



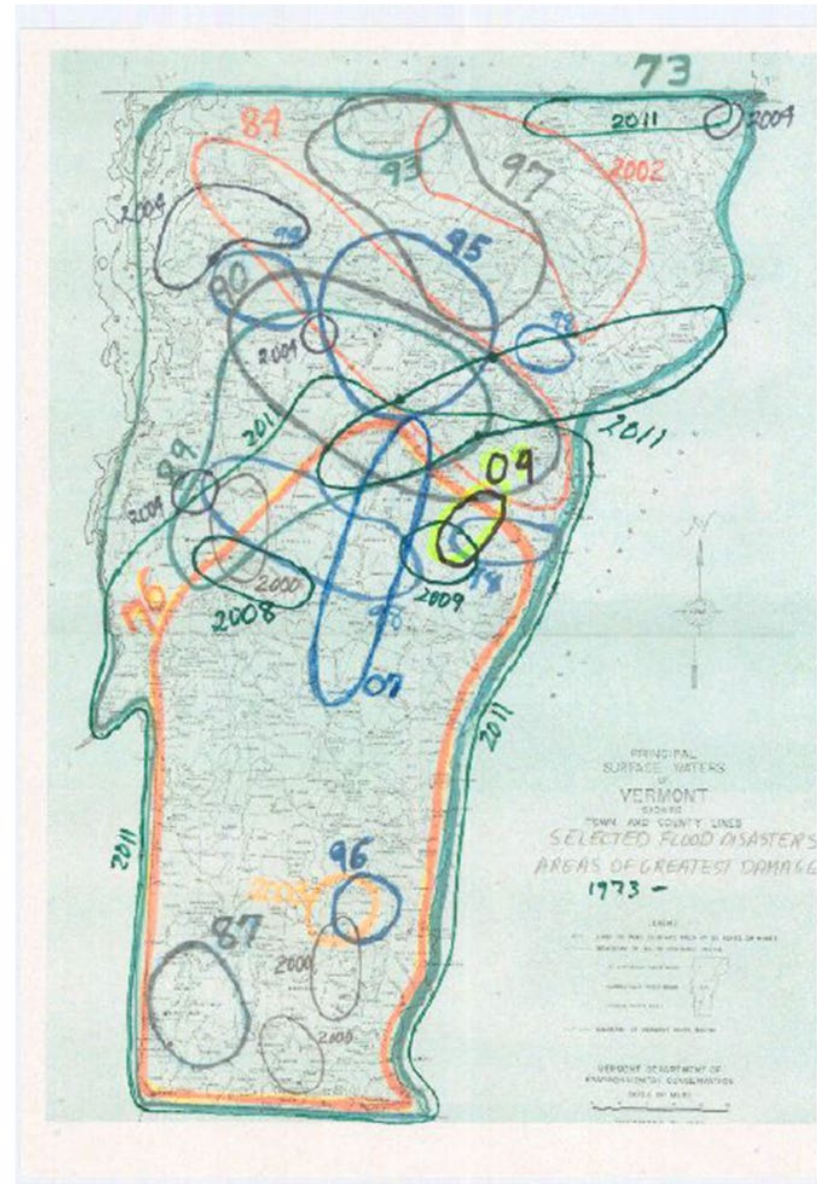
# Floodplain Administration in Vermont: What You Need to Know

Asa Brayton, CFM & Tessa Yip  
DEC River Corridor and  
Floodplain Protection Program

# Agenda

- ① **Flooding in Vermont**
- ② **The National Flood Insurance Program**
- ③ **The Role of a Floodplain Administrator**
- ④ **Permit Process**
- ⑤ **When a Flood Happens**
- ⑥ **New Flood Maps**
- ⑦ **Resources**
- ⑧ **Questions?**

