# 2015 Inventory of Vermont Communities Health-related Resources

A collaboration of Center for Rural Studies at the University of Vermont and the Greater Burlington YMCA

September 2015

#### Introduction

Ten years ago, The Center for Rural Studies at the University of Vermont inventoried town health resources throughout the state. More than 90% of the communities in Vermont responded in 2005 and that inventory is still available to the public on our website.

Aspects of the community environment such as the availability and accessibility of bicycle or walking paths, exercise facilities or farmer's markets influence a person's health behaviors such as level and amount of physical activity or consumption of fresh fruits and vegetables. For these reasons, the Vermont Department of Health's Fit and Healthy Vermonters Obesity Prevention Program, in collaboration with the UVM Center for Rural Studies conducted a survey of public resources related to physical activity and nutrition in Vermont's cities and towns in 2005.

After ten years, the inventory has been updated. The Center for Rural Studies, with direction and funding from the Greater Burlington YMCA developed an online inventory form and distributed it electronically, by phone and by regular mail, to town clerks across the state. This report summarizes the results of this inventory.

The report is organized into four main sections. The results section is further subdivided into four main sections, with 3 subsections, as described below.

- 1. Introduction
- 2. Methods
- 3. Results
  - a. Overview of Communities
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    - ii. Municipal land infrastructure
    - iii. Sports field infrastructure
  - c. Community Policies
  - d. Non-municipal Community Resources
- 4. Conclusions

#### **Methods**

Development of the 2015 inventory began in December 2014. Town clerks and other municipal officials completed the online inventory between February and June 2015.

In an effort to include all municipalities in Vermont, all town/city clerks were sent an email invitation. Clerks from communities that had not responded were sent at least two email reminders, as well as two telephone reminders and one postcard. A total of 157 municipalities, out of 255, completed at least some of the inventory.

After the inventory results were collected, four indices were created to summarize the main categories of infrastructure considered in this inventory of health-related resources:

- Active transportation
- Municipal land
- Sports fields/rinks
- Food access

For each item in the category, communities got a 1 if they had the item and they considered it to be in excellent, good or adequate condition. If they did not have the item, or if it was considered to be in fair or poor condition, they got a 0 for that item.

To better understand differences in communities, each community was categorized by population size (based on census data) as small, medium or large. Towns with a population at or below 900 people were coded as 'small;' towns with a population between 901 and 1600 people were coded as 'medium;' towns with a population greater than 1600 people were coded as large. Table 2 shows the percentage of small, medium and large towns, by county.

### **Results**

#### Overview of the communities

Table 1. Vermont Municipalities by County

	Actual # of towns/ cities	Percent of towns/cities in VT	Number of towns/ cities responding to inventory	Percent of the towns responding to inventory	Percent of towns responding by county
Addison County	23	9%	17	9%	74%
Bennington County	17	7%	9	5%	53%
Caledonia County	17	7%	13	7%	77%
Chittenden County	18	7%	10	5%	56%
Essex County	19	7%	12	7%	63%
Franklin County	15	6%	9	5%	60%
Grand Isle County	5	2%	5	3%	100%
Lamoille County	10	4%	6	3%	60%
Orange County	17	7%	10	5%	59%
Orleans County	19	7%	9	5%	47%
<b>Rutland County</b>	28	11%	18	10%	64%
Washington County	20	8%	11	6%	55%
Windham County	23	9%	11	6%	48%
Windsor County	24	9%	17	9%	71%
Total	255		157		61.57%

Every Vermont county is represented in the Inventory, and the percent of towns responding by county is approximately the same as the percent of all towns within each county. For example, 9% of the state's towns are in Addison County and 9% of towns in the Inventory are in Addison County.

Overall, 62% of the towns in Vermont responded to the Inventory. Grand Isle County had 100% of its town's respond, while just 47% of the towns in Orleans County responded.

