



# **A Plainfield Wetlands Protection Bylaw:**

## **Presentation Summary**

- 1. Review of the Plainfield Municipal Vulnerability Preparedness Plan (MVP).**
- 2. Review of the Mass. Wetlands Protection Act (WPA).**
- 3. Importance of wetlands for resiliency under changing climate conditions.**
- 4. Importance of wetland buffer zones.**
- 5. How the Bylaw and the WPA differ.**
- 6. Activities allowed in both the WPA and the Bylaw.**



# The Plainfield Municipal Vulnerability Preparedness Plan Final Report Jan. 2019

## Top Hazards

“Severe weather, including precipitation-based events leading to localized flooding, as well as Thunderstorms...”

## High Priority Actions

- **Open Space and Land Management:** Update open space plan to protect wetlands.

# MA Wetlands Protection Act

*Any activity proposed or undertaken within an area specified in 310 CMR10.02(1) which will remove, fill, dredge, or alter that area is subject to regulation....*

## ***Areas Under Protection***

- *Any bank, freshwater wetland, wet meadow, marsh, bog or swamp bordering any creek, river, stream, pond, lake or bank.*
- *Land under water of any of the bodies above.*
- *Land subject to flooding.*
- *Riverfront Area*

# Purposes of WPA Regulations

- Protection of public and private water supply
- Protection of ground water supply
- Flood Control
- Storm Damage control
- Prevention of pollution
- Protection of land containing shellfish
- Protection of fisheries
- Protection of wildlife habitat



“Ecosystem Services”

