

Minutes of the East Montpelier Planning Commission

October 5, 2023

PC Members Present: Zach Sullivan (Chair), Erica Zimmerman, Kim Watson (zoom), Mia Stone (zoom), Gianna Petito (zoom), Clarice Cutler (zoom),

Call to Order: 7:06 pm

Changes to Agenda: None

Public Comment: None.

Review Minutes

The group reviewed the September 20th minutes.

Motion: To approve the September 20, 2023 minutes as written. Made by Gianna Petito, second by Zach Sullivan. Passed unanimously.

Review Updates to Town Plan Chapter 9 Natural and Scenic Resources and Discuss Work Plan for Town Plan Updates.

Mr. Sullivan asked the group to begin reviewing the Town Plan to identify areas that need revisions and updates.

Chapter 9: Natural and Scenic Resources A-G

Clarice Culter identified areas that need revision and updates in Chapter 9 Natural and Scenic Resources.

Clarice Cutler went through the updates with the commission and Zach took notes regarding the prospective edits and potential updates which will be amended to the minutes. We reviewed the changes and updates up to Section E. Forest Resources and Integrity (pg. 117). Clarice Cutler highly suggested prior to reviewing this section that we have Mark Lane present since he is working on the Resilient Roads Committee and with the Forest Warden. Therefore, based on the time and need for interaction with other commission members Chapter 9 Section E to G were tabled to the next meeting. The work plan was also tabled until the meeting.

Updates

- **Capital Improvement Committee-** Kim Watson reported the group met and there were no new proposals for funding and the group will meet this month to complete the CIC Budget for 2024.
- **Energy Committee-** Mr. Sullivan reported that the Energy Committee is waiting on updates to the data and targets from CVRPC.
- **Resilient Roads Committee-** No Report
- **Central Vermont Regional Planning Commission-** Clarice Cutler reported that they are working on updates and the Basin Plan.

DRB Report

The group did not have a hearing in October. The group reviewed the permits report. No new permits.

Other Business

Zach Sullivan will keep the commission informed if an accepted offer from the Selectboard is received from the candidate for the Zoning Administrator position.

Motion: To adjourn. Made by Gianna Petito, second by Erica Zimmerman. Passed unanimously.

Meeting closed at 8:26 p.m.

Respectfully submitted by Kim Watson

Approved on October 19, 2023

Chapter 9

NATURAL AND SCENIC RESOURCES

A. AIR QUALITY

Everybody breathes, so the quality of our air is important. The U.S. Environmental Protection Agency sets health-related standards for a variety of air pollutants. The Vermont Department of Environmental Conservation monitors air quality at several locations, and all of the monitored areas currently meet the federal air quality standards. No air quality monitoring stations are located in Central Vermont, so there are no data on local air quality. — *Do we even need this section? speak to impact of electric lines*

Locally, air quality concerns are limited mainly to emissions from motor vehicles, heating systems, and some agricultural practices. Emissions of air pollutants are closely related to energy use. We can help reduce air pollution by using renewable energy, increasing energy efficiency and conserving energy. These topics are discussed more fully in the Energy section of this plan. Forests can help remove some air pollutants, so maintaining forested landscapes can also help preserve air quality. *Any thing about wild fires (heat pumps = ability to stay indoors?)*

Goals and Actions

➤ Goal 9.1: Promote local actions to maintain air quality.

This goal cuts across many other areas. See actions for:

- Infrastructure (6.2.1, 6.2.2, 6.2.3, 6.2.5, 6.3.1, 6.5.1, 6.5.2, 6.6.1, 6.14.1, 6.15.1, 6.15.2);
 - Economic Development (7.1.1, 7.2.1);
 - Natural and Scenic Resources (9.7.1, 9.7.2); and
 - Land Use (10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.3.1).
- Do we want to speak to distributed air quality monitoring? Lack of official monitoring sites - look @ where the sites are? is there one in Norwich VT? mention air quality alerts (VT Alert)*

B. WETLANDS AND WATERWAYS

History

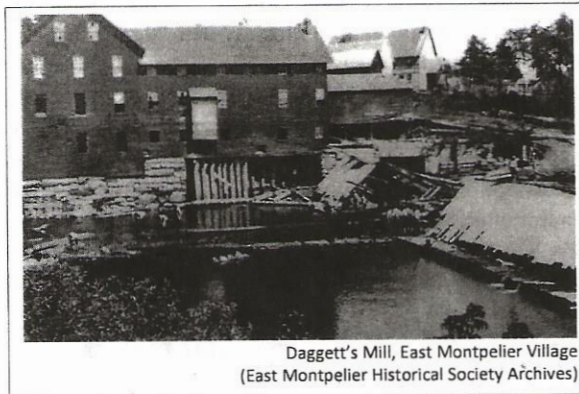
With the arrival of the first European immigrants into the East Montpelier area some two hundred years ago, a natural environment that had remained relatively stable for centuries began to undergo rapid change. Early settlers to this area found bear, deer, moose, and other wildlife in