Table 2. Counties, by size of municipality

County	Total	Small n=54	Med n=47	Large n=56
Addison	10.80%	13%	10.6%	8.9%
Orleans	5.70%	9.3%	6.4%	1.8%
Rutland	11.50%	11.1%	10.6%	12.5%
Washington	7.00%	0%	10.6%	10.7%
Windham	7.00%	5.6%	6.4%	8.9%
Windsor	10.80%	16.7%	8.5%	7.1%
Bennington	5.70%	9.3%	2.1%	5.4%
Caledonia	8.30%	11.1%	6.4%	7.1%
Chittenden	6.40%	1.9%	2.1%	14.3%
Essex	7.60%	13%	10.6%	0%
Franklin	5.70%	0%	6.4%	10.7%
Grand Isle	3.20%	3.7%	0%	5.4%
Lamoille	3.80%	5.6%	0%	5.4%
Orange	6.40%	0%	19.1%	1.8%

Town size was determined by population. Towns with a population at or below 900 people were coded as 'small;' towns with a population between 901 and 1600 people were coded as 'medium;' towns with a population greater than 1600 people were coded as large. Table 2 shows the percentage of small, medium and large towns, by county.

### **Infrastructure Summary**

Table 3. Number of infrastructure by type

	Small town n=54		Medium tow	n n=47	Large town n=56	
	Mean	Median	Mean	Median	Mean	Median
Transportation (0-11) Mean	1.87	1.50	2.3	1.88	4.54	4.43
Municipal land (0-6), Mean	1.24	1.23	1.34	1.22	2.88	3.00
Sports fields (0-12), Mean	0.73	0.55	1.74	1.38	3.42	3.18
Food sources (0-8), Mean	1.31	1.05	1.68	1.52	3.9	4.00

For the analysis of the existence of types of infrastructure resources, questions were divided by category. For each individual resource provided within a category, 1 point was assigned. The range of possible scores is indicated in parentheses next to each category name (zero indicates that none of the resources were provided, while the larger number indicates that all of the resources were provided.) Table 4 shows the specific items in each category.

Table 4. Infrastructure items

Transportation Sidewalks Crosswalks Speed Bumps Reduced Speed Zones Ped safety-related	Municipal land Public Parks Playgrounds Conservation Lands Beaches Off-leash dog parks	Sports fields Baseball Soccer Basketball Tennis (indoor) Tennis (outdoor)	Food sources Grocery store/ supermarket General store Convenience store Fast food restaurant Summer Farmers Market
signage Ped stoplights Protected bike lanes Bike racks Off-road bike/ped paths Foot paths Other paths	Other park resources	State parks Ice rink (indoor) Ice rink (outdoor) Swimming Pool Track Golf Other	Winter Farmers Market Community gardens School garden

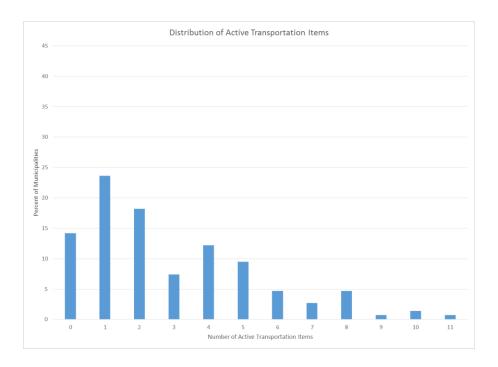
The scored data was broken down by town size to identify any potential correlation between town size and provision of resources. For all items, small towns scored lower than medium towns, which scored lower than large towns. There do not seem to be outliers in the data, as the means and medians are close. From this data we can conclude that, on average, small towns have fewer resources than medium and large towns, and that large towns have the most resources.

The tables below show scores broken down by frequency. This provides a more comprehensive picture of the percentage of towns with each score, which is useful for seeing which scores were most frequent-information a mean and median can't provide. While the data isn't broken down by town size, the information is nevertheless useful as a snapshot of resource provision for the state.