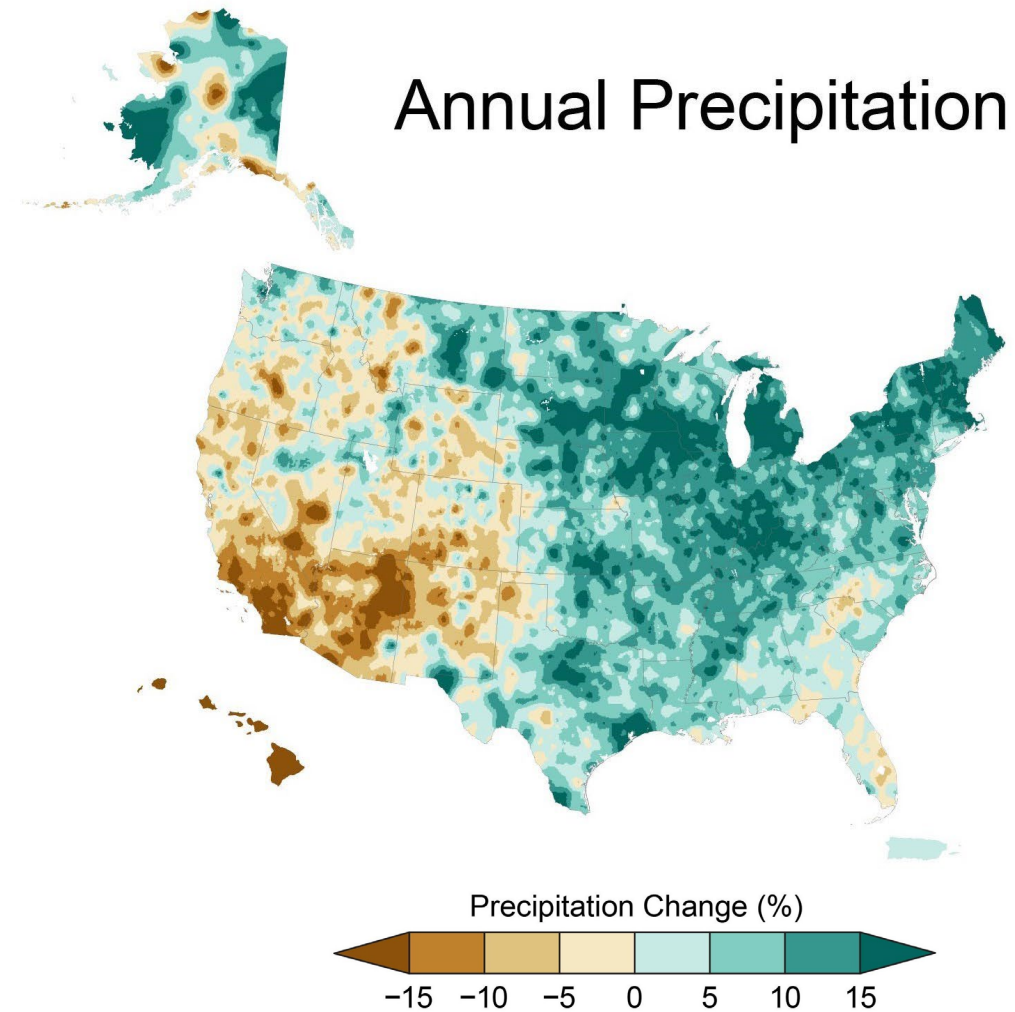
# Flooding in Vermont





# Observed Changes in Annual Precipitation

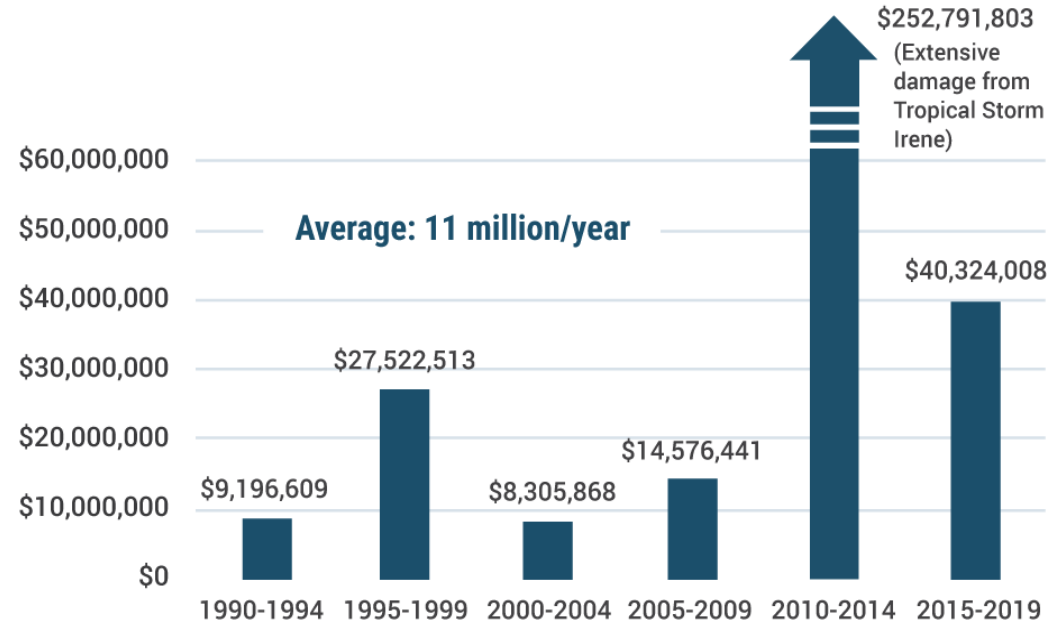
Figure Credit: NOAA NECI and CISESS NC



Compares data for the 2002–2021 period to the average for the period of 1901–1960



# FEMA Public Assistance to VT 1990-2019



## FEMA Public Assistance to Vermont for Flood and Severe Storms

*These amounts represents 75-90% of the actual costs that municipalities face from storms. And they're increasing. This doesn't include private property.*

