

# Volunteer Involvement in Climate Action Planning

Casco Bay Coastal Academy

March 23, 2023

**GPCOG**  
GREATER PORTLAND  
COUNCIL OF GOVERNMENTS

# Agenda

- Setting the stage
- Climate Action Planning
  - Municipal led
  - Community leadership
- Committee Experiences
- Tools and Resources

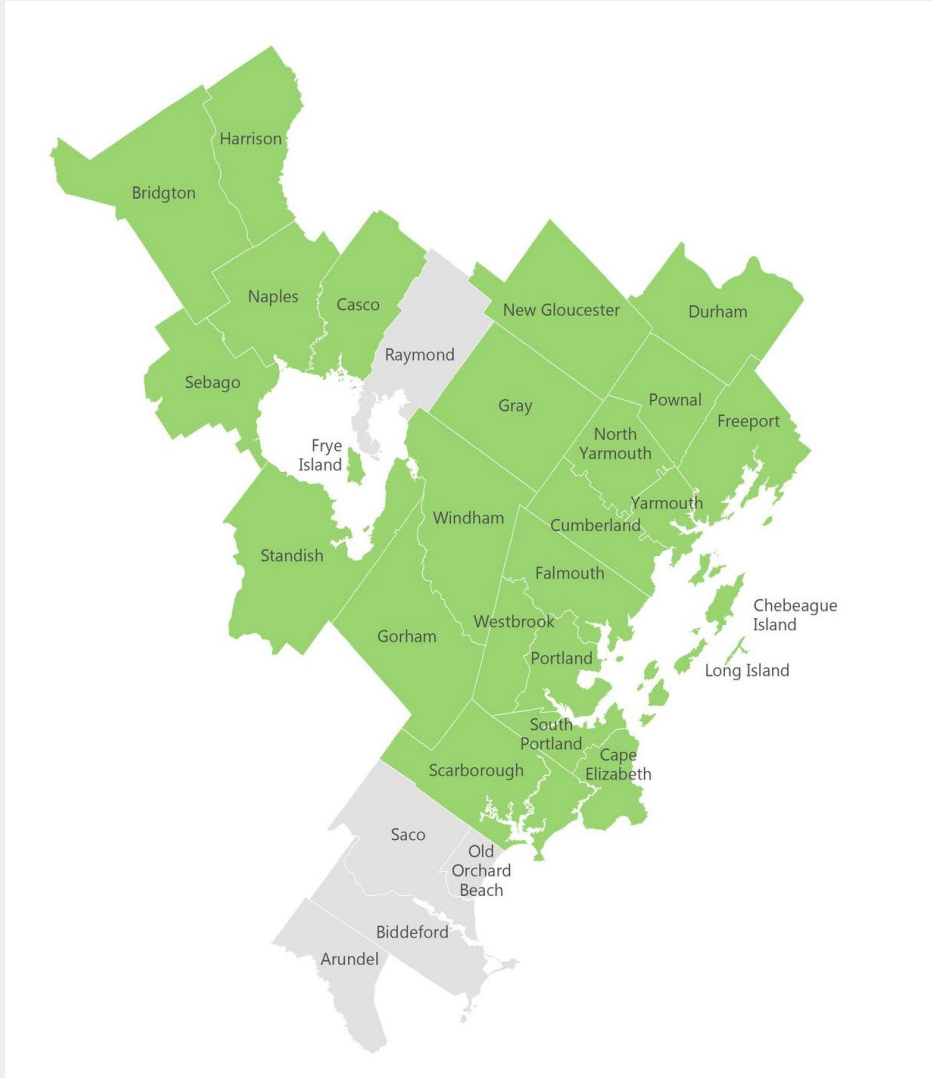




# Setting the Stage: GPCOG



\*PACTS is the primary transportation arm of the Greater Portland Council of Governments (GPCOG)





A photograph of a flooded street in a coastal town. In the background, a large, conical lobster trap stands in the water, topped with a yellow flag. The street is filled with floodwater, and various pieces of debris, including blue plastic crates, are floating. On the left, there are brick buildings and a black street lamp. On the right, there are wooden utility poles with many power lines and a light blue building. The sky is overcast and grey.

# Setting the Stage: Climate Change in Maine

We're facing  
a climate crisis  
that requires long-  
term planning and  
decisive action

Rising Sea Levels

Changing Precipitation

Warmer Temperatures

Changing Ocean Conditions



A scenic landscape of a wetland area. In the foreground, a calm body of water reflects the sky and the surrounding greenery. A small, rustic wooden bridge with a metal railing spans a narrow channel of the water. The bridge is surrounded by lush green trees and vegetation. In the background, a vast expanse of wetland stretches towards a distant, forested horizon. The sky is filled with large, dramatic clouds, suggesting an overcast day. The overall scene is peaceful and natural.

