

# Central Vermont Regional Planning Commission – Clean Water Advisory Committee

14 September 2023

# Agenda

**4:00 Call to order & Roll call**

4:05 Approve August CWAC minutes (action)

4:10 Updates to agenda

4:15 Public Comment

4:20 Presentation on Tactical Basin Plan (Keith Fritschie)

5:05 Tactical Basin Plan (discussion)

5:20 Clean Water Service Provider update (discussion)

5:35 FEMA Map Updates (discussion)

5:50 Upcoming meetings and partners (discussion)

6:00 Adjourn

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# Clean Water Service Provider Update

- ◆ Winooski Basin Water Quality Council voted to prioritize funding for design of a berm removal project
  - ◆ Project Implementor: Vermont Land Trust
  - ◆ Project Location: Marshfield
  - ◆ P-reduction: Early estimate suggests  $\sim 120$  kg / yr
- ◆ Project Solicitation – Round 2
  - ◆ Request for Proposals closed on 1 September 2023
  - ◆ No proposals submitted



# Clean Water Service Provider Update

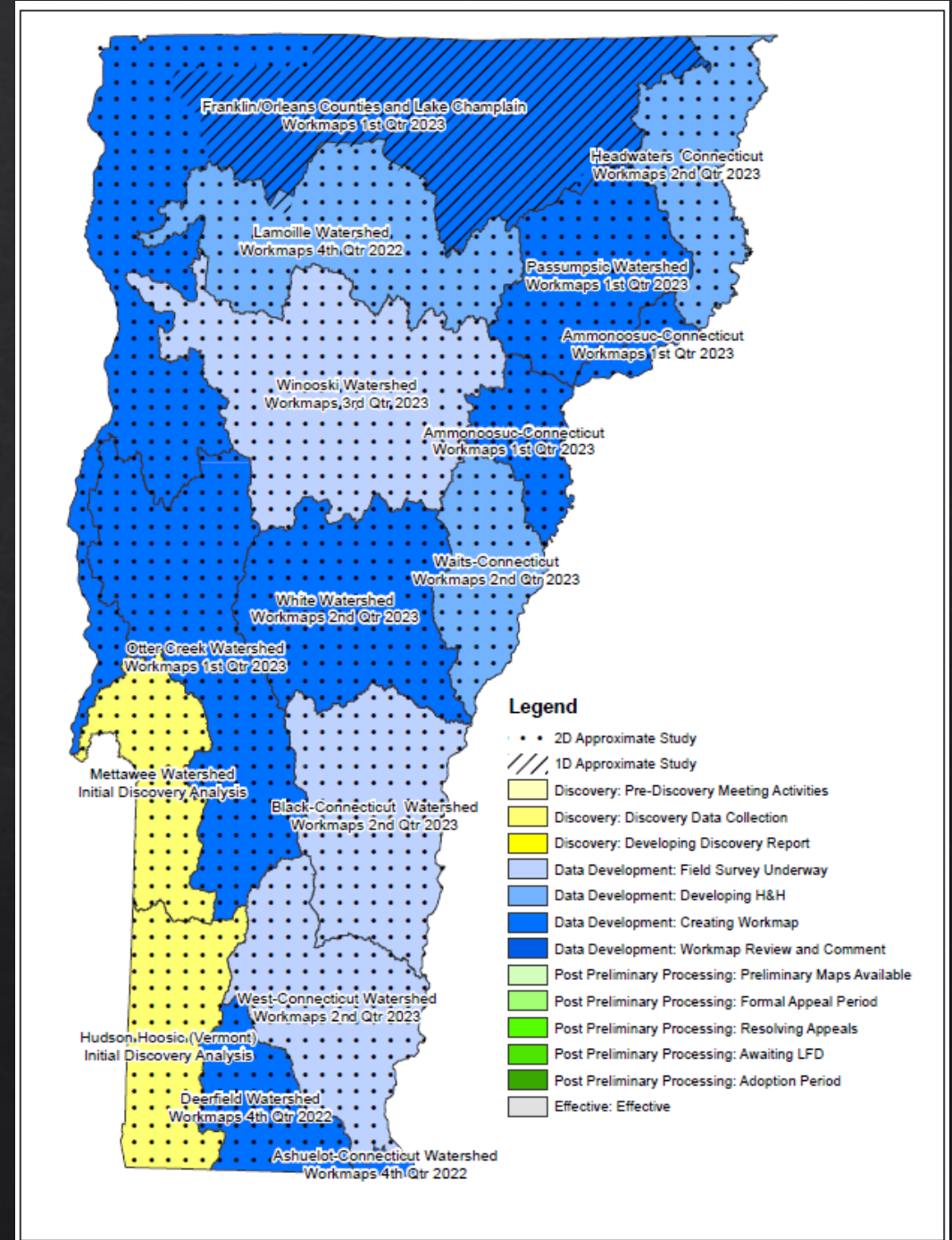
- ◆ What's next?
  - ◆ CVRPC applying for project scoping & development funding
  - ◆ Identify priority projects and seek project partner(s) to lead projects to implementation
- ◆ What can you do?
  - ◆ Offer project ideas (reminder: non-regulatory, p-reduction projects only)
  - ◆ Promote the program:
    - ◆ Encourage involvement by Selectboard, Planning Commission, Conservation Commission
    - ◆ Connect us with organizations working on water quality improvements
    - ◆ Invite us to meetings