# What is a Floodplain?



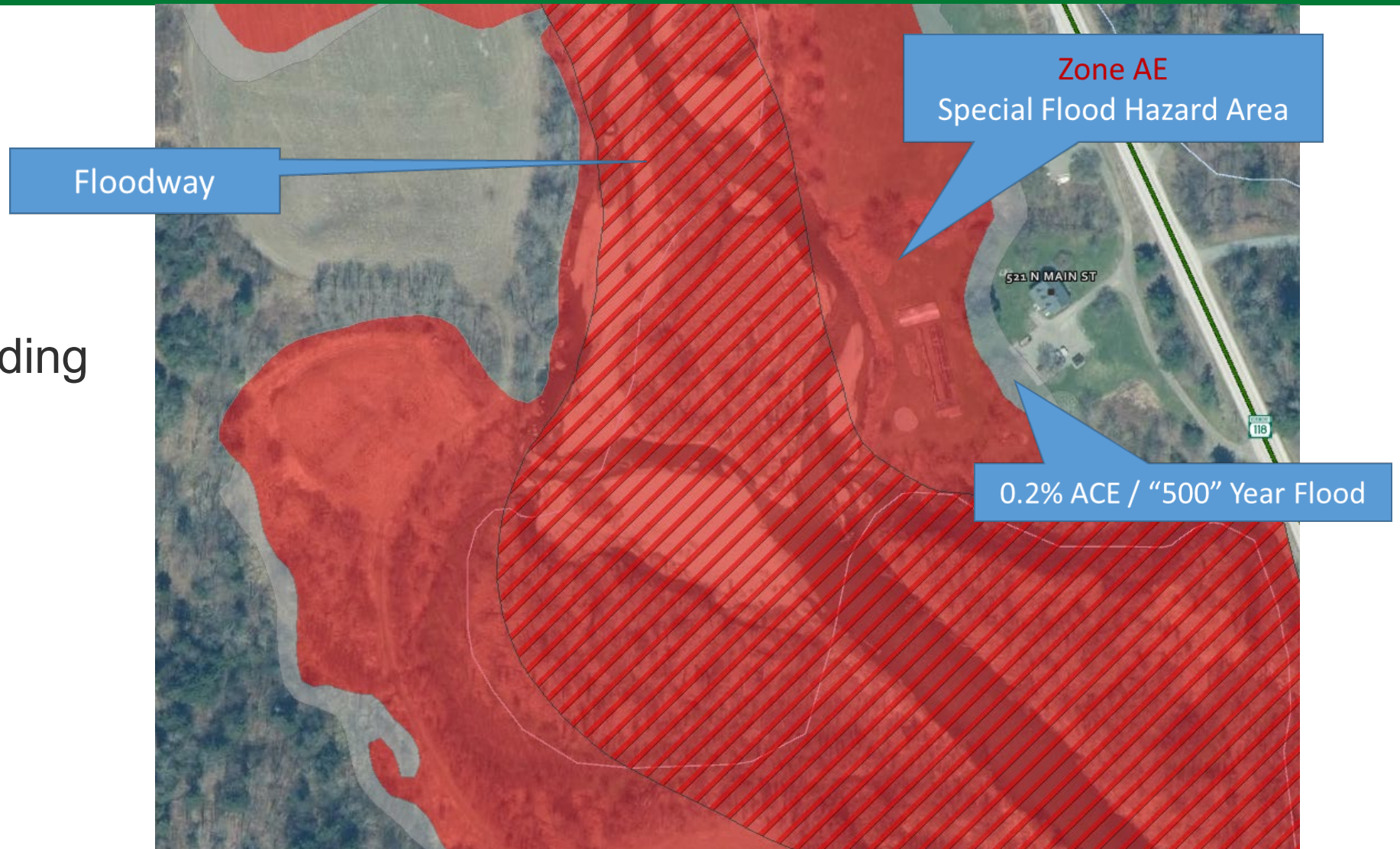
- The low-lying area next to a stream that gets wet during a high-water event
- Natural benefits:
  - Store floodwaters
  - Keeps water clean (traps sediment)
  - Creates habitat
  - Community value



# Special Flood Hazard Area (FEMA Floodplain)

## SFHA

- High-risk
- 1% chance of flooding in any year
- Zones A, AE
- Base flood
- Inundation only