Setting the Stage:

# Climate Change in Maine

Impacts to human  
health, infrastructure,  
ecosystems,  
economy, social  
equity, and more





# Climate Action Planning

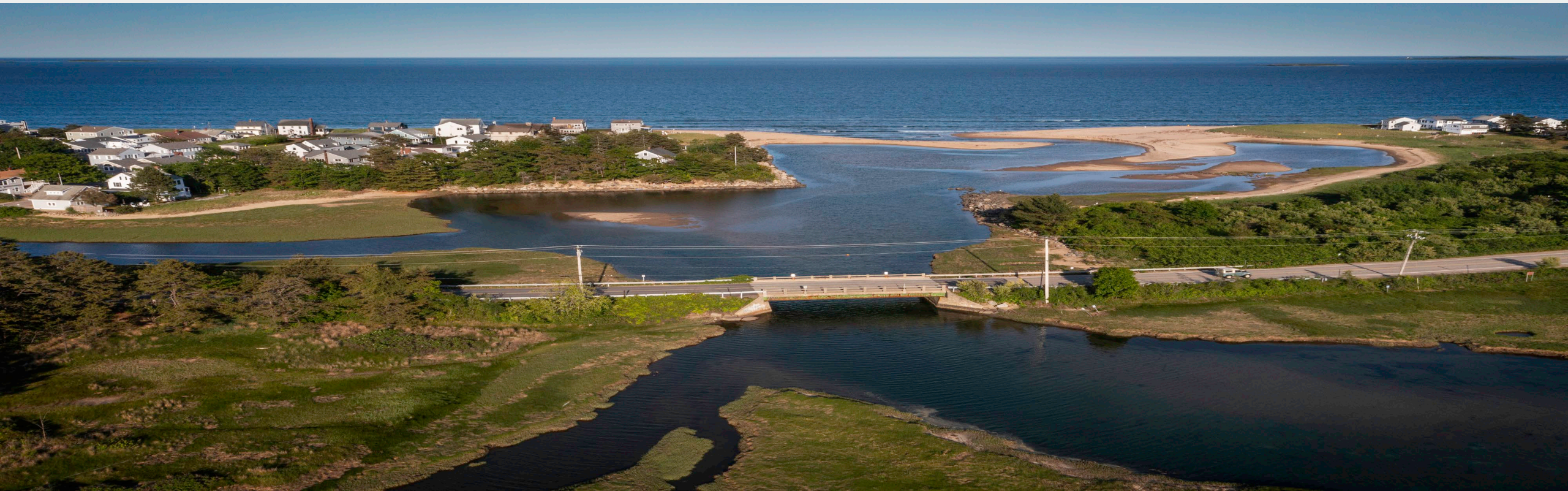
**WHAT.** Develop strategies that will reduce town-wide emissions, build resilience, and prepare for climate change.

**WHY.** Supports community goals, protects economic development, reduces vulnerabilities, creates a healthier, sustainable community





**Residents, municipal staff, elected officials, non-profit organizations all have important roles to play in climate action planning**







## Climate Action Planning

# Municipal Leadership

**Embed climate action  
in a way that aligns  
with your community  
resources and  
capacity**

- 1) Develop an integrated Climate Action Plan Report
- 2) Incorporate climate action into existing planning
- 3) Partner with local, regional, and state organizations

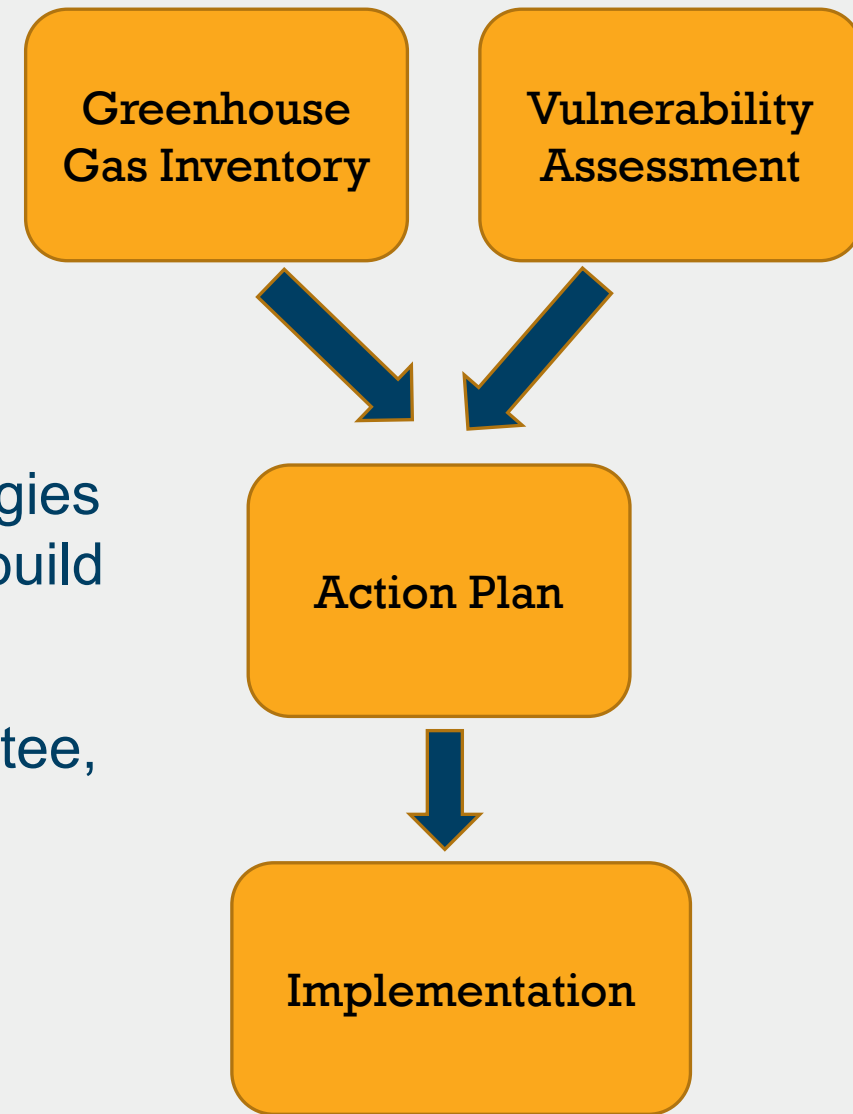




# Climate Action Planning Municipal Led

## Develop a Climate Action Plan Report

- Report identifying climate action strategies that achieve emission reductions and build resilience
- Developed through consultant, committee, or staff
- Process that ensures resident engagement, staff and council support
- Reflects town priorities and values and establishes a framework for decision making