### Open Water

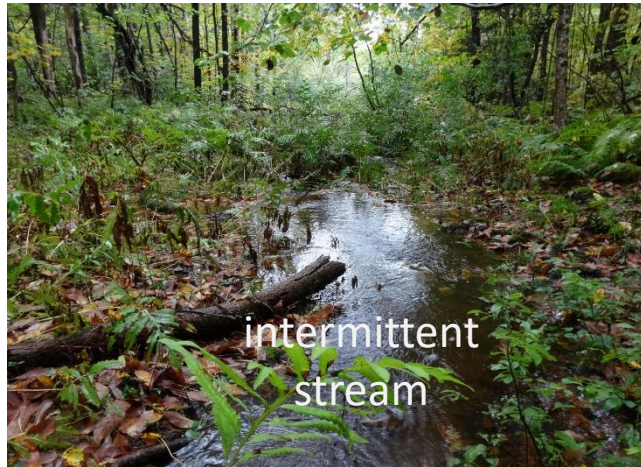


### Bordering Wetlands



### Uplands

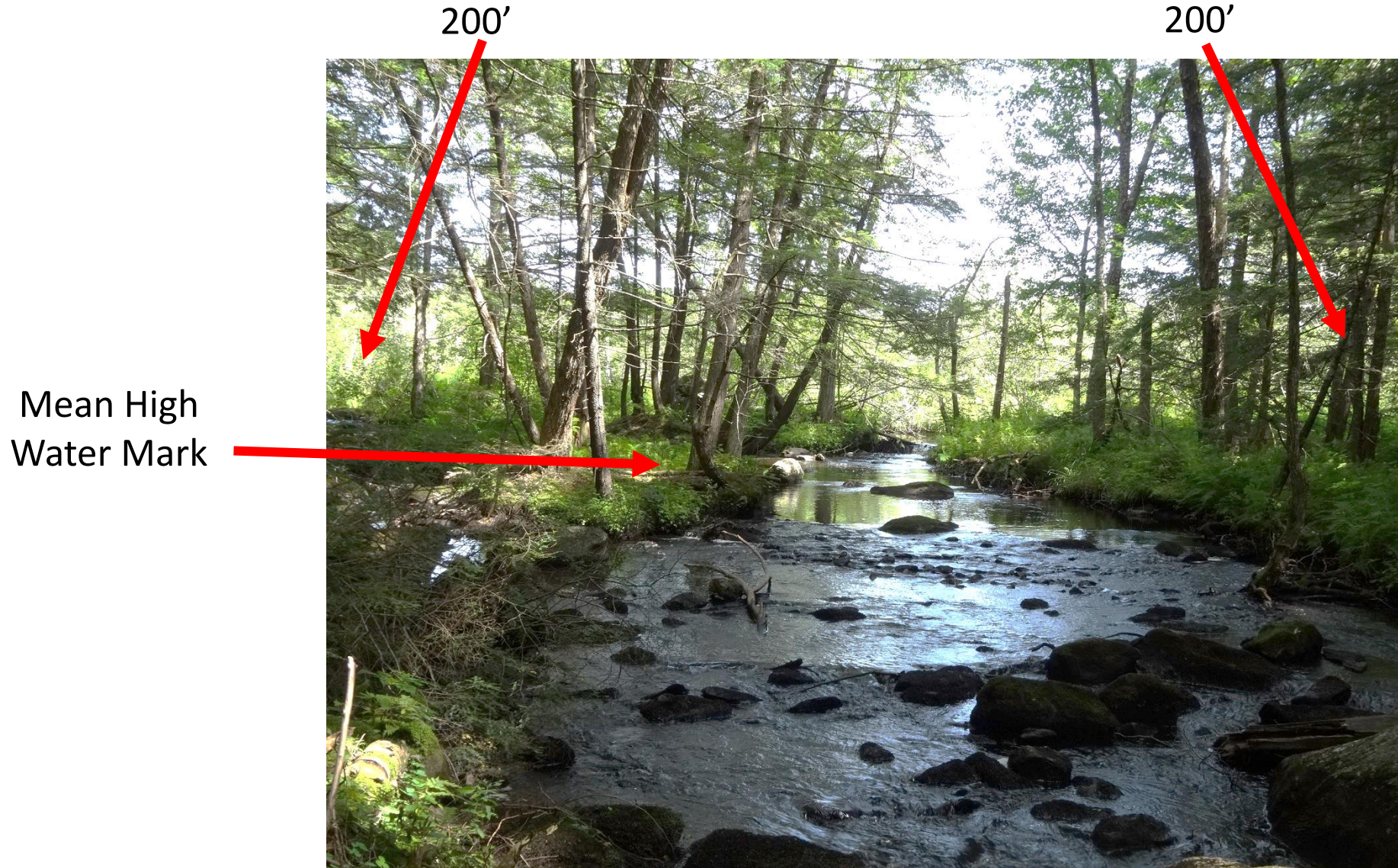
100 ft. Buffer Zone



100 ft. Buffer Zone



# Riverfront Area and Perennial Streams





# Isolated