CHITTENDEN COUNTY RPC
Communities Planning Together

Long Range Planning Committee

Tuesday February 8, 2022
7:00 pm to 9:00 pm

Remote Access ONLY Meeting via Zoom

Virtual Location: Please join the meeting by clicking: https://us02web.zoom.us/j/81093807778

For those who would prefer to join by phone or those without a microphone on your computer, please dial in using your phone. (For supported devices, tap a one-touch number below to join instantly.)
Dial: +1 646 876 9923; Meeting ID: 858 5590 9618
For supported devices, tap a one-touch number join instantly: +16468769923,,85855909618#

Agenda

1. **Welcome**

2. **Approval of January 11, 2022 Minutes*** *(page 2 of the packet)*

3. **Review the DRAFT Water Quality Section*** *(page 5 of the packet)*

    a. Staff overview of this topic and explanation of the organization of the draft document
    b. Goal & Key Issues
    c. Indicators
    d. Strategy & Actions

4. **Adjourn**

Next Meeting: March 8, 2022 at 7pm

Note – Pg. 2 of the agenda includes links to the existing 2018 ECOS Plan for reference

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2018 ECOS Plan Resources for the Long Range Planning Committee:

- **Summary: 2018 ECOS Plan »**
  This summary document provides a simplified overview of the ECOS Plan, as well as the three main sections updated in 2018: energy, economy, and transportation. Please note that this overview does not reflect the overall content within the Plan, but seeks to summarize some of the main components and updates.
- **2018 ECOS Plan: Main Document »**
  This main section includes the vision, goals and collective strategies and actions to address the region's concerns, including CCRPC's top 10 actions for the coming five years.
- **Supplement 1: Process »**
  Process and public engagement.
- **Supplement 2: Regional Analysis »**
  Regional analysis, culminating in a list of 31 high-priority concerns.
- **Supplement 3: Regional Plan »**
  Regional Plan, including a description of the maps, planning areas, Act 250/Section 248 role, and compatibility with municipal and surrounding regional plans.
- **Supplement 4: Comprehensive Economic Development Strategy »**
  Comprehensive Economic Development Strategy (CEDS) including a strengths / weaknesses / opportunities / threats analysis and project list of the region's utility and facility needs.
- **Supplement 5: Metropolitan Transportation Plan »**
  Metropolitan Transportation Plan (MTP) including the 2050 scenario, financial plan and the region's transportation project list.
- **Supplement 6: Energy Analysis, Targets, & Methodology »**
  Enhanced Energy Planning methodology and data guide.
- The **ECOS Scorecard** is where we house the indicators.
- **Annual Reports**
- **ECOS online map**

CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION
LONG RANGE PLANNING COMMITTEE - MINUTES

DATE: Tuesday, January 11, 2022
TIME: 7:00 p.m. to 8:00 p.m.
PLACE: Virtual Meeting via Zoom with link as published on the agenda; and a Physical location at 110 West Canal Street, Suite 202, Winooski VT

Members Present:
Annie Costandi, CWAC Rep from Essex
Dana Hanley, Alt Board Rep from Charlotte
Bob Henneberger, TAC Rep
Eric Vorwald, PAC Rep from Winooski
Andy Watts, Board Rep from Williston

Staff:
Jason Charest, Senior Transportation Engineer
Eleni Churchill, Transportation Program Manager
Marshall Distel, Senior Transportation Manager
Christine Forde, Senior Transportation Planner
Regina Mahony, Planning Program Manager
Melanie Needle, Senior Planner
Charlie Baker, Executive Director

1. Welcome and Introductions

Regina Mahony welcomed everyone at 7:02pm. All attendees introduced themselves.

2. Approve November 30, 2021 Minutes

Eric Vorwald made a motion, seconded by Andy Watts, to approve the November 30, 2021 minutes with one edit – Dana is not the Alternate Representative from Charlotte. No further discussion. MOTION PASSED.

3. Review the DRAFT Housing Section

Regina walked through the draft housing section that was included in the meeting packet.