Timeline: ~12 months

# GPCOG Climate Action Plan Process

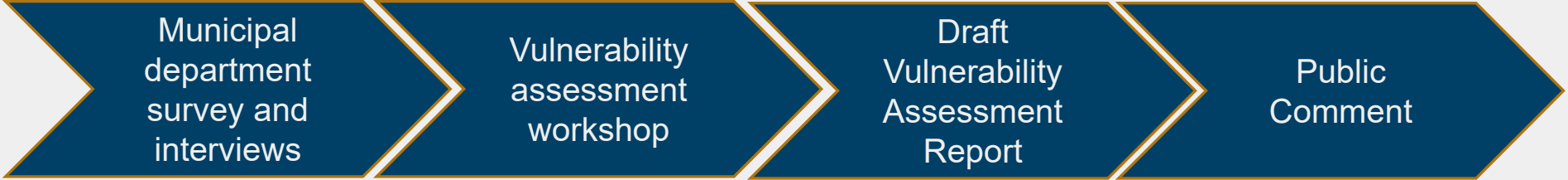
Preparation and Data Collection



GHG Emissions Inventory



Vulnerability Assessment



Climate Action Planning



Implementation and Tracking Progress







## Climate Action Planning Municipal Led

Incorporate climate action across all departments

- Planning Documents
- Capital Budgets
- Infrastructure Improvements
- Ordinances
- Communication, outreach and education





## Climate Action Planning Municipal Led

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### **Comprehensive Plans, Open Space Plans, Neighborhood Plans**

- Create explicit sustainability and climate action goals
- Set energy benchmarks
- Include climate data and projections in baseline setting
- Preserve working lands, water, connected open space





## Climate Action Planning Municipal Led

Incorporate climate action across all departments

- Planning Documents
  - Capital Budgets
  - Infrastructure Improvements
  - Ordinances
  - Communication, outreach and education
- Target number of projects related to sustainability
  - Prioritize projects that increase resilience in vulnerable populations
  - Ensure infrastructure improvements provide public sustainability benefits





## Climate Action Planning Municipal Led

### Incorporate climate action across all departments

- Planning Documents
  - Capital Budgets
  - Infrastructure Improvements
  - Ordinances
  - Communication, outreach and education
- Design projects to withstand future climate impacts
  - Incorporate sidewalks, bike lanes, and multi-use paths
  - Consider social vulnerabilities in design
  - Set guidelines for using sustainable and durable materials that will withstand climate changes





## Climate Action Planning Municipal Led

### Incorporate climate action across all departments

- Planning Documents
- Capital Budgets
- Infrastructure Improvements
- Ordinances
- Communication, outreach and education

- Consider adopting EV ordinances for new developments
- Adopt the stretch building code
- Strengthen building codes in flood or shoreline zones by requiring additional adaptation approaches that go beyond base building codes
- Set landscape ordinances to promote native vegetation or reduce pesticides



## Climate Action Planning Municipal Led

### Incorporate climate action across all departments

- Planning Documents
  - Capital Budgets
  - Infrastructure Improvements
  - Ordinances
  - Communication, outreach and education
- Ensure collaboration across departments for consistent messaging
  - Create public engagement materials and events
  - Consider lending programs or incentives to help residents shift to sustainable practices





## Climate Action Planning **Municipal Led**

### Challenges to progress

- Capacity
  - Limited staff availability
- Time and speed
  - Municipal processes can be slower
- Ensuring council support
  - Political pressures and frequent elections
- Funding
  - Inability to secure funding for dedicated climate action



## Climate Action Planning **Municipal Led**

### Opportunities for engagement

- Capacity
  - Time and speed
  - Ensuring council support
  - Funding
- Develop volunteer committees to add capacity
  - Seek community input – residents know their town the best!
  - Create an engagement plan and identify key stakeholders to ensure inclusivity





## Climate Action Planning **Municipal Led**

### Opportunities for engagement

- Capacity
  - Time and speed
  - Ensuring council support
  - Funding
- Empower grassroots efforts they often can move at a faster pace
  - Be transparent about progress and share updates frequently



## Climate Action Planning **Municipal Led**

### Opportunities for engagement

- Capacity
  - Time and speed
  - Ensuring council support
  - Funding
- Support the committee in advocating for climate action
  - Encourage engagement in council meeting





## Climate Action Planning **Municipal Led**

### Opportunities for engagement

- Capacity
  - Time and speed
  - Ensuring council support
  - Funding
- Share funding opportunities with community groups



# Climate Action Planning

## Partner organizations are here to help



Regional  
planning  
organizations



Local land trust  
or conservation  
conservancy





## Climate Action Planning

# Community Leadership

**There are many ways  
for community  
members to be  
involved in climate  
action**

- 1) Join committees or board
- 2) Education and engagement
- 3) Advocacy
- 4) Grassroots organizing



## Climate Action Planning Community Leadership

### Committee or board

- Join a council appointed committee or board to help lead and support staff in climate action development
- Help implement climate action plans and incorporate climate strategies across municipal departments

Committees increase municipal capacity, build community support, and help implement plans. Every committee can prioritize and incorporate climate action strategies!