Wetlands, Bogs & Fens





# Isolated Lands Subject to Flooding



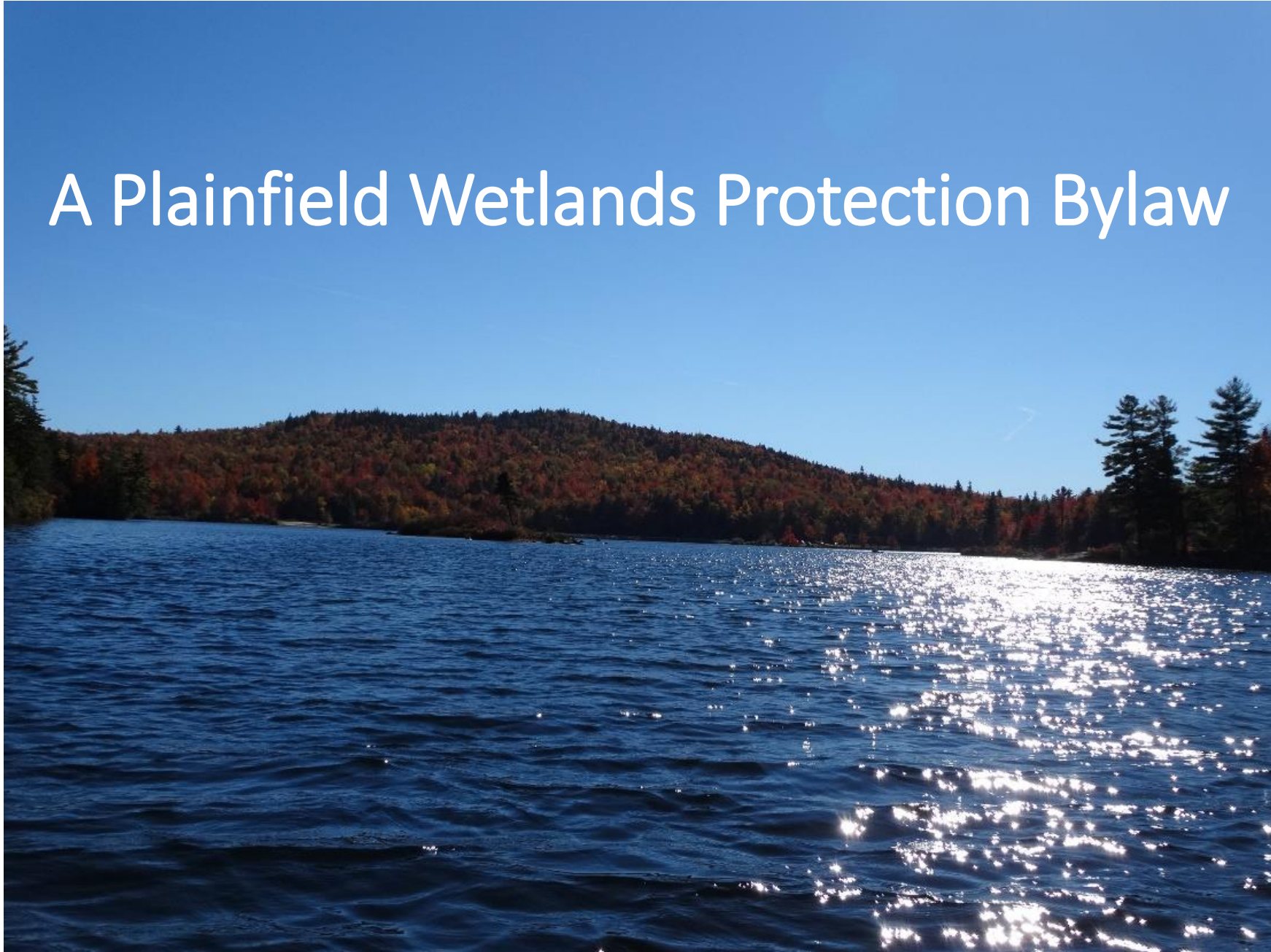


# Vernal Pools and Vernal Pool Habitat

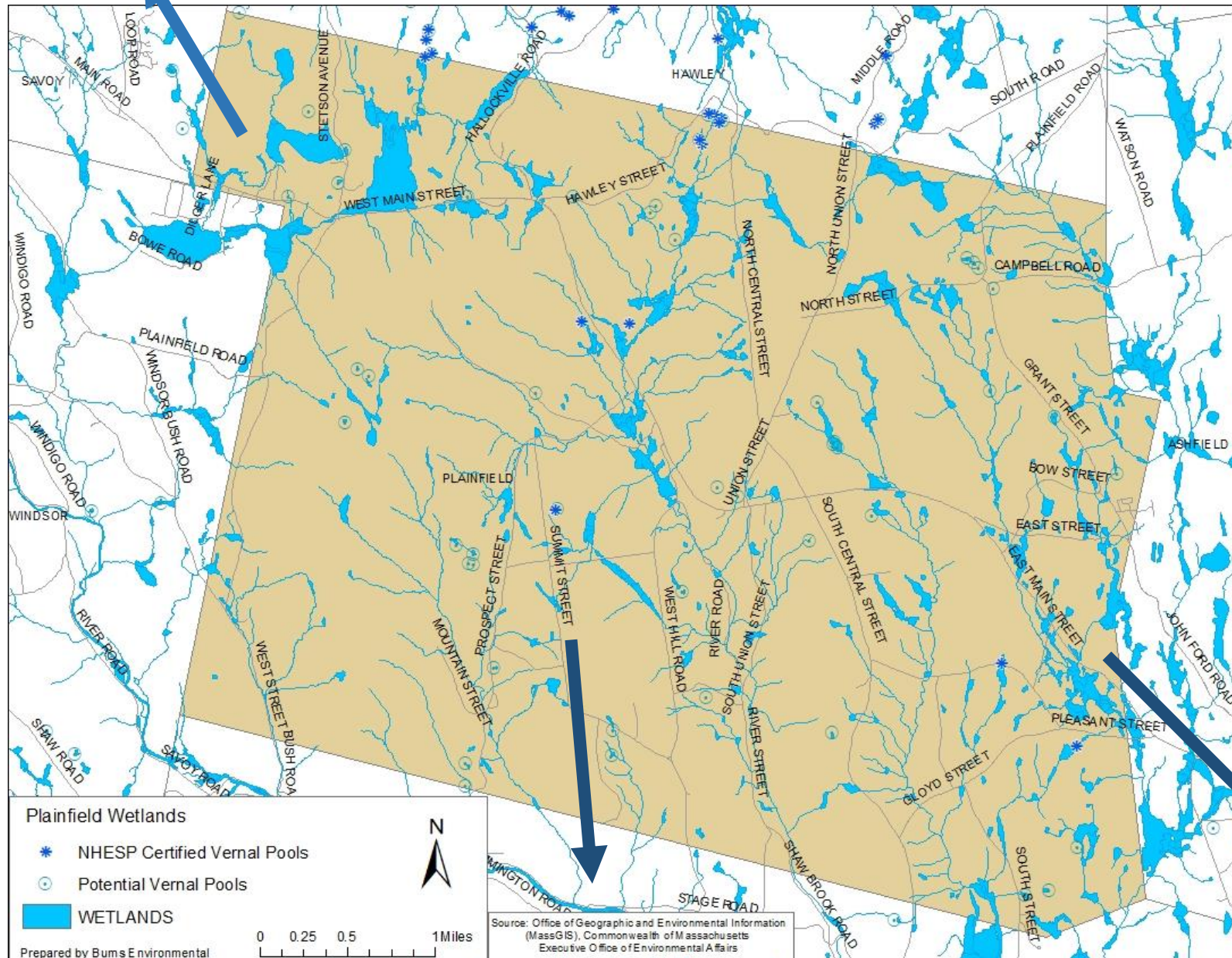




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