

9. Utilities, Facilities, And Services

A. Background

The communities in our Region depend on a system of public, nonprofit, and private utilities, facilities, and services. These are needed to maintain the health and welfare of our citizens, as well as support a sound economy.

While TRORC ~~currently~~ does not have a direct role in maintaining these systems, it does have the ability to provide municipalities with guidance and technical assistance; to ~~achieve~~ ~~take a~~ regional ~~approach to prioritization of future investments, particularly investments by the State of Vermont;~~ and local planning goals to look forward at ways to improve our services. Compact regional land use patterns ~~may~~ generally improve the efficiency of wastewater and water supply such systems, roads, transit, and emergency services. ~~such as identifying areas where future investments might have a regional benefit in these areas.~~ Conversely, sprawling development leads to an expansion of infrastructure and services to new areas and is generally inefficient. ~~may lead to unsustainable patterns of land use.~~

Nearly all services and facilities benefit from greater density and intensity of land development within a given area. ~~More people can be served by fewer water lines, sewer mains, etc., if they are not spread out. Rural areas have many advantages, but they are inefficient for physical infrastructure.~~

Achieving Vermont’s land use goal, “to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside”¹ is challenging for communities to implement without public sewer and water. ~~Vermont’s land use goals seek “to maintain the historic pattern of compact village and urban centers separated by rural countryside”. While most would agree that this pattern is desirable, it is also challenging for communities to implement without the~~

27 ~~necessary infrastructure.~~ Continued increases in density and development in
28 many of our villages will eventually be unsustainable without water and
29 wastewater facilities. ~~In a number of our communities, space to develop new~~
30 ~~systems is limited due to geography.~~

31 Long-range planning for such infrastructure investments and their maintenance is
32 essential to ~~avoid jumps~~~~reduce fluctuation~~ in annual tax rates. Therefore,
33 ~~state~~State statutes enable communities to create a Capital Improvement Plan
34 (CIP)² for the purposes of planning and investing in long-range capital facilities.
35 ~~This is different from the Capital Budget and Program (24 VSA §4443), which is~~
36 ~~adopted annually following a hearing by the selectboard. The CIP is a schedule of~~
37 ~~capital investments over a number of years. Although most communities have~~
38 ~~some form of a capital savings account, many do not have a CIP. The CIP includes~~
39 ~~estimated costs and a proposed method of financing those costs. Also outlined in~~
40 ~~the program is an indication of priority and the order in which these investments~~
41 ~~will be made. Any CIP must be consistent with the Town Plan. An adopted CIP~~
42 ~~should be drafted with assistance from TRORC to ensure consistency with the~~
43 ~~Town Plan. The given town’s selectboard has the ultimate decision as to whether~~
44 ~~or not such a budget and program is adopted.~~

45 From a regional standpoint, investments in municipal infrastructure must be
46 made based on the population they will serve and on the most pressing needs.
47 For communities with existing infrastructure and stable population numbers,
48 capacity is not a significant issue, therefore priority for future investments is in
49 modernizing or replacing aging infrastructure. This will make these systems more
50 sustainable and affordable and will protect against loss of service. ~~In addition,~~
51 ~~any opportunities to make improvements to existing systems that increase their~~
52 ~~energy efficiency should be implemented.~~

53 ~~Vermont’s population growth has flattened substantially over the past decade,~~
54 ~~and our Region is at a standstill. While population growth can influence the need~~

55 ~~for improved utilities, facilities, and services, so can changes to the makeup of a~~
56 ~~static population. An increased number of residents within a community can~~
57 ~~require additional roads, whereas an aging population can increase the need for~~
58 ~~health care. To ensure that essential systems are able to handle changes, long-~~
59 ~~range planning is needed.~~

60 **Goals, Policies, and Recommendation: Overall Utilities,**
61 **Facilities, and Services**

62 **Goals**

63 1. The ~~expansion,~~ maintenance, expansion, or construction of new
64 facilities and utilities ~~is will be~~ financially sustainable for governments
65 and taxpayers.

66 2. Investments in utilities, facilities, and recreation enhance the desired
67 pattern of development which is compact village and urban centers
68 surrounded by open countryside.

69 **Policies**

70 1. Public investments in governmental and public utility facilities, services,
71 ~~and lands~~ should support existing and future development.

72 2. The scale, type, and design of major public utilities and facilities shall
73 be consistent with ~~undertaken so as to complement~~ the future land use
74 settlement patterns recommended in this Plan and relevant municipal
75 plans.

76 ~~2.3.~~ Public investments in municipal, regional, and state facilities should be
77 located within existing or planned Regional Growth, Industrial, and
78 Mixed-Use Areas.

79 ~~3.4.~~ Public facilities such as solid waste disposal facilities, correctional
80 facilities, and wastewater treatment facilities shall be situated in an
81 area where they best serve their purpose while minimizing negative
82 impacts on the surrounding area.

83 ~~4.5.~~ TRORC supports the acquisition of future public and quasi-public utility
84 sites, properties, or interests, when such acquisitions advance the goals
85 and policies of this Plan and relevant local plans.

86 ~~5.6.~~ The construction of primary educational facilities, health-care facilities,
87 emergency facilities, post offices, libraries, and other public facilities
88 should occur in or adjacent to existing or planned Regional Growth and
89 Mixed-Use Areas, so as to maximize their convenience to people (either
90 locating facilities near transit stops or walking distance), to minimize
91 additional infrastructure improvement costs, and to contribute to the
92 vitality of communities.

93 ~~6.~~ ~~TRORC supports the development of innovative and stable sources of~~
94 ~~public facility funding to supplement traditional funding resources.~~

95
96 **Recommendations**

1. ~~TRORC will foster partnerships between public investment planning and implementation activities and the private sector in a manner that advances the goals and policies set forth in this Plan.~~

2. ~~TRORC should look into developing a capital budget for the Region.~~

B. Water and Wastewater Systems

The TRO Region is largely a rural region, with ~~most a majority~~ of ~~the~~ water supply handled through individual on-site wells and septic systems. Only a fraction of municipalities ~~has have~~ public water systems, and in those municipalities, the systems serve a limited area—generally downtown or village areas (see map/figure X). ~~Many of the supply and sewer lines need. Additional community systems may serve a large development or neighborhood.~~

~~For villages and downtowns, water supply systems are a vital piece of infrastructure. Water systems allow communities to create greater population density than would be possible without them. Well-maintained public drinking water infrastructure is critical for public health, strong businesses, and a clean environment. Municipalities are required by law to create plans, which ensure that drinking water supplies will remain safe and untainted.~~

~~There are 15 municipal water systems in 12 municipalities in the TRO Region. Most of the supply lines are in need of~~ repairs or upgrades. Some systems suffer from inadequate storage or from poor line pressure. Many systems have poorly mapped lines due to their age (50 to 100 years old). Municipalities are required by law to create Source Protection Area (SPA)³ plans, which ensure that drinking water supplies will remain safe and untainted.

For villages and downtowns, water supply and septic systems are vital infrastructures, as they allow communities to create greater population density than would be possible without them. Well-maintained public drinking water

123 infrastructure and septic systems are critical for public health, strong businesses,
124 and a clean environment.

125 Currently, there are 12 wastewater treatment facilities in 9 communities in our
126 Region⁴. ~~Potable water may be lost through leaking pipes due to age, damage~~
127 ~~from frost, or other causes. Losses can go undetected for years if the water gauges~~
128 ~~are not properly installed or functioning. Large leaks in water mains can and have~~
129 ~~caused damage to roads in our Region. During Tropical Storm Irene, several~~
130 ~~communities experienced damage to water lines that passed under the river, that~~
131 ~~was difficult to identify.~~

~~To increase the long-term sustainability of existing water system infrastructure,~~
133 ~~municipalities can implement water efficiency programs. These programs include~~
134 ~~installation of water meters, which can help identify areas of unusual loss or use,~~
135 ~~and water saving devices. Water efficiency programs can reduce operating costs~~
136 ~~and reduce the need for additional sources of water or water storage facilities.~~
137 ~~Reductions in water usage can also lead to less energy usage to treat, heat, and~~
138 ~~dispose of water. Financial savings from these efficiency upgrades can be set aside~~
139 ~~to build cash reserves for future system investments.~~

140 **C. Wastewater Treatment Systems**

141 ~~There are 12 wastewater treatment facilities in 9 communities in our Region.~~ The
142 bulk of these systems were originally built in the 1970s and 1980s, with periodic
143 improvements being made in response to aging equipment or increasing demand.
144 As time goes on, the cost of necessary upgrades for these facilities increases.

145 Wastewater treatment facilities suffer from structural defects such as leaking
146 sewers, sewer pipe leakage as well as decrepit older built connections that funnel
147 stormwater ~~from impervious surfaces such as rooftops, roadways, and parking lots~~

148 into combined sewer and stormwater lines ~~—which diminishes the efficacy of~~
149 ~~wastewater rehabilitation.~~

150 The majority of the wastewater systems in our Region have ~~sufficient~~ at least 45
151 ~~percent available~~ capacity. Given that population growth rates have flattened
152 ~~substantially~~, it is likely that the design capacity of the systems in most
153 communities will be sufficient, as long as they are maintained.