# Climate Action Planning

## Community Leadership

### Education and engagement

- Talk with neighbors and engage with people who have different viewpoints
- Learn about resources and tools
- Ensure all members of the community are represented
- Promote and participate in municipal led activities



# Climate Action Planning Community Leadership

## Advocacy

- Advocate for development and approval of a Climate Action Plan Report locally
- Attend council meetings or send emails to councilors about the importance of climate action
- Engage in advocacy for state legislation





## Climate Action Planning **Community Leadership**

### Grassroots efforts

- Connect to regional and statewide groups - expand your reach beyond the municipality
- Find what you can do at home or in your neighborhood

# Committee Experiences

Denny Gallaudet – Cumberland

Jody Jones – Arrowsic





# CLIMATE ACTION PLAN

Phase 2 – Recommendations for Action

Prepared for Cumberland Town Council  
& MSAD51 Board of Directors

By the Sustainability Subcommittee (or CAPSC)  
of the LCC

May 9 2022

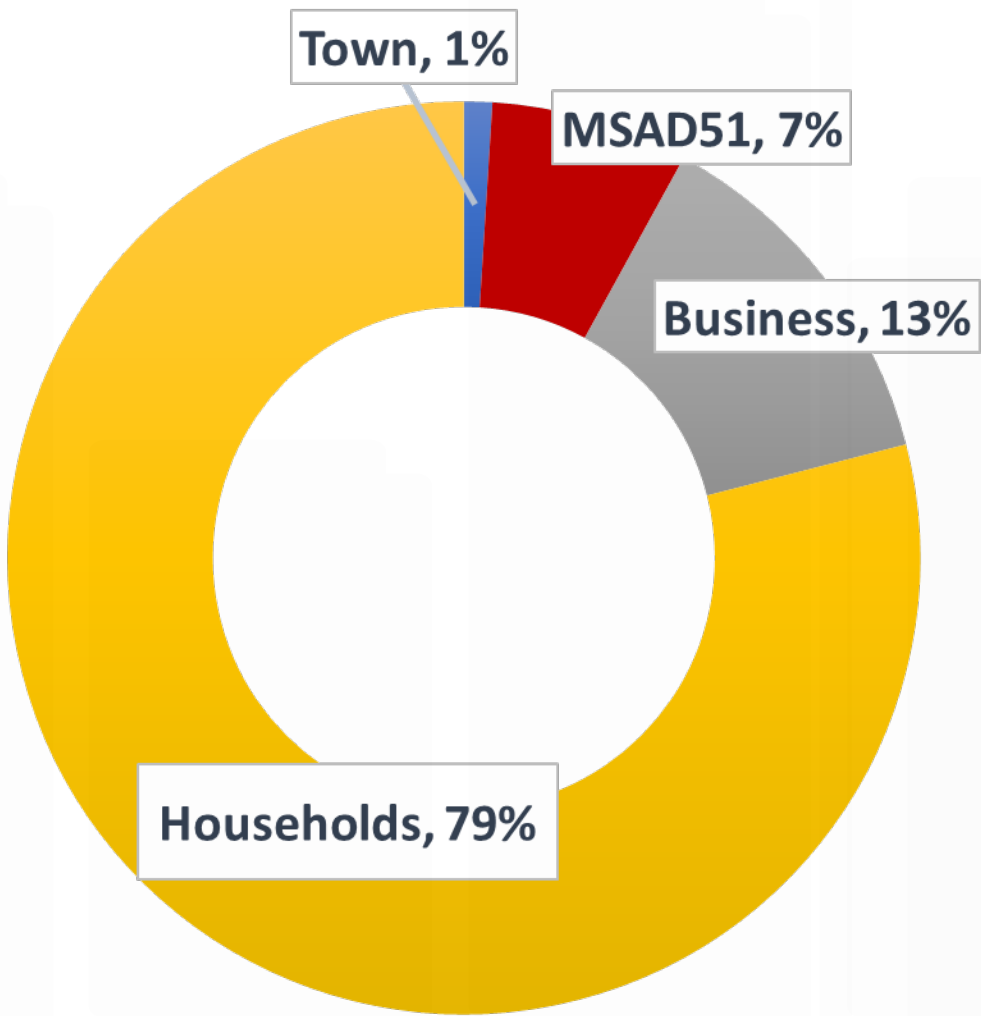
- In 2019, Cumberland's **Lands and Conservation Commission ("LCC")** formed a **Climate Action Plan Subcommittee ("CAPS")** to expand on the work of the 2009 Cumberland Comprehensive Plan.
- Under its Charter, CAPS was tasked with taking **inventory** of the **Town's Greenhouse Gas ("GHG") emissions** and proposing a **goal and action plan to reduce GHG** in the coming years.
- This presentation summarizes **Phase 2** of CAPS work: to develop a goal and action plan for the Business and Household Sectors