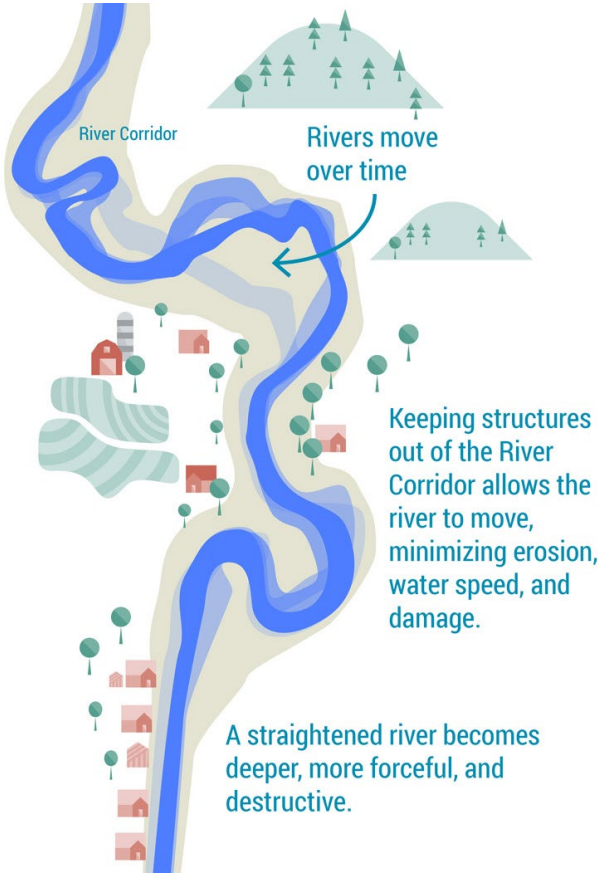
# Inundation vs. Erosion Flooding



Jeffersonville, VT



# River Corridors

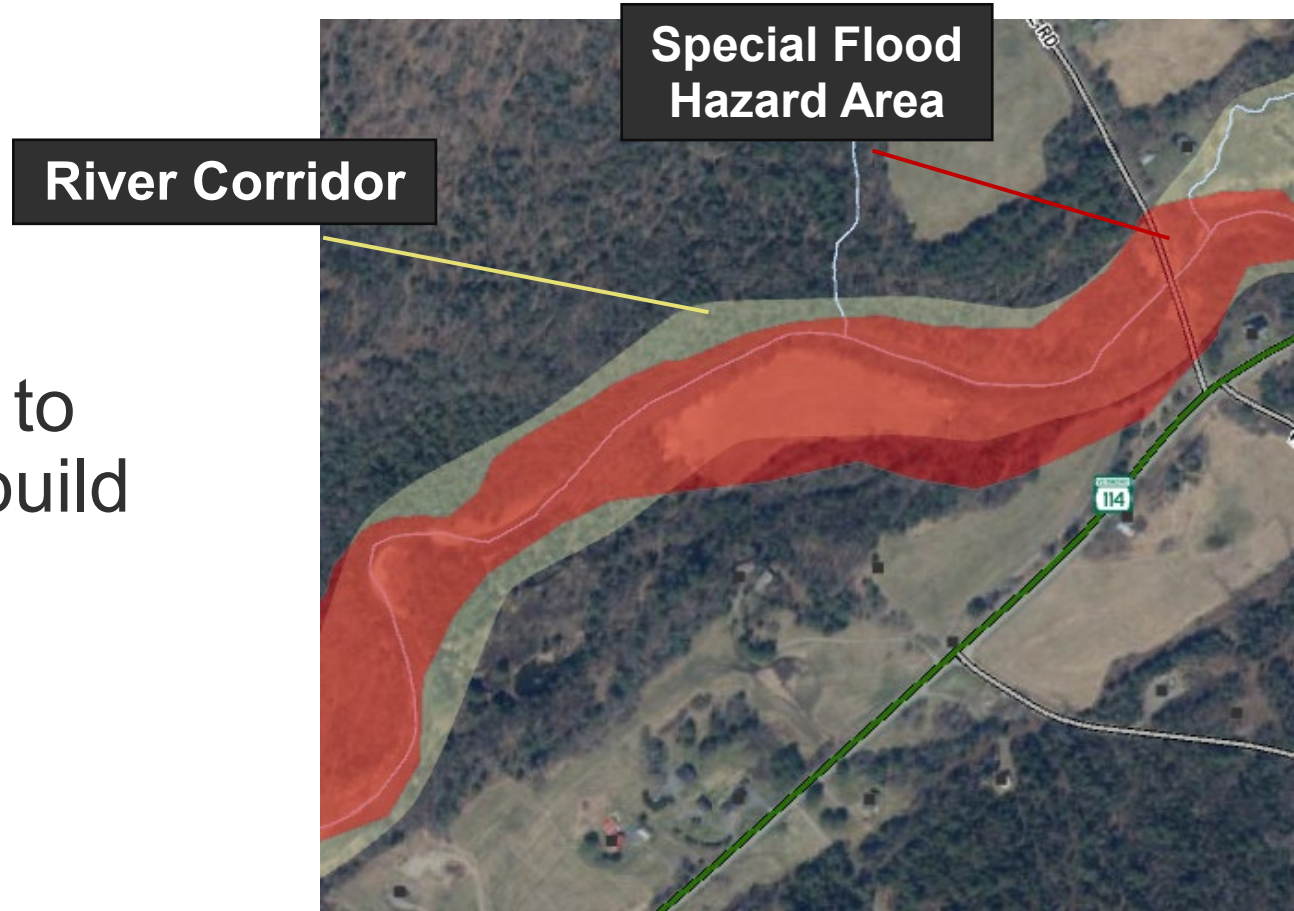




# Addressing Erosion

## SFHA + River Corridors

- Utilize both SFHA and RC to inform where and how to build



VT Flood Atlas



# Find Your Maps!

## VT Flood Atlas

[bit.ly/flood-atlas](https://bit.ly/flood-atlas)

## FEMA Map Service Center

[msc.fema.gov](https://msc.fema.gov)

### VT Flood Atlas

The screenshot displays the VT Flood Atlas interface. On the right, a satellite map shows a town area with red flood zones and road labels like '122', '5', 'PARK AVE', 'COURT ST', and 'EAST ST'. On the left, a 'Flood Ready Tools' menu is open, listing various interactive options:

- Toggle Flood Data On**: Turn on the Atlas flood data.
- Toggle River Corridors On**: (Currently selected)
- Toggle Flood Data Off**: Turn flood data from the Atlas OFF.
- Toggle River Corridors Off**
- Find Address**: Find an address.
- Zoom to Town**: Specify a town to zoom to.
- Print Map**
- Return to initial map extent**
- Change visible map layers**: @language-app-gone-online
- Bookmark current map extent**: Add the current map extent to the list of bookmarks, so that I can return to it later.