Goal & Key Issues comments from the LRPC:

- This section would benefit from a reference to VT as a place for refugees, and we should be prepared to house them and train them for the workforce.
- If it isn't too in the weeds make mention of Accessory Dwelling Units as a helpful means for additional homes.
- Change served-enriched housing to supportive housing.
- Check the citation on bullet 2.
- Bullet 6 – should this be two separate issues/bullets? Starting at "location" maybe start a new bullet;
- Bullet 7 – Short term rental data. Explain what this data includes and where it is from. Regina stated that this is from AirBnB DNA, not municipally regulated units.
- Clean up language such as remove "a lot of".

Indicators – Regina did not review these in detail, but described how to access these if the LRPC members would like to.

Strategy & Actions:

- There was a discussion about the strategy and whether there will be two strategies - land use & housing or just one? Regina explained that in the current plan there is one smart growth strategy (80% of growth in areas planned for growth) and the land use, housing, energy and transportation actions are all underneath it. Staff is thinking about breaking these out into different strategies, but trying to figure out how to maintain connection to the overall smart growth concept for all of them. This is still being worked out.
- There was a recommendation to add the Regional Development Corporations to 2c as well as the other organizations listed.
- There was a question on how we might educate the public more broadly about the need for more housing. Regina stated that there was an effort a few years ago to start a YIMBY campaign (yes in my backyard v. Not in my backyard). Perhaps a specific marketing campaign would help.
- Edit fair housing 4.c – there are two "accommodations". Remove one.

- 1.b: separate out fee waivers or other development review. Redundancy is one piece; while fees associated with review is another.
- 1.f: regarding the state rental registry program it is important to acknowledge that some municipalities already do this locally and these programs should continue to stand on their own.
- 2.a: this refers to new funding programs that may need to be spent in the coming years. Does it make sense to include these in this long-term plan?
- 2.d: there was a suggestion to include other groups beyond BIPOC. Regina added that staff will take a look at this. She added that we want to be clear that we want to address all protected classes; but we should bring specific attention to BIPOC because the actions may be different.
- Regarding housing affordability under #5: Eric Vorwald mention that "something we've been talking about in Winooski is using City specific economic indicators to determine affordability. Using the metro area can skew this number to where the incomes in Winooski are still not able to afford the housing within the 30% parameter." Perhaps this plan should acknowledge those local income differences.
- Last sentence in #5: acknowledge that some folks don't want to live in the City, and they'll choose to travel.

Regina then showed the LRPC how to navigate the Building Homes Together dashboard.

4. <u>Adjourn</u>

Regina stated that the agenda had the incorrect next meeting date. The next meeting is set for February 8, 2022. The meeting adjourned at 8:11pm.

Respectfully submitted, Regina Mahony

PLACE: Make public and private investments in the built environment to minimize environmental impact, maximize financial efficiency, optimize social equity and benefits, and improve public health. AND Design and maintain a strategically planned and managed green infrastructure network composed of natural lands, working landscapes, and open spaces that conserve ecosystem values and functions, and provide associated benefits to our community.

Water Quality – Ecological Systems Goal & Strategy 3 (plus all actions under it)

X. ECOLOGICAL SYSTEMS

Ecological Systems Goal: Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.

Key Issues/Trends/Insights

[Data for this section drawn from Natural Systems Analysis Report, VT Parcelization Website and Lake Champlain Basin Program's State of the Lake Reports]