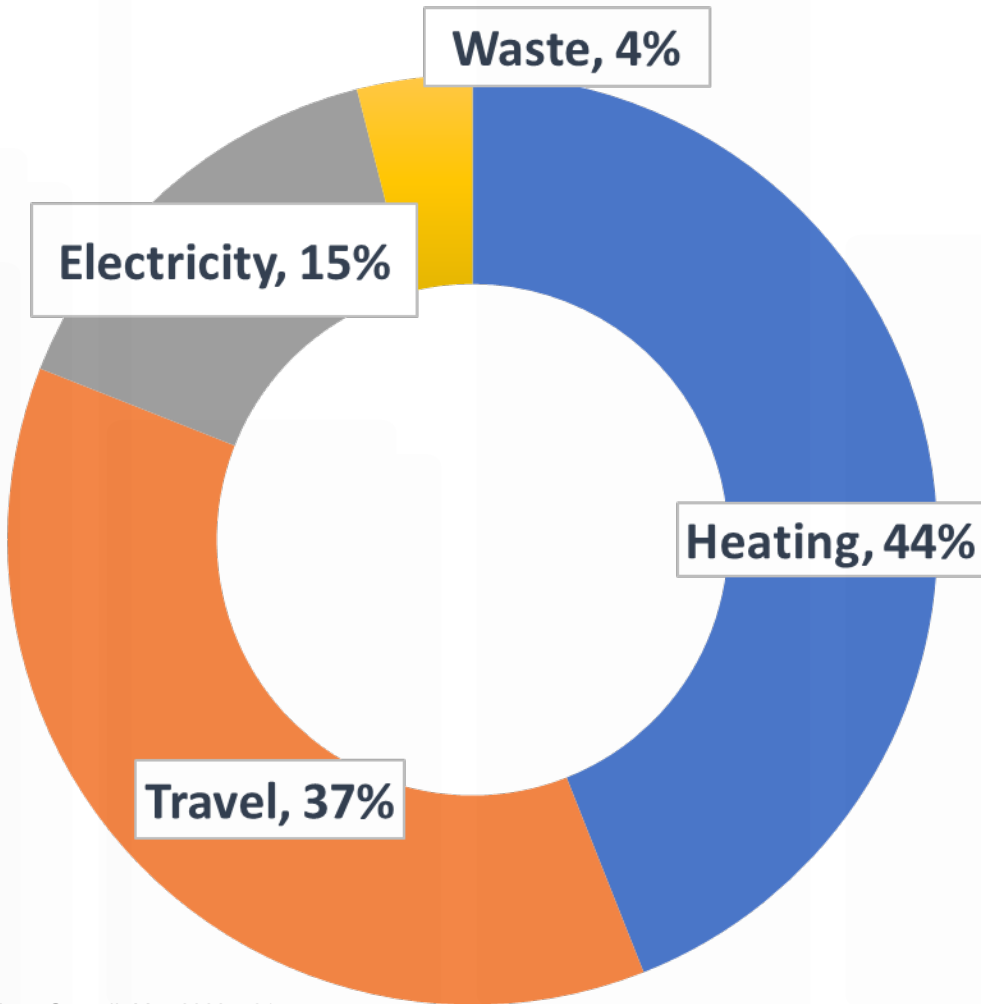
# Household 2015 Baseline: 52,353MT GHG



By Sector



By Use



# Actions Households can take to become Climate Positive \*

Phase II Recommended Actions		MT CO2e Avoided
1	Reduce GHG emissions from home energy use – promote heat pump use	24,000
2	Reduce GHG from transport	18,000
3	Adopt ecologically productive, low carbon/ low water landscaping practices	10,000
4	Support 30X30 goal of conserving 30% Cumberland's lands by 2030	4,000
5	Purchase low-cost carbon offsets from Town owned forest lands	3,000
6	Install low-cost solar panels	1,600
7	Decrease food waste through composting	1,000
8	Adopt the 2021 IECC "stretch" energy efficiency goal for new construction	800
9	Buy more locally grown food.	Not yet calculated
10	Ensure the integrity of water quality in Broad Cove.	Not yet calculated

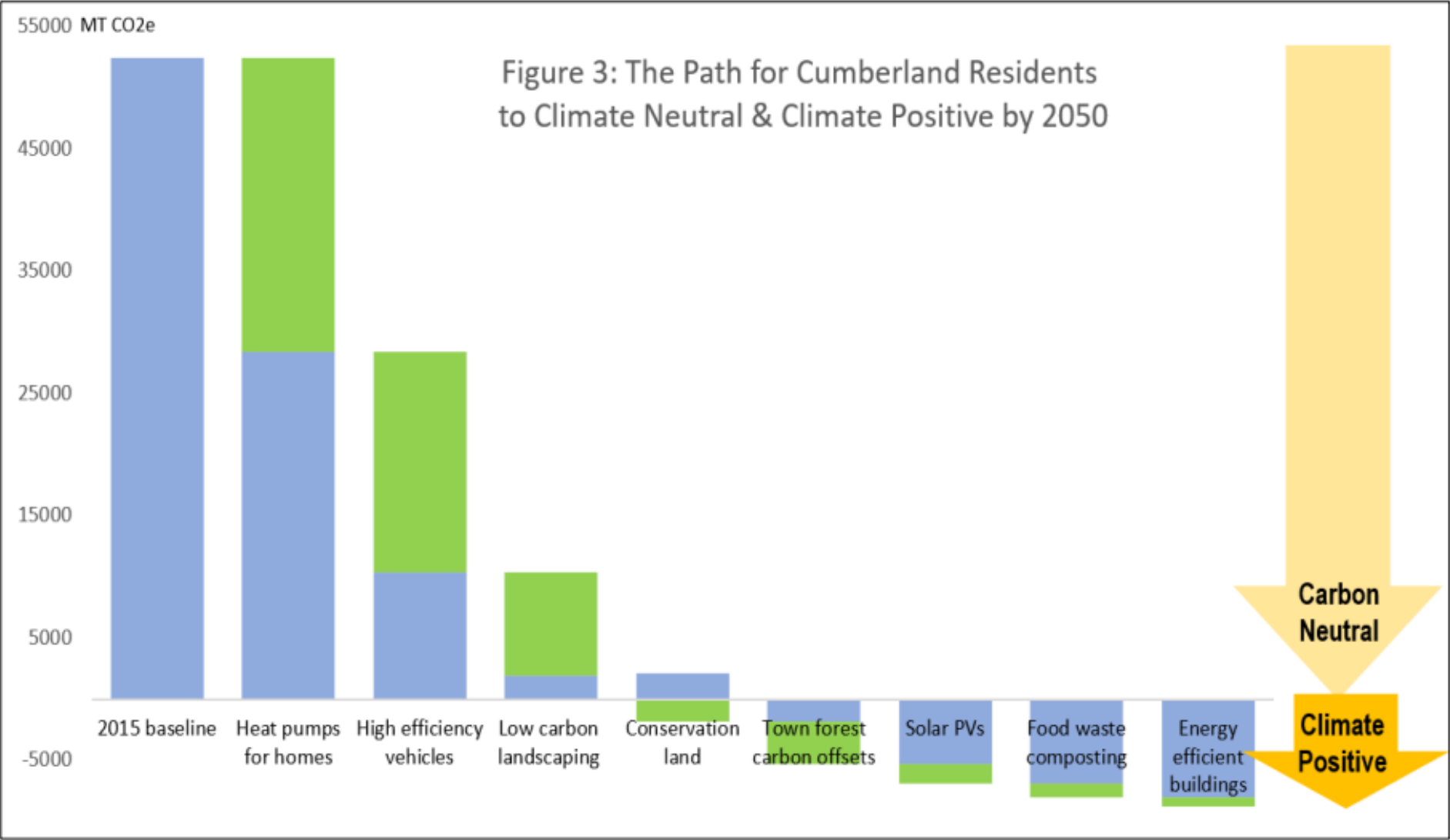
Combined, these actions will reduce household GHG emissions by 60,535 MT GHG -- 115% below their 2015 baseline (52,353MT GHG)