154 ~~However, new w~~Wastewater treatment facilities and/or public water supplies will
155 eventually be necessary in all communities' core areas if they desire to grow,
156 create more housing, or attract businesses. ~~Currently, the towns of Norwich,~~
157 ~~Hartland, Sharon, Strafford, and Fairlee are the highest priority for wastewater~~
158 ~~treatment facilities to achieve the State's goal of "densely populated villages and~~
159 ~~downtowns surrounded by open countryside."~~ Hartland and Norwich are the
160 largest communities in the TRO Region without wastewater treatment facilities.
161 Fairlee and Strafford both have viable village centers that would benefit, both
162 economically and in overall health, from the ability to concentrate more
163 development within those areas. Municipal plans, per Vermont statute, shall
164 identify and prioritize future capital improvements and major repairs, as well as
165 estimate costs and financing for maintenance and future capacity.

166 **Goals, Policies, and Recommendations: Water and Wastewater** 167 **Systems**

168 **Goals**

- 169 1. Municipal water and wastewater systems are secure, financially
170 sustainable, well-maintained and energy efficient.
- 171 2. Municipal water supply areas maintain high and wastewater systems
172 ~~take into account the water~~ quality of drinking water for public
173 ~~health and watersheds.~~

174 **Policies**

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- 175 1. Municipalities and private utilities should create capital budgets and
176 reserve accounts for utilities and facilities management and operations.
- 177 2. TRORC ~~will~~ supports proposals to install, upgrade, and improve existing
178 public water supplies and wastewater treatment facilities that serve
179 Regional Growth, Industrial, and Mixed-Use Areas as designated in this
180 Plan, as well as affordable housing projects in Rural Areas.
- 181 3. Proposals for upgrades, improvements, or expansion of water and
182 wastewater treatment infrastructure ~~shall not that~~ promote sprawl,
183 strip development, and scattered land uses. ~~are not compatible with~~
184 ~~this Plan.~~
- 185 4. ~~When systems are extended to service a new development, careful~~
186 ~~consideration must be given to the impacts of additional hookups along~~
187 ~~the length of the extension. The allowance of new New hookups must~~
188 not promote sprawl or strip development.
- 189 5. TRORC ~~will~~ encourages the location of community water supplies and
190 wastewater treatment facilities primarily in Regional Growth, Industrial,
191 and Mixed-Use Areas; however, systems designed specifically to supply
192 appropriately scaled cluster housing projects in rural areas ~~are may be~~
193 consistent with this Plan.
- 194 6. Land development within existing or planned Source Protection Areas
195 ~~shall not that~~ poses a reasonable threat of contamination to public
196 water supplies. ~~is not compatible with this Plan.~~
- 197 7. TRORC ~~will~~ supports water conservation measures to reduce demand
198 for water and to promote the life span and efficiency of water and
199 wastewater facilities.
- 200 8. TRORC supports will and encourages installation of community
201 wastewater treatment facilities and/or water supply systems in areas of

202 existing concentrated settlement where conventional on-site septic
203 systems and wells are inadequate for public health and development.

204 9. New water and wastewater systems should be designed to be ~~as~~
205 energy efficient and secure ~~as possible~~.

206 10. The village areas of Norwich, Hartland, Sharon, Strafford, and Fairlee
207 are the highest regional priorities for new wastewater treatment
208 facilities.

209 Recommendations

210 1. Municipal plans, per Vermont statute, shall identify and prioritize
211 future capital improvements and major repairs, as well as estimate
212 costs and financing for maintenance and future capacity.

213 2. TRORC will assist communities with the identification and prioritization
214 of future capital improvements and repairs, grant writing, and project
215 management.

216 3. TRORC will continue to offer capital budgeting services to workshops
217 throughout the towns. Region.

218 4. Water efficiency programs and codes should be adopted at the state or
219 local level to reduce demand ~~for on~~ municipal water systems.

220 5. TRORC shall seek grant opportunities to map water and wastewater
221 systems throughout the Region.

222 6. When funding is available, municipal plans should inventory water and
223 wastewater systems to identify current and projected capacity gaps.

224 7. Municipalities should conduct periodic auditing of all water and
225 wastewater distribution systems to calculate infiltration and losses.

226 **CD. Solid Waste**

227 All Vermont municipalities, either individually or as part of a solid waste district or
228 an intermunicipal association, are required by Vermont law encouraged to adopt a

229 Solid Waste Implementation Plan (SWIP)⁵. The SWIP documents town or district
230 waste management facilities and articulates how solid waste will be managed over
231 the next five years. All solid waste districts and intermunicipal SWIPs must
232 be regulations or amend current regulations to promote dense development in
233 compliance areas with public sewer and water.

234 the goals outlined in the statewide 2019 Materials Management Plan (MMP)⁶. In
235 addition to being in conformance with the state plan, all SWIPs must be in
236 accordance with any Town or Regional Plan. The TRO Region is served by a total of
237 six waste management districts⁷, six waste management districts, as well as one
238 intermunicipal association. The Greater Upper Valley Solid Waste Management
239 District⁸The Greater Upper Valley Solid Waste Management District covers a ten -
240 town area, which contains nearly half a third of the Region's population, based on
241 2010 U.S. Census Bureau figures. The second largest service area by population is
242 within the town of Hartford Community Recycling Center, which covers 18 percent
243 of the Region's population. It currently operates the Hartford Community
244 Recycling Center⁹. a solid waste/recycling transfer center on a 19-acre site (the
245 former town landfill). The third largest waste management district by population
246 is the White River Alliance¹⁰, White River Alliance, which covers eight of the
247 Region's towns, and roughly 17 percent of the regional population.

248 As of 20232014, there are 25 active solid waste facilities throughout our Region
249 that have been certified by the State. Presently, the Region has 7 recycling
250 facilities, 4 composting facilities, and 11 transfer stations (see map). A third of the
251 Region's towns lack any waste management facility, and are instead reliant on
252 their neighboring municipalities for waste disposal. In some instances, these
253 towns find themselves two to three towns removed from a landfill or transfer
254 station. There are no operating landfills in the region.

255 ~~While the Greater Upper Valley Solid Waste Management District has transfer~~
256 ~~stations and recycling centers within its region, it is currently reliant on a landfill~~
257 ~~outside its region, in neighboring Lebanon, New Hampshire~~

258 **~~Universal Recycling Law~~**

259 ~~According to the Agency of Natural Resources (ANR), the average Vermont~~
260 ~~resident generated 5.18 pounds of waste per person per day in 2014. In 2012,~~
261 ~~Vermont adopted Act 148, commonly known as the Universal Recycling Law, to~~
262 ~~promote the universal recycling of solid wastes and keep more waste out of~~
263 ~~landfills. The law works by phasing in a required separation of waste materials~~
264 ~~over six years, giving municipalities and waste management districts time to~~
265 ~~establish necessary collection services and accompanying waste processing~~
266 ~~facilities for residents. Following this, the Secretary of the ANR implemented rules~~
267 ~~in the form of the Vermont Materials Management Plan (MMP), which came into~~
268 ~~effect in June of 2014.~~

269 ~~Four goals serve as the basis of the state Materials Management Plan (MMP)~~
270 ~~vision:~~

- 271 ~~1. To prevent waste from being generated;~~
- 272 ~~2. To promote sustainable materials management, with a preference for~~
273 ~~efficient and best uses;~~
- 274 ~~3. To minimize reliance on waste disposal (landfilling and incineration);~~
275 ~~and~~
- 276 ~~4. To conserve resources, minimize energy consumption, and reduce~~
277 ~~greenhouse gas (GHG) emissions and other adverse environmental~~
278 ~~impacts.²~~

279 ~~The biggest task ahead of solid waste management entities is providing residents,~~
280 ~~businesses, and municipal governments with education and guidance about their~~

~~role in these new waste management requirements. Conducting this necessary outreach is a critical task to ensure proper compliance with the statewide MMP.~~

~~The MMP sets out eight implementation objectives:~~

- ~~1. Expanded education and outreach to schools, businesses, and the general public.~~
- ~~2. Extended producer responsibility and product stewardship.~~
- ~~3. Reduction in the statewide disposal rate (pounds per person per year).~~
- ~~4. The reuse, recycling, and composting of materials to reduce the amount landfilled.~~
- ~~5. Reduction of toxicity in the waste stream.~~
- ~~6. Improved availability of statewide infrastructure and services for waste reduction and diversion through convenient, consistent, and cost-effective services.~~
- ~~7. Improved measurement and progress of performance standards.~~
- ~~8. Development of sustainable financial structures to manage materials.³~~

~~The most obvious role for TRORC regarding solid waste is to provide outreach and education to our communities. As the ANR continues to implement the requirements of the Vermont MMP, TRORC can help guide our communities through those requirements, ensuring that the plan is implemented. Additionally, TRORC can continue to support our Region's solid waste districts when seeking permits through Act 250 or when renewing solid waste plans. Towns can consider consolidating solid waste services to cut costs; TRORC is able to assist communities with writing agreements.~~

Goals, Policies, and Recommendations: Solid Waste

Goals

1. Solid and hazardous waste generation in the TRO Region is reduced.

307 2. Reuse, recycling, and composting in the TRO Region is increased.