*no deference to Uniooski River
conservation*

plentiful supply. The free-flowing Winooski River was a popular fishing area and, for a few years in the 1860s, served as an abundant source of pearl-bearing freshwater clams. By the late 1800s, however, clearing of land and unregulated hunting and trapping had begun in earnest and profoundly influenced the area's natural resources and wildlife population.

The Winooski River and its tributary, the Kingsbury Branch, both served important roles in the early settlement of East Montpelier. Historical evidence indicates the existence of several Native American settlements along these rivers. The native Abenaki people frequently used the Winooski as a major route to eastern points. For the European settlers, the rivers and multiple streams in our area served as sources of power, food, and recreation. By the beginning of the twentieth century, many sawmills were operating along both rivers.

The use of waterways in town and in the Central Vermont area for early industrial purposes also led to abuse and pollution. Wetlands were considered a nuisance to be avoided if possible or, in cases where avoidance was not possible or desirable, to be filled or drained. With the abundance of available land and with the limited potential of wetlands for agricultural productivity, wetlands were largely ignored until the recent escalation in the value of land.



Daggett's Mill, East Montpelier Village
(East Montpelier Historical Society Archives)

Reforestation, the consolidation of farms, and decreased human population during the first half of the twentieth century allowed some of the natural habitat and animal species to reappear in the East Montpelier area. More recently, population growth within the town and the Central Vermont region has once again brought major changes to these water and wildlife resources.

add history re: Flooding

Current Status

Our wetlands and waterways have many uses and functions. Wetlands support exceptional diversity of plants and animals and play a critical role in flood resiliency and improving water quality by slowing fast moving water and filtering pollutants. Ponds and waterways provide opportunities for swimming, canoeing, kayaking, fishing, bird watching, and are important scenic resources.

Two private hydroelectric projects are located within East Montpelier. One is in North Montpelier (located on the Kingsbury Branch), and the other is located on the Winooski River between US 2 and Gallison Hill Road.

Map 4 shows the network of rivers, streams, and ponds in East Montpelier as well as numerous, mostly small, wetlands.

Major Waterways and Wetlands

The Winooski River is the major waterway running north to south in the eastern side of town. The Kingsbury Branch, Sodom Pond Brook, and Bennett Brook (also known as Mallory Brook) flow into the Winooski River, along with other smaller streams. On the western side of town, Long Meadow Brook flows out of Horn of the Moon Pond down to Wrightsville Reservoir and into the North Branch of the Winooski.

Major Rivers and Streams			
Name	Drainage Area	Drainage Area Measurement Location	
** Winooski River	160 square miles	Near the mouth of the Kingsbury Branch	
** Kingsbury Branch	53 square miles	At its mouth	
** North Branch	67 square miles	At the outlet of Wrightsville Reservoir	
* Bennett Brook (Mallory Brook)	5 square miles	At its mouth	
* Sodom Pond Brook	11 square miles	At its mouth	

** Partially in town; * Completely in town

Major Lakes and Ponds			
Name	Size	Elevation above sea level	Drainage Area
** Wrightsville Reservoir	90 acres	629 feet	67 square miles
** North Montpelier Pond	72 acres	703 feet	51 square miles
* Sodom Pond	21 acres	1,058 feet	3 square miles
* Horn of the Moon Pond	10 acres	1,230 feet	<1 square mile
* Nelson Pond	10 acres	1,210 feet	<1 square mile
* Chapell Pond	2 acres	1,170 feet	<1 square mile
* Coburn Pond	6 acres	n/a	<1 square mile

** Partially in town; * Completely in town

Forested riparian areas, along streams and rivers, are critical for river processes, aquatic biota, wildlife movement, and biological diversity, as well as other ecological functions. The Winooski River, Kingsbury Branch, Bennett Brook (also known as Mallory Brook), and Sodom Pond Brook are important to wildlife connectivity, even though some of these areas have been fragmented with development.

Wetlands are defined as "those areas of the state that are inundated by surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction."

