of school hours, as well. Vermont town recreation is largely funded by property tax collections from its residents, as well as with money from state government and outside grants.

This Data Collection

The Center for Rural Studies at the University of Vermont has collected data on municipal health and recreation services every ten years since 2005. The 2005 and 2015 editions featured a drop-down menu where the user selected the town of their choice. It displayed data in a yes or no format – does this town have parks? physical activity programs? – that is compared to the percentage of towns who reported that it has such infrastructure.

After meeting with stakeholders and deliberating over the 2005 and 2015 list, it was decided that this newest edition would focus on municipal recreation infrastructure. The 2025 edition does not feature street infrastructure, nutritional programs, health screening sites, and health/recreation regulations and policies. The data featured are town parks, baseball fields, basketball courts, beaches, dog parks, gyms, golf courses, playgrounds, pools, rinks, skate parks, soccer fields, trailheads, water access points, and public trails. Data points are displayed in an interactive map view where viewers can explore information about each attribute.

This data collection was led by me, Isabelle Serrano, as my senior capstone project at the University of Vermont (UVM). I worked under the direction of Michael Moser, the Center for Rural Studies' Research Operations Director, and was advised by Sarah Williamson, Lecturer in UVM's Community Development and Applied Economics department. Key stakeholders in the process were Jessica Brodie, Executive Director at the Vermont Recreation and Parks Association, and Claire Polfus, Recreation Program Manager at Vermont Forests, Parks, and Recreation department. Their help was invaluable to this project!

Funding for this project was provided as part of the Leahy Institute for Rural Partnership's Vermont Data Collaborative grant, led by Emma Spett. Data collected for this project will be provided for the Collaborative's statewide data accessibility projects. Additional funding was provided by Lawson's Finest Liquids' Sip of Support program.

Methodology

This project began by addressing the shortcomings of the 2005 and 2015 databases. These databases are incomplete, and they feature a confusing list of health and recreation indicators. Further, they feature little documentation to trace the decision-making behind them. I quickly established the need for a more user-friendly interface and better organized indicator information.

To narrow down the study focus, I established a list of stakeholders involved in Vermont sports, health, and recreation – including non-profits such as Local Motion, Vermont Trails and Greenways Council, and Vermont Parks Forever. I created a survey using Qualtrics software to evaluate the usefulness of potential data that would be collected. The survey listed each existing indicator, asking the respondent to choose between “This indicator is relevant and doesn't need to be edited.” “This indicator is relevant, but needs clarification or different labeling,” or “This indicator

isn't relevant." Finally, I asked if the respondent's organization would be willing to host a version of the finished portal on their website or in their digital materials.

I received seven responses out of 15 surveys sent. Most respondents indicated that the existing indicators were relevant, with a couple of exceptions: street infrastructure, policies/regulations/practices, and conservation lands. Two organizations expressed interest in hosting a finished version of the website.

From there, I got in contact with two stakeholders with in-depth knowledge about state and local parks infrastructure: Jessica Brodie from the non-profit Vermont Recreation and Parks Association (VRPA), and Claire Polfus from Vermont Department of Forests, Parks, and Recreation (FPR). I met with both and talked through their thoughts about the current dataset and how it could be improved. Both noted the need for information about accessibility – does the infrastructure provide accessible access points to trailheads, for example – and emphasized the need for consistent municipal information. Claire Polfus expressed the importance of the dataset to the State of Vermont's knowledge of town parks and offered to provide trail data collected by the FPR. Jessica Brodie offered a structure on how to complete the data collection by endorsing the survey to VPRA members.

After considering the results of the survey and the input from Claire Polfus and Jessica Brodie, I established a research question:

Where are municipally owned and/or operated recreation infrastructure points located in Vermont, and how does municipal recreation infrastructure vary by municipality?

This question has a narrower focus than the questions answered in the 2005 and 2015 database. By limiting the scope, I would be able to make a more complete data collection from which the information provided would be more valuable to stakeholders. This scope would also be more appropriate for the time and resource constraints I was limited to.

Once I had established my research question, I began data collection using Qualtrics survey software. I customized survey tools to manage outreach and responses. I organized the survey to have an introduction page, an instructions page, and a page to select a town to report on. After that, I added questions categorized my infrastructure type (parks, playgrounds, tennis courts, etc.) that asked the respondent to list the infrastructure's title, its location in XY coordinates and a series of yes or no selections: if it was free to use, if it has limited hours, and if it provided an accessibility accommodation. The survey included a table for each infrastructure type and a

chance for the respondent to edit and submit their responses.