Actions for TC: approval of concept, modest fiscal note, future staff help

\* Climate Positive – when actions cause more GHG emissions to be avoided from your activities than those activities produced



# Path to Carbon Neutrality for Household Sector



# Action Item 1 – Retrofit 80% of homes with heat pumps



- Home heating is the single largest contributor to GHG emissions by households
  - In Maine ~2/3 of households still heat with carbon intensive fuel oil
- Heat pumps are a cost effective and climate friendly alternative
  - Lower cost heating vs. oil
  - As the grid becomes greener, so does your home heating/cooling
  - Over 70,000 installed in Maine homes, 20,000 in 2021 alone
- Additional benefits include
  - Low cost air-conditioning
  - Improved air quality
  - Safety



# Action Item 2 – 80% of households adopt EV/PHEV\* vehicles

## 2021

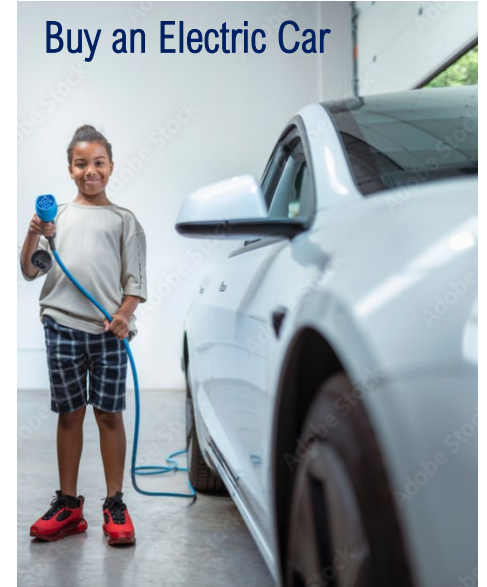
- 7,454 vehicles
- 56% light duty passenger trucks incl. SUVs
- 2.6 per household
- 99% gas/diesel 1% electric
- 8 yr average age

## 2030

- State of Maine assumes a 5x increase in New Light-duty Electric Vehicles (EV) sales to 219,000
- Cumberland Town is committed to zero GHG, including for most vehicles
- Total Cost of Ownership of an EV/PHEV projected to be at or better than parity with a similar gasoline vehicle

## 2050

- Cumberland households buy a new car every 8 years
- CAPSC estimates that they will make 3.5 new purchases by 2050
- If 80% of these are EV or PHEV, the town can reduce its transportation GHG emissions to 5,650 MT GHG.



\* EV – Electric Vehicle; PHEV – Plug-in Hybrid Electric Vehicle

# Action Item 3 – Adopt Sustainable Landscaping

Sustainable, low-carbon landscaping is a “low-tech” climate action item with high potential for helping Cumberland reach carbon neutrality. Low-carbon landscaping steps include:

- Plant more native trees, shrubs, and flowering plants and shrink the area of your property that’s turf grass.
- Mow your lawn less frequently. Set your mower above 3” high. Practice “No Mow May.” Let your lawn bloom!
- Replace gas-powered mowers and leaf-blowers with electric models. (Better yet, leave leaves as mulch)
- Reduce or eliminate the use of lawn fertilizers, herbicides, and pesticides that run off into Casco Bay.
- Water less; use a rain barrel for lawn and garden work.

Benefits of low-carbon landscaping include:

- More CO<sub>2</sub> absorbed and carbon stored by trees
- Better filtering and absorption of rainwater, reducing run-off



- Cleaner, healthier air; less noise pollution
- A healthier Casco Bay
- More resilient habitats that support wildlife
- Fruits and berries for people, birds, and wildlife
- More Biodiversity, More Biomass, More Beauty
- Reduce Cumberland’s CO<sub>2</sub> emissions by 8,500 MT



- The CAP outlines action opportunities to build a future Sustainable Cumberland and become net positive - avoid more GHG than we emit:
  - ✓ a town that supports investments in clean energy and transportation;
  - ✓ where local farmers produce and sell local food and improve local food security;
  - ✓ where forests and ecosystems thrive and encourage healthy recreation.
- Cumberland's investments in land and forest conservation position Cumberland as an innovative leader in responding to climate change



# Workshop Outreach Efforts

Jody Jones – March 2023





We Have:

- 477 Residents
- 233 Households
- 258 Housing Units
- No business district
- Wells & septic systems



# Kennebec Estuary









# Help Keep Arrowsic Above Water



**When:** August 16, 2022  
6:30 - 8:00 PM

**Where:** Arrowsic Fire Barn

All residents and all ages are welcome to join the conversation and help set priorities for carbon reduction and climate resiliency here in our town!

*Refreshments will be provided as we brainstorm, chat, and chew!*

Sponsors: Governor's Community Resilience Partnership and the Arrowsic Conservation Commission

With support from  
Community Resilience  
Partnership Service  
Providers



## Arrowsic Conservation Commission

- Workshop Planning
- Support from CBEP Resilience Fellow on Design.





ACC Members

Neighborhoods

*MOST effective!*

# Email blast – Positive, relatable message

Whether it's purchasing homeowner's insurance or putting on a seatbelt, there are many ways we all prepare for the unexpected in our daily lives. It shouldn't be any different with climate change.

If we do nothing, we will be reacting and responding for generations—an expensive strategy that will whittle away at our collective quality of life. If we are proactive now, we can better protect this community that we all love so much.



# Email/letters to student households

## Dear Students and Parents:

The Conservation Commission Climate Resilience Group will be hosting an in-person town wide workshop on **Tuesday August 16<sup>th</sup> at 6:30- 8pm at the Arrowsic Fire Barn.**

The workshop will be a chance for town residents to share their thoughts about how the changing climate is affecting Arrowsic as well as an opportunity to talk about what actions Arrowsic can take to reduce its carbon pollution and protect its natural resources. We are particularly interested to hear what young people are thinking about, their thoughts and concerns. It will be an opportunity for students to see local government in the beginning steps of developing an action plan for the town they live in. They will be able to participate, provide their perspective to a problem that is affecting us all and help prioritize the next steps of action.

Please invite your student to attend as it promises to be an interesting evening of refreshments and conversation. Parents of pre-teens or teens do not have to be present to allow student participation. Although not required, we'd love to know if your student plans on coming. For more information or to RSVP, email [conserve@arrowsic.org](mailto:conserve@arrowsic.org). We are looking forward to having the conversation with the wider community and hope that you can join us as well. Everyone in our community is welcome to attend; please help spread the word.

Most gratefully,  
Conservation Commission Climate Resilience Group

# Workshop Goals:

- How can the town of Arrowsic respond to impacts of a rapidly changing climate?
- How can we slow climate change through reduction of carbon?
- What actions do we prioritize?



Victoria Bochny

Jose Getich

Nick & Vicky Steneman

Ran Kauffinger

Roz McLean

Ken Hnottavage-Telleen

JIM STUMP

NANCY BROWN STUMP

Jaidyn Stultz

Angel Braestump

MARK SPALDING

Jerry & Lucy Pich

BARBARA BOYCE

Baird Brown

Kathy Reissman

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Selmusa@gmail.com

tsprer@wisc.edu

cewhockey86@gmail.com

lmjohnson.contino@gmail.com

At least 58  
Participants!

11% of our  
student  
population!



Welcome

Introductions

Snack break

# Breakout groups

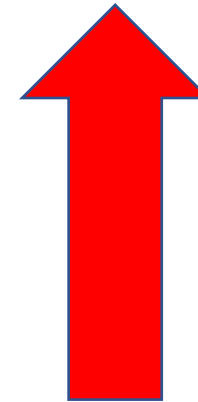
- Group 1: How can the town of Arrowsic **respond to impacts** of a rapidly changing climate? What actions do we prioritize? What could we do on a regional level?
- Group 2: How can the town of Arrowsic **slow climate change** through **reduction of carbon**? What actions do we prioritize? What could we do on a regional level?



# Agenda

**Introduction: Phine Ewing** - Chair, Arrowsic Conservation Commission (6:30)

- **Opening Remarks: Victoria Boundy** - *Community Engagement Coordinator*  
Casco Bay Estuary Partnership (6:35 – 6:40)
- **Workshop Goals and Organization – Jesse Nankin McMahon** – Arrowsic Conservation Commission member (6:40 – 6:45)
- **Group Discussions:** Each group tackles the questions given below. **6:45 – 7:20** (with 5 minute notice to wrap up discussion at 7:15]
- **Break (refreshments provided): 7:20 – 7:30**
- **Group 1 report out:** 7:30 – 7:40
- **Group 2 report out:** 7:40 – 7:50
- **Regional Responses:** 7:50 – 8:00