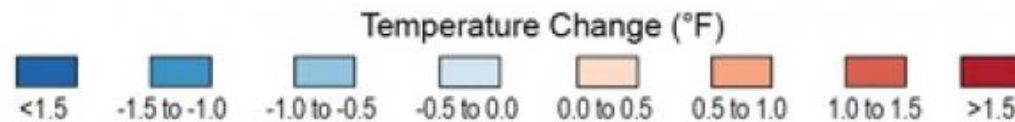
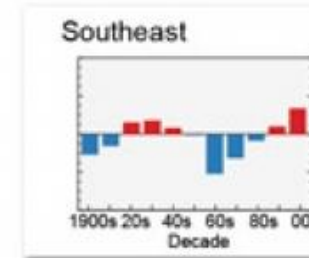
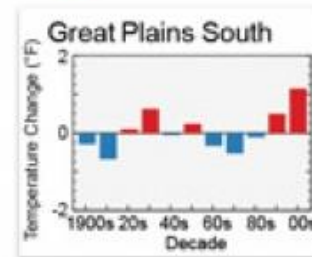
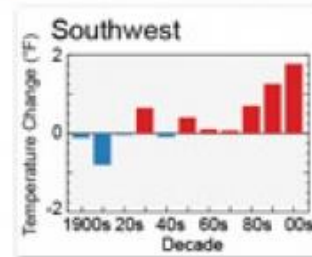
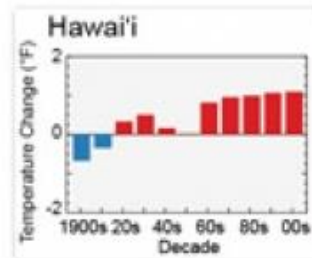