#### **Active transportation infrastructure**

Table 5. Number of transportation items, n=148

# of items	Percent
None	14%
1	24%
2	18%
3	7%
4	12%
5	10%
6	5%
7	3%
8	5%
9	1%
10	1%
All items	1%



This table and graph show the frequency (graph) and percentage (table) of each score for transportation items. From the data we can deduce that 85.1% of scores are between 0 and 5, meaning 85% of towns have less than half of the transportation items mentioned in the inventory. 14.2% of towns and cities have no transportation resources, and only .7% of towns and cities have all 11 resources.

Most municipalities have reduced speed zones (77.1%) in the town/city center, and about half the towns have foot paths (55.7%) and pedestrian safety-related signage (49.4%). Fewer than half of the municipalities reported sidewalks (41.2%), crosswalks (38.9%), off road bike/pedestrian paths (29.6%) or bike racks (28.3%). Very few Vermont communities have pedestrian stoplights (12.2%), protected bike lanes (6.5%) or speed bumps (6.4%).

Table 6. Active transportation items

•	
	% Yes
Reduced Speed Zones n=179	77.1%
Foot paths n=174	55.7%
Ped safety-related signage n=178	49.4%
Sidewalks n=182	41.2%
Crosswalks n=180	38.9%
Off-road bike/ped paths n=169	29.6%
Bike racks n=173	28.3%
Ped stoplights n=172	12.2%
Protected bike lanes n=170	6.5%

Speed Bumps n=172	6.4%
Other paths n=159	2.7%

Table 7. Miles of active transportation infrastructure

	Total Miles (all towns)	Least miles	Most miles	Average miles per town
How many miles of roads are there in your city or town? n=152	7633.8	4.25	112	50.22
How many miles of sidewalks are there in your city or town? n=153	384.85	0	60	2.48
How many miles of bicycle lanes are there in your city or town? n=159	44.6	0	10	0.28
How many miles of off-road bicycle/pedestrian paths are there in your city or town? n=137	307.9	0	40	2.24
How many miles of foot paths (hiking and walking trails) are there in your city or town? n=135	590.9	0	80	4.38

The average municipality in Vermont has 50 miles of roads and 2.48 miles of sidewalks. Among 159 towns responding there are 44.6 total miles of bicycle lanes. There are also a total of nearly 1000 (898.8) miles of off road paths and trails among about half of Vermont municipalities.

Table 8. Percent of paved roads, crosswalks

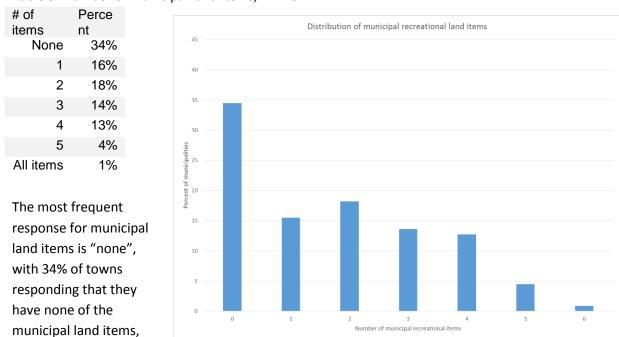
	Lowest percent	Highest percent	Average percent per town
What percent of the roads in your city or town are paved? n=152	0	100	32.78
What percent of intersections have crosswalks in your city or town center? n=157	0	100	15.04

On average, one-third (32.78%) of town roads are paved, while only 15% of intersections in the town center have crosswalks.

Based on this data, there are towns in Vermont without paved roads, sidewalks, bike lanes, bike paths, walking trails, or intersections with crosswalks. This is congruent with the 14.2% of Vermont towns/cities that scored 0 for transportation items, which included crosswalks, sidewalks, bike lanes, bike paths, and walking trails. There's also a noticeable difference between maximums and averages. Thus the maximum numbers should not be seen as indicative of resource provision throughout the state.

#### **Municipal land infrastructure**

Table 9. Number of municipal land items, n=110



described in Table 10. About half of the communities report having public parks (56.3%), playgrounds (57.5%) or conservation lands (53.4%) in their community, and 27% have a public beach. Fewer than one in ten (8.2%) have off-leash dog parks.