# The National Flood Insurance Program (NFIP)



**FEMA**



**NATIONAL FLOOD  
INSURANCE PROGRAM®**

**Flood Hazard Maps**

**Floodplain Management  
Regulations**

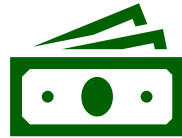
**Flood Insurance**

# Benefits of the NFIP



## Flood Insurance

Access to NFIP flood insurance for residents anywhere in the community



## Post-Disaster Funds

Access to extra financial support after a disaster



## Flood Protection

Minimum standards reduce exposure to flood damage



## Mitigation Funds

Access to FEMA Hazard Mitigation Grants for home elevations and buyouts



# How to Join the NFIP

1. Apply (one-page application form) to join the NFIP
2. Adopt a resolution of intent to participate
3. Adopt NFIP compliant regulations to avoid future damage from flooding
  - Regulations are required even if the town does not have zoning
4. Complete a FEMA Community Assistance Visit

# What's Required of NFIP Communities

- A local Administrative Officer to administer the regulations (bylaw)
- Adopt, implement, and enforce flood regulations
- Issue or deny Flood Hazard Area Permits
  - Ensure compliance during and after



# Floodplain Administrator Responsibilities

- Issues or denies permits for ALL development in the SFHA
- Record-keeping
- Inspections
- Enforcement of regulations
- Substantial Damage Determinations

**Flood Hazard Area Permit Application**

Permit Application #	Flood Insurance Rate Map (FIRM) Panel #	Flood Insurance Rate Map (FIRM) Date
Applicant's Name		Owner's Name
Address		Address
Phone #		Phone #
Property Location		
Subdivision	Tax #	Parcel #

*Note to Applicant: A complete application may require information on this form as well as any other items as described in the town's Flood Hazard Area Bylaws.*

Description of Work (Check all applicable boxes)

A. Structural Development

<b>Activity</b>	<b>Structure Type</b>
<input type="checkbox"/> New Structure	<input type="checkbox"/> Residential (1-4 Family)
<input type="checkbox"/> Addition	<input type="checkbox"/> Residential (4+ Family)
<input type="checkbox"/> Renovations/Repairs/ Maintenance	<input type="checkbox"/> Non-Residential (Floodproofing?) <input type="checkbox"/> Yes
	<input type="checkbox"/> Manufactured Home

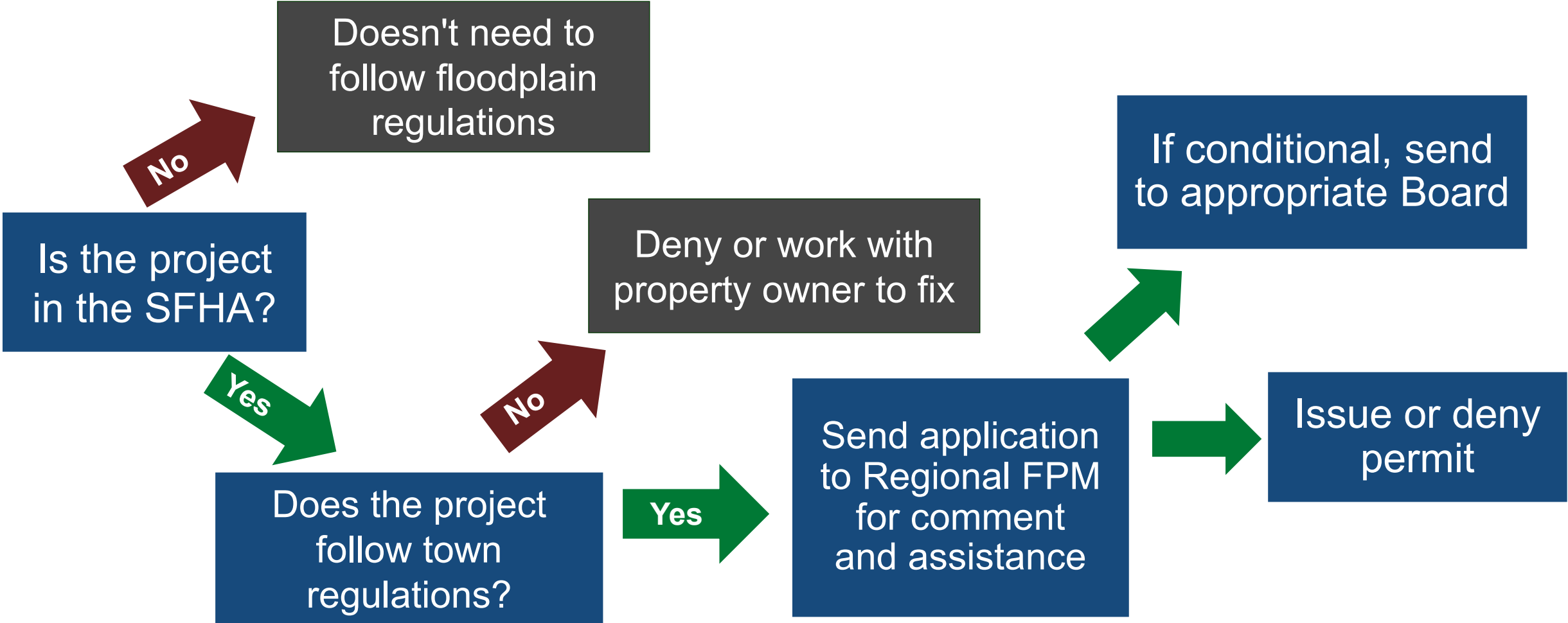
Dimensions (length X width) of any structures or additions: \_\_\_\_\_ Feet