- **Wildlife, Forests and Native Species** Vermont's forest cover was as low as 35% in the mid to late 1800's; reforestation brought it back to 74% and it is the third most forested of the lower 48 states. However, in the 2000s the State began experiencing an overall loss of forest cover. This is concerning because of the resulting habitat loss and fragmentation, increase in non-native species, reduction in productive forest land and diminished resiliency especially in the face of a rapidly changing climate. While these issues are of concern in Chittenden County as well, at forest cover has remained steady at around 52% between 2001 and 2019[i] and only .04% of wetlands were lost to development between 2011-2019 in Chittenden County[ii] This is likely due to a variety of reasons, including a purposeful and successful movement toward concentrating new growth in areas planned for growth. Since 2014, 85% of new housing growth and 98% of new commercial/industrial growth has occurred in only 15% of the land area. However, we still experience incremental growth that breaks up the forests. The most significant change is the pattern of the forest cover and relative connectedness of forest blocks to each other and riparian areas. The Agency of Natural Resources is seeing forest blocks in Chittenden County getting smaller and more isolated from other forest blocks, as well as surface water and riparian areas. Leaving isolated islands of habitat contributes to losses in biodiversity. Development outside of planned areas for growth has had a visible (and ecological) impact on the pattern of forests and forest cover. These trends speak to the broader concept of the pattern of forest cover versus focusing on core forest areas. Increasing land parceling and subsequent habitat conversion, lack of local regulations responsive to wildlife habitat concerns, and construction of transportation infrastructure (including roads and trails) continue to adversely impact forest and habitat integrity. In addition, acid deposition from air pollution, migration of invasive species including destructive insect species, and climate change continues to threaten native forest plant and animal habitat.
- **Water Quality** Vermont water bodies continue to face mounting pressures from unsustainable development, farm practices and logging activities. Cumulative impacts from these land use activities have degraded water quality, aquatic habitat and altered the stability of river corridors and lakeshores. Issues that predominate in the County include increasing impervious surfaces, steady high pollutant loads (mainly from nonpoint sources such as unmanaged stormwater), that result in nutrient enrichment and sedimentation, as well as other impairments. In addition, aquatic nuisance species continue to enter our waterways, contributing to the degradation of both habitat and recreational opportunities. Climate change is expected to bring us more intense storms at a higher frequency, which will only exacerbate the problem. However, as discussed in the previous bullet, development concentrated in the areas planned for growth, and proper management of stormwater in our developed areas have and will continue to improve water quality measures. Support of water quality improvement has been an ongoing effort of the Vermont Agency of Natural Resources and since 2012 the following initiatives have come into effect or been updated: Shoreland Protection Act and Permit (Chapter 49A of Title 10, §1441 et seq.); Update of Lake Champlain Watershed Basin Plans within Chittenden County – Lamoille, Winooski and Northern Lake Champlain; Flood Hazard Area and River Corridor Protection standards ; Update of Stormwater Rules and Permits especially most recently the Municipal Roads General Permit and the Stormwater General Permit

3-9050, ; and the Designation of Sandbar Wetlands in Milton as a Class I Wetland. Also, in 2022 DEC will prepare phosphorus reduction budgets by sector and by watershed. These budgets will inform next steps in phosphorus reduction needs through regulatory and non-regulatory programs. Clean Water Service Providers have been established to address these non-regulatory reductions.