Table 10. Municipal land items

	% Yes
Public Parks n=158	56.3
Playgrounds n=160	57.5
Conservation Lands n=148	53.4
Beaches n=151	27.2
Off-leash dog parks n=147	8.2
Other park resources n=128	25

Very few towns have public transportation available to parks/recreation facilities (8%), though 22% of large towns provide public transportation to parks/recreation facilities. Nearly two-thirds of Vermont communities describe their parks/recreation facilities as "easily accessible by foot or bicycle." Interestingly, 87% of small towns report easy to access parks/recreation facilities, compared to 61% of medium sized communities and 58% of large ones.

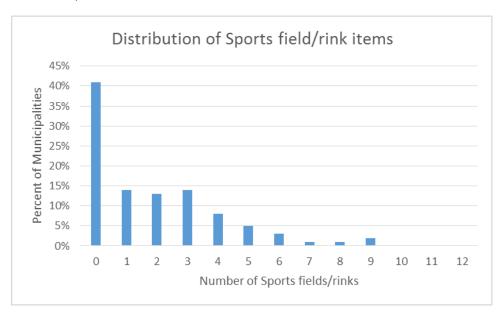
Table 11. Accessibility of municipal lands by size of community

	Overall	Small	Medium	Large
Does your town or city have public transportation to parks/rec facilities? n=147	8%	0%	2%	22%
Are parks/rec facilities easily accessible by foot or bicycle?	64%	87%	61%	58%

### Sports field infrastructure

Table 12. Number of sports field items, n=112

Table 12.	Nullibel Of
# of	Percen
items	t
None	41%
1	14%
2	13%
3	14%
4	8%
5	3%
6	3%
7	1%
8	1%
9	2%
10	0%
11	0%
12	0%



The most frequent response for sports items is "none," with two out of five (41.1%) towns indicated that they have no sports fields. Baseball fields (63.6%), basketball courts (53.0%) and soccer fields (51.6%) are the most common sports fields/rinks in Vermont communities. Many communities also have outdoor tennis courts (37.7%) and ice rinks (26.0%). Only about one in ten have swimming pools (13.0%), tracks (12.4%) or state parks (11%).

Table 13. Sports field and rink infrastructure items

	% Yes
Baseball field n=162	63.6
Basketball court n=151	53.0
Soccer field n=162	51.6
Tennis court (outdoor) n=154	37.7
Ice rink (outdoor) n=150	26.0
Swimming Pool n=146	13.0
Track n=145	12.4
State parks n=178	11.0
Golf n=142	6.3
Ice rink (indoor) n=143	5.6
Tennis court (indoor) n=137	2.2
Other n=129	8.5

Table 14. Accessibility of sports fields and rinks by size of community

	Overall	Small	Medium	Large
Does your city or town have public transportation to its	8%	0%	0%	20%
fields/rinks? n=132				
Are the fields/rinks easily accessible by foot or bicycle?	57%	63%	46%	60%
n=116				

As shown in Table 14, only about one out of ten Vermont communities provide public transportation to fields/rinks in their community, though the proportion of large towns provide public transportation access is more than double (20%). However, many more communities fields and rinks are accessible by foot or bicycle (57%).

#### **Community policies**

Table 15. Policies promoting physical activity by size of community

	Overall	Small	Medium	Large
Are sidewalks in your community ADA accessible? n=185	29%	7%	21%	57%
Do you have policy requiring bikeways/ped walkways in new public infrastructure projects? n=122	9%	3%	0%	21%
Do you regularly clear snow from sidewalks? n=84	63%	50%	44%	77%
Does your community have any walk to school programs? n=118	33%	13%	14%	66%
Is there policy that that allows public access (after hours) to school rec facilities? n=101	44%	40%	41%	49%
Does your community collaborate with private organizations to promote physical activity? n=129	16%	5%	10%	30%

Municipalities use policies to guide community decision making, spending and priorities. Sidewalk accessibility is important to Vermont communities. Eight out of ten (81%) have ADA accessible sidewalks, and six out of ten (63%) regularly clear snow from the sidewalks.

