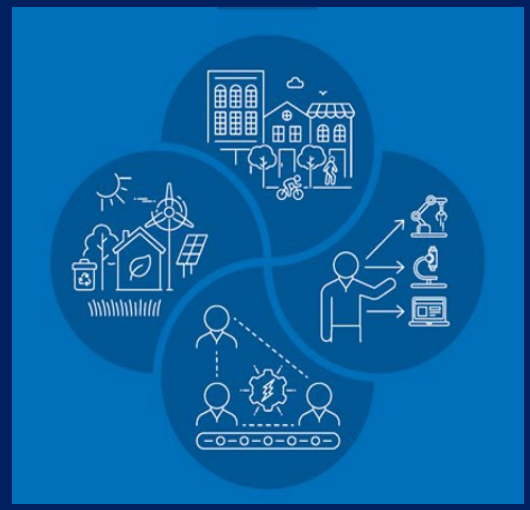

Building Climate Resilience in Newfane, NY

University at Buffalo
The State University of New York

Our team

- **Environmental Design Senior Studio**

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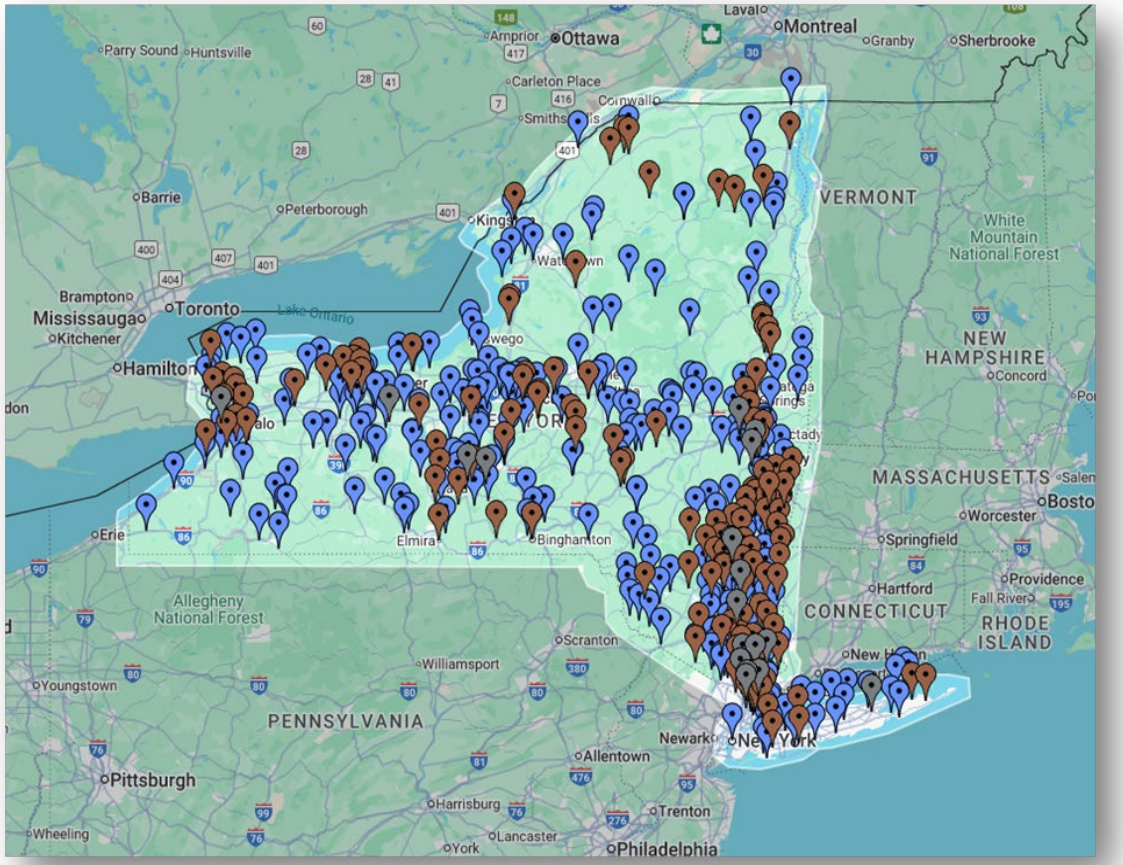
Outline

1. Climate Smart Community program
2. Plan and Policy Evaluation
3. Expected climate change impacts
4. Climate Vulnerability Assessment and Recommendations
   - Water quality and quantity
   - Agriculture and Land Management
   - Infrastructure
   - Local Economy
5. Guidance for the Comprehensive Plan Update

1. Climate Smart Communities Program



Goals:

- Reduce greenhouse gas emissions
- Build resilience to climate impacts
- Save taxpayer dollars
- Increase energy security and reliability
- Improve public health and safety
- Support a green innovation economy
- Demonstrate leadership

Interagency NYS program that **supports local efforts to meet the economic, social, and environmental challenges of climate change.**

Priority Actions

3 Required for Bronze
6 Required for Silver

PE2
- Government operations GHG emissions inventory
- Community GHG emissions inventory
- Government operations climate action plan
- Community climate action plan

PE3
- Government building energy audits

PE6
- Comprehensive plan with sustainability elements
- Alternative fuel infrastructure
- Complete Streets policy
- Natural resource inventory

PE7
- Climate vulnerability assessment
- Evaluate plans and policies for climate resilience
- Climate adaptation plan

PE9
- Climate change education and engagement

+ Guidance for the Comprehensive Plan Update

2. Plan and Policy Evaluation

List of Documents Analyzed - Spring 2026

- Newfane
  - Local Waterfront Revitalization Program (2026)
  - Master Plan (1998–2015)
  - Zoning Ordinance (1999)
  - Code & Regulations
- Niagara County
  - Agriculture Plan (2018)
  - Comprehensive Emergency Management Plan (2014)
  - Countywide Resilience Plan (2014): not specific to Newfane, but maps are useful
  - Multi-hazard mitigation plan (2022-2023)

Strengths

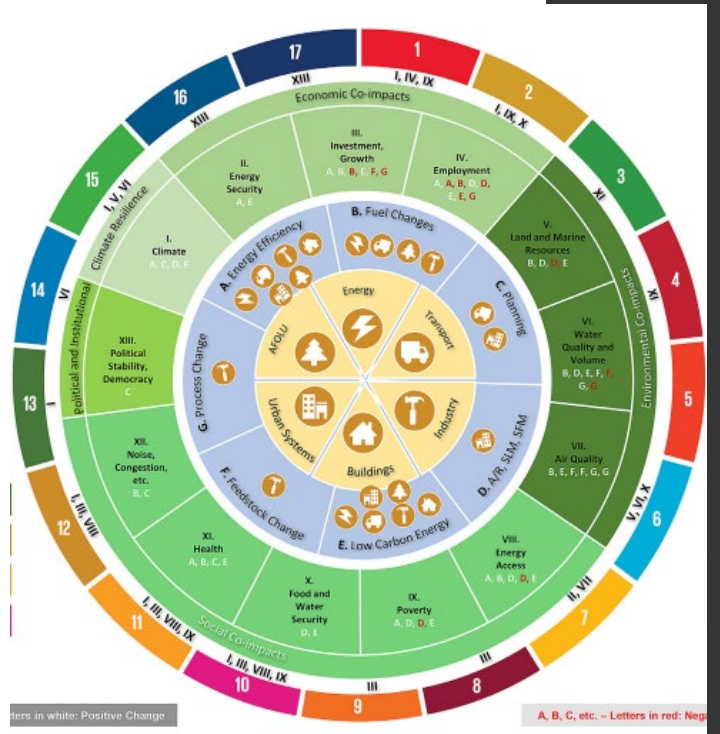
- Assets
  - Prime farmland, Niagara Fruit Belt microclimate
  - Nature-based tourism: fishing, orchards, wine trail
  - Lake Ontario is regulated: water levels vary, but are controlled
  - High banks of Eighteen Mile Creek reduce impacts of storm surge/heavy rains