308 **Policies**

309 1. Solid waste collection systems should be coordinated to lessen costs
310 and increase efficiency.

311 2. Products that are fully recyclable are encouraged to be recycled.

312 **Recommendations**

313 1. TRORC will continue to assist member towns, alliances, and the Greater
314 Upper Valley Solid Waste Management District in the update and
315 implementation of municipal and regional solid waste plans.

316 2. TRORC will support and participate in any future discussions regarding
317 the development of regional waste management services.

318 3. TRORC should assist towns in meeting the Universal Recycling Law
319 requirements through outreach and education, with assistance from
320 the Agency of Natural Resources.

321 4. All towns or districts of this Region are encouraged to contact TRORC
322 offices regarding their current planning activities and determine if their
323 SWIP revisions meet the overall goals and policies of this Plan.

324 ~~5. TRORC should study the affordability of solid waste services in the~~
325 ~~Region.~~

326 **DE. Educational Facilities and Services**

327 Access to ~~a system of~~ quality education is required to achieve social and economic
328 goals ~~of throughout~~ the TRO Region. According to Vermont statute, the right to
329 public education is key to guaranteeing political and civil rights to constituents.

330 Indeed, "to keep Vermont's democracy competitive and thriving, Vermont
331 students must be afforded substantially equal access to a quality basic
332 education¹¹."

~~Sustained regional and economic development will be impossible in the Region unless financial and geographic access to education is affordable and convenient. Without a well-educated work force, the Region’s residents, like the rest of Vermont residents, will be unable to compete with other states for well-paying jobs. Further, education and child care are necessary to community vitality.~~

Elementary and Secondary Schools

~~Sound planning for educational facilities and programs is necessary to support the social, economic, and cultural welfare of a community. Increased levels of higher education correlate with higher earnings, lower unemployment and poverty rates, decreased reliance on social welfare programs, and higher levels of civic engagement.⁵ Furthermore, higher levels of education positively correlate with improved health, well-being, and lower crime rates.⁶ A quality education provides the foundation for a child’s productive future, enabling the child to make positive contributions to business, civic affairs, and family life.~~

All public schools in the Region are governed by a district school board elected by the voters of their respective municipalities, and administrative support to the district board is received from supervisory unions. ~~In the 2016–2017 school year, there were a total of 44 public and private educational facilities within, or serving, the Region. Total enrollments amounted to approximately 8,372, covering grades K through 12 and special programs.^{7, 8}~~ Some school districts and municipalities accept, on a year-to-year basis, tuition-paying students from neighboring communities that do not provide elementary or secondary education, or that lack adequate facilities.

Declining enrollments have brought staffing, programmatic, and financial planning challenges to schools throughout the Region, resulting in the closure of some several schools.

359 ~~In the years 2003–2016, schools in the TRO Region saw a 3.14 percent decline in the~~
 360 ~~number of enrolled students. There were 8,650 students for academic year 2003–~~
 361 ~~2004 and 47 educational facilities, and then just over 8,372 enrolled students in~~
 362 ~~2016, with a loss of three schools. The decline in student enrollment was most~~
 363 ~~pronounced in Windsor County, which has seen student numbers fall by over 12~~
 364 ~~percent since 2003. The largest gains and declines in individual school enrollment~~
 365 ~~numbers were seen in Orange County schools. The student body at Vermont~~
 366 ~~Academy of Science and Technology in Randolph, a school that provides specialized~~
 367 ~~and advanced courses for students from other area schools, increased by 862~~
 368 ~~percent. Meanwhile, enrollment at Potter’s House in Hartford declined by 87.5~~
 369 ~~percent. In Windsor County, Barnard Central School enrollment numbers increased~~
 370 ~~by over 22 percent, and the Rochester School’s student numbers declined by nearly~~
 371 ~~43 percent.~~ Sustained levels of decline may have adverse~~untold~~ social and
 372 economic impacts for towns in the TRO Region, and are, therefore, an area of
 373 vigilance and concern for the future well-being of the Region.

374 A table of schools in the Region and their average daily enrollment~~membership~~
 375 can be found~~seen in previous versions of the Regional Plan or~~ on the Vermont
 376 Department of Education website¹².

377 ***Homeschooling***

378 ~~Not all children in the Region attend public or private schools; some are~~
 379 ~~homeschooled. As of the 2014 school year, 5 percent of students in the Region~~
 380 ~~were homeschooled. More recent numbers on this are not available.~~ While
 381 homeschooled children do not require educational provisions from school
 382 districts, there are actions~~still considerations~~ that towns and local organizations
 383 should consider~~make~~ for the wellbeing of these children. ~~For instance, there are~~
 384 ~~several organizations and programs in the Region, such as Artistree in Pomfret,~~
 385 ~~that provide extracurricular activities to supplement class learning.~~

386 ~~Quality educational facilities are expensive investments to construct and maintain,~~
387 ~~and per pupil tuition rates are increasingly steep. As a result, schools require~~
388 ~~careful and diligent longrange planning by school officials, administrators, and~~
389 ~~citizens.~~

390 *Poverty and Education*

391 ~~The~~ ~~It is important to note that the~~ Region’s school system provides a major~~the~~
392 ~~main~~ avenue of support for children living in poverty, as it may be the main
393 ~~source.~~ ~~In Orange County, 17.5 percent~~ of food for children in this condition.~~under~~
394 ~~18 live in poverty, and in Windsor County, 13.3 percent of children under 18 live in~~
395 ~~poverty, according to the 2016 American Community Survey.~~ Children who are
396 homeless have the same right of access to a free public education that other
397 children do. ~~In the 2013–2014 school year, 1,145 homeless children in Vermont~~
398 ~~were enrolled in school.⁹ (There is no regionally specific data available.) It is~~
399 ~~important to realize that M~~many students may not be classified as homeless but
400 may be staying with friends and ~~other~~ family members, or be housed in a motel.
401 The summer, when school is out~~off~~, is concerning for those that are homeless and
402 living in poverty, as schools can be the main source of food for children who are
403 homeless and living in poverty~~in these conditions.~~

404 *Vocational Training and the Region’s Youth*

405 Educational~~In recent years, promoting educational~~ opportunities that support the
406 acquisition of professional skillsets allowed students to better understand and
407 prepare for valuable local employment sector opportunities. ~~Act 77, more~~
408 ~~commonly known as the Flexible Pathways Initiative, was passed by the Vermont~~
409 ~~Legislature in 2013 with the intention of expanding educational opportunities,~~
410 ~~including more work-based learning and access to career and technical~~
411 ~~education.¹⁰ This initiative is intended, in part, to help students align their interests~~
412 ~~and abilities with professional prospects within the context of their academic~~

413 ~~curriculum.~~ Many trades are an integral part of our economy and can supply a
414 good living wage.

415 ~~Both students and prospective employers from local enterprises stand to benefit~~
416 ~~substantially from the formal connections between students and the working~~
417 ~~world, both within and outside of the traditional classroom.~~ These connections
418 serve as an enriching supplement to traditional academic course offerings.
419 Providing opportunities for the Region’s youth to see, experience, and learn about
420 local jobs may serve as an incentive, convincing many youths to stay in our
421 communities well beyond high school. In our region, there are currently three
422 vocational schools:

- 423 • River Bend Career and Technical Center in Bradford¹³
- 424 • Randolph Technical Career Center¹⁴
- 425 • Hartford Area Career & Technology Center¹⁵

426 Both students and prospective employers from local enterprises stand to benefit
427 substantially from networks formed between students and the working world,
428 both within and outside of the traditional classroom.

429 ~~Higher Education~~

430 ~~There are several higher education options located in the Region that include the~~
431 ~~following:~~

- 432 • ~~Vermont Technical College — Randolph~~
- 433 • ~~Vermont Law School — South Royalton~~
- 434 • ~~Center for Cartoon Studies — White River Junction~~
- 435 • ~~Community College of Vermont — Wilder~~

436 ~~Nationally, Vermont is ranked lowest in higher education funding.⁴¹ This can drive~~
437 ~~up the costs for students seeking degrees.~~

438 These connections serve as an enriching supplement to traditional academic
439 course offerings.

440 *Adult Education*

441 The availability of ~~adult~~ education services for adult learners¹⁶ is critical to the
442 social and economic well-being of the Region and its residents. ~~The Vermont~~
443 ~~Agency of Education defines adult learners as “persons 16 years of age and~~
444 ~~older, who may or may not be enrolled in school, and lacking essential skills or a~~
445 ~~credential equivalent to high school completion.” The Agency funds adult and~~
446 ~~continuing education through its Adult Education and Literacy Program. The~~
447 ~~Agency of Education funds three~~ adult learning centers in the region~~Region: the~~
448 ~~Vermont Adult Learning Center in Hartford and the two Central Vermont Adult~~
449 ~~Basic Education Centers in Randolph and Bradford.~~

450 ~~These centers~~ offer classes free of cost to adults in basic skills, General
451 Educational Development (GED) certification, English as a second language,
452 college transition skills, and work readiness skills, including WorkKeys (ACT)
453 certification. ~~For instance~~ ~~Additionally~~, The Family Place ~~is~~, a family support center
454 ~~that~~, offers courses to young mothers with the aim of helping them earn their
455 GED and acquire basic employment skills.