- **River Corridors** *River corridor resilience* is also critical to the health of our ecological systems as well as protection of nearby infrastructure. Channelization of streams and rivers, reduction and alteration of natural floodplains, river corridor encroachment, stormwater runoff and reduction and elimination of vegetative buffers are practices that lead to river corridor instability causing excessive erosion of river channels, pollution and additional fluvial erosion hazards. Of the river miles assessed in Vermont, 74% have become confined to deeper, straighter channels and no longer have access to historic floodplains essential to stable streams and sustainable water quality management. River Corridor means the land area adjacent to a river that is required to accommodate the dimensions, slope, planform, and buffer of the naturally stable channel and that is necessary for the natural maintenance or natural restoration of a dynamic equilibrium condition, as that term is defined in 10 V.S.A. §1422, and for minimization of fluvial erosion hazards. A River Corridor includes the meander belt *and* the area to maintain a riparian buffer (defined as 50 feet from the meander belt). These areas are mapped in the 2022 update of the *Chittenden County Multi-Jurisdictional Hazards Mitigation Plan* and its associated municipal Annexes, and are officially posted on the ANR Natural Resources Atlas. River Corridor protection is a goal in statute for municipalities, regions and state agencies. Important incentives such as the Emergency Relief Assistance Fund (see the Public Safety, Criminal Justice & Hazard Mitigation Section in this Supplement for more information) are available to communities protecting river corridors.
- **Groundwater** As of 2015, 30,713residents of Chittenden County (19% of the 2015 population) relied on *groundwater* sources for their drinking water[iii] . Protection of groundwater resources from failing septic systems and petroleum spills/leaks is critical.
- **Regulations** *Local zoning lags behind town plans.* There is a disconnect between the vision for natural systems as expressed in Municipal Plans, and the Zoning Regulations that implement those plans. In addition, many zoning regulations have vague review standards and definitions, a situation that complicates enforcement and opens the town to due process legal challenges. Conversely, local bylaws protect the majority of River Corridors in the County with stream setbacks and floodplain regulations from new development. However, agriculture and forestry practices are exempt from local review and without State enforcement of accepted agricultural practices fluvial erosion hazard areas are subject to degradation.
- **Air Quality** *Outdoor air pollution* in significant concentrations can raise aesthetic and nuisance issues such as impairment of scenic visibility; unpleasant smoke or odors; and can also pose human health problems, especially for more sensitive populations like children, asthma sufferers, and the elderly. While Chittenden County's air quality meets current National Ambient Air Quality Standards (NAAQS), we are close to the limits for ground-level ozone. The attainment level for ozone is .070 ppm and levels should not exceed this amount. While ozone levels in Chittenden County have been continuously decreasing for the last twenty years, the 2021 ozone level measured .057 ppm. Particulate matter is well below the attainment level of 12.0 ppm. Chittenden County's level in 2021 measured 6.7 ppm. We are also subject to pollution from the mid-west that we cannot control. If the NAAQS are revised to be more stringent - or air pollutant levels increase - so that we exceed the NAAQS, additional and costly environmental regulations will apply to our region (Source: http://dec.vermont.gov/air-quality).
- **Climate Change Mitigation & Adaptation –** Plants remove carbon from the atmosphere and store it in biomass and soils – a process called carbon sequestration or storage. Maintaining forests, wetlands, agricultural lands and vegetated spaces is important for ensuring current and future carbon storage. Vegetated landscapes are also important for moderating extreme heat, natural absorption of stormwater, reducing runoff and the potential for flooding. By concentrating development in areas planned for growth, we can protect vegetative cover throughout the County. Also, reducing fragmentation of forest blocks and riparian areas will help limit the effects of climate change on species. As species adjust their ranges, they will need to cross roads to find suitable habitat. Maintaining a connected network of lands and waters is the one of the most important climate change adaptation strategies.

Key Indicators

- **Chittenden County Land Cover Losses (Source: USGS 2001 and 2019 National Land Cover Data):**
    - o According to the national land cover data in 2019, 204,173 acres or 59% of Chittenden County's land area is forested.
    - o Between 2011-2019, 486.4 acres or .18% of barren land, deciduous forest, evergreen forest, mixed forest, shrub, grassland, woody wetlands, and emergent herbaceous wetlands were converted to development. These land cover categories are being used as a surrogate for wildlife habitat as there is currently a lack of a better, more accurate data source.
    - o In particular, 26 acres or .04% of wetlands were lost to development between 2011-2019 developed in Chittenden County.

- **Phosphorus level concentrations.** The overall Lake Champlain Total Maximum Daily Load requires a total phosphorus load reduction of 212 metric tons per year by 2038. The state is tracking progress on this goal, and the details are outlined in the Vermont Clean Water Initiative 2021 Performance Report. As of state fiscal year, 2021, an estimated 38.4 metric tons of phosphorus reduction has been achieved. This represents 16 percent of the reduction required to achieve VT's water quality goals. (Source: Vermont Clean Water Initiative 2021 Performance Report).

Additional indicators can be found on the ECOS Scorecard.

Indicators	Location
Acreages of Wildlife Habitat Lost to Development, 2006,2011	Scorecard
Percent of Impaired Stream Miles, 2012	Scorecard
Phosphorus Load to Lake Champlain from Vermont, 2001-2010	Scorecard
Percent of Impervious Surface by Watershed, 2008	Scorecard
Ozone, 2000-2016	Scorecard
Particulate Matter, 2002-2016	Scorecard

3. IMPROVE THE SAFETY, WATER QUALITY, AND HABITAT OF OUR RIVERS, STREAMS, WETLANDS AND LAKES IN EACH WATERSHED.

While striving toward all the ECOS strategies, and particularly Strategy #2 – 80% of growth in 15% of our land area, it is essential to do so in such a way that we do not impair our essential water resources (including potable water) and that we prepare ourselves for the impacts of a changing climate.