Several large wetland complexes exist in town, but numerous small wetlands are also valuable. There are 146 mapped wetlands in town regulated by the Vermont Wetlands Act. They range in size from 0.12 acres to 199 acres and occupy a total of 857 acres. An official wetlands map is available from the State Department of Environmental Conservation (<http://dec.vermont.gov/watershed/wetlands>), and a copy is in the Town Office.

All wetlands shown on the Wetlands Inventory Map are presumed to be significant unless determined to be otherwise by the Department of Environmental Conservation (DEC). The Vermont Wetland Rules identify and protect 10 functions and values of significant wetlands and establishes a 3-tier wetland classification system to identify such wetlands. The first two classes of wetlands (Class I and Class II) are considered significant and protected under the wetland rules along with their buffer zones (generally 100-foot for Class I and 50-foot for Class II).

Comment [1]: Could elaborate on mapping nuances.

this is both an FYI for owners and potentially a marker to say that we're not limited by maps to say unmapped wetlands are a regulatory issue.

- note that there are areas not mapped that are wetlands, areas that are mapped but are not mapped.

these should be separate brooks

Bennett Brook joins Mallory Brook

update on how wetlands are classified

Chickering Bog (Fen), a Class I wetland is primarily located in Calais, but a portion of the wetland or its buffer may be located in East Montpelier. Development is prohibited in protected wetlands, although wetland rules exempt certain areas that grow food or crops in connection with farming activities.

Water Quality

The water quality of lake and pond water resources are rated by the Vermont Department of Environmental Conservation (DEC) Lake Score Card (<http://dec.vermont.gov/watershed/lakes-ponds/data-maps/scorecard>) as "poor" to "good" based on four criteria: nutrient trends, shore and lake habitat, mercury pollution, and invasive species. Elevated levels of mercury in fish tissue are a water quality concern in all Vermont waterways. North Montpelier Pond has, since the early 1980s, been infested by Eurasian water milfoil, a nuisance non-native aquatic plant, resulting in the only "poor" rating. While their presence has been documented in nearby waters, zebra mussels and didymo (two other non-native nuisance aquatic species) have not been discovered in any waterway in town. Preventing the spread of non-native species will require the continued vigilance by residents and all who enjoy using these water resources.



Canada Geese on Templeton Pond (Gary Ann Lewis)

quality habitat, and drinking water supplies after appropriate filtration and disinfection. Class B waters may also include waste management zones which allow for the discharge of treated sewage. There are no waters in East Montpelier classified as Class A. All surface waters in East Montpelier are designated and managed by the state as a "cold water fishery."

East Montpelier is located in the Winooski River basin. All surface waters in town drain into the Winooski River and ultimately into Lake Champlain. Lake Champlain is impaired, with levels of phosphorus that do not meet water quality standards. Vermont has developed a plan to clean up Lake Champlain by reducing the levels of phosphorus entering the lake. This plan is known as the Total Maximum Daily Loading (TMDL). The phosphorus comes from agricultural runoff, roadways, eroding stream banks and lawn fertilizers. Achieving the goals of the clean up plan requires that phosphorus levels be reduced from all sources throughout all the watersheds

Comment [2]: And in the wetland buffer?

Comment [3]: I would change this to something like, although there are some allowed uses, <https://dec.vermont.gov/watershed/wetlands/bmps>

Comment [4]: Point out that nutrient trend rating is good, shore and lake habitat and mercury are stressed?

Vermont has state water quality standards. Water bodies that do not meet one or more standard criteria are considered impaired. East Montpelier does not have any impaired surface waters.

The state classifies surface waters as either Class A or Class B. Class A waters are suitable for public drinking water supplies and include all waters in pristine natural condition and all waters above 2,500 feet in elevation. Class B waters are all other surface waters and are managed towards the objective of maintaining high quality, suitable for recreation, high

make a note about how this is monitored, who monitors?

how much are we thinking in the context of a watershed vs. in the context of local issues?

who monitors? free vet testing from agency of Vermont?