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# FEMA Map Updates

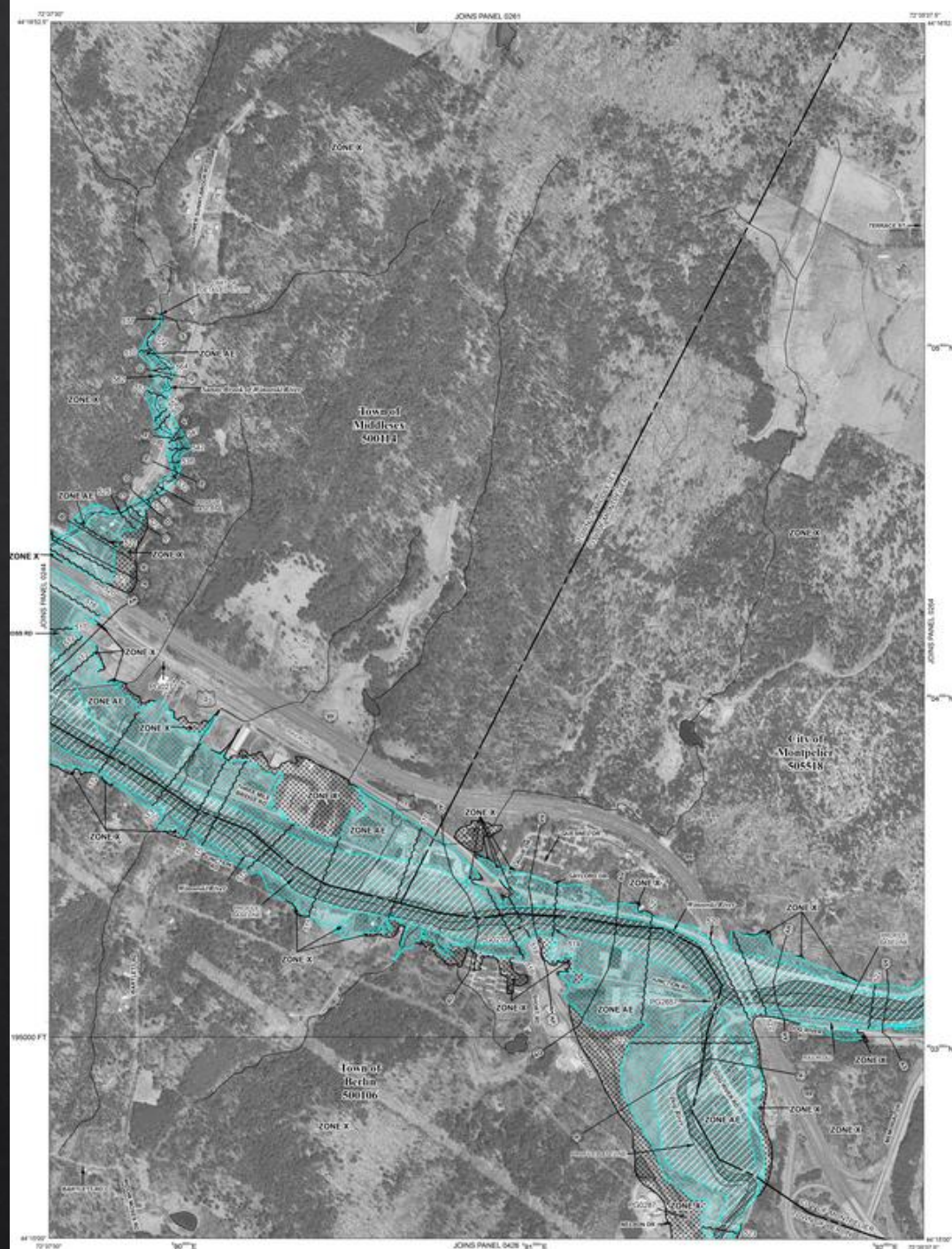
- ❖ FEMA map updates ongoing – first update for many towns since the 70s or 80s
- ❖ DFIRMs (Digital Flood Insurance Rate Maps) delivered in 2007 were not based on updated studies
- ❖ Current update will cover the entire state with the earliest effective date in 2025