1. **River Hazard Protection** – Develop and implement adaptation strategies to reduce flooding and fluvial erosion hazards. While supporting planned growth, ensure that growth is evaluated in terms of preparedness for a changing climate. Chittenden County will continue its efforts, along with the municipalities, to avoid development in particularly vulnerable areas such as floodplains, river corridors, wetlands, lakeshore and steep slopes; protect people, buildings and facilities where development already exists in vulnerable areas to reduce future flooding and erosion risk; plan for and encourage new development in areas that are less vulnerable to future flood & erosion events (see Strategy 2); and implement stormwater management techniques to slow, spread and sink floodwater (see the Non-Point Source Pollution section below).

a. Use mapping and data tools to prioritize and address erosive areas - VTrans developed the Vermont Transportation Resilience Planning Tool (TRPT: https://roadfloodresilience.vermont.gov/#/map), a web-based application that identifies bridges, culverts, and road embankments that are vulnerable to damage from floods, estimates risk

based on the vulnerability, and criticality of roadway segments, and identifies potential mitigation measures based on the factors driving the vulnerability. The TRPT combines river science, hydraulics and transportation planning methods and is applied at a watershed scale. Another tool under development, to identify problem locations, is the Repeat Damage Tool for roads and bridges that needed repair after two or more Governor-declared events [note: more to come].

b. Revise bridge/culvert designs - Revise public works standards and zoning ordinances with culvert and bridge design specifications that allow for wildlife passage and movement of floodwater and debris during high intensity events. Implement culvert and bridge designs that produce stable structure in river channels (i.e. fluvial geomorphology).

c. Protect river corridors – Existing bylaws protect most River Corridor areas with stream setbacks and floodplain regulations. Work with municipalities and ANR to improve bylaws to protect the River Corridor Areas not currently protected and enforce these bylaws. Continue protection of river corridors including non-regulatory protection measures such as stream re-buffering, river corridor easements on agricultural lands, river corridor restoration and culvert and bridge improvements.

d. Support non-regulatory conservation and/or preservation of vulnerable areas through public and land trust investments, including identification of repetitively damaged structures and provide assistance to elevate, relocate or buy out structures, and identify where flood storage capacity may be restored and conserved.

e. Participate in the development and implementation of the Lamoille (Basin 7), Winooski (Basin 8) and Northern Lake Champlain Direct Drainages (Basin 5) Tactical Basin Plans. CCRPC will work with the State, municipalities, and other partners to address river hazard protection, flood resiliency and water quality through these Plans – including prioritizing projects for funding.

f. To protect water quality, development should be located to avoid state and local known constraints that have been field verified, and to minimize impacts to state and local possible constraints that have been field verified.

i. State and Local Known Constraints, as protected by municipalities and State agencies, are shown on Map 9 and include the following: DEC River Corridors, FEMA Floodways, and Municipal Water Quality Setbacks, Local Known Constraints – see constraint tables under the description of Map 9 in Supplement 3.

ii. State and Local Possible Constraints are shown on Map 9 and include the following: FEMA Special Flood Hazard Areas and hydric soils, Local Possible Constraints – see constraint tables under the description of Map 9 in Supplement 3.

2. **Non-point Source Pollution** - While we have addressed point sources of pollution, non-point sources are still contributing pollutants to our water bodies.

a. Assemble data – Work from existing data collected and further identify the locations that are contributing to water quality pollution such as flow, sediment, pathogen and nutrient. Where needed, conduct on-the-ground inventories of water quality and biological assessments (in-stream), wetlands, sub-watersheds, river corridors (buffered or not) and geomorphology. Map the existing and new data on one regional map.