Comment [5]: Also waste water treatment plants and silviculture.

you're near a farm.

look at how this connects to Chapter 6 D: water supply

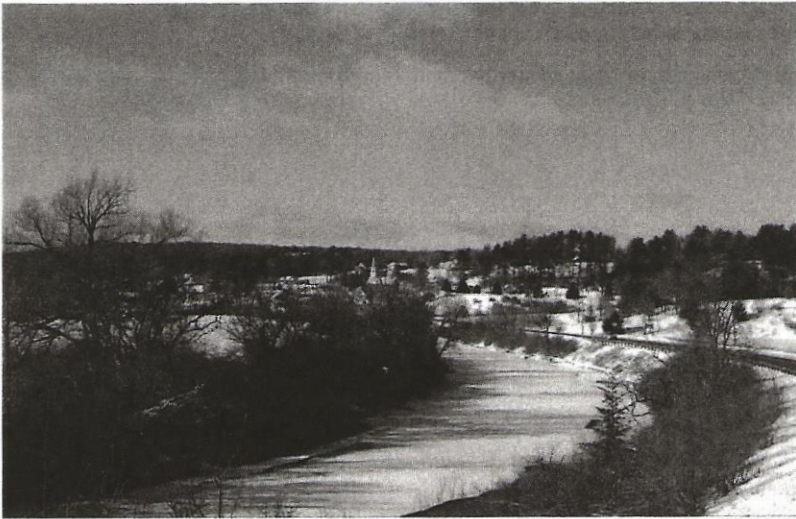
contributing to Lake Champlain. Clean water programs to meet the TMDL ~~will~~ affect East Montpelier. The town is required to obtain and comply with a Municipal Roads General Permit to reduce pollutants from roadways. The town is currently participating in the Kingsbury Branch Watershed Stormwater Master Plan, which will identify and develop preliminary designs for five priority stormwater projects. This stormwater master plan will be completed in early 2019.

Formatted: Strikethrough

confirm we did comply

Comment [6]: update

confirm above



The Winooski River along Route 2 approaching East Montpelier Village (Jean Vissering)

Protecting Wetlands and Waterways

The continued richness and diversity of fish and wildlife within East Montpelier depend on the sustained integrity and maintenance of the places where they eat, visit, live, and reproduce. An important component of this system is the network of stream banks referred to as riparian corridors. When recognized and respected, they can play a large role in protecting fish and wildlife and in ensuring the connectivity of natural areas within the town.

All wetlands are protected by state statute. Municipally-adopted Flood Hazard and River Corridor regulations limit development within vulnerable areas along the Winooski River, Kingsbury Branch, and Bennett Brook. The town requires a minimum 50-foot buffer around all streams and wetlands.

Forested riparian areas along rivers streams and wetlands still require protection. Several ponds located within the town have only a "fair" rating for shore conditions, invasive species, mercury levels, and nutrient trends. Maintaining forested buffers can improve water quality.

changes to flood
staff - new
commission set up
to look @ flooding
post 7/10/23 floods

Comment [7]: update

include a table
to show scorecard data
link to DEC Scorecards?

113

Winooski River Conservancy
working on this

There are various techniques for removing invasive Eurasian milfoil from ponds including manual removal and introducing natural predators. One potential way to help protect water quality is the use of green infrastructure (GI) and low impact development (LID) techniques during construction. Low Impact Development (LID) is development designed to minimize offsite impacts, especially run-off, sedimentation and pollutants. Techniques include using natural systems and green infrastructure. Examples include using narrow unpaved driveways, rain garden catchment areas to absorb any run-off from a site, retaining roadside vegetation, and collecting runoff from hard surfaces like roofs into rain barrels. LID approaches should be incorporated into the town's *Land Use and Development Regulations*.

Importantly, natural resource management efforts will continue to involve land in both public and private ownership.

Comment [8]: Site stormwater regs?

Comment [9]: Eliminated minimum parking requirement in the village. Added max impervious surface area for lots in the village.

Goals and Actions

- **Goal 9.2:** Protect wetlands and waterways as valued wildlife habitat and recreational and scenic focal points of the community.
 - ✓ **Action 9.2.1:** Consider use of the Conservation Fund for the purchase of important public access to wetlands and waterways.
- **Goal 9.3:** Ensure *Land Use and Development Regulations* promote water quality protection.
 - ✓ **Action 9.3.1:** Review and update *Land Use and Development Regulations* to include adoption of Low Impact Development (LID) techniques.
- **Goal 9.4:** Support project development and implementation of projects that will improve water quality.
 - ✓ **Action 9.4.1:** Manage highway operations and implement projects to comply with the Municipal Roads General Permit.
 - ✓ **Action 9.4.2:** Implement roadside vegetation practices that reduce runoff and sedimentation.
 - ✓ **Action 9.4.3:** Pursue funding for project development and implementation of priority projects in the Kingsbury Branch Watershed Stormwater Master Plan.

Comment [10]: Update? Or at least be more specific?

remove?

not just funding resources; perhaps resources may not be funds, but still have an impact.