- Resilience
  - Town regulations recognize flooding, coastline / riverine erosion
  - No critical infrastructure in high-risk areas
  - Newfane has already begun resilience works:
    - Coastal hardening, Olcott harbor breakwater, wastewater treatment plant upgrades
  - Newfane Fire Company is active in disaster preparedness
  - Niagara County handles hazard mitigation, disaster preparedness, response, & recovery
    - 2023 multi-hazard mitigation plan is recent and comprehensive

Opportunities for improvement

- 1998 Master Plan outdated, up for review in 2027

- Good time to focus on
  - Impacts of extreme temperatures and droughts
  - Cumulative risk assessments
  - Co-benefits of mitigation/adaptation actions
  - Green infrastructure/ open space plan
  - Meaningful public engagement

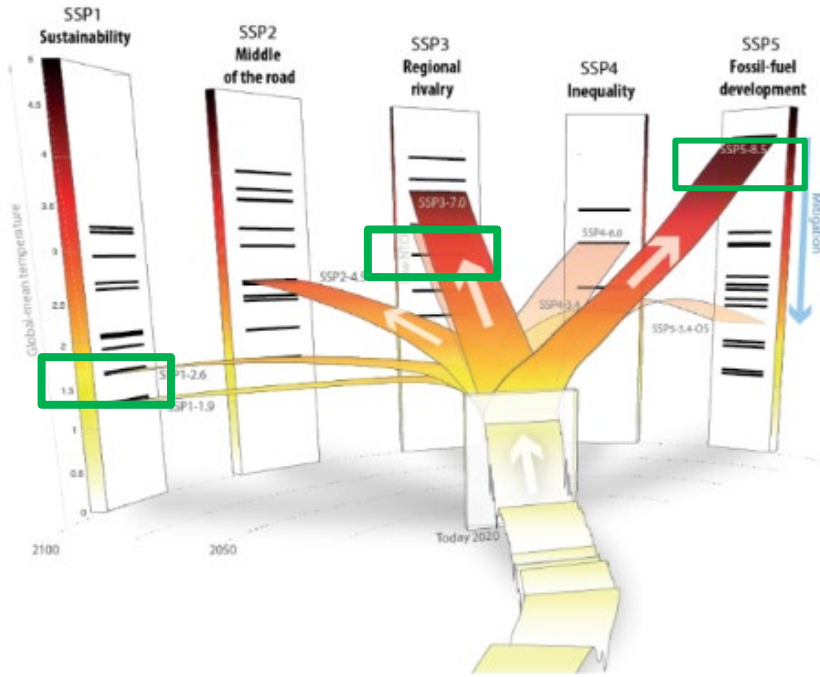


Cohen et al. 2021. Co-benefits and trade-offs of climate change mitigation actions and the Sustainable Development Goals. *Sustainable Production and Consumption,* 26: 805-813,

3. Expected Impacts of Climate Change

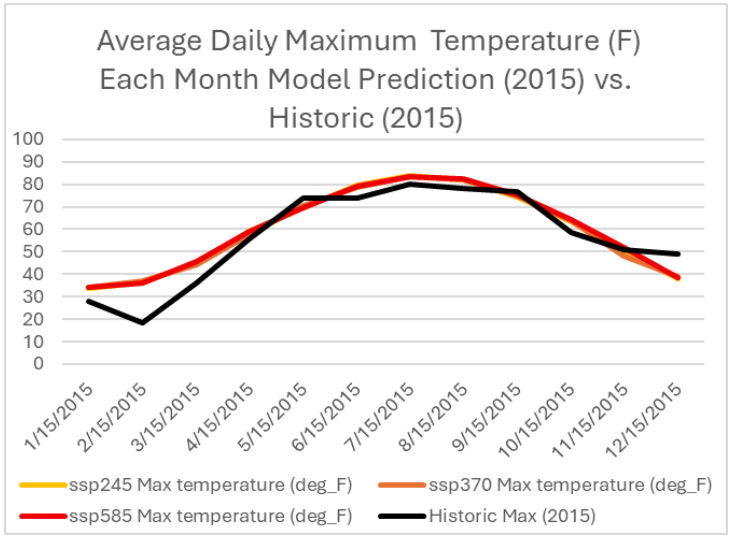
- CMIP6 temperature, precipitation predictions
  - Predictions from 2022 IPCC (1950-2100)
  - Data for Niagara County: National Climate Change Viewer
  - 3 socio-economic pathway models based on emission levels
    - best to worst: ssp245, ssp370, ssp585
- Gathered predictions to 2100
- Variables
  - Average daily max/min per month/season
  - Total precipitation per month/season
  - Total runoff per month/season
- Historical temp./precip. in Niagara Falls 2015 & 2025 (NOAA)
- Changes 2015-2100, 2025-2100

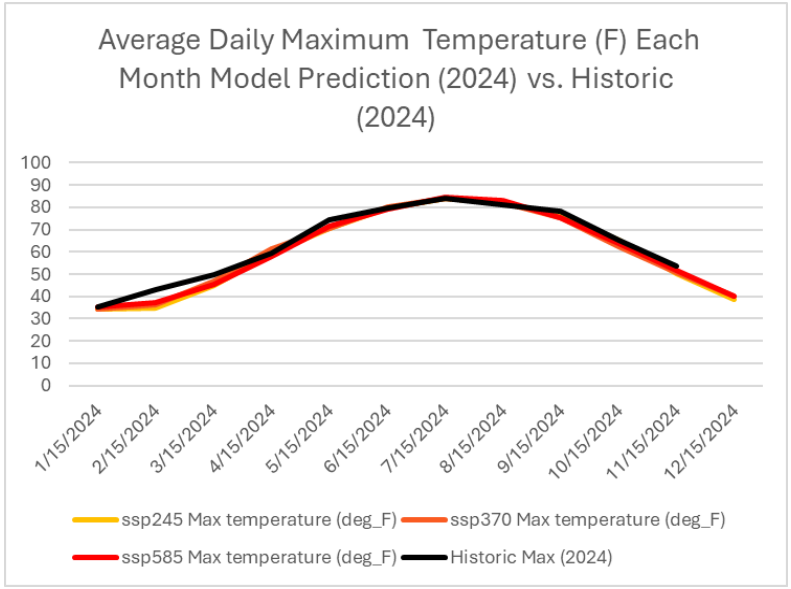
Figure 2: The sequence of information used to project future levels of climate change.