456 The Agency of Education funds three adult learning centers in the region: the
457 Vermont Adult Learning Center¹⁷ in Hartford and the two Central Vermont Adult
458 Basic Education Centers¹⁸ in Randolph and Bradford. Both of the Community
459 Action Agencies covering the TRO Region (Southeastern Vermont Community
460 Action¹⁹ and Capstone Community Action²⁰) have adult education and job skills
461 programs. Capstone Community Action has two locations in our Region: Bradford
462 and Randolph. Southeastern Vermont Community Action’s physical location is in
463 Westminster, with an additional office in White River Junction. Other than these
464 options, participants are required to travel outside the Region for these

465 educational opportunities. This is a limiting factor to the Region’s lower-income
466 residents who wish to use these services.

467 ***Continuing Education***

468 As Vermont’s senior population significantly increases, and adults of all ages
469 continue to seek learning opportunities for economic or personal reasons, the
470 State will be confronted with the need for both new educational and recreational
471 activities. Currently, residents can enroll in the following institutions:

- 472 • Artistree in Pomfret²¹
- 473 • Vermont Law and Graduate School in South Royalton²²
- 474 • Vermont State University in Randolph²³
- 475 • Dartmouth College in Hanover, NH²⁴
- 476 • Riverbend Career and Technical and Oxbow High School in Bradford²⁵
- 477 • Bethel University in Bethel²⁶
- 478 • Community College of Vermont in Wilder²⁷

479 ~~There are a number of continuing education programs for seniors throughout the~~
480 ~~Region; however, the distance, lack of safe and reliable transportation, lack of~~
481 ~~access to highspeed Internet, and a lack of understanding of the basic facets of~~
482 ~~information technology may prevent them from enjoying the opportunities~~
483 ~~available. Currently, with respect to in-person instructional classes, residents can~~
484 ~~participate in classes at the following institutions:~~

- 485 ~~• Artistree in Pomfret~~
- 486 ~~• Vermont Technical College in Randolph~~
- 487 ~~• Dartmouth College in Hanover, NH~~
- 488 ~~• Riverbend Career and Technical and Oxbow High School in Bradford~~
- 489 ~~• Bethel University in Bethel~~

~~Community College of Vermont in Wilder~~

The Future of Education in the Region

Many of our Region’s communities have a school. Schools are often seen as the center of a community, or at the very least, a location that brings the townspeople together. Unfortunately, declining enrollments and an aging population have made~~are making~~ the traditional model of “one school in every town” less sustainable. The cost of publicly educating children places a significant financial strain on many municipalities. ~~Surveys in many of our communities show a growing frustration with the cost of education in Vermont.~~ As a result, many communities continue to work on ways that they can collaborate together to decrease costs and maintain the quality of education desired by everyone.

Ensuring all students have access to high-speed Internet will extend our students’ academic offerings beyond the brick-and-mortar classroom setting and put students on an equal footing with those from more developed regions of the nation. Lack of access to high-speed Internet in portions of the Region can hinder access to education materials.

With the adoption of [Act 46²⁸](#) in 2015, many schools in the Region began~~have begun~~ consolidating with other districts. ~~Several, considering closing several schools, or reducing the number of grades.~~

~~Some~~ communities have either closed or merged~~(Hancock, Granville, Bridgewater, Rochester, Stockbridge, Chelsea, Tunbridge, and Plymouth) have opted to close their schools or to merge schools~~ with other communities. If the trend toward smaller classes and fewer children in many towns continues, more communities will need to engage in these consolidation discussions. ~~However, the closing or merging of schools is not a simple decision. For towns with no defined community center, a school often acts as the central focal point for the community. In many communities, the academic institutions are the largest employer(s) and the~~

~~\$17 metaphorical center of the community. Downsizing or closing of schools also~~
~~\$18 means, in many instances, laying off neighbors and friends.~~

519 Considering the cost of repairs is also important when determining whether
520 schools ought to be consolidated. In the event that communities choose to close
\$21 or merge schools, how to manage ~~vacant~~the vacated infrastructure should be part
522 of the discussion.

\$23 For many communities, the closure of a school can present new opportunities;
\$24 ~~b~~Because schools are often located within villages or town centers, they can
525 become prime locations for reuse in areas that are otherwise built up. Possible
526 options for reuse of existing school buildings could include:

- 527 • Town offices and other municipal services
- 528 • Inclusive, mixed age and income housing opportunities
- 529 • Senior centers
- 530 • Light industrial development
- 531 • Business incubators or office parks

~~\$32 In addition to the existing school building, facilities that had land for athletic~~
~~\$33 purposes may now be available for new development.~~

534 **Goals, Policies, and Recommendations: Educational Facilities** 535 **and Services**

536 **Goals**

- 537 1. Accessible and affordable educational facilities and services are
538 available throughout the Region that meet or exceed statewide
539 standards, including life-long learning opportunities.
- 540 2. Students have access to quality vocational and workforce training
541 opportunities to prepare them for future careers.

542 **Policies**

543 1. The construction of primary educational facilities should occur in or
544 within close proximity to existing or planned Regional Growth and
545 Mixed-Use Areas, so as to maximize their accessibility to people and
546 infrastructure, ~~as well as contribute to the vitality of communities.~~

547 2. Expansion of continuing education and vocational education
548 opportunities is encouraged.

549 ~~3. Adaptive reuse of vacant school facilities that occurs in a manner that~~
550 ~~enhances villages and downtowns and stimulates the local economy is~~
551 ~~supported.~~

552 **Recommendations**

553 1. Town and school authorities should create and maintain safe
554 pedestrian access and transit opportunities to educational facilities, in
555 line with Safe Routes to School efforts.

556 2. Towns must assess and incorporate the needs of disabled children and
557 staff into educational facility and budgetary planning efforts to ensure
558 the provision of free and appropriate education for all children.

559 3. Towns should consider adaptive reuse of vacant school facilities that
560 occurs in a manner that enhances villages and downtowns and
561 stimulates the local economy.

562 4. Towns should consider applying for funding opportunities enhancing
563 educational facilities as early as possible (i.e., a year in advance) in
564 order to request help from TRORC, if needed.

EF. Child-Care Services

The availability of high-quality and affordable ~~childcare~~~~child care~~ is an important factor in the appeal and sustainability of our Region. ~~Child care fulfills many roles within the Region.~~ For example, the ~~childcare~~~~child care~~ industry contributes to the regional economy as a business and employer in its own right. It also functions as a service industry that provides crucial support to employers and employees. Without access to affordable, high-quality ~~childcare~~~~child care~~, one parent would likely leave the labor force to care for young children. Good quality ~~childcare~~~~child care~~ helps prepare children for schooling or may even supplement a child’s school curriculum, and it provides them with opportunities for socialization.

~~There are long-term benefits of high-quality child care as well. Research conducted by a regional economic analyst demonstrated that investment in early childhood development programs brings a real (adjusted for inflation) public return of 12 percent and a real total return, public and private, of 16 percent.⁴² The State of Vermont invests in making high-quality child care affordable through its child care subsidy, available to working families on a sliding scale, and through offering prekindergarten programs to all three- to five-year-olds for 10 hours per week.~~

Child-Care Services in the Region

According to the ~~2020~~~~2010~~ U.S. Census, approximately ~~5356~~,000 people live in the TRO Region. The number of children aged 0-14 is a relatively small percentage of the Region’s population: just over ~~15 percent, or 12,445 individuals.~~ As of 2020, there are 101 registered and licensed childcare providers; to see the locations of providers and the types of programs they provide, please visit Bright Future’s [Childcare Information System](#)²⁹. ~~16 percent, or 9,015 individuals.~~ There are currently ~~154 regulated child care and early education programs (47 in Orange~~

592 ~~County and 107 in Windsor County), comprised of after-school child care~~
593 ~~programs (ACCPs), center-based child care and preschool programs (CBCPPs),~~
594 ~~and family child care homes (FCCHs).⁴³ Comparatively, there are 1,269 regulated~~
595 ~~child care and early education programs in the State of Vermont.~~

596 ~~Hartford has the highest number of regulated child care programs in our Region.~~
597 ~~Otherwise, child care providers are, for the most part, reasonably spread across~~
598 ~~the Region. Five towns are without any type of licensed or registered child care:~~
599 ~~Bridgewater, Granville, Pittsfield, Pomfret, and Vershire. It is important to note~~
600 ~~that the number of private (unregulated), in-home child care providers in our~~
601 ~~Region is unknown, but it is likely that this type of provider makes up a significant~~
602 ~~portion of the child care providers.~~