Road Zoning Reassessment
Action around road projects to improve water quality.

Sometimes landowners need to pursue funding/water care for the need.

C. GROUNDWATER AND AQUIFERS

History

Early settlers depended on springs and groundwater wells to provide drinking water. As the town developed, however, inadequate procedures for waste disposal and wastewater treatment threatened the quality of surface water and groundwater. The development of stricter sewage regulations has restored much of the lost water quality.

Current Status

In this Town Plan, "groundwater" means water below the land surface as well as springs. "Spring" means a groundwater source where groundwater flows naturally to the surface of the earth. "Withdraw" or "withdrawal" means the intentional removal of groundwater from a well, spring, or combination of both.

In response to a proposed bottling plant in the western part of town, a citizen group formed in 2008 to place a moratorium on large groundwater withdrawals. The Planning Commission has since developed regulations that provide careful review of permits for such withdrawals.

The Vermont Geological Survey completed a review of the town's geology and groundwater resources in 2013 (see Appendix D). The Moretown bedrock formation on the western edge of town is a tight rock formation with lower groundwater yields. The Waits River Formation in the center to eastern side of town has looser rock with a greater flow of groundwater. The greatest groundwater yields were found near the Winooski River. Water samples from 17 wells were tested for arsenic, nitrate, fluoride, uranium, and gross alpha radiation; none of the samples exceeded state health standards.

The report states that the bedrock aquifers are recharged by local precipitation and spring snowmelt infiltrating into the ground. This reinforces the need to ensure that large groundwater withdrawals do not impact neighboring wells. Additionally, appropriate wastewater treatment, waste disposal, and pesticide and fertilizer practices are important to prevent groundwater contamination.

Goals and Actions

- **Goal 9.5:** Safeguard the quality and quantity of the town's groundwater.
 - ❖ **Policy 9.5:** Groundwater withdrawals for commercial water bottling are the lowest priority groundwater extractive use.
 - ✓ **Action 9.5.1:** Ensure that groundwater withdrawals do not harm the citizens, existing uses, water systems, or ecosystems of East Montpelier.

recharge challenged
re: snowmelt
talk about drought
cycles?
how long does
it take for
water to get in

Comment [11]: Timescale needed.

Comment [12]: Cite state regulations? Talk about contamination in the village?

tie to infrastructure
drinking water.
How much has been cleaned up

Comment [13]: Research possible expansion of Crystal Springs through new wells?

deal with in
infrastructure

refer to analysis
of groundwater

D. EARTH RESOURCES

History

Historically, East Montpelier had relatively small sand and gravel quarries. A former gravel pit off Coburn Road is used as a swimming hole. The town once owned and operated its own small gravel pit off VT 14, but the material extracted from the site is now considered low-grade and unsuitable for town use.

Current Status

The town's bedrock geology is dominated by two formations of metamorphic origin. The Moretown formation along the western edge of town is rich in calcium carbonate, which produces richer, more alkaline soils with a higher pH. This tight rock formation has lower yields of groundwater. The Waits River Formation in the center and eastern side of town has looser rock with a greater flow of groundwater. Between the two formations is a middle band of rock that produces rich soils but is slightly tighter in composition with less flow of groundwater.

The town's surficial geology is dominated by glacial till or lacustrine (lake) deposits of varying thickness over bedrock. The thickest surficial deposits are located in the Winooski River Valley.

According to a 1960s era state map, there are no known viable sources of sand and gravel in town. More recent surficial geologic mapping by the state indicates possible sand and gravel deposits in localized areas. No commercial sand and gravel operations currently exist in town. The town purchases the sand and gravel it needs for roadwork from outside sources.

Extraction of soil, sand, and gravel is allowed as a Conditional Use in all five current zoning districts. However, sand and gravel deposits generally follow the course of streams and rivers, which are protected from extraction by state regulations. An Act 250 permit would be needed for any new proposed extraction activity. Large-scale earth resource extraction is not encouraged within East Montpelier.

Comment [14]: Extraction is one use, what about acreage devoted to crop production?

Goals and Actions

- **Goal 9.6:** Any new or expanded earth resources extraction operations will be developed to minimize impacts on the environment and community.
- ❖ **Policy 9.6:** *Earth resource extraction facilities shall not be located within villages or defined growth areas.*
- ✓ **Action 9.6.1:** Review and update the *Land Use and Development Regulations* to ensure that development conditions address scale, screening, truck traffic, and protection of forest and riparian habitats and scenic resources.