Model Predictions vs. Historic

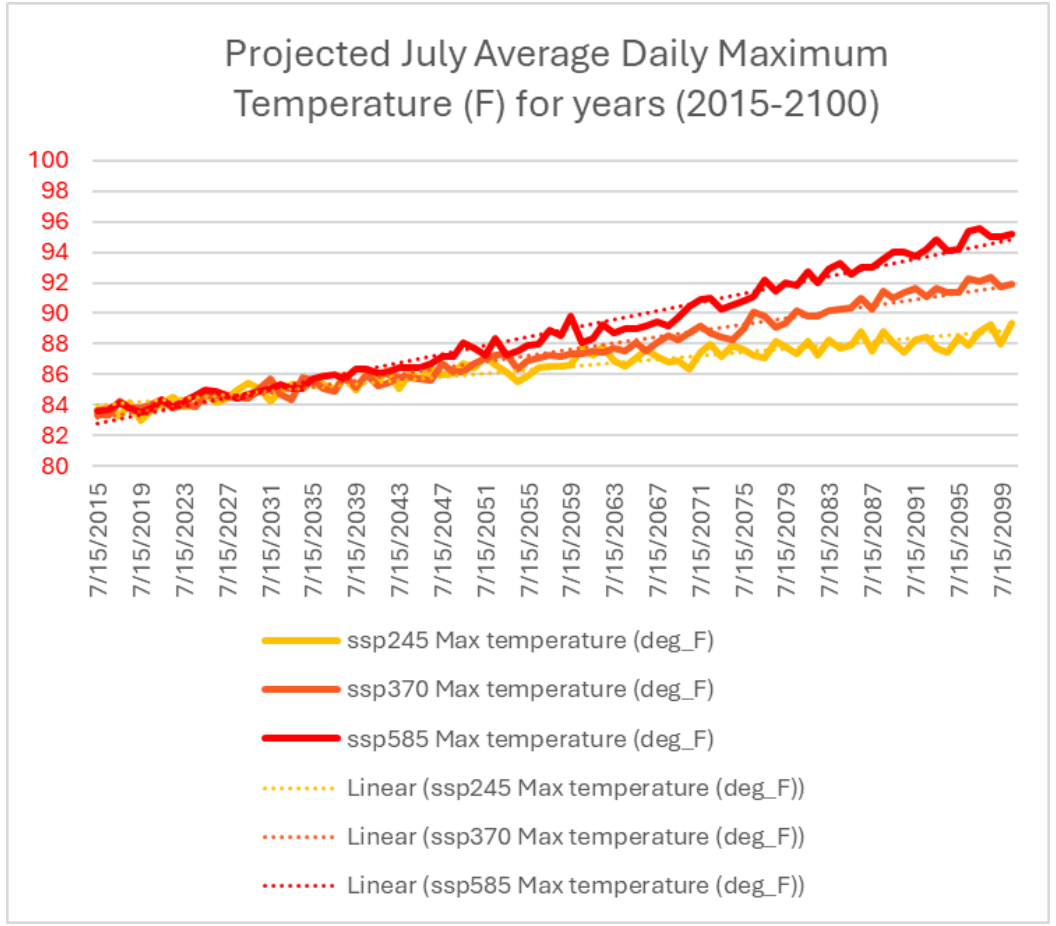
- Historic temps for 2015, 2024, 2025 for comparison with predictions
- Predictions do not provide accurate predictors year-by-year
- They show trends and natural fluctuations
- Accurately predict trends thus far





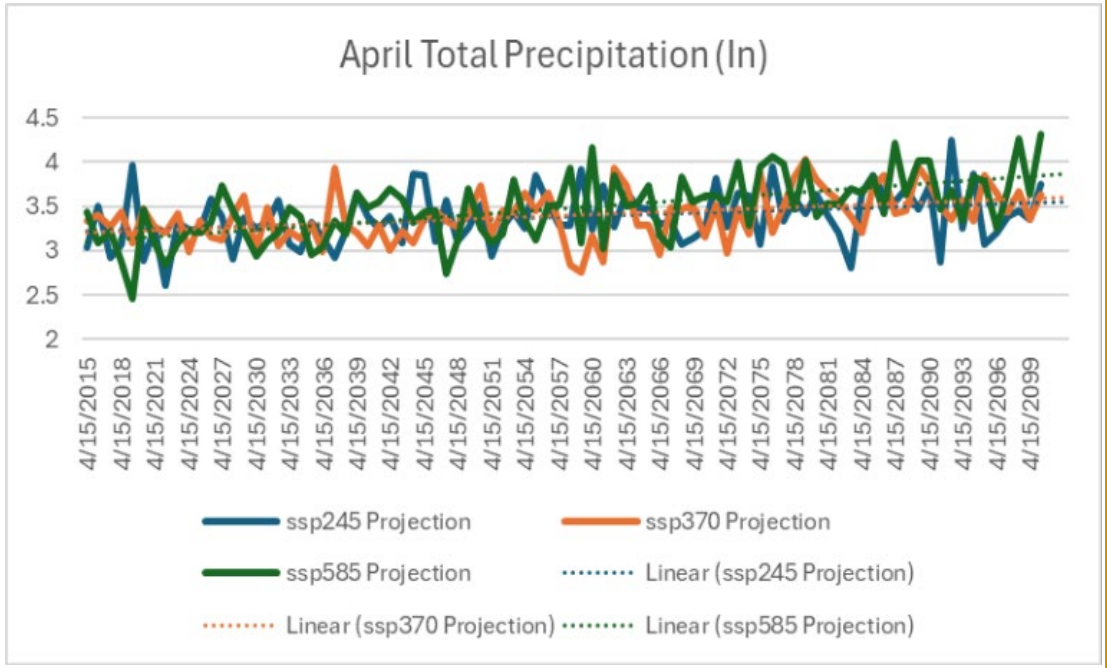
Temperature Predictions for Niagara County (2015-2100)

- Change in Average Daily Max
  - ~ 4F-11F
  - Worst case: July/August average ~95F, June/September upper 80sF
  - Best case: July temps become temps in June
  - Worst case: July temps become temps late May
- Change in Average Daily Min
  - ~5F-12F
  - Best case July = 68F
  - Worst case June-September > 68F (A/C)
  - Best case December > 32F, March 32F
  - Worst case: all winter months >32F



Precipitation Predictions

- Yearly precipitation: Increase 1.1-5.1 inches total by 2100
- Highest increases in Winter (up to +2.8 inches), Spring (+ 0.6 to 2.7 inches)
- Summer precipitation: Likely to decrease
- Fall: Could increase or decrease (low certainty)
- Runoff: Projected to decrease all seasons



Certainty of Precipitation Predictions

- Winter: Increase very certain
- Spring: Increase very certain
- Summer: Decrease, moderate certainty, depends on models
- Fall: Uncertain

Precipitation Model Agreement Table (Change from 1981-2010 to 2075-2099)

Model	Winter (ssp245)	Winter (ssp370)	Winter (ssp585)	Spring (ssp245)	Spring (ssp370)	Spring (ssp585)
ACCESS-CM2	N	I	I	I	I	I
ACCESS-ESM1-5	I	I	I	I	I	I
AWI-CM-1-1-MR	I	I	I	N	D	I
BCC-CSM2-MR	I	I	I	I	I	I
CESM2-LENS					I	
CNRM-CM6-1-HR			I			I
CNRM-CM6-1	I	I	I	I	I	I
CNRM-ESM2-1	I	I	I	I	I	I
CaNESM5	I	I	I	I	I	I
EC-Earth3-Veg	I	I	I	I	I	I
EC-Earth3	I	I	I	I	I	I
FGOALS-g3	I	I	I	I	I	I
GFDL-CM4	I	I	I	I		I
GFDL-ESM4	I	I	I	I	I	I
HadGEM3-GC31-LL	I		I	I		I
HadGEM3-GC31-MM	I		I			I
INM-CM4-8	I	I	I	I	I	I
INM-CM5-0	I	I	I	I	I	I
IPSL-CM6A-LR	I	I	I	I	I	I
KACE-1-0-G	I	I	I	I	I	I
MIROC6	I	I	I	N	I	N
MPI-ESM1-2-HR	I	I	I	I	I	I
MPI-ESM1-2-LR	I	I	I	I	I	I
MRI-ESM2-0	I	I	I	I	I	I
NorESM2-LM	I	D	I	I	I	I
NorESM2-MM	I	I	I	I	N	I
TaiESM1	I	I		I	I	
Multi Modal Mean Weighted (MMM)	I	I	I	I	I	I
MMM likely ECS	I	I	I	I	I	I
MMM very likely ECS	I	I	I	I	I	I