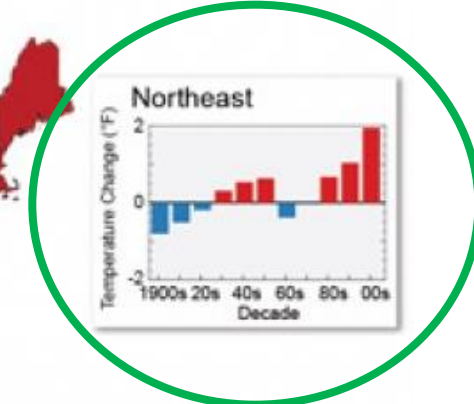
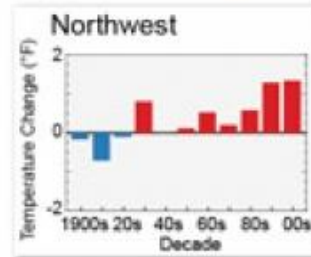
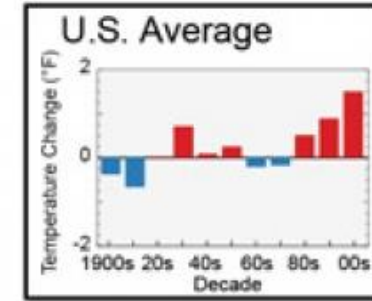
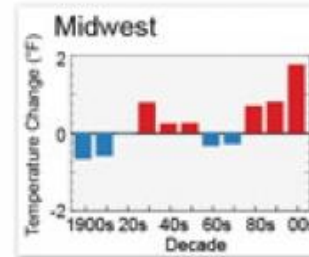
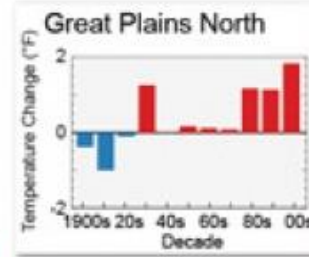
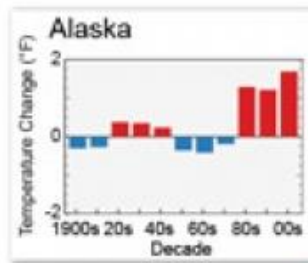