b. Revise Plans and Bylaws and Ensure Enforcement -- Incorporate the above data into municipal plans; establish specific statements that protect these resources; develop clear standards for how to protect these resources within zoning regulations; and initiate on-going enforcement of the regulations. Encourage Low Impact Development (LID) policies and Green Stormwater Infrastructure (GSI) techniques, and shared storm water control programs to maximize land development in areas planned for growth. Incentivize best management practices for agricultural uses; and encourage the Agency of Agriculture to better enforce their required agricultural practices. In addition, EPA's Lake Champlain Total Maximum Daily Load (TMDL) for phosphorus, Vermont's Phase 1 TMDL Implementation Plan, and the Vermont Clean Water Act (2015 Act 64) have established a variety of regulatory programs to

address phosphorus reduction. CCRPC will work with the municipalities and other partners to implement these programs: Municipal Roads General Permit, Phosphorus reduction integration into the existing MS4 permit, and Stormwater General Permit 3-9050 for Developed Lands (3 or more acres of impervious). See Chittenden County's Work Plan and the 2022 Chittenden County Multi-Jurisdictional Hazards Mitigation Plan (in development) for more detail on these actions.

c. Implement Non-regulatory approaches - Identify and implement non-regulatory approaches to nutrient, pathogen and sediment pollution management especially projects implemented through the Clean Water Services Provider framework authorized under Act 76.. . Support watershed organizations.

d. Implement permits - Under new MS4 permit requirements, nine Chittenden County municipalities are implementing various measures to reduce the impacts of non-source runoff and help meet the total maximum daily load requirements for impaired streams, rivers, and Lake Champlain. These include MS4 Stormwater Management Plans which include several elements namely six Minimum Control Plans, Flow Restoration Plans for impaired streams, and Phosphorus Control Plans for municipal owned roads, rights-of-ways and properties. Nine other municipalities in the County also must implement their Municipal Roads General Permit which requires improvements to municipal roads that drain to waterways. These permits require additional public investment in storm water facilities or investments.

3. **NOTE: still need to update. Will be done when looking at Infrastructure goal and key issues.** **Wastewater Treatment Plant Upgrades** – The non-point sources have been identified as the largest contributors of phosphorus to Lake Champlain, and therefore Vermont's August 2015 *Draft* Lake Champlain Phosphorus TMDL Phase I Implementation Plan, does not allocate any additional phosphorus reductions to wastewater treatment plants in the Lake Champlain basin. However, EPA's *Draft* Phosphorus TMDLs for Vermont Segments of Lake Champlain, dated August 14, 2015, does include reductions at some of the County's wastewater treatment plants as identified in Table 9 of that document. These treatment plants are listed in the ECOS/CEDS Project List (in Supplement 4). To provide further context to the treatment plants on this list, here is further information from EPA's Phosphorus TMDL:

"*The currently permitted WWTF [wastewater treatment facility] contributions in [the Main Lake, Shelburne Bay and Burlington Bay] segments range from 16 to 97% of the total segment base load and should be reduced. EPA has made WWTF waste load allocations [WLA] equivalent to setting the phosphorus limit at 0.2 mg/l at design flow for the 17 facilities with flows greater than 0.20 MGD. Those facilities [in Chittenden County] are: Burlington East, Burlington Main, Burlington North, Essex Junction, Hinesburg, Global Foundries, Shelburne #1 and #2, Richmond, South Burlington Airport Parkway, South Burlington Bartletts Bay, and Winooski. [Some] of these facilities have recently made upgrades or have the ability to make process improvements that would enable them to meet permit limits consistent with the new allocations without major construction upgrades. [Within Chittenden County] these include, Essex Junction, South Burlington Airport Parkway, Shelburne #1 and #2, and South Burlington Bartlett Bay….There are two exceptions to this general approach. The 2002 WLAs for Weed Fish Culture Station and Burlington Electric were lower than a limit equivalent to 0.2 mg/l at design flow. The more stringent 2002 allocations have been retained and are already reflected in the permit limits for these facilities.*" EPA's Phosphorus TMDLs for Vermont Segments of Lake Champlain August 14, 2015, page 31.

[i] Multi-resolution Land Characteristics Consortium National Landcover Data EVA Tool

[ii] 2019-2011 National Land Cover Data

[iii] Estimated Use of Water in the United States County-Level Data for 2015, USGS