Precipitation Model Agreement Table (Change from 1981-2010 to 2075-2099)

Model	Summer (ssp245)	Summer (ssp370)	Summer (ssp585)	Fall (ssp245)	Fall (ssp370)	Fall (ssp585)
ACCESS-CM2	D	D	D	N	I	N
ACCESS-ESM1-5	D	D	D	I	I	N
AWI-CM-1-1-MR	N	D	D	D	D	D
BCC-CSM2-MR	D	D	D	N	I	N
CESM2-LENS		D			I	
CNRM-CM6-1-HR			D			N
CNRM-CM6-1	I	I	N	I	I	I
CNRM-ESM2-1	N	N	N	I	I	I
CaNESM5	D	D	D	N	D	D
EC-Earth3-Veg	D	D	D	I	D	D
EC-Earth3	D	D	N	D	D	D
FGOALS-g3	I	N	N	I	I	I
GFDL-CM4	D		D	I		I
GFDL-ESM4	I	D	D	D	N	N
HadGEM3-GC31-LL	D		D	D		D
HadGEM3-GC31-MM			D			I
INM-CM4-8	I	I	I	D	I	I
INM-CM5-0	I	I	I	I	I	N
IPSL-CM6A-LR	D	D	D	D	N	D
KACE-1-0-G	I	I	D	N	I	I
MIROC6	I	I	I	I	I	I
MPI-ESM1-2-HR	I	D	N	N	D	I
MPI-ESM1-2-LR	I	N	I	I	D	I
MRI-ESM2-0	I	I	I	I	I	D
NorESM2-LM	D	D	D	N	I	I
NorESM2-MM	D	D	D	I	I	I
TaiESM1	I	I		I	I	
Multi Modal Mean Weighted (MMM)	N	D	D	I	I	I
MMM likely ECS	N	D	D	I	I	I
MMM very likely ECS	N	D	D	I	I	I

4. Climate Vulnerabilities: Assessment and Recommendations

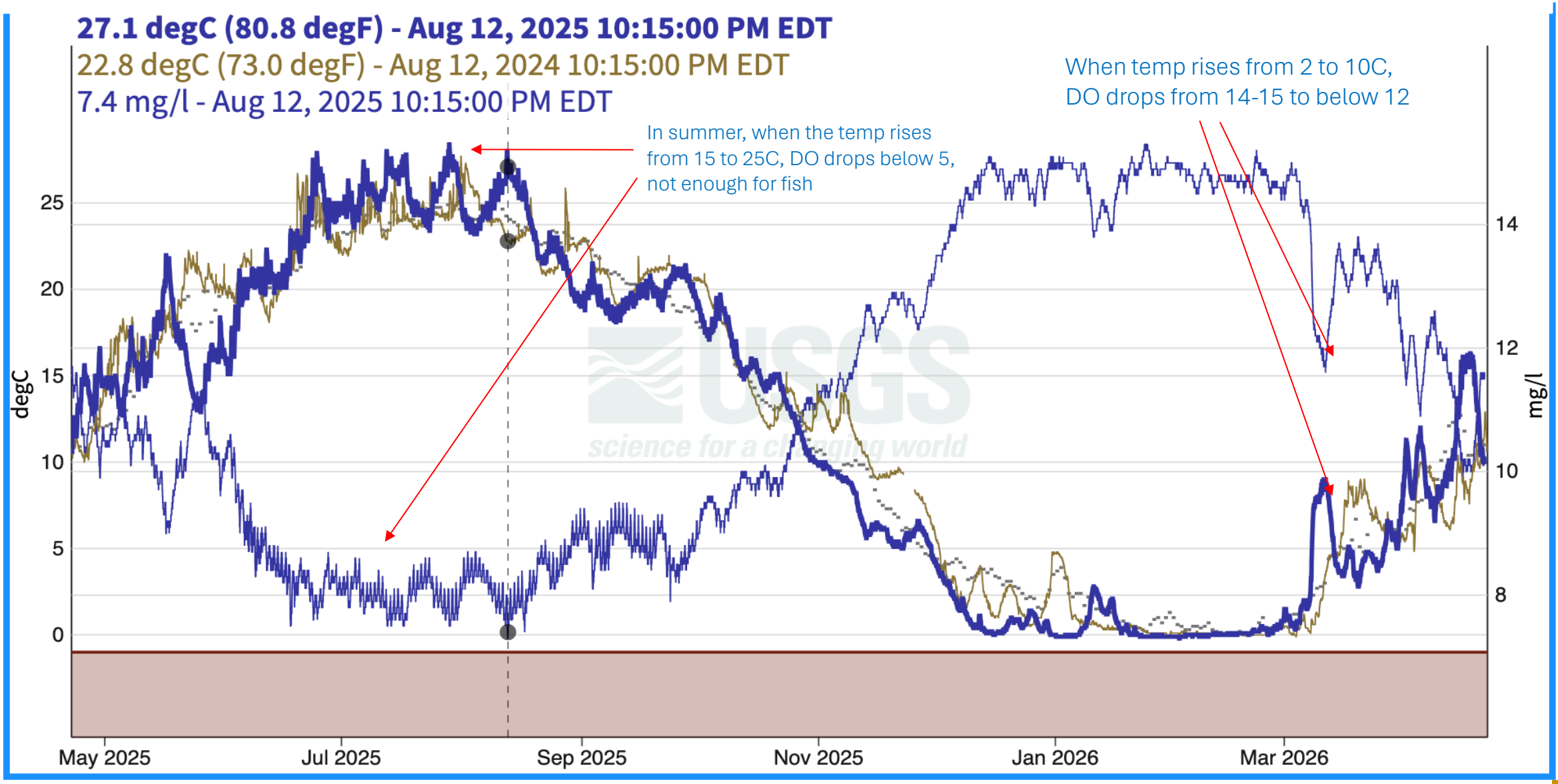
- Water quality and quantity
- Agriculture and Land Management
- Infrastructure
- Local Economy

Water quality & quantity: vulnerabilities

- Legacy contaminants
- Agricultural runoff
- Increasing lake and stream temperatures
  - => Algal blooms
- Bacteria (E-coli)
  - => Beach closures
- Fish Consumption Beneficial Use Impairment
- Invasive species

Algae in Newfane- Google Earth image , Lake Ontario

Burt Damn on Eighteen-Mile Creek; Water Temperature and Dissolved Oxygen Levels



(USGS, 2026)

Water: A Fragile Ecosystem

Current Creek Conditions:

- Temperature increase => dissolved oxygen decreases
- In summer, Creek exceeds optimal temperatures
  - Multiple days above 80°F
- Dissolved oxygen: summer avg. 7.5 mg/L
  - 2024 hit low of 6.8 mg/L
- Eggs, younger fish need higher O2 levels
- Temperature are increasing, DO is decreasing