Somewhat less prevalent in Vermont municipalities are school policies. One-third of these communities have walk to school programs (33%) and forty-four percent have policies in place that allow public access to school recreation facilities. This is especially important when considering the results presented in Table 16.

Soccer fields (52%), basketball courts (41%), baseball fields (47%) and tracks (42%) are often on school grounds.

Table 16. Prevalence of sports fields on school grounds

Sports field on school grounds	Number of communities with field/rink on school grounds	Of those that have them, percent on school grounds
Soccer field	41	52%
Baseball field	44	47%
Track	10	42%
Basketball courts	26	41%
Tennis courts outdoor	10	21%
Ice skating outdoor	8	20%
Tennis courts indoor	2	14%
Swimming pool	2	8%
Ice skating indoor	1	7%

Table 16 provides one clue as to the accessibility of these resources to the community, but it doesn't tell the whole story. The policy of access to school facilities must also be considered. Some resources are

not typically on school grounds (like indoor skating rinks), school access policies are of no consequence. As shown in Table 15, only about half (44%) of communities have a policy that calls for access to school recreation facilities.

Among communities that have a policy for school grounds access, the most often mentioned policy is "school board approval." Many also commented that their school fields and rinks are "always open" or "available to all residents."

For schools without policies, the most common responses to the question "What would be necessary for your city or town to consider a policy to make school facilities available during non-school hours" are summarized below.

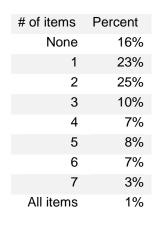
- a.) there is no school located within the town and therefore the question is not applicable,
- b.) there is no written policy in existence but school grounds are open to the public nevertheless, thus a policy seems to be unnecessary, or
- c.) the School or Select Board would have to approve a policy.

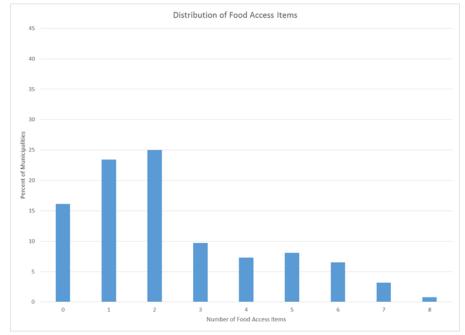
Only one respondent identified funding as necessary for a policy to be put in place. Overall, school access policies seem to be out of the jurisdiction of the town government.

#### **Non-municipal Community Resources**

Communities were also asked to indicate the food access items available in their community. Sixteen percent indicated they didn't have any food access items, most had 1-3 items (58%).

Table 17. Number of food access items, n=124





Interestingly, 16% of town and cities responded that they have no food sources within their town or city.

This raises the question of food access for Vermonters, and the frequency of food deserts. The USDA defines food deserts as urban neighborhoods or rural towns without access to fresh, healthy food options. This may manifest itself in the existence of a convenience store or fast-food restaurant, with limited healthy, affordable food options. It does *not* necessarily mean that there are no food sources in the town or city.

Table 18. Food access infrastructure items

	%Yes
Grocery store/supermarket n=146	26
General store n=154	50.6
Convenience store n=147	58.5
Fast food restaurant n=140	16.4
Summer Farmers Market n=145	40
Winter Farmers Market n=134	12.7
Community gardens n=145	21.4
School garden n=147	53.1
Food Policy Council n=141	0.7

The following section diverges from the typical questions about municipal resource provision, and instead provides data on food access, which are not usually provided as a municipal resource or service. One in four (26%) communities indicated that there is a grocery store or supermarket, and two out of four (51%) reported a general store. More than half (59%) communities have a convenience store, while few communities (16.4%) have a fast food restaurant. General and convenience stores are almost twice as common as grocery stores or supermarkets.

Four out of ten (40%) have summer farmers markets, while only 13% responded have a winter farmers market. 21% have community gardens, and 53% say they have school gardens. Most communities have one or two of the food access items, though only 1% of the communities have all food access items.