Beaches													
	Beach Title	Location	Map Link	Municipally owned/operated?		Free access?		Limited hours access?		Paid access facilities?		Accessibility accommodation?	
	Title	XY Coordinates	If applicable	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Beach 1				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 2				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 3				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 4				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 5				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 6				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 7				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 8				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 9				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beach 10				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

To distribute the survey, I uploaded a contact list of Vermont Parks and Recreation Association members – Vermont municipal recreation directors and assistants – and crafted an email invitation to take the survey.

Email Invite

English (US) ▾

Hello `{{m://FirstName}}`,

The Vermont Recreation and Parks Association is working in partnership with the [Center for Rural Studies](#) at the University of Vermont to conduct an audit on municipal recreation infrastructure in Vermont. We are collecting a complete list of town owned or managed parks, playgrounds, public golf courses, and sports fields, courts, and rinks. This information will be used to create an interactive portal and distributed to Vermonters and Vermont recreation institutions.

Your role as a recreation provider is valuable to this data collection. Please take 15 minutes and fill out the information in the link provided below about the recreation infrastructure in your town. The deadline for replies is Monday, December 22. An instructions sheet is here: [VTMunicipalRec_Instructions.pdf](#)

`{{l://SurveyLink?d=Fill%20out%20the%20questions%20here.}}`

Your insight is extremely valuable to the creation of this tool. If you have additional questions, please contact the project lead, Isabelle Serrano, at iserrano@uvm.edu. If you'd like, you can opt-out `{{l://OptOutLink?d=here.}}`

Thank you!
Isabelle Serrano and Jessica Brodie

In this phase, I sent out 77 survey invites, representing 72 unique towns. I received 39 responses, 30 of which were complete. This was a 38.9% complete response rate.

Because VPRA members have self-selected to be members, it was not a complete list of Vermont town recreation directors. I decided it would be too time-consuming and complicated to generate my own list of Vermont recreation directors (especially considering that many towns have committees instead of departments, and some towns have no recreation management at all). Instead, I decided to utilize a town clerks list provided by the Vermont League of Cities and Towns as the second round of survey distribution contacts. I added assistant town clerk information to

this list, if applicable, to ensure a better response rate. This way, at least one person would be contacted in each of Vermont's ~251 municipalities. I decided to take a more personable approach to the second invite email, shown below:

Email Invite

English (US) ▾

Hello `{{e://Field/First_Name}}`,

My name is Isabelle and I'm a senior at the University of Vermont. I'm writing to ask for your assistance with a project I'm working on for the [Center for Rural Studies](#): I am collecting a complete list of town owned or managed parks, playgrounds, public golf courses, sports fields, courts, rinks, and other recreation infrastructure. This information will be used to create an interactive portal and distributed to Vermonters and Vermont recreation institutions.

Your role as a Town Clerk or Assistant Town Clerk is integral to this data collection. If you are able, please take 15 minutes and fill out the information in the link provided below about the recreation infrastructure in your town, or pass this survey on to your town recreation provider.

The deadline for replies is Friday, February 20th. An instructions sheet is available here: [VTMunicipalRec_Instructions.pdf](#)

`{{l://SurveyLink?d=Take%20the%20survey%20here.}}`

Your insight is extremely valuable to the creation of this tool! If you have additional questions, please contact me at iserrano@uvm.edu. If you'd like, you can opt-out `{{l://OptOutLink?d=here.}}`

Thank you!
Isabelle Serrano

This survey sent 357 emails, representing 251 unique municipalities. I received 187 responses, 68 of which were complete – a 36.3% complete response rate. I received an additional 22 emails from town clerks forwarding the link to their recreation director, asking for assistance, or letting me know that their town did not have any recreation infrastructure. Throughout this process, I kept an Excel spreadsheet to track complete, incomplete, and requested responses.

I cleaned the data using Qualtrics' "Export" feature to an Excel spreadsheet. I eliminated incomplete responses and edited typos. After this process, I could examine what towns were under- and over-represented. Barre Town, Brattleboro, Highgate and Hubbardton had duplicate responses. I cross-referenced these responses to ensure one consistent and clarified response from each town. I identified major gaps in the data from a list of Vermont's 15 largest municipalities. Of that list, the data was missing from South Burlington, Montpelier, Williston, Colchester, Barre City, Winooski, and Hartford as well as Stowe and Woodstock. To make up for these gaps in the data, I completed the survey for these towns using the anonymous survey link using information available on each town's website.