Chinook Salmon - OSU

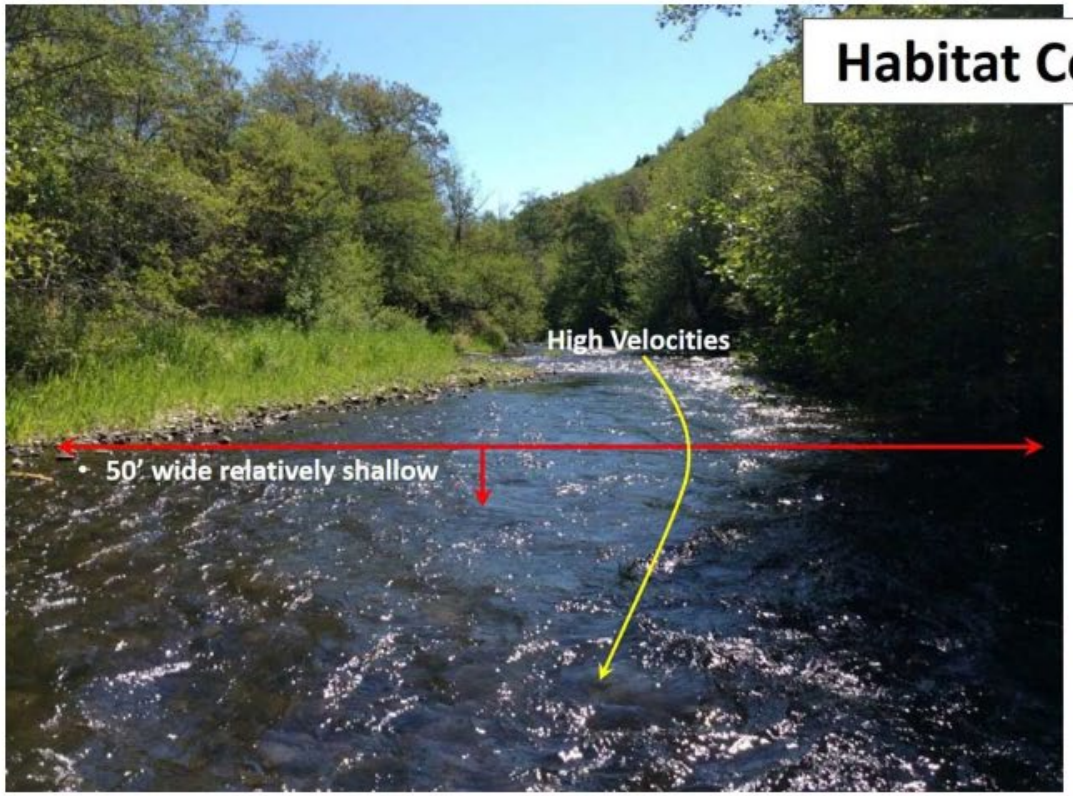
Local Fish Species	Optimal Temperature	Min Dissolved Oxygen
Steelhead Trout	50°F	6 mg/L DO
Chinook Salmon	65°F	4 mg/L DO
Small Mouth Bass	75°F	6 mg/L DO
Brown Trout	60°F	4.5 mg/L DO
Northern Pike	70°F	7.0 mg/L DO


DIY Fly Fishing – Eighteen-Mile Creek

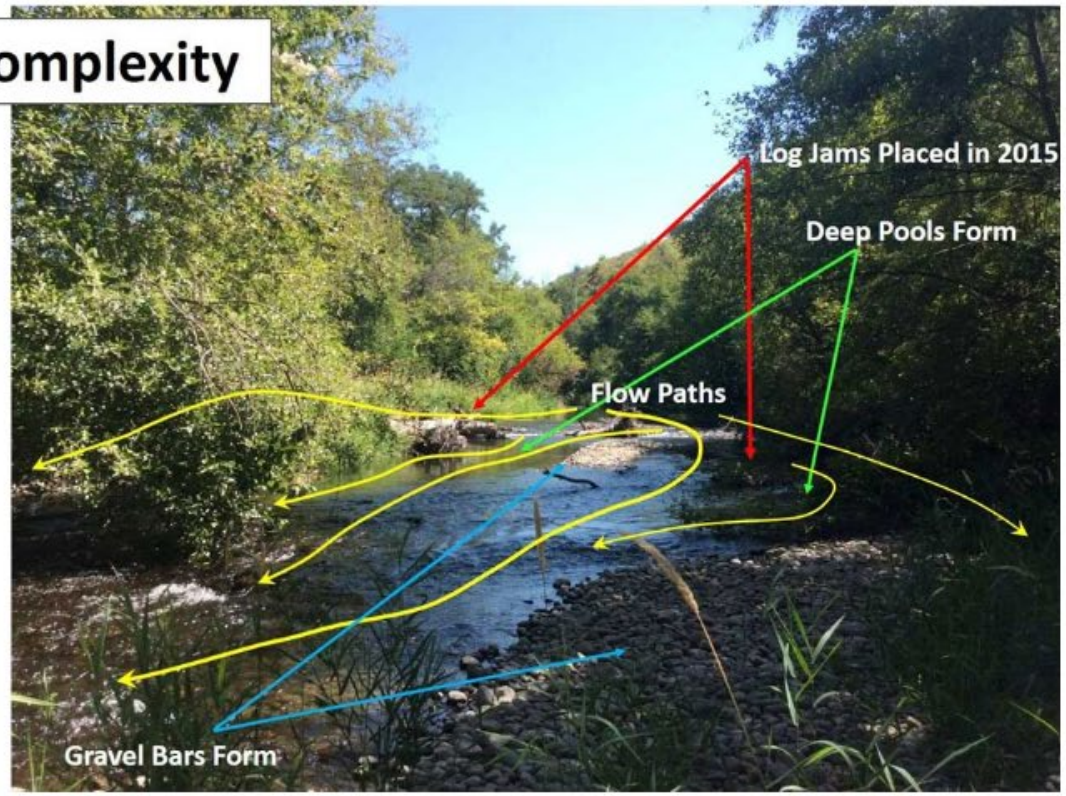
Water: Recommendations

- Superfund Site
- Cooling the creek: Riparian vegetation, deepening creek bed
- Bacteria: Clean piers, agitate stagnant water on surface
- Reduce algal growth: Stream restoration, riffle pools, aeration
- Invasive species: Continue knotweed removal, monitor invasive mussels with DEC updates
- Update signage on restrictions on fish consumption
- Community engagement: Invasive species, Beneficial use impairments, Waterway stewardship.

https://www.parametrix.com/fish-passage-river-restoration/w
A orker with the Adirondack Park Invasive Plant Program attempts to control knotweed. Photo courtesy of APIP - https://www.adirondackexplorer.org/environment/knocking-out-knotweed/P
https://www.syracuse.com/news/2024/03/how-contaminated-are-onondaga-lake-fish-its-unknown-thanks-to-botched-honeywell-testing.html



Habitat Complexity



Pre-project June 2015

- 50’ wide relatively shallow (red arrow above)
- Single high velocity flow path (yellow arrow above)
- No pools or fish cover habitat
- No spawning gravel

Post-project September 2017

- Place log jams (red arrows above)
- Gravel bars form (blue arrows above)
- Pools form (green arrows above)
- Stream channels increases (yellow arrows above)

https://snakeriverboard.org/tucannon-river-habitat-restoration/habitat-complexity/

Agriculture Vulnerabilities

- Climate change impacts on farming
  - Increasing temperatures, precipitation variability
  - Droughts, reliance on city water
- Invasive species & fungal disease
  - Spotted lanternfly, Japanese beetle, Cereal leaf beetle
  - Warmer winter survival, Fungal disease pressure
  - Pesticide management
- Crop-specific vulnerabilities
  - Early blooming / frost damage (apples, peaches, cherries)
  - Heat stress / drought / invasive species (corn, grapes)
  - Soil moisture / variability in growing conditions (soybeans, cabbage)
- Agriculture & local economy
  - Farm & Winery Economy, Agritourism
  - Crop Loss Impacts
  - Rising Management Costs
  - Labor Shortage