# Permit Process

1. Is the project in the SFHA?
2. Does it follow the town regulations?
3. Send application to Regional FPM for comment and assistance
4. If conditional, send to appropriate Board
5. Issue or deny permit

# Permit Process



# Sample Permit

- Applicant information
- Parcel information
- Project description
- Base Flood Elevation
- Property elevations

## Floodplain Development Permit

(See Terms & Conditions)

Issue Date:	Expiration Date:
Permit #	*Permit becomes void if there are changes to the effective Flood Insurance Rate Maps*

The **Floodplain Development Permit** is the mechanism by which our community evaluates any and all impacts of activities proposed within our regulated floodplains. All activities must be in compliance with the Floodplain Damage Prevention Ordinance of the presiding jurisdiction, whether local, regional or statewide. The National Flood Insurance Program provides flood insurance to individuals at much lower premiums than could otherwise be purchased through private insurers, and makes certain federal funds available to communities. In order for citizens to be eligible for the national flood insurance rates, or for communities to receive certain kinds of federal funds, the community must agree to meet minimum floodplain standards. This application packet is a tool to ensure that the activities in our community comply with the Floodplain Damage Prevention Ordinance

Any party undertaking development within a designated floodplain must obtain a floodplain development permit prior to the work commencing. FEMA defines development in Title 44 of the Code of Federal Regulations part 59.1 as: *Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.* Other human activities that are considered development include but are not limited to: alterations of a structure through additions, demolition and remodeling, fences, retaining wall, moving/placement of remanufactured or mobile homes, campgrounds, storage of equipment, vehicles or materials (storage yards, salvage yards).

### 1 General Provision of the Floodplain Development Permit Terms

- No work may start until a permit has been issued.
- The permit may be revoked if:
  - Any false statements are made herein;
  - The effective Flood Insurance Rate Map has been revised;
  - The work is not done in accordance with the Floodplain Damage Prevention Ordinance of the presiding jurisdiction or other local, state and federal regulatory requirements.
  - The work is different than what is described and submitted to the community as part of the Floodplain Development Permit application.
- If revoked, all work must cease until permit is reissued.
  - If the permit cannot be reissued, applicant acknowledges that they will be responsible to correct the issue which may require removal of any development that may have occurred.
- Development shall not be used or occupied until the project has received final inspection, a final elevation and approval by the community.
- The permit will expire if no work has commenced within 3 months of issuance and by the expiration date noted on the permit.
- Applicant is hereby informed that other permits may be required to fulfill local, state, and federal regulatory requirements and acknowledges that it is their responsibility to ensure that all necessary permits are obtained.
  - This includes but is not limited to documentation showing compliance with the endangered species act.
- Applicant hereby gives consent to the local Floodplain Administrator and his/her representative (including state and federal agencies) to make reasonable inspections required to verify compliance.
- Applicant acknowledges that the project will be designed to minimize any potential drainage onto surrounding properties and will be responsible for any drainage issues that may arise.
- I, the applicant, certify that all statements herein and in attachments to this application are, to the best of my knowledge, true and accurate. Furthermore, I have read and understand the relevant Floodplain Damage Prevention Ordinance for my community and will adhere to the ordinance and will or have already obtained all necessary state, federal and local permits for the proposed development.