603 ~~There are a few larger employers in the broader Region that offer child care for~~
604 ~~their employees. These employers have sliding fee scales, but costs still remain~~
605 ~~high. Such employers include Dartmouth Hitchcock Medical Center and~~
606 ~~Dartmouth College. The Gifford Medical Center in Randolph has a child care~~
607 ~~center that provides child care to Gifford Medical Center employees and the~~
608 ~~public. There are also some employers in the area who offer child care to their~~
609 ~~employees at a reduced rate, but also have slots open to the public. Regardless, it~~
610 ~~is critical for the quantity and quality of child care providers to meet the needs~~
611 ~~and expectations of parents and guardians living and/or working in the Region.~~
612 ~~With several of our regional centers of jobs in manufacturing and hospitals, it is~~
613 ~~especially important to have child care outside of the traditional work-day hours~~
614 ~~for those who work weekends and nights.~~

615 ~~**Other Forms of Child Care and Early Learning Programming**~~

616 After-school programs and summer camps provide childcare~~child care~~ options for
617 parents with children old enough to attend public or private school full time.
618 Both help to keep children engaged in enriching activities, while also allowing

619 parents to feel comfortable that their children are safe if they are working past
620 school hours or during summer vacation. According to the 2020 Vermont After 3
621 PM study³⁰, statewide there are approximately 19,000 children who are
622 participating in afterschool programs and 26,000 children who are not because of
623 financial constraints and lack of available programs in their communities There
624 are approximately 20,000 children in after-school programs in Vermont.⁴
625 However, the number of children attending after-school programs in the TRQ
626 Region is unknown. There is no data on after-school program attendance outside
627 of the K-12 system, yet the State of Vermont recognizes this and has
628 commissioned a study to determine how many children are in this type of care.

629 Barriers associated with childcare in Vermont include inadequate amount of
630 infant/ toddler care available, complicated application forms, and insufficient
631 financial assistance to cover the cost of high-quality services (despite receiving
632 financial help from some childcare providers). Searching for childcare is often
633 difficult for parents in the Region, as the availability of childcare providers,
634 especially for infant and school-age children, is limited. To learn more about
635 other obstacles to childcare services that caretakers commonly experience,
636 visit Vermont's Early Childhood Systems Needs Assessment 2020³¹.

637 To address the workforce needs of childcare providers, there There are many
638 varieties of summer camps that parents may choose to send their children to,
639 from adventure camps to nature camps, summer camps at local recreational
640 centers, and art or music camps. Depending on the program, children may only
641 attend camp during the day for a specific number of days, or they may remain at
642 the camp for an extended period of time.

643 There are a few vocational schools in the Region that have training programs
644 thatto teach interested high school students to care for infants and preschool-age
645 children. One vocational school to offer such a program is the River Bend Career
646 and Technical Center in Bradford in their "Teacher Education³²" Education and

647 ~~Human Development”~~ curriculum. The Randolph Technical Career Center has a
648 ~~and the Hartford Area Career and Technology Center both have~~ similar
649 ~~program~~ programs in their “Education Services³³” ~~“Human Services/Teacher~~
650 ~~Preparation”~~ curriculum, ~~and “Human Services” curriculum, respectively.~~ CCV
651 offers a degree in Early Education³⁴, along with several other related degrees, and
652 an option to obtain a certificate. In addition, there is ongoing professional
653 development offered through Northern Lights at CCV for those who are in the
654 field and seek training or additional qualifications.

655 ~~Barriers to Child Care Services: Cost, Affordability, and Family Structure~~

656 ~~Barriers associated with child care in Vermont include an inadequate amount~~
657 ~~of infant/ toddler care available and insufficient financial assistance to cover~~
658 ~~the cost of high-quality services (despite the financial help from some child~~
659 ~~care providers). Searching for child care is often difficult for parents in the~~
660 ~~Region, as the availability of child care providers, especially for infant and~~
661 ~~school-age children, is limited.~~

662 ~~Over the past decade, the cost of child care in Vermont has risen substantially.~~
663 ~~The market rate for preschool-age children in regulated child care facilities rose~~
664 ~~from \$200 a week in 2012 to \$250 a week in 2017.⁴⁵ In Windsor County, parents~~
665 ~~can expect to pay \$165 to \$250 a week. Comparatively, in Orange County,~~
666 ~~parents can expect to pay \$150 to \$225 a week.⁴⁶ It is more expensive to place~~
667 ~~an infant or toddler in a regulated child care facility. In conjunction with high~~
668 ~~costs for child care, workers often receive wages below Vermont’s livable wage,~~
669 ~~and early childhood educators (child care workers, preschool teachers, and~~
670 ~~preschool educators) do not have pay parity with positions of similar skills and~~
671 ~~educational requirements in the public education systems. It is also expensive~~
672 ~~to provide quality child care, as young children need a high staff-to-child ratio.~~

673 To help families pay for ~~childcare~~child care, the State of Vermont provides
674 financial assistance through the [Vermont Childcare Financial Assistance Program](#)
675 [\(CCFAP\)](#)³⁵. Vermont’s CCFAP helps families who meet certain work, education,
676 and income requirements afford ~~childcare~~child care. The program also provides
677 ~~childcare~~child care financial assistance for children in foster care and children
678 and families who meet certain health criteria.

~~CCFAP makes payments directly to a child care provider on behalf of a family. The
679 amount of the payment is determined by the age of the child, the income and size
680 of the family, the type of child care program, the child care program’s quality
681 designation in STARS (Step Ahead Recognition System, Vermont’s quality
682 recognition and improvement system for regulated child care and early learning
683 programs), and the number of hours of care needed. Assistance is provided on a
684 sliding scale fee that gradually reduces the assistance as family income rises.
685 Families pay a co-payment directly to providers to make up the difference
686 between what the State pays and what the provider charges. Due to chronic
687 underfunding, the program’s reimbursement rates have not kept pace with how
688 much providers charge for quality care, leaving a gap that creates economic
689 challenges for families and providers.~~

~~According to the 2016 American Community Survey, families living in poverty
691 with children comprise 13.6 percent of the Region’s population.~~

693 Given the high costs of ~~childcare~~child care, it can be difficult for ~~these and other~~
694 low- to moderate income families to afford placing their children in ~~childcare~~child
695 care. As a ~~potential~~ consequence of this situation, a family member may decide to
696 provide care ~~for~~the child or children instead of working and supplementing the
697 family income.

698 ~~Out o~~Of approximately 32,000 households in the TRO Region, ~~1,7043,838~~ of them
699 are classified as “single_ head-of-household” with children 18 years old or younger.

700 It is very important for single parents to find ~~childcare~~~~child care~~ so that they are
701 able to work and provide for their families. The parent may have another family
702 member or trusted adult care for their child or children while at work, or they
703 may seek out a ~~childcare~~~~child care~~ provider. Women are often the ones filling the
704 role of the primary caregiver for young children. A national statistic states that [out
705 of all women between the ages of 25-44 who are not participating in the
706 workforce, about a third are not working due to childcare \(compared to 12% of
707 men for the same reason\)](#)³⁶. ~~74 percent of women with a minimum of a
708 bachelor's degree who left their job voluntarily reported child care as their
709 primary decision factor.~~⁴⁷

710 [Let's Grow Kids](#)~~Let's Grow Kids~~³⁷ is a statewide campaign looking for more high-
711 quality, affordable ~~childcare~~~~child care~~ in Vermont to better support our children,
712 families, women, communities, and economy. [More than 70 percent of Vermont
713 children under age 6 have both of their parents in the labor force](#)³⁸, meaning
714 they're likely to need care. Yet half of those infants and toddlers don't have access
715 to any regulated care, and [nearly 80 percent don't have access to high-quality
716 programs](#)³⁹. ~~This nearly 80 percent don't have access to high-quality programs.
717 Vermont's child care shortage disproportionately impacts women, who are three
718 times more likely to leave their careers than men when families can't find child
719 care. It also~~ has a negative ripple effect on our businesses, schools, communities,
720 health-care system, and economy as a whole.

721 In our Region, there have been two major reports that focus on ~~childcare~~. [The
722 Blue-Ribbon Commission on Financing Childcare](#)⁴⁰, published in 2016, looked into
723 the real cost of ~~childcare~~~~child care~~ and found that "the estimated cost of high -
724 quality early care and learning is currently unaffordable for almost 90% of
725 Vermont families." The second report was [Stalled at the Start](#)⁴¹, published in
726 ~~2022~~~~2018~~ and produced by Let's Grow Kids, which analyzed the supply and
727 demand of ~~childcare~~~~child care~~.

728 One available program that could benefit families is the [Childcare Financial](#)
729 [Assistance Program \(CCFAP\)](#)⁴². This is a government program that helps eligible
730 families cover some of the cost of ~~childcare~~child-care. There is also a federal
731 scholarship program for ~~childcare~~child-care center teachers that are trying to
732 earn credentials/degrees. Through the [T.E.A.C.H. Early Childhood Vermont](#)
733 [program](#)⁴³, up to 80 percent of tuition can be covered, along with other
734 benefits.