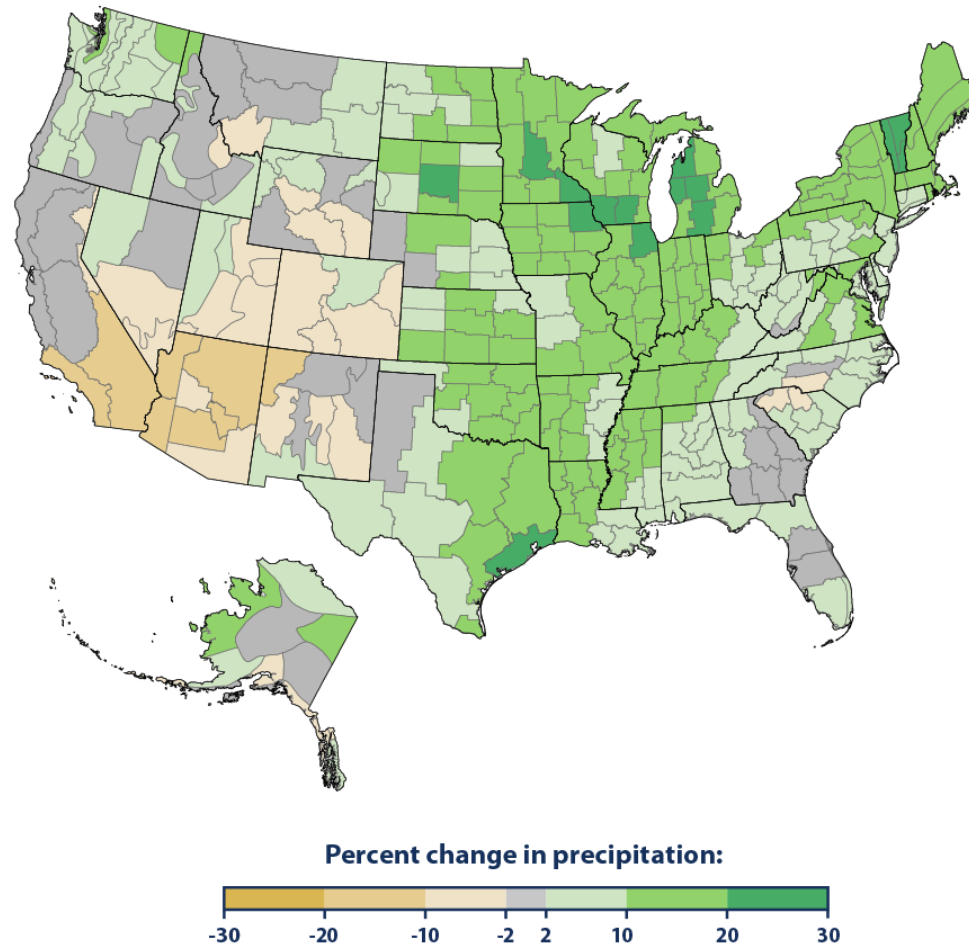


**Wetlands and Our Changing Climate**  
**§**  
**Why a Wetlands Bylaw Will Be Important**

# Average Temperature Trends







This figure shows the rate of change in total annual precipitation in different parts of the United States since the early 20<sup>th</sup> century (since 1901 for the contiguous 48 states and 1925 for Alaska). The data are shown for climate divisions, as defined by the National Oceanic and Atmospheric Administration.

Data source: NOAA, 2021<sup>3</sup>

Web update: April 2021

# West Hill Road July 29, 2021



*Over 11 inches of rain in July*



*A wetlands bylaw can improve buffer zone  
protection of wetlands and the community from  
the hazards of climate change*