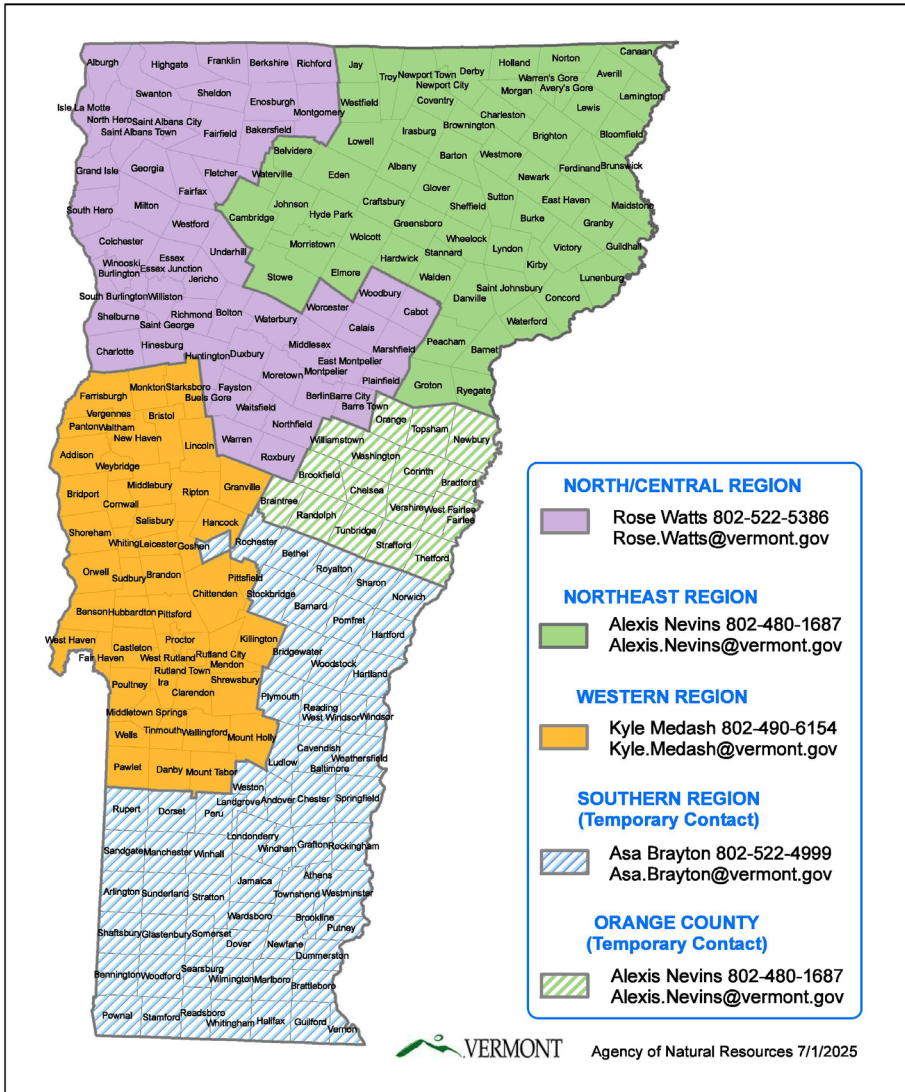


APPLICANT'S NAME:  
[Redacted]

APPLICANT'S SIGNATURE:  
[Redacted]

DATE:  
[Redacted]





# DEC Regional Floodplain Managers

## Your Floodplain Manager is here to help YOU!

[Bit.ly/flood-manager](https://bit.ly/flood-manager)

# Bylaws

- Required to have a community-level bylaw for SFHA
- Every community is different – be familiar with your community's bylaw
- State model bylaw



# What is "Development"?



Any human-made change  
to improved or  
unimproved real estate

Includes:

- Structures
- Fill, grading, dredging, paving
- Interior construction
- Accessory structures
- Fences and signs





# Substantial Damage & Substantial Improvement

- Focus: making buildings more flood resilient
- NFIP expectation on town
- Substantial Damage – 50%, or more, Loss to Structure
- Substantial Damage estimates
- Non-substantial Damage
  - Permits mostly after the fact
  - Flood Damage Resistant materials
  - Utilities Protection

# When a Flood Happens

## Pre-Flood

- Prep work - List of addresses in the SFHA
- Form fillable Substantial Damage Determination
- Information Form for properties in SFHA



# When a Flood Happens

## Post-Flood

- Properties in SFHA require permits for post-flood repairs
- Properties in SFHA must have damages assessed prior to repairs
  - Substantially damaged properties must have determinations



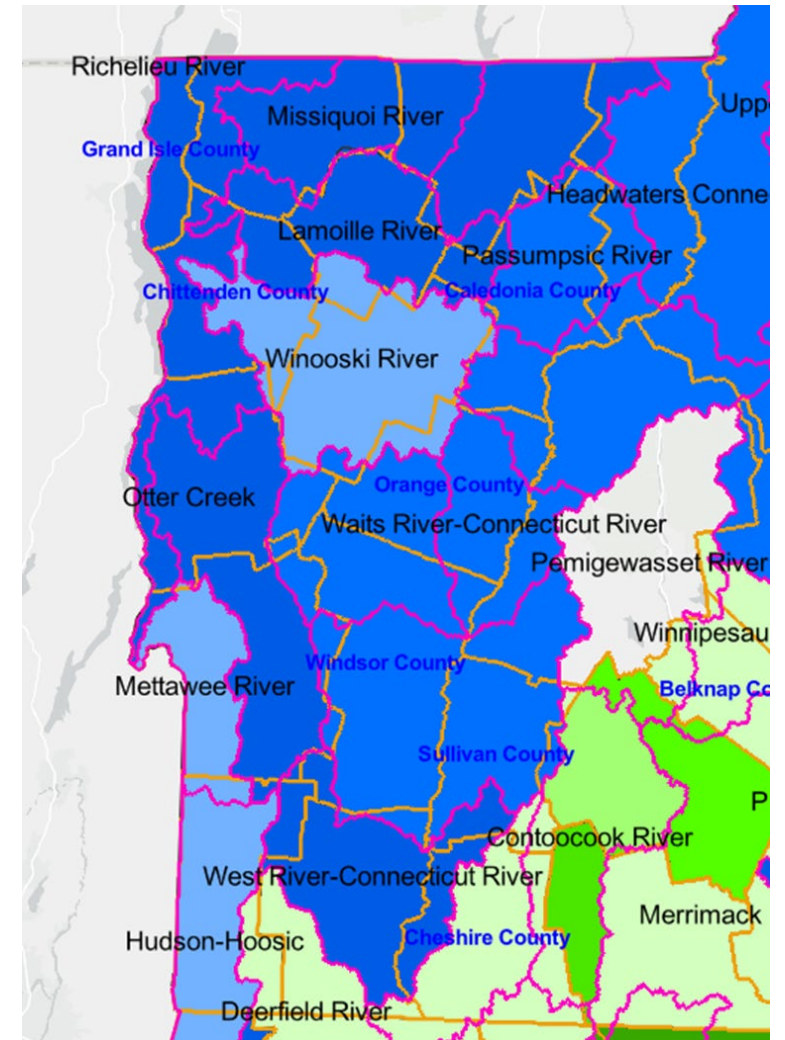


# New FEMA Maps

- New flood maps are coming!
  - Released by county
  - Watershed approach
- Municipalities must have bylaws that meet the NFIP standard