735 **Goals, Policies, and Recommendations: Childc-~~C~~are Services**

736 **Goals**

- 737 1. An adequate supply of safe and affordable ~~childcare~~child-care services
738 and facilities is available.
- 739 2. A regional network of high-quality ~~childcare~~child-care programs fulfills
740 the needs of families and employers.
- 741 ~~3. Major employers (employing more than 35 employees) provide child~~
742 ~~care services on site or create a partnership with a local child care~~
743 ~~service.~~

744 **Policyies**

- 745 1. TRORC supports initiatives to develop ~~childcare~~child-care facilities
746 where a need has been proven and the location conforms to this
747 Regional Plan.
- 748 ~~2. TRORC should work collaboratively with child care providers and towns~~
749 ~~to help them locate into convenient and safe areas.~~

750 **Recommendations**

751 1. TRORC should encourage major employers (employing more than 35
752 employees) to provide childcare services and create a partnership with a
753 local childcare service.

754 2. TRORC should work collaboratively with childcare providers and towns to
755 help them locate childcare services in convenient and safe areas.

756 ~~1.3.~~ TRORC should work with towns to address identified needs for
757 ~~childcare~~~~child care~~ facilities or services by:

- 758 • Identifying publicly owned buildings throughout the Region; and
- 759 • Evaluating and prioritizing their suitability to serve as ~~childcare~~~~child~~
760 ~~care~~ facilities after considering Vermont regulations.

761 ~~2.4.~~ Towns should review their zoning regulations (if adopted) to determine
762 the ability of the regulations to allow ~~childcare~~~~child care~~ providers to
763 be located in the town.

764 ~~3. Develop business “how-to” guides for providers to navigate local~~
765 ~~permitting.~~

766 ~~4. Conduct a child care needs assessment in the Region.~~

767 **FG. Telecommunications**

768 Information technology (such as broadband Internet and wired/wireless
769 telecommunications) has become essential to residents and businesses in the
770 Region. Our economy, educational systems, and functionality of our homes rely
771 ~~now relies~~ on ubiquitous availability of data and communications for our
772 Region. ~~_to remain economically competitive with more urban areas of the~~
773 ~~State.~~

774 In the 2021 [Vermont Ten-Year Telecommunications Plan⁴⁴](#), ~~2014 Vermont~~
775 ~~Telecommunications Plan~~, the Public Utilities Commission set the following
776 goals:

- 777 • Bringing every currently unserved and underserved on-grid Vermont
- 778 home access to 100/100 megabits per second (Mbps) broadband that can
- 779 be scalable to faster speeds as demand warrants
- 780 • Leveraging residential fiber deployments into better mobile voice
- 781 coverage along key roadways and in small communities
- 782 • Ensuring that telecommunications systems are resilient, redundant,
- 783 secure, and futureproof for commercial, consumer, and public safety
- 784 needs
- 785 • Facilitating competition and choice of multiple internet service providers
- 786 at the majority of premises in the state
- 787 • Promoting local input and oversight in the direction of future use for
- 788 publicly funded broadband infrastructure through empowered regional
- 789 Communication Union Districts
- 790 • ~~Leveraging fiber broadband expansion to ensure public safety has access~~
- 791 ~~to reliable and redundant communications capacity. Every address in~~
- 792 ~~Vermont should have available broadband Internet access with the~~
- 793 ~~minimum technical requirements of 4 megabits per second (Mbps)~~
- 794 ~~download and 1 Mbps upload. By year end 2020, a majority of addresses~~
- 795 ~~in Vermont should have access to the Internet at speeds of at least 100~~
- 796 ~~Mbps symmetrical (download/upload), and every address should have~~
- 797 ~~access at speeds of at least 10 Mbps download.~~
- 798 • ~~Every address in Vermont should have access to wired and wireless~~
- 799 ~~broadband Internet access service.~~
- 800 • ~~Broadband service should be affordable to all members of every~~
- 801 ~~customer class.~~
- 802 • ~~Universal adoption and use of broadband service at home and at work.~~

~~• Universal availability of mobile service along roadways and near universal availability statewide.~~

~~• Reliable, economical telephone service in all areas of the State, including rural areas. All residents, regardless of income or location, should have access to basic telephone service.~~

In the TRO Region, access to broadband is provided via a number of mediums, including cable, DSL (digital subscriber line), fiber-optic cable, cellular, wireless, and satellite. This access varies from town to town, with the highest concentration of availability ~~generally~~ being in villages and downtowns. Broadband providers tend to locate their infrastructure in areas with high population density to maximize the subscriber-to-infrastructure ratio. The farther away from a community center, the fewer options for broadband connectivity; this makes the “last mile” homes and businesses the least likely to have access.

Efforts to improve broadband coverage in the TRO Region are ongoing. Between 2000 and 2012, the State of Vermont invested a substantial amount of funding in an effort to bring broadband to all Vermonters. One such project was the [Vermont Digital Economy Project \(VDEP\)](#)⁴⁵, which was developed as part of the State’s goal to create more resilient communities after ~~the damages caused by Tropical Storm Irene in 2011~~ by delivering 26 free Wi-Fi zones/hotspots. In an effort to speed disaster recovery, spur economic and pursing other prominent projects ~~job growth, and improve community resilience after disasters, the VDEP project was tasked with building digital infrastructure in communities that expanded digital literacy in rural towns. Similar in scope, the VT Community Broadband Board (VCBB)~~⁴⁶, was established in 2021 in order to “accelerate the development and implementation of universal community broadband solutions” all throughout Vermont. ~~had been hardest hit by the storm.~~

§30 In our Region, VDEP has built free village Wi-Fi zones in the communities of
§31 Bethel, Royalton, and Rochester. These investments provide residents who lack
§32 access in their homes with a reliable place to connect to the Internet. In East
§33 Barnard, there is also a community-funded Wi-Fi zone for residents. Village-
§34 wide access is a boon to businesses who can take advantage of the additional
§35 customers who are drawn to the village for Internet access. To see Wi-Fi
§36 coverage across our Region and Vermont, visit [Vermont Department of Public](#)
§37 [Service’s interactive map showing Wi-Fi hotspots](#)⁴⁷.

§38 [The East Central Vermont Fiber-Optic Network \(EC Fiber\)](#)⁴⁸~~The East Central~~
§39 ~~Vermont Fiber Optic Network (EC Fiber)~~ is a consortium of 24 towns (including
§40 21 TRO Region towns) that is working to expand access to high-speed Internet.
§41 ~~The list of towns EC Fiber is working with can be viewed here:~~
§42 ~~<https://www.ecfiber.net/member-towns/>~~ Major cellular providers are
§43 continually working to expand coverage, particularly along major transportation
§44 corridors, such as Interstates 89 and 91.

§45 Use of cellular phones in day-to-day activities has skyrocketed over the past
§46 decade. The availability of broadband cellular data has increased the use of
§47 cellular phones to the point that they are essential to businesses and
§48 individuals alike. In fact, most U.S. households no longer have a “landline”
§49 phone⁴⁹~~.citizens alike. In a 2014 Vermont Telecommunications survey, 57~~
§50 ~~percent of businesses reported that they subscribed to cell phone services for~~
§51 ~~their organization. The average number of cell phones per household in~~
§52 ~~Vermont is 2.39, further supporting that these devices have become common.~~
§53 ~~Many U.S. households no longer have a “landline” phone, but Vermont is the~~
§54 ~~state with the lowest percent of households that have gone wireless.~~¹⁸ The lack
§55 of cell coverage is a major deterrent to both attracting businesses and younger
§56 families.

§57 Cellular access is determined in great part by ~~a region's~~ topography in relation to
858 the placement of cellular transmission towers. While coverage in the TRO Region
859 is reasonably good along main travel corridors, it is spotty in more rural areas. In
860 some instances, there are entire communities (such as Barnard) that have
§61 virtually no cellular access⁵⁰. In ~~most many~~ cases, residents support improved cell
862 phone access, but are less supportive of having the necessary facilities located in
863 their communities. When residents object to proposed facilities, it is almost
864 always due to the potential for aesthetic impacts.

§65 Wireless telecommunications facilities are (primarily ~~cell towers~~) ~~are~~ permitted
§66 under Section 248a⁵¹. ~~one of two state options — Section 248a or Act 250 —~~
§67 ~~depending on the facility. Projects may also be subject to local permitting.~~ The
868 248a process was created to enable a faster permitting process in order to
869 achieve greater wireless coverage, and it specifically exempts projects that
§70 achieve this wireless coverage from local zoning or Act 250. ~~It is limited to~~
§71 ~~facilities that are part of a network, and this permitting authority currently expires~~
§72 ~~in 2020.~~

873 Under the Section 248a permitting process, the Public Utility Commission⁵² must
874 review the environmental, economic, and social impacts associated with a
875 particular project prior to issuing a Certificate of Public Good⁵³. The project is
876 reviewed against the Act 250 criteria and both Regional and Town Plans, and even
877 relevant parts of zoning that would otherwise apply, are accorded “substantial
§78 deference” in such reviews, ~~“unless there is good cause to find otherwise.”~~ ~~(30~~
§79 ~~VSA section 248a(c)(2)).~~ Even when substantial deference is not granted, the
880 248a process must give due consideration to the recommendations of municipal
881 planning commissions, selectboards, and regional planning commissions based on
882 their respective plans. Accordingly, it is appropriate that this Plan address these
883 land uses and provide guidance to town officials, regulators, and providers.