In terms of access to food, transportation to food sources is also important. Nearly one in five (18%) have public transportation to a food source. However, very few communities (2%) collaborate with others to promote healthy eating.

Table 19. Policies promoting access to food

	Overall	Small	Medium	Large
Does your city or town have public transportation to	18%	9%	5%	38%
places that sell food products? n=140				
Does your city or town collaborate with other	2%	2%	0%	5%
organizations or businesses to promote healthy eating?				
n=129				

In terms of health screenings, municipal provision of these tests are low (the highest being blood pressure screenings at 7%). This may or may not suggest that municipalities should increase their provision of such screenings, because such health records are typically taken by private physicians on a yearly basis. Municipalities could play a role, however, in delivering public service announcements concerning the importance of yearly check-ups and maintenance of good health.

Table 20. Development policies and municipal support for physical activity and nutrition education

Permit Process/Regulations for new development to include?	%Yes	Of those who require permits, has regulation been applied to new development yet?
Sidewalk adjacent to road n=146	12%	66.7%
Protected bike lanes n=144	4%	25%
Off-road bike/ped paths n=141	4%	33.3%
Ped paths connecting cul-de-sacs n=139	1%	10%
Municipal support for physical activity		
Public walking events n=129	25%	
Biking events n=127	26%	
Running events n=133	31%	
Other events n=99	8%	

Municipal support for nutrition education	
Choosing healthy food n=142	8%
Preparing healthy food n=142	9%
Growing fruits/veggies n=142	9%
Other n=137	4%
Health screenings provided	
Blood Pressure n=152	7%
Cholesterol n=149	3%
Blood glucose n=151	4%
Other n=144	1%

Respondents were asked whether or not the town had permits or regulations in place for sidewalks, protected bike lanes, bike paths, and pedestrian paths that then connect to cul-de-sacs. According to their responses, 12% of towns have a policy for sidewalks, 4% have a policy for protected bike lanes, 4% have a policy for bike paths, and only 1% have a policy for pedestrian paths that then connect to cul-de-sacs. Of the towns and cities that have such permits and regulations, only 67% apply the sidewalk policy, 25% apply the bike lanes policy, 33% apply the bike path policy, and 10% apply the pedestrian paths policy. This demonstrates that there is area for improvement on the part of the towns to ensure pedestrian and biker safety through the enforcement of regulations.

Table 20 describes municipal support for physical activity, through either the issuance of permits or sponsorship. One in four towns report municipal support for walking events, 26% report support for biking events, 31% report support for running events, and 8% report support for other events

About 1 in 10 cities and towns sponsor education on choosing healthy foods outside the home (8%), preparing healthy foods (9%), growing fruits and vegetables (9%).

#### **Conclusions**

Vermont municipalities are largely rural, which preclude many from "urban" resources such as sidewalks and traffic calming. Small towns in Vermont are very small; this report considered any town with 900 or fewer residents to be small, and large towns have 1,600 or more residents. While lacking in population, Vermont municipalities average 50 miles of road, about one-third of which are paved. And most of these towns have reduced speed limits in the town center.

In the case of infrastructure resources, size matters. Small towns have just 1-2 resources in each category, while large towns average 3-5 resources in each category. For those interested in an active lifestyle, large towns in Vermont may provide a better environment. In addition, small towns rarely have public transportation available to make their resources accessible to the community, though the resources they have are often accessible by foot or bicycle.

As far as land and resources available for recreation, one-third of these Vermont communities don't have any beaches, parks, or playgrounds, and 4 out of ten don't have any sports fields in their community. Of those communities who do have these resources baseball fields, parks, playgrounds, basketball courts, conserved lands, and soccer fields are the most common recreational and sports land resources, with more than half of the communities having each of these items. And when they do have them, more than half of the communities report that there are accessible by foot or by bike.

Most communities do not have a policy that allows public access to school facilities after hours, though anecdotally many communities report informal arrangements for public access to these facilities. While informal arrangements may allow for more flexibility, it also leaves access to these school facilities more vulnerable to the whim of school boards and administrators.