# FEMA Map Updates: Steps

- ◆ Project Planning
  - ◆ Select Project Area
  - ◆ “Discovery” – collect current and historic flood-related data
- ◆ Mapping & Data
  - ◆ Data & Product Development:
    - ◆ regulatory: may include Flood Insurance Rate Maps & Flood Insurance Study
    - ◆ non-regulatory: flood risk products to support mitigation and planning





## LEGEND

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, ARH, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of unusual high flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently discarded. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE ARH** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual-chance floodplain boundary

0.2% annual-chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities

Base Flood Elevation line and value; elevation in feet

Base Flood Elevation value where uniform within zone; elevation in feet

\* Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

82° 07' 45" N, 32° 22' 30" W

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1200-meter Universal Transverse Mercator grid values, zone 18

600000 FT

1985-foot grid values; Vermont State Plane coordinate system (VTSPZONE 4000), Transverse Mercator projection

DX5510 N

North mark (see explanation in Notes to Users section of this FIRM panel)

1:1.5

River Map

**MAP REPOSITORY**

Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**

March 18, 2012

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

For community map revision history prior to countywide mapping, refer to the Community Map History table included in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-6622.

**MAP SCALE 1" = 500'**

250 0 250 500 FEET

100 0 100 200 METERS



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- ◆ Mapping & Data
  - ◆ Data & Product Development:
    - ◆ regulatory: may include Flood Insurance Rate Maps & Flood Insurance Study
    - ◆ non-regulatory: flood risk products to support mitigation and planning
  - ◆ Flood Risk Review Meeting: optional meeting to offer community officials opportunity to review & provide early feedback
  - ◆ Resilience Meeting:
    - ◆ help plan for the future
    - ◆ discuss factors contributing to flooding in the Project Area

# FEMA Map Updates: Steps

- ◆ Preliminary FIRM Issuance
  - ◆ Distribution of Maps & Data:
    - ◆ delivered to community officials & posted publicly through [FEMA's Flood Map Service Center](#)
    - ◆ Identify new & updated flood hazard areas
  - ◆ Consultation Coordination Officer Meeting & Public Open House
    - ◆ Follows release of preliminary FIRMs and FIS reports
    - ◆ Explain changes in flood risk
    - ◆ Opportunity to provide feedback
  - ◆ 90-Day Appeal Period: opportunity to submit data to revise FIRMs
- ◆ Risk Assessment
  - ◆ Flood Risk Products help local officials understand flood risk, potential impacts and offer a guide for local mitigation & outreach efforts
- ◆ Effective FIRM & FIS Report Issuance
  - ◆ Follows resolution of appeals
  - ◆ FEMA provides a Letter of Final Determination
  - ◆ Communities must adopt / amend their floodplain management ordinance within 6 months