Mark Longstroth, MSU Extension, https://www.canr.msu.edu/news/assessing_frost_and_freeze_damage_to_flowers_and_buds_of_fruit_trees

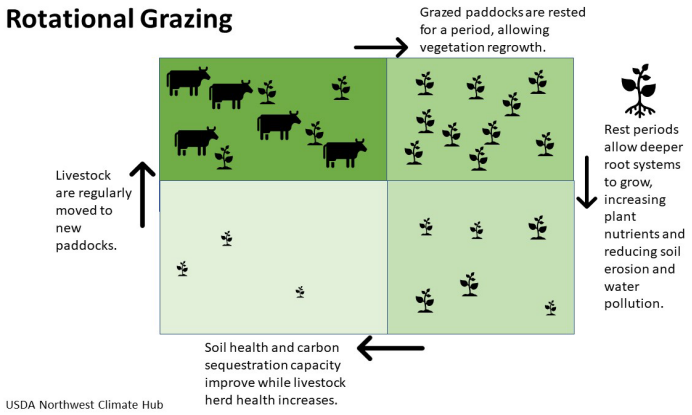
Cereal Leaf Beetle image: https://static.grainews.ca/wp-content/uploads/2018/07/the-adult-beetle.jpg

Spotted Lanternfly image: https://tualatinswcd.org/wp-content/uploads/2022/09/SpottedLanternFlyAdult01Small_USDA.png

Agriculture Recommendations : Soil Health and Erosion Control

- **Cover Crops**: Reduce erosion, increase rainfall infiltration, hold moisture during droughts
- **Mulch**: Retains moisture in soil, reduces need for irrigation. Beneficial for crop production.
- **Rotational Grazing**: Improves soil structure, nutrients, reduces need for fertilizers / pesticides, reduces runoff.
- **Biochar Application**: Increases water retention, improves soil structure and nutrients.

Biochar image:
https://extension.usu.edu/crops/research/biochar-impacts-on-crop-yield-and-soil-water-availability



Rotational Grazing image:
https://www.climatehubs.usda.gov/hubs/international/topic/rotational-grazing-climate-resilience

Cover Cropping image:
https://www.shutterstock.com/image-vector/cover-crops-cultivation-growing-advantages-260nw-2255655059.jpg

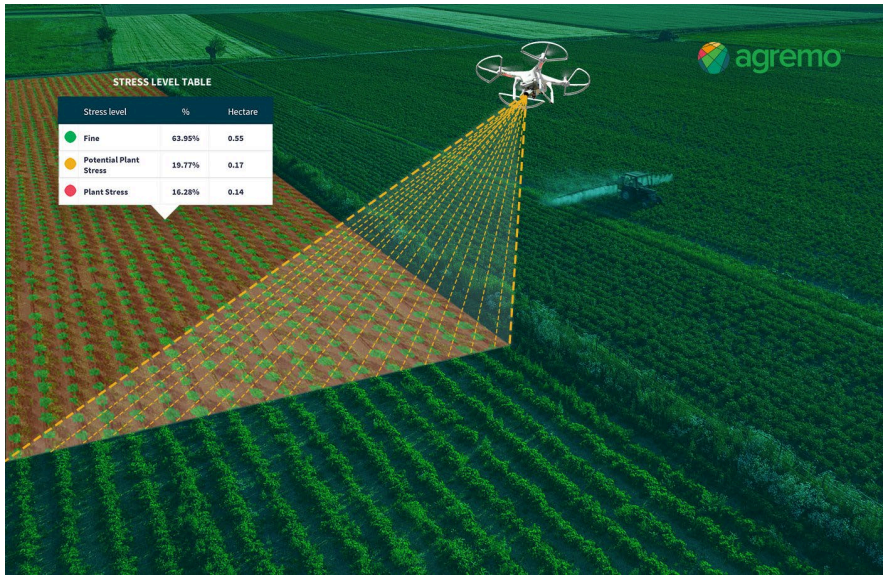
Example of "living mulch" cover crop planted in tree row, using sweet woodruff (Galium odoratum). Credit: D. Granatstein.

- https://treefruit.wsu.edu/crop-protection/weed-control/organic-weed-control/

Agriculture Recommendations: Monitoring and Protecting Crops

- **Crop biomass monitoring**: Can detect crop stress, pest damage, poor soil conditions before significant losses occur
- Frost **fans/wind machines**: Prevent frost damage, which can affect early blooming.

Frost fan image: https://www.chamberlinag.com/tow-and-blow-portable-wind-machines



Crop Monitoring image: https://raptordynamic.com/products/agremo-crop-monitoring?srsltid=AfmBOoqtJQyFLNm11G2nvLIHCOI5BG9kibqVz5ZGXzvGfTEvw5BtfVGc

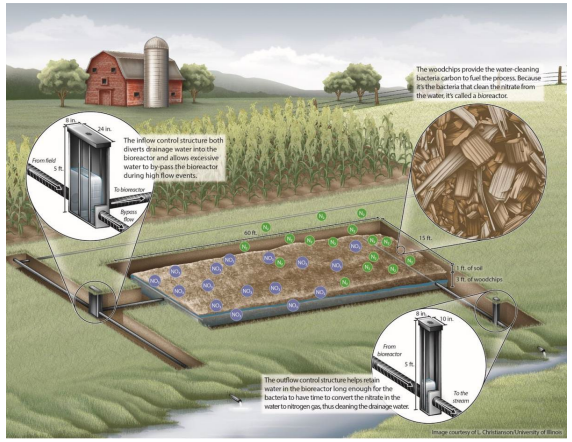
Crop Monitoring image: https://mapmycrop.com/the-importance-of-real-time-crop-monitoring-in-modern-agriculture/

Agriculture Recommendations
Water Quality, Quantity, Drought Resilience

- **Retention ponds**: Temporarily store stormwater runoff and slowly release it, reducing flooding, erosion, and nutrient runoff.
- **Irrigation ponds**: Collects and stores excess rain water and reduces flooding chances. With the installation it is essential to have water pumps, some that are known are solar pumps.
- **Bioreactors**: Slows down runoff, reduces erosion, trap excess nutrients

Retention ponds images:
https://westernliner.com/blog/the-role-of-retention-ponds-in-green-infrastructure/

Irrigation Pond with solar pump – https://www.freepik.com/premium-ai-image/small-pond-with-solar-panel-top-providing-power-pumps-creative-portrayal-solarpowered-pumps-supporting-smart-irrigation-system-rural-area_242788004.htm



Crop Monitoring image:
https://agbmps.osu.edu/bmp/wood-chip-bioreactor-nrcs-605

Image – google earth

Irrigation Pond – Getty images - https://www.gettyimages.com/photos/irrigation-pond