~~Wireless telecommunications towers over 50 feet tall, or more than 20 feet tall if placed on an existing structure, are regulated by Act 250 if not exempted through the 248a process. If such a tower is regulated, then the ancillary developments such as roads and structures that go with it are also regulated. Towers subject to Act 250 are also able to be regulated by municipalities, as are towers and facilities under the height limits. Towns cannot regulate telecommunications facilities in such a manner as to have the effect of excluding them and cannot regulate emissions of electromagnetic radiation.~~

~~Separately from state and local permitting, the Federal Communications Commission (FCC) retains jurisdiction over public airwaves and the telecommunications industry in general. Additionally, the Federal Aviation Administration (FAA) exercises control over the location and height of towers and similar structures to prevent interference with airport operations.~~

Transmission towers are necessary telecommunications facilities, but as land uses, these towers have ~~emerged as~~ planning concerns, primarily for aesthetic reasons. To ensure adequate transmission of signals in mountainous areas such as ours, towers and related facilities need to be located on hilltops or high elevation points. ~~One of the Region’s principal scenic qualities is its ridgelines and mountainsides.~~ These areas are also significant contributors to the scenic and rural character of the Region. ~~The ridges are predominately undeveloped and provide an unbroken skyline viewed from the valley floor. The use of the Region’s ridges for telecommunication towers and related facilities needs to be undertaken in a manner that will not unduly detract from, nor adversely affect, these scenic values.~~ Protection of these areas from insensitive developments is a matter of public good. Thus, due to transmission towers’ higher visibility from multiple vantage points, conflict with scenic landscapes has become an issue.

~~While broadband and cellular service expansion was not in TRORC’s traditional purview, it is an essential public service. It can support opportunities for free~~

~~access such as the village Wi-Fi zones developed through the Vermont Digital Economy Project.~~

Goals, Policies, and Recommendations: Telecommunications

Goals

1. Universal broadband access using fiber is available throughout developed areas in the TRO Region.
2. Universal availability of mobile cellular service is available throughout developed areas in the TRO Region.
- ~~3. Speeds and pricing for residential broadband are on par with national urban areas.~~
- ~~4. The enhancement of telecommunications networks is supported, when such facilities do not have significant adverse environmental, health, or aesthetic impacts.~~

Policies

1. Public and private efforts to expand telecommunications access ~~are~~ supported, when done in a manner that does not have an undue adverse impact on the rural character of our communities.
2. Efforts to provide free public broadband access in places such as village centers and public buildings ~~are~~ supported.
3. Telecommunications facility development shall be excluded from the following areas:
 - a. Floodways shown on FEMA Flood Insurance Rate Maps.
 - b. Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis.
 - c. Rare, threatened, or endangered species habitat or communities.

- 937 4. All new telecommunications facilities and related infrastructure must
938 be sited and designed to avoid or, if no other reasonable alternative
939 exists, to otherwise minimize and mitigate adverse impacts to the
940 following:
- 941 a. Historic districts, landmarks, and sites.
 - 942 b. State or federally designated scenic byways and municipally
943 designated scenic roads and viewsheds.
 - 944 c. Special flood hazard areas identified by National Flood Insurance
945 Program maps.
 - 946 d. Necessary wildlife habitat identified by the State or through analysis,
947 including core habitat areas, migration, and travel corridors.
- 948 5. New telecommunications facilities and related infrastructure
949 (~~including this includes~~ access roads, site clearing, on-site power lines,
950 lighting, and off-site power lines) must be sited to avoid the
951 fragmentation of large priority and high priority forest blocks.
- 952 6. Telecommunications facilities development shall minimize site clearing
953 and highly visible roadways.
- 954 7. The developer shall make reasonable efforts to minimize the aesthetic
955 impact of the telecommunications facility or infrastructure on the
956 surrounding landscape. This includes options such as the utilization of
957 “stealth towers,” camouflage through paint scheme, or designs that
958 blend into the surroundings, such as asymmetrical ~~monopoles mono-~~
959 ~~poles~~ disguised as pine trees.
- 960 8. Telecommunications facilities shall be designed to be the minimum
961 height necessary to achieve coverage.
- 962 9. All new facilities shall incorporate reasonable options for sharing space
963 on the proposed towers. Applicants for new towers must demonstrate
964 that there is no reasonable opportunity for colocation on existing
965 towers.

- 966 10. To support resiliency, applicants shall make space available on towers
967 for municipal communication systems to enhance or expand road and
968 emergency service communication networks.
- 969 11. To minimize conflict with scenic values, facility design and construction
970 shall employ the following principles:
- 971 a. In rural locations, be located in forested areas or be sufficiently
972 landscaped to screen the lower sections of towers and related
973 ground fixtures from public vantage points, such as trails, roads, or
974 water bodies;
- 975 b. In more developed areas, utilize materials, architectural styles, color
976 schemes, lighting fixtures, size, and other design elements to
977 promote aesthetic compatibility with surrounding uses and to avoid
978 adverse visual impacts; and
- 979 c. Be located downgrade of the ridge so as not to exceed the elevation
980 of the tree line as seen from public highways.
- 981 12. Consideration shall be given to the environmental limitations of any
982 given site. Impacts on wildlife habitats, soil erosion, forestry and
983 agricultural lands, and similar resources should be carefully addressed.
984 Projects that materially impact these resources are discouraged.
- 985 13. The clearing of land associated with site development for tower and
986 facility construction ~~shall~~should not negatively impact the scenic views
987 present.
- 988 14. Towers or facilities that are designed to resemble trees or natural
989 features shall not be placed ~~unnaturally~~conspicuously higher than the
990 tree line.
- 991 15. Permits must require removal of facilities that are no longer used.

992 **Recommendations**

- 993 1. TRORC should continue to participate actively in ~~the~~ Section 248a
- 994 permitting process.
- 995 2. Communities should seek out funding to implement new or sustain
- 996 existing Wi-Fi zones in villages and downtowns.
- 997 3. The State should continue to support programs that achieve universal
- 998 broadband and cellular communication access.

999 **GH. Municipal Buildings and Properties**

1000 Towns own a variety of public buildings, ~~and every~~. Every town has a town office
 1001 building. Nearly every town has a town hall where they hold town
 1002 ~~meetings~~meeting and other events. Sometimes, ~~the~~ town offices are also located
 1003 in this building. Towns with their own road crews also own town garages, ~~some of~~
 1004 ~~which are woefully inadequate for their function~~, and ~~are sites~~a site for salt and
 1005 sand storage. Some towns own their own sand and gravel pit, but most contract
 1006 this function out. Nearly all of the town halls and offices are in older structures,
 1007 many of which need substantial maintenance or improvements, but several have
 1008 been renovated to create better working space and improve energy efficiency.
 1009 Town offices, like other civic functions, help to create a sense of community and
 1010 give energy and importance to town and village centers. ~~Town garages are usually~~
 1011 ~~not buildings, but some are still woefully inadequate for their function.~~

1012 Public libraries play an important role in providing materials to inform,
 1013 challenge, and inspire the Region’s residents, ~~as well as Wi-Fi hotspots and~~
 1014 ~~computer access~~. In some towns, public libraries are privately owned
 1015 entities that still provide an essential public service to residents.

1016 ~~The services they provide are changing, partly to meet the changing needs of~~
 1017 ~~users and also because of developments in technology and the availability of~~
 1018 ~~information. Statewide use of national online databases and the Internet has~~
 1019 ~~increased dramatically for libraries in the past few years. According to the~~

1020 ~~Vermont Department of Libraries, the demand for electronic information~~
1021 ~~services has come from rural and remote areas of the State. This presents a~~
1022 ~~challenge to the Region’s libraries to find ways to ensure that all citizens have~~
1023 ~~access to books, information, and worldwide resources, similar to the access~~
1024 ~~opportunities at urban libraries. The onslaught of information technology and~~
1025 ~~the number of new formats, coupled with the vast number of books available,~~
1026 ~~will promote increased resource sharing among the Region’s libraries.~~

1027 **Goal, Policies, and Recommendations: Municipal Buildings**
1028 **and Properties**

1029 **Goal**

- 1030 1. The Region has adequate municipal buildings to serve town needs.

1031 **Policies**

- 1032 1. Town buildings ~~must~~should be carefully sited and designed to meet the
1033 future energy efficiency needs of the town and built with both
1034 construction and operating costs in mind.

- 1035 2. Towns are encouraged to rehabilitate historic buildings that are located
1036 in existing developed areas for their offices.

- 1037 3. The State ~~shall~~should only construct new office buildings in Regional
1038 Growth Areas.

1039 **Recommendations**

- 1040 1. Towns should assess expected maintenance and upgrades for town
1041 buildings and create reserve funds to cover these so that these
1042 buildings remain in good condition.

1043 2. TRORC should assist towns with planning, public dialogue, and grant
1044 writing, if requested, when considering, constructing, or renovating
1045 ~~new~~ buildings so that they meet community needs and are located
1046 wisely.

1047 3. The State must consider effects on the Region and our towns if they are
1048 considering siting new buildings so they fit well with the Region’s
1049 needs.

1050 **H. Recreational Facilities**

1051 Many recreational opportunities are available to the Region’s residents and
1052 visitors. These range from organized, structured prospects at state and federal
1053 parks to more informal opportunities in municipal parks and forests. ~~Recreational
1054 opportunities attract new residents, tourists, second homeowners, and retirees to
1055 the Region and contribute to the quality of life of current residents. The Region’s
1056 recreational resources include elements of the built and natural environment.
1057 Many of our outdoor recreational opportunities are on public lands, but access to
1058 private lands is also important and available through agreements brokered by
1059 groups such as the Vermont Association of Snow Travelers (VAST) and other local
1060 groups. As large landholdings are subdivided and become less available for public
1061 uses, the need for publicly owned land for recreation is critical.~~

1062 ***Public Recreational Opportunities***

1063 The Region has one national park—the [Marsh-Billings-Rockefeller National Historic](#)
1064 [Park](#)⁵⁴ in Woodstock. Associated with the Park is the privately owned [Billings Farm](#)
1065 [and Museum](#)⁵⁵, which offers farm educational programs. The western part of our
1066 Region is also home to a portion of the [Green Mountain National Forest](#)⁵⁶ and the
1067 [Long Trail corridor](#)⁵⁷. [The Appalachian Trail corridor](#)⁵⁸ goes through the central

1068 part of the Region. Additionally, outdoor recreation opportunities are available at
1069 the [Saskadena Suicide Six ski area⁵⁹](#), many rivers and lakes, public and private
1070 forests, and Class 4 roads. Indoor recreational opportunities include ice rinks, [the](#)
1071 [Upper Valley Aquatic Center⁶⁰](#), and the [Montshire Museum of Science⁶¹](#).

1072 Several state parks can be found in the Region, including the [Calvin Coolidge](#)
1073 [Historic Site⁶²](#) in Plymouth, the [Quechee Gorge State Park⁶³](#), and several other
1074 historical sites. The Department of Forests, Parks and Recreation, and the
1075 Department of Fish and ~~Wildlife also have~~~~Wildlife's~~ several state forests, wildlife
1076 management areas, and lake or river access points [that](#) offer additional outdoor
1077 recreational opportunities.

~~1078 Many towns throughout the Region also have town forests that are available for~~
~~1079 recreation; these forests also offer unique educational opportunities for local~~
~~1080 school children and residents about forestry and landscape practices. Twenty-~~
~~1081 three towns in the Region have town forests: Barnard, Bethel, Bradford,~~
~~1082 Brookfield, Chelsea, Fairlee, Hancock, Hartford, Hartland, Newbury, Norwich,~~
~~1083 Plymouth, Pomfret, Randolph, Rochester, Royalton, Sharon, Strafford, Thetford,~~
~~1084 Tunbridge, Vershire, West Fairlee, and Woodstock. Currently, there are public and~~
~~1085 private statewide initiatives studying and encouraging town forest development~~
~~1086 and use.~~

1087 Several towns also offer town recreation programs through their recreation
1088 departments. These may include ski programs in conjunction with local schools in
1089 the winter, camps and track and field programs in the summer, and various events
1090 year-round. These recreation departments may also manage a modest network of
1091 town parks.

1092 Many towns also have excellent trail networks linked to their road networks, and
1093 portions of these networks include Class 4 roads [and trails](#). ~~Town selectboards~~
1094 ~~have the authority to develop a policy that regulates use and maintenance of~~

1095 ~~town trails and Class 4 roads, and several towns have developed policies for these~~
1096 ~~public rights-of-way (ROWs) based on the users' needs.~~

1097 The Region’s rivers and lakes offer opportunities for [swimming, and boating⁶⁴](#), and
1098 [fishing⁶⁵](#), all of which require public access areas for parking or boat launching.
1099 Scenic waterfalls, cascades, and gorges are also destinations for tourists and
1100 residents. There is a need for access areas to water resources in the Region.

1101 Only ~~15~~[13 percent of all land in Vermont is publicly owned by state or federal](#)
1102 [agencies in Vermont](#), which means many of the outdoor recreational resources in
1103 the Region rely on the willingness of landowners to allow access to private land.
1104 Several large private landowners allow access to their land.

1105 Several large private landowners allow access to their land. ~~Notable examples~~
1106 ~~include the owners of the Wilder Dam facility in Hartford and its associated~~
1107 ~~Kilowatt Park, the Montshire Museum lands in Norwich, and lands owned by the~~
1108 ~~Vermont Land Trust and the Nature Conservancy. Other private facilities such as~~
1109 ~~local ski areas and golf courses provide recreation opportunities. Facilities in the~~
1110 ~~Region include the ski centers of Bear Creek, Middlebury Bowl, Northeast Slopes,~~
1111 ~~Nordic Centers, Quechee, and Suicide Six; the Quechee Club; golf courses; and~~
1112 ~~exercise/fitness clubs.~~

1113 **Goal, Policies, and Recommendations: Recreational**

1114 **Opportunities Facilities**

1115 **Goal**

- 1116 1. The Region is home to a variety of indoor and outdoor recreational
1117 opportunities.

1118 **Policies**

- 1119 1. The maintenance and development of recreation trail networks (e.g.,
1120 Appalachian and Long Trails, Cross Vermont and Cross Rivendell Trails,
1121 regional and state snowmobile networks, and cross-country ski trails) is
1122 encouraged.
- 1123 2. New development and land subdivisions that have an undue adverse
1124 impact on the enjoyment or continued use of recreational uses should
1125 be discouraged.~~are inconsistent with this Plan.~~
- 1126 3. Consistent with private property rights, maintenance~~ownership~~ and
1127 enhancement of~~management practices that maintain or enhance~~
1128 public access to and uses of recreational amenities on privately held
1129 land are encouraged.
- 1130 4. Where development interacts with the Appalachian or Long Trails and
1131 other related side trails, design plans and construction must maintain
1132 the predominant scenic character and the primitive qualities of the trail
1133 corridor.
- 1134 5. TRORC supports the development of multipurpose trails using
1135 abandoned railroad beds and other public rights-of-way.
- 1136 6. TRORC encourages federal, state, and local acquisition of land and
1137 facilities well-suited for outdoor recreation, provided that adequate
1138 financial and management plans and arrangements are made with
1139 involved local governments.

1140 **Recommendations**

- 1141 1. TRORC will assist communities with the establishment of Conservation
1142 Commissions and will support existing Conservation Commissions
1143 when possible.
- 1144 2. TRORC ~~will~~should help towns develop highway policies that address
1145 recreation needs and should encourage the adoption of walkable
1146 communities programs within the Region.

1147 3. TRORC ~~will~~should assist towns with establishing and managing town
1148 forests.

1149 4. TRORC should work with the State, White River Partnership, ~~and~~ the
1150 Vermont River Conservancy, and other groups on increased river
1151 access.

1152 5. TRORC will continue to assist towns with their efforts to improve public
1153 access to outdoor recreational opportunities, while ensuring
1154 consistency with local and regional land use plans.

1155 **I. Opportunities for Shared Services/Infrastructure**

1156 As is the case in much of Vermont, our Region is generally low-density with a
1157 limited population as compared to more urban locations.

1158 ~~While they may not be so readily apparent,~~ Opportunities exist in our rural
1159 communities, as well as in our more urban downtowns, for inter-municipal
1160 cooperation. State statute enables communities to join into inter-local contracts or
1161 union municipal districts for the purposes of performing “any governmental
1162 service, activity, or undertaking which each municipality entering into the contract
1163 is authorized by law to perform.”~~19~~ TRORC also now can provide a mechanism for
1164 shared services; common existing examples among communities include shared
1165 police services and municipal aid agreements. Communities may also share staff
1166 or equipment. Under certain forms of cooperative agreements, they may
1167 purchase property together. Engaging in well-planned and well-organized
1168 cooperative efforts can ensure that services are provided more efficiently and
1169 more effectively.

1170 **Goal, Policy, and Recommendation: Shared Services and**
1171 **Infrastructure**

1172 **Goal**

1173 1. ~~Shared s~~Services and infrastructure are provided efficiently and
1174 effectively.

1175 **Policy**

1176 1. TRORC encourages communities to seek opportunities for shared
1177 staffing, services, and infrastructure with other municipalities ~~in an~~
1178 ~~effort~~ to reduce costs and improve quality of service.

1179 **Recommendation**

1180 1. TRORC will assist communities with the development of inter-local
1181 agreements, union municipal districts, and other cooperative
1182 agreements whenever possible

1183
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1185

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