After re-uploading the completed Excel spreadsheet with complete responses, I began to separate the data into .csv files that could be uploaded as point data into ArcGIS Pro. This involved a heavy amount of copy-and-pasting the information to the appropriate category. I created a new file for each infrastructure type, which included the municipality name, infrastructure title, location, municipal yes/no, limited hours yes/no, free yes/no, and accessible yes/no. Many town clerks or recreation providers did not include XY coordinates or used a different format than decimal XY degrees, so I manually corrected those data points by referencing Google Maps. I used the format "[X coordinate], [Y coordinate]" and used Excel's "Separate Data by Column" tool to create an X coordinate and Y coordinate column, delimited by comma. This step was essential to plotting

points once the data was uploaded to ArcGIS Pro. I used a consistent file format to download each .csv file:

[Infrastructure Type]_ArcGISUpload.csv

In ArcGIS Pro, I created a new map and established a folder connection that contained my .csv files. To test the upload process, I started with Parks_ArcGISUpload.csv. I added the table to map, used the “Export Table” tool to add a copy to the geodatabase and manually checked that each field’s data type was correct (i.e. Numeric for “X Coordinate,” Text for “Park Title”). I used “XY Table to Point” tool with the following parameters:

Input Table: *Parks_ArcGISUpload.csv*
Output Feature Layer: *Parks*
X Coordinate: *X_Coordinate*
Y Coordinate: *Y_Coordinate*

Once points were plotted, I changed the symbology to a highly visible color and the display to “Park Title.” I repeated this process using the “Batch” method for the other infrastructure types, ensuring that each symbol was consistent but recognizable.

Once all points were plotted, I uploaded the shapefile of Vermont trail data provided by Claire Polfus and the Vermont Department of Forests, Parks, and Recreation to the map. I arranged the layers so the trails layer was below the points. I uploaded the feature layers to an ArcGIS Web app, where I added a title and navigation. From there, I used ArcGIS InstantApps to create an interactive portal complete with the Center for Rural Studies logo. I added this map as an iFrame to the Center for Rural Studies’ website, where it will remain for public use.

Results

This data collection recorded recreation infrastructure in 68 unique Vermont municipalities. Of that 68, 6 recorded that there was no data, meaning there is no recreation infrastructure in their municipality. The municipalities with complete data are:

Alburg, Barre City, Barre Town, Bennington, Benson, Bradford, Brattleboro, Bridport, Bristol, Burlington, Canaan, Colchester, Coventry, Essex City, Essex Town, Fair Haven, Fairfax, Grafton, Granville, Hancock, Hartford, Highgate, Hinesburg, Johnson, Killington, Londonderry, Lowell, Lunenburg, Manchester, Mendon, Middlebury, Middlesex, Milton, Montpelier, Newport City, North Hero, Norwich, Orange, Proctor, Reading, Richmond, Rockingham, Shaftsbury, Shelburne, Shoreham, South Burlington, St. Johnsbury, Starksboro, Stowe, Strafford, Swanton, Waitsfield, Warren, Waterbury, West Haven, Whitingham, Williston, Winooski, Wolcott, Woodstock

In total, there were 200 parks, 27 beaches, 89 playgrounds, 22 dog parks, 59 water access points, 123 trailhead access points, 25 skate parks or pump tracks, 21 gymnasiums, 101 baseball or softball fields, 29 ice rinks, 15 pools, 66 soccer fields, 70 tennis courts, and 14 golf courses and disc golf courses.

Most recreation infrastructure is clustered in the Chittenden County area, particularly in Burlington, South Burlington, and Colchester, as well as the Capital District area (Montpelier, Barre City, and Barre Town). This is expected due to the high population density of the area. Further, municipalities with established Parks and Recreation (or similar) departments tend to have more established recreation infrastructure than municipalities that have recreation committees or no organized municipal recreation leadership.

Potential for Future Research

As this data collection does not include complete data from all ~251 Vermont municipalities, the Center for Rural Studies will continue to collect data from additional municipalities. The survey link is available on the Municipal Recreation Resources page on the Center's website – <https://www.uvm.edu/cals/crs/cals/crs/more-vermont-resources/vermont-health-and-recreation-resources-database>. If you are a municipal recreation provider or a municipal officer, you are welcome to complete the survey on behalf of your town.

This data will contribute to a larger technical assistance project to connect Vermont government, citizens, and organizations called the Vermont Data Collaborative (VDC). As of May 2026, VDC is in the process of refining a dashboard that will contain nearly all publicly available social, economic, cultural, environmental, and municipal data relevant to Vermont. The municipal recreation data collected here will be added to this dashboard and made available for members of the public to view, compare, and analyze.