Agriculture Recommendations: Crops

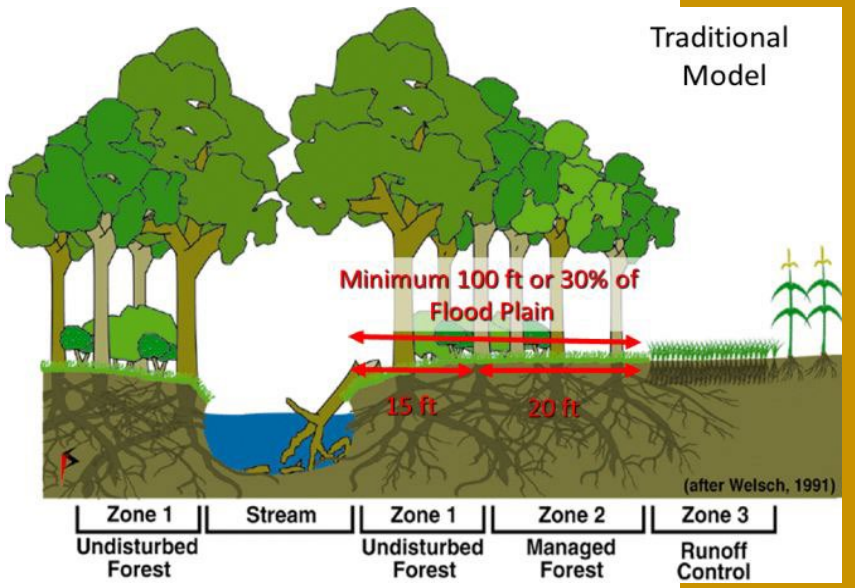
Quinoa image: https://www.agrifarming.in/quinoa-farming-information-guide

- Grapes:
  - Ideal for crop growth: 70 °F and 85°F, no growth below 50°F and above 90°F
- Climate-resilient crops
- Consider crop that tolerate warmer temperatures, longer growing seasons, droughts
  - Quinoa: reliable yields with minimal irrigation
  - Cowpeas: most heat resistant legumes
  - Sweet Potatoes / Peppers: tolerance to drought and high moisture
  - Nonpareil almond trees: withstand temperature fluctuations
  - Sorghum: tolerates heat and drought
  - Peaches, Nectarines , Apricots: more viable with warmer temperatures

Nonpareil almond trees image: https://www.buyshrubsandtrees.com/product-page/non-parsil?srsltid=AfmBOoo3gRTtMZ1lodsw4YCtM5-4pcYo9OsCrApRa9Kc43RMwemXsTmc

Infrastructure Recommendations: Shoreline and Erosion

- Wave breakers recently added to Olcott Harbor
  - ~18 parcels remain without protective hardening measures
- **Riparian buffers**
  - Promote infiltration, moderate flooding, stabilize banks, filter pollutants, shade streams, support habitat, contribute to groundwater recharge
- Implementation
  - 100 feet of undisturbed riparian buffer
  - Wider buffers where risks are higher
  - Prohibit disturbances within buffer
  - Preservation of existing trees and shrubs
  - Impervious cover regulation
  - Long-term monitoring



Infrastructure Recommendations: Shoreline and Erosion: Zoning & Funding

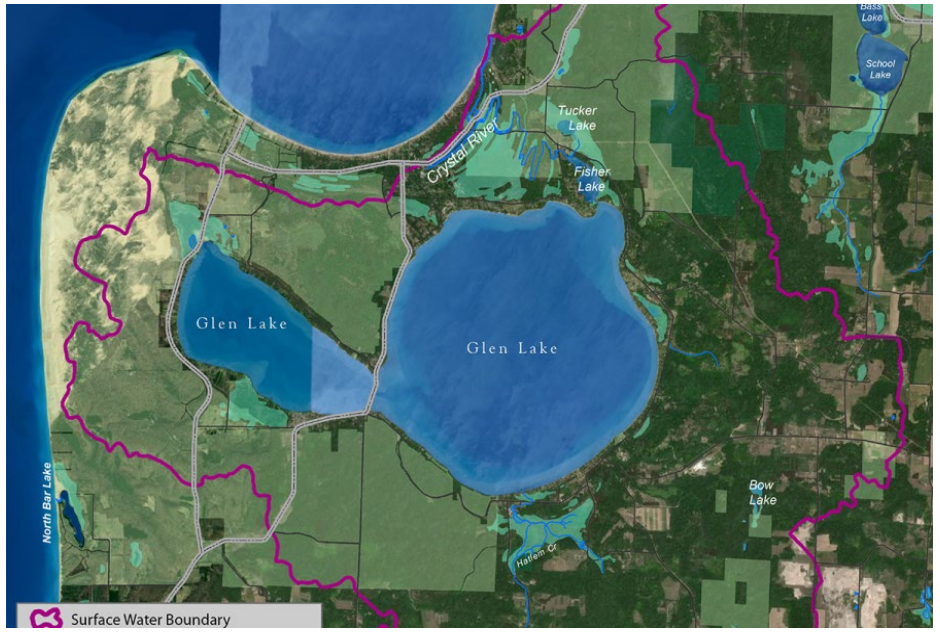
- **Proposal: Lakeshore and Riparian Protection District** (Overlay Zoning)
  - Zoning tool adding regulations to existing zoning without interfering with base zoning
  - Legal mechanism for establishing vegetative buffers

- Explore possible funding options, e.g. small shoreline protection fee applied to properties in the district, based on assessed property values
    - $0.50 per $1,000 -> Max fee: $60/yr -> revenue $15,800/year
    - $0.85 per $1,000 -> Max fee: $102/yr -> revenue $26,900/year
    - $1.00 per $1,000 -> Max fee: $120/yr -> revenue $31,000/year

- Property owners pay relatively small fees for:
  - Reduced flood and erosion risk
  - Reduced need for expensive repairs
  - Improved water quality & environmental health

Infrastructure Recommendations: Shoreline and Erosion: Case Study

- Overlay district model example – Glen Lake, adjacent to Lake Michigan
  - Approach: Formal watershed overlay district applied to existing zoning
  - Requires shoreline vegetative buffers with a minimum 30 ft width
  - Restrictions
    - Limited clearing (<20%)
    - No fertilizers/pesticides
    - No storage/vehicle use in buffers
  - Prevent soil erosion and filters runoff



Infrastructure Recommendations: Stormwater Management and Drainage

(Google Maps, 2021

- Vulnerability: aging infrastructure, pipe break in March 2026

(Google Maps, 2021)

- **Decentralized stormwater management**
  - Combine existing ditch and culvert systems with decentralized systems
  - Prioritize small-scale, high impact interventions in high-risk areas
  - Rain gardens (e.g., Krull Park), bioswales, on-farm irrigation ponds
  - Work with landowners, use public right of way along local roads

- Resilient:
  - Reduce peak flows, runoff volumes
  - Less burden on aging infrastructure
  - Better flood resilience, water quality

(*Roadside Guide to Clean Water: Stormwater Basins*, 2022)

Infrastructure Recommendations: Roads

- **Regular ditch maintenance**: proper drainage
- **Road grading** to prevent water pooling
- **Snow barriers**
  - Reduce snow drifts
  - Reduce plowing frequency, improve safety
- **Frost-resistant, flexible pavement designs**
  - Withstand temperature fluctuations, prevent cracking
  - Lightweight Aggregates: thermal insulation layer and base material: low density, high drainage capacity