**Stay Updated:**

[bit.ly/fema-map-update](https://bit.ly/fema-map-update)



# State Model Bylaw

## No Adverse Impact

- ✓ Special Flood Hazard Area
- ✓ River Corridor Protection



# Resources

## DEC Websites



### Flood Ready Vermont

[www.floodready.vermont.gov](http://www.floodready.vermont.gov)

### Flood Training Vermont

[www.floodtraining.vermont.gov](http://www.floodtraining.vermont.gov)

### Vermont Flood Atlas

[bit.ly/flood-atlas](https://bit.ly/flood-atlas)



# Resources

## ASFPM NFIP 101 Course

- Free Online Course
- Approximately 15 hours
- Can receive CEC





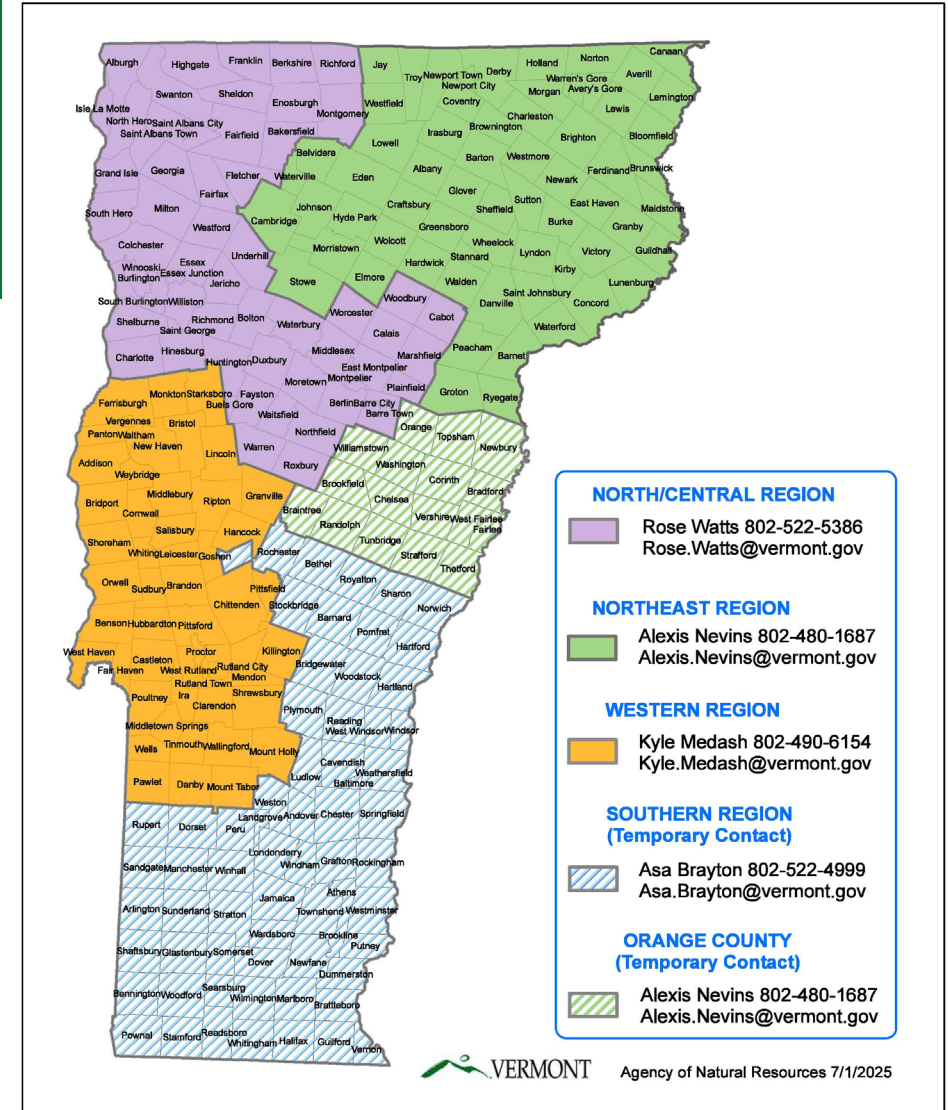
# Resources

## Regional Floodplain Managers

Contact Your Floodplain Manager!

[Bit.ly/flood-manager](https://bit.ly/flood-manager)

### VT DEC River & Floodplain Managers





# Contact Us

**Asa Brayton, CFM, Regional Floodplain Manager**

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[Sacha.Pealer@vermont.gov](mailto:Sacha.Pealer@vermont.gov)

# Questions?