# FEMA Map Updates: Local Considerations

- ◆ Municipal Plan & Local Hazard Mitigation Plan must be valid before updating zoning bylaws
- ◆ Understand risks & opportunities
  - ◆ Check your community Emergency Relief & Assistance Fund score to look for potential areas for improvement
  - ◆ Meet with [Regional Floodplain Manager](#)
- ◆ Review your current Zoning Bylaws
  - ◆ CVRPC has reviewed the Zoning Bylaws of all 23 member municipalities using the model ordinance and a bylaw review checklist
  - ◆ Will be reaching out to Planning Commissions to discuss required and optional improvements
- ◆ Update Zoning Bylaws
  - ◆ Consider using [DEC's model bylaws](#)
  - ◆ Zoning Bylaws that meet required standards allow residents to purchase insurance through the National Flood Insurance Program & halt adding risk to existing structures



# FEMA Map Updates: Proposed Schedule

- ◆ **Last Work Map Meeting: Winter 2024?**
- ◆ FEMA Discovery Meeting for Winooski watershed: October 20, 2021
- ◆ FEMA Discovery Report for Winooski watershed - Sept. 7, 2022
- ◆ Zone A Base Level Engineering by 2D Rain on Grid
- ◆ New detailed studies (8/15/2022)
  - ◆ Winooski River: Cabot-Marshfield corporate limit to upstream limit of USGS model (36.7 mi)
  - ◆ Winooski River: Approximately 8500 ft downstream of confluence with Mad River to Bolton Falls Dam, Waterbury (7.6 mi)
  - ◆ North Branch Winooski River: Approximately 1250 ft above confluence with Hardwood Brook in Worcester to mouth (16.4 mi)
  - ◆ Mad River: From State Route 100B in Moretown to mouth (6.9 mi)
  - ◆ Stevens Branch: Approximately 1800 ft above State Route 14 in Williamstown to Orange-Washington County boundary (4.6 mi)
  - ◆ Stevens Branch Bypass: Divergence from Stevens Branch in Williamstown to confluence with Brook No. 1, Williamstown (0.4 mi)
  - ◆ Brook No. 1: Confluence with Stevens Branch Bypass to confluence with Stevens Branch, Williamstown (0.3 mi)
  - ◆ Thatcher Brook: Approximately 4.7 miles upstream of mouth to mouth, Waterbury (4.7 mi)
  - ◆ West Branch Little River: ~ 80 ft upstream of State Route 108 to confluence with East Branch Little River, Stowe (6.0 mi)
- ◆ **Washington County approximate Deadline –Spring 2026**

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# Upcoming Meetings

Topic	Date	Partner	Name	Title
<b>Invasive Species + Stream Buffers</b>	11/9/23	Winooski Natural Resources Conservation District	Adelaid Dumm	Conservation Specialist
		DEC Lake Wise	Alison Marchione	Lake Shoreland Coordinator
		DEC Lake Wise	Kimberly Jensen	Lakes & Ponds Technical Service Provider (Aquatic Nuisance Control Grant)
		Waitsfield Conservation Commission	Curt Lindberg	Vermont Master Naturalist Program Coordinator-Mad River Valley
		US Fish & Wildlife Service	Katie Kain	Biologist
<b>Prioritizing Culvert Replacement + Dam Removal</b>	1/11/23	VT Agency of Transportation	Alan May	Better Roads Program
		VT Agency of Transportation	Ross Gouin	Better Roads/Municipal Highway & Stormwater Mitigation Program
		The Nature Conservancy	Ben Mathews	River Restoration Coordinator
		Vermont Natural Resources Council	Karina Dailey	Restoration Ecologist
<b>Town Forests?</b>	3/14/23	County Forester	Robert Nelson	Washington County Forester

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