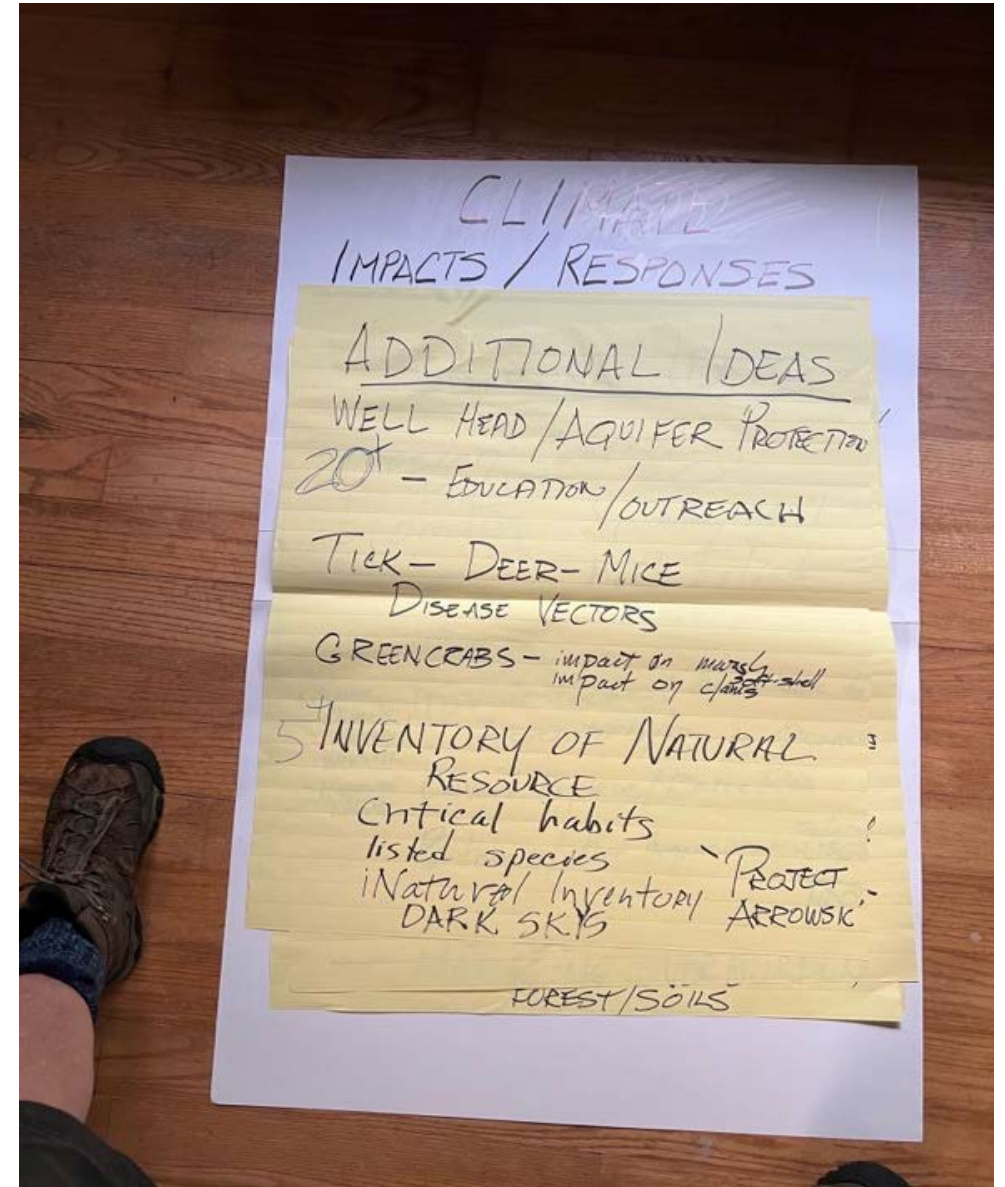
# Breakout Groups

- Facilitator
- Note taker



# Workshop take-aways

- More than just a requirement.
- Got people excited/involved.
- Results → Climate Action Plan.
- Useful template – next workshop



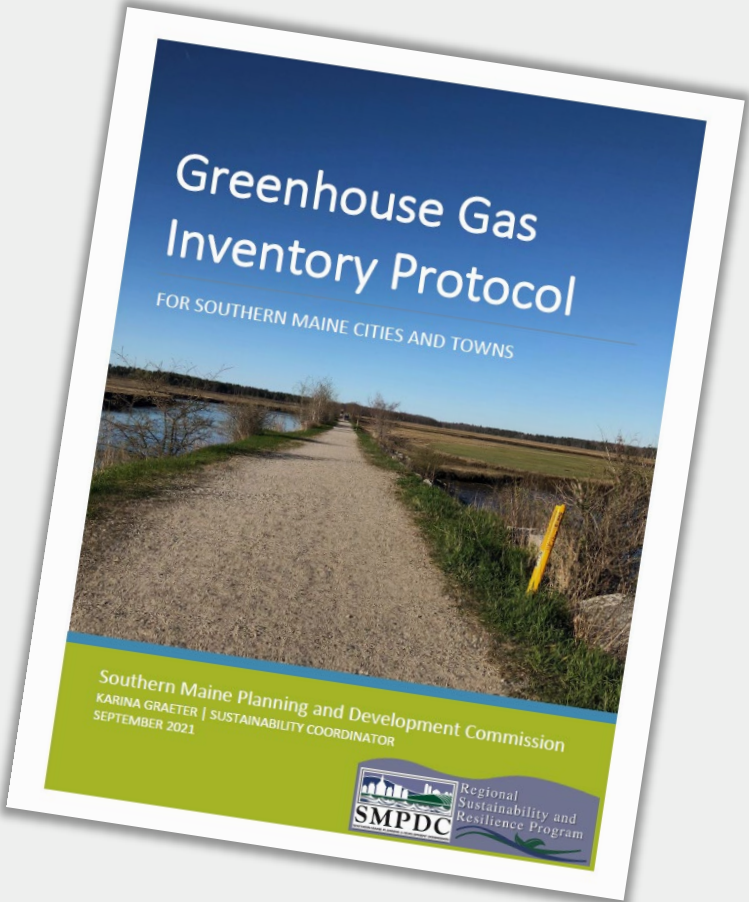