Infrastructure Recommendations: Power

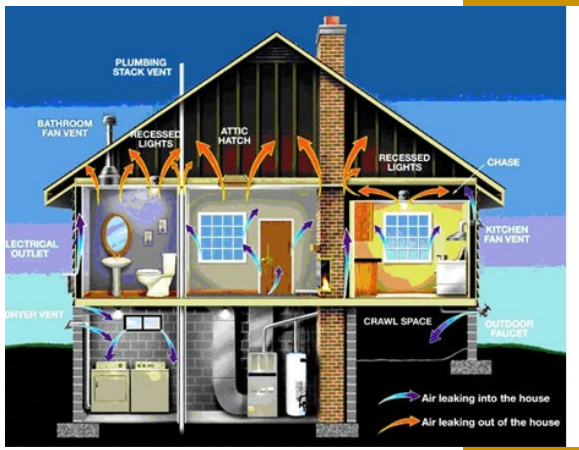
- Structured maintenance cycle for tree trimming with National Grid
  - Zones where tall trees are not permitted near power lines
- Local backup power systems
  - Reduces dependence on the central grid
  - Provides reliable power during outages and emergencies (renewables+ battery storage)
  - Community-level microgrid for faster power restoration
  - Explore agrivoltaics (dual-use solar and farming)
- Advocate for improvements with utility providers
  - prioritize rural vulnerable areas like Newfane for faster restoration after major storms
  - underground power lines in high-risk areas

  or
  - replace wooden utility poles with metal poles

Economic Vulnerabilities

- **Newfane's economy is climate-sensitive**: agriculture, tourism, agritourism, outdoor recreation (fishing, boating, wine trail…)
- **Small businesses**: limited capacity to recover from climate disruptions
- **Aging population**: lack of services for aging in place
- **Low-income households (35%) and aging housing stock:**
  - Vulnerable to extreme weather events, increasingly hot summers
  - Financing home weatherization (insulation) is difficult
- **Labor shortages** in agriculture

- Tourism, farming, recreation, small businesses are interconnected
  => climate impacts in a sector can trigger losses across the local economy



https://projected2perform.com/residential-thermal-imaging/
Cortland County Community Action Program, Inc. - https://www.capco.org/our-programs/energy-services/
https://www.niagarafallsusa.com/directory/lakeview-village-shoppes/

Economic Resilience : Strengthening and Diversifying

- **Complete shoreline strengthening & waterfront improvements** to protect economic assets

- **Strengthen & diversify local economy** through joint marketing, pooling resources
  - E.g., "Newfane Farm & Shore Experience"
  - Empire State Development Marketing NY Tourism Program

- **Support climate-smart agriculture**
  - Support local farmers investing in regional resilience (ditch clearing, stormwater retention, water quality improvement projects, sustainable agriculture…)
  - Help address labor shortages, support partnerships with 4-H, local schools

Lane Southern Orchards – Images from Website https://lanesouthernorchards.com/pages/about-us

Economic resilience: Demographics, Housing, and Climate Change

- **Upgrade, weatherize, insulate old housing stock**
  - Prioritize low-income & elderly households
  - Home Energy Assistance Program (HEAP), Weatherization Assistance Program (WAP)
- **Strengthen aging-in-place services**
  - Investment in more health facilities
  - Support Home and Community-Based Services, supports local economy with nurses, drivers, care aides, other care workers
- **Education and healthcare sectors** provide economic stability, but need to prepare for:
  - Senior residents vulnerable to increased heat
  - Day cares and K-12 schools without A/C
  - Access to emergency health services during climate extremes

Maskot/Getty Images

File photo

https://historichomescapecod.com/insulating-your-old-home/
https://www.healthline.com/health/aging-in-place
https://www.njspotlightnews.org/2024/09/ac-shortage-climate-changes-higher-temperatures-cause-back-to-school-challenges-too-hot-to-learn/

Economic Resilience: Tourism

Newfane & Olcott Beach Tourism Board earns recognition

An overhead view of Olcott Harbor. The town and local business people are looking to introduce some newly proposed projects from the town as well as private businesses, particularly focusing on the hamlet of Olcott.

James Neiss file

Members to be honored at Niagara USA Chamber's awards luncheon

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Data paints a clear picture of how much the 10 members of the Newfane & Olcott Beach Tourism Board punch above their weight. With 9,720 visitors for fishing alone, and annual growth in marina and lodging patrons, the northern

carved out a destination status to be envied across upstate New York. The board's accomplishments will be recognized by the Niagara USA Chamber, in collaboration with Destination Niagara USA, at the Chambers Honors Awards Luncheon on May 14 with the Excellence in Tourism Award.

Gina Guido-Redden, chair of the Newfane and Olcott Beach Tourism Board, said that because they can't count every tourist that comes to town, the best number to represent visitors is the local room occupancy rate.

"Our room occupancy rates are way higher than the state

"We use two professional analytics services to track data from lodging."

While the state short-term rental occupancy rate is 48%, and Niagara Falls reaches 56%, she said Olcott has 91%, Newfane reaches 86% and Burt has 87%.

"The percentage increases the closer to the water you get," said Guido-Redden. "We're bounded by two campgrounds to the west and one to the east. We have three times more short-term rental beds per capita than any county in Western New York. We don't have any hotel beds. The data

See AWARD on 4

- Newfane & Olcott Beach Tourism Board **- 2026 Spirit of Hospitality Tourism Award**
- **Krull Park:** great asset with potential to become a year-round destination
- **Support 4-season tourism**
  - **Winter:** low economic activity, develop winter activities: ice fishing, ice skating
  - **Summer:** hotter conditions could increase tourism
    - Position Newfane/Olcott as the perfect cooling escape from hot city days *"Cool down at Olcott"*
    - *"Niagara Falls to Olcott Escape"*: day trip Falls + Olcott, local farms, Niagara Wine Trail
    - Explore weekend shuttle service with Discover Niagara from Lockport or Niagara Falls

5. Comprehensive Plan update: Integrate climate resilience co-benefits in all plan elements

- Economy:
  - Protect town assets
  - Support/expand/diversify businesses.
  - Promote 4-season tourism
- Housing (within broader housing crisis context):
  - Upgrade/weatherize aging housing stock, protect coastal properties
  - Expand aging-in place services
- Infrastructure
  - **Water:** Decentralized stormwater management
  - **Transportation**: Budget for road/bridge repair, maintenance, upgrades to new materials.
  - **Power:** Protect powerlines, Build local resilience

https://www3.erie.gov/environment/comprehensive-plan-updates

Comprehensive Plan Updates

Environment and Green infrastructure

- Focus on Co-Benefits
- Water quality
  - Improvements within and around streams
  - Rain gardens, e.g., at Krull Park
  - Wetland restoration and management
- Flooding
  - Improve ditching, strategic decentralized stormwater retention, detention and irrigation ponds
- Invasive species
  - Work with DEC and nearby towns, support landowner initiatives
  - Increase riparian vegetation along creeks/riverbanks once invasives are removed
- Land Management and Farming:
  - Soil improvements
  - Climate-resilient crops, cover-crops, rotational grazing, irrigation ponds
  - Swales or retention basins to collect runoff and irrigate
  - Solar and Wind energy: Agrivoltaics

Comprehensive Plan Update process

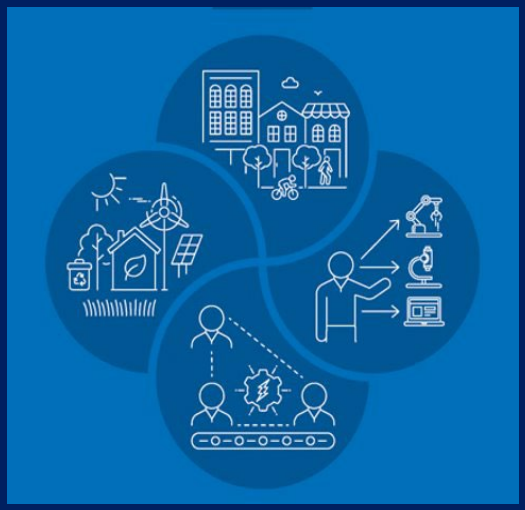
- Opportunity for meaningful public engagement
  - Inform
  - Discuss
  - Consult
  - Collaborate

- Early, broadly, using many different methods

https://www.completecommunitiesde.org/public-engagement-archived/

Thank you!

We're looking forward to your feedback!



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