Food is accessible in most of these communities, though not every community. General stores and convenience stores are each available in half of the communities, while grocery stores are only present in one in four communities, suggesting that affordable, fresh foods may be a little less accessible than processed foods. At the same time, half of the communities have a school garden, so canned goods from the local convenience store may be supplemented with produce from the school garden. Again, though, lack of formal access policy may put access to school gardens at risk for the community in the future.

Vermont communities appear to be investing in their residents' health, but low population density make infrastructure resources more expensive per capita. Finding creative ways to provide healthy resources can help differentiate communities and provide higher quality of life for residents of all ages and abilities.

#### Appendix – Open Ended Comments

## Please describe the policy in place to make school grounds accessible to the public during nonschool hours. outdoor playground at school is available for use Approval of the School Board. Public requests permission to use the facilities and arranges on a case-by-case basis. Informally, residents use the school playground and basketball court & mountain bike trails at Marlboro Elementary School Contact the School Board for permission They are recreation fields, paid for by the Town, on land owned by the school district, therefore, any resident may use the facilities. Multi use is voted at town meeting. Outdoor facilities are open at all times. Indoor basketball court is available for adult league on request. fields & tennis courts always available. the outdoor facilities are available to anyone who wants to use them, there is no gate closing them in. THEY ARE OPEN TO THE PUBLIC TO 6:30 PM AND ANYONE CAN USE IT. They ask and school and town provides access School playgrounds are always open There is no limitations to get to the fields or courts alway open No fence People using facilities need to follow the rules City Recreation programs have 2nd priority next to school activities SCHOOL POLICY Playground is on town green, as is the school, community center (attached to the school) contains basketball courtbuilding manager schedules events. Playgrounds and ball fields along with the Town Green and Community Park are accessible for use by athletic

leagues, farmers markets, town band concerts, 4th of July events, rec programs, bike/rec path

contact Supt of schools
Recreation Dept runs various programs for Adults in the School Gym during the winter months.
Signage which states open to the public except for school hours
I believe that groups contact the school letting them know of the organization using the fields
What would be necessary for your city or town to consider a policy to make school facilities available during non-school hours?
we are a unified district the school isn't in our town
funding for maintenence/liability insurance
Not sure
does not apply
Pittsfield does not have a school
The union school board would need to approve
our school is in another town
No policy but the facilities are available.
they are available, just no policy in place.
Have a school, we do not have a school in this town we send our children to a adjoining towns school union.
we do not have a school
No, there is no policy, but the school grounds are open 24/7 to all users
permission from the school board
unknown
Request from the Select Board and then approval of the school district.
it is unspoken permisison. it would require school board adoption of a policy.
unkown
we don't need a prolicy

That is a good question! We used to have access to the schools when we controlled the school . Now the OSSU controls the Elementary Schools and the people get nothing without a lot of headache. Ask the locally elected school board Need to ask School Board to fill out this survey concerning school grounds. We are very rural. Do not have an operating School. Not sure. There already is public access. There is no policy. No need for a policy to use the school playground and ball fields. No school within our town People are allowed use of most facilities after hours without a policy. facilities are available upon request After school activities on school grounds are coordinated through and managed by the town recreation dept We already have our school facilities available for some activities. School (K-12) is located in another town. There is public access there. We would need a school We have no schools in town. There is no functioning school in our town We do not have any schools, all students are tuitioned to other towns. interest by the public, and school board will I believe the facilities are available but I am not familiar with a policy There isn't currently a policy per se regarding public use of school grounds after hours. The school grounds are open to the public to use at their own risk until dark. Any further clarification, you would need to contact the school itself for any policy they may have. We have no school. We tuition our students to area schools. The Town of Peru does not have a school in town. Staff and recreation committees. That would be up to the School District not the Town.

permission from School Principal
yes
We do not have any schools in Town
That would be a question to ask the school board UD # 37
School playground is not fenced-in. Access is unlimited.
Sample language and interest from the community
School board approval
enough need for it
The school has its own policies.