- Severe storm events
- Hydrological and temperature changes
- Land use change

# Wetlands provide flood storage capacity and reduce peak flow

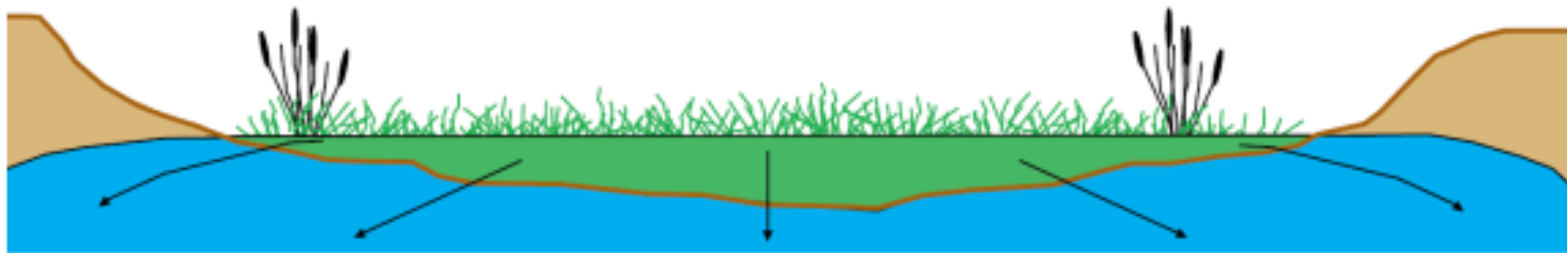




# Wetlands also Recharge Surface Waters During Drought

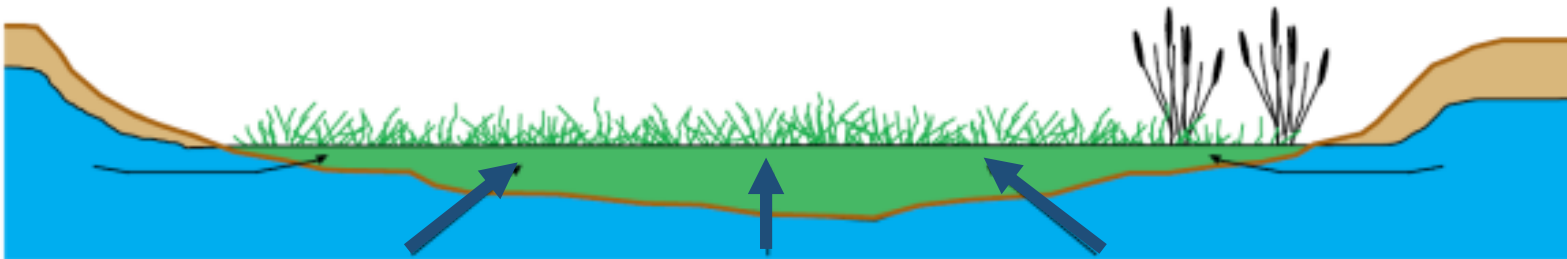
## Recharging Wetland

In Recharging wetlands, water moves from the wetland into the groundwater



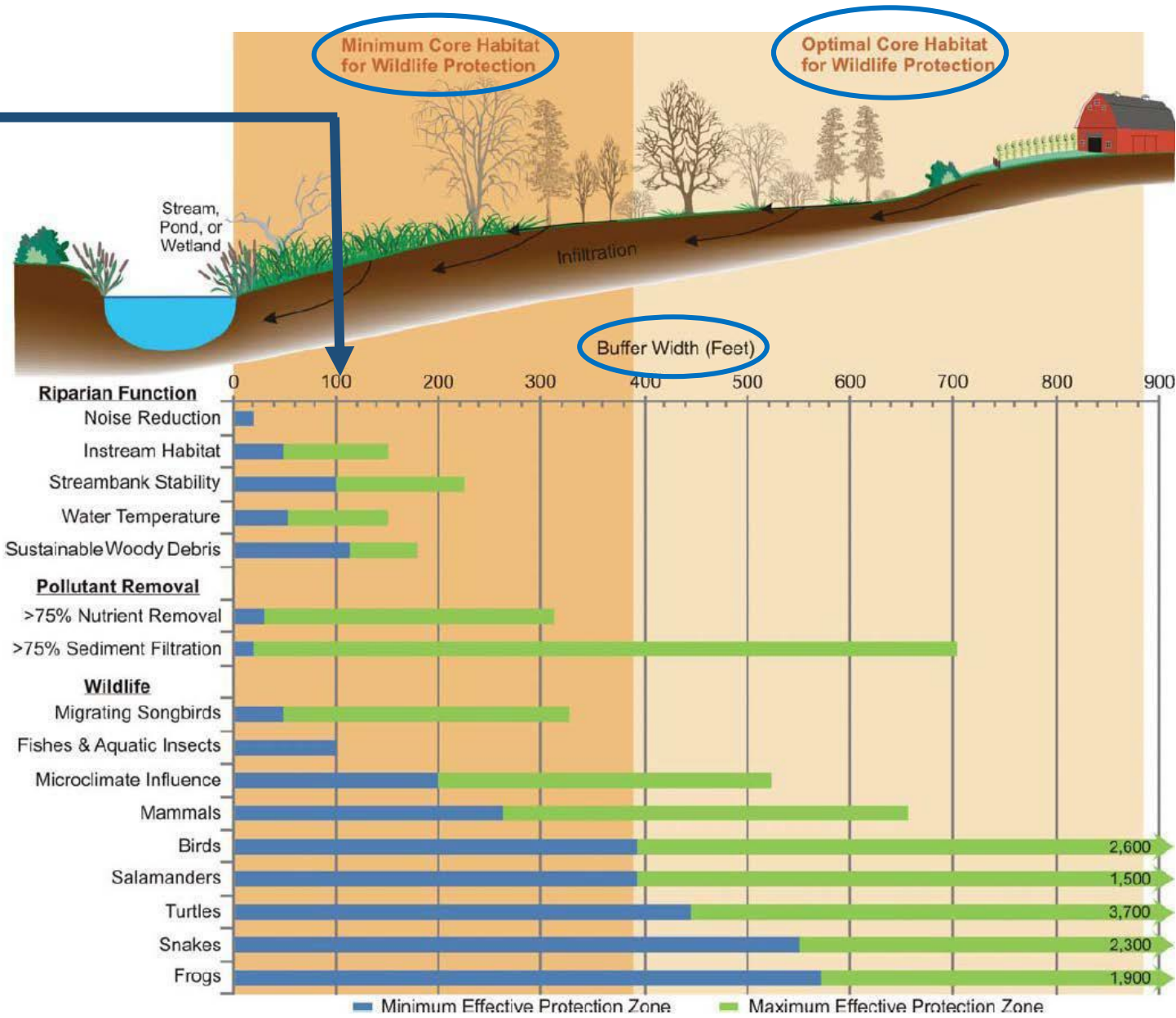
## Discharging Wetland

In Discharging wetlands, water moves from groundwater into the wetland



Fluctuating water tables can cause wetlands to shift back and forth from Discharging to Recharging

100' Buffer  
Zone





	MA Wetlands Protection Act	Plainfield Bylaw
Buffer Zone	100', not considered a "Resource Area"	100', established as a "Resource Area," with a 50' No Disturbance Zone
Rivers & Perennial Streams	200' Resource Area along banks	Same, except with an inner 100' No Disturbance Zone
Intermittent Stream	100' Buffer Zone around bordering wetlands	Same
Areas Regulated	Those bordering open water and ILSF*	Same
Isolated Lands Subject to Flooding (ILSF)*	An isolated depression that fills to a volume of at least ¼ acre-feet, 6" average depth at least once/year. No Buffer Zone.	Same, except surrounded by the 100' Buffer Zone.
Vernal Pool Habitat	Certified vernal habitat regulated.	Both certified and uncertified vernal pools surrounded by the 100' Buffer Zone regulated.
Ponds Regulated	Minimum 10,000 ft <sup>2</sup> – banks, land under water & wetlands regulated	Minimum 5000ft <sup>2</sup> Same regulated areas
Alternatives Considered	Yes	Yes
Notice of Permit Applications to Abutters	Those within 100' from property line	Those within 300' of the property line or across Plainfield or Crooked Ponds
Exempt Activities	Some specific activities	Same exempt activities
Filing Fees	Yes	No additional fees

# Buffer Zone Activities Allowed in Both the WPA and Bylaw

- Work performed for normal maintenance or improvement of land which is lawfully in agricultural use.
- Unpaved pedestrian walkways, fencing (provided it does not constitute a barrier to wildlife), vista pruning, and planting of native plant species of trees, shrubs or groundcover.
- Maintaining and repairing existing roads and driveways (excluding bridges and culverts).
- Maintaining and repairing existing buildings and structures, provided the footprint remains the same and there is no additional alteration of resource areas.
- Conversion of lawns to accessory uses, such as decks, sheds, pools.
- Title 5 Requirements



## Definitions According to the MA WPA and the Plainfield Bylaw

*Buffer Zone*: that area of land extending 100’ horizontally outward from the boundary of any Resource Area, except the Riverfront Resource Area.

*Resource Area*: freshwater wetlands, marshes, swamps, wet meadows, banks, land under water and the *Riverfront Area*\*

*Riverfront Area*\*: 200’ on either side of a river or perennial stream measured horizontally from the mean high water line.

*River or Perennial Stream*: a natural, flowing body of water that flows throughout the year, except in some cases of drought.

*Stream*: one that flows through a defined channel into, within, or out of a Resource area. Perennial streams flow throughout the year. Intermittent streams do not flow throughout the year and have a 100’ buffer zone.

*Performance Standards*: standards that applicants are normally required to meet in order to conduct a permitted activity.

*Minor Activities within the Buffer Zone or Riverfront*: the conversion of lawn to other uses, such as a deck, patio or pool, as long as it is more than 50’ away from wetlands or the mean annual high water line of the Riverfront Area and activities involving the installation of trails, fencing or planting of native plants are also allowed in the WPA and Plainfield Wetland Protection Bylaw.

*Limited Projects*: activities allowed with conditions: such as the construction and maintenance of a new driveway when there is no reasonable alternative and the maintenance and improvement of public roadways. These activities are permitted in the WPA and Plainfield Wetland Protection Bylaw.

*No Disturbance Zone*: an area adjacent to a Resource Area in which disturbance is prohibited, except for *Minor Activities* and *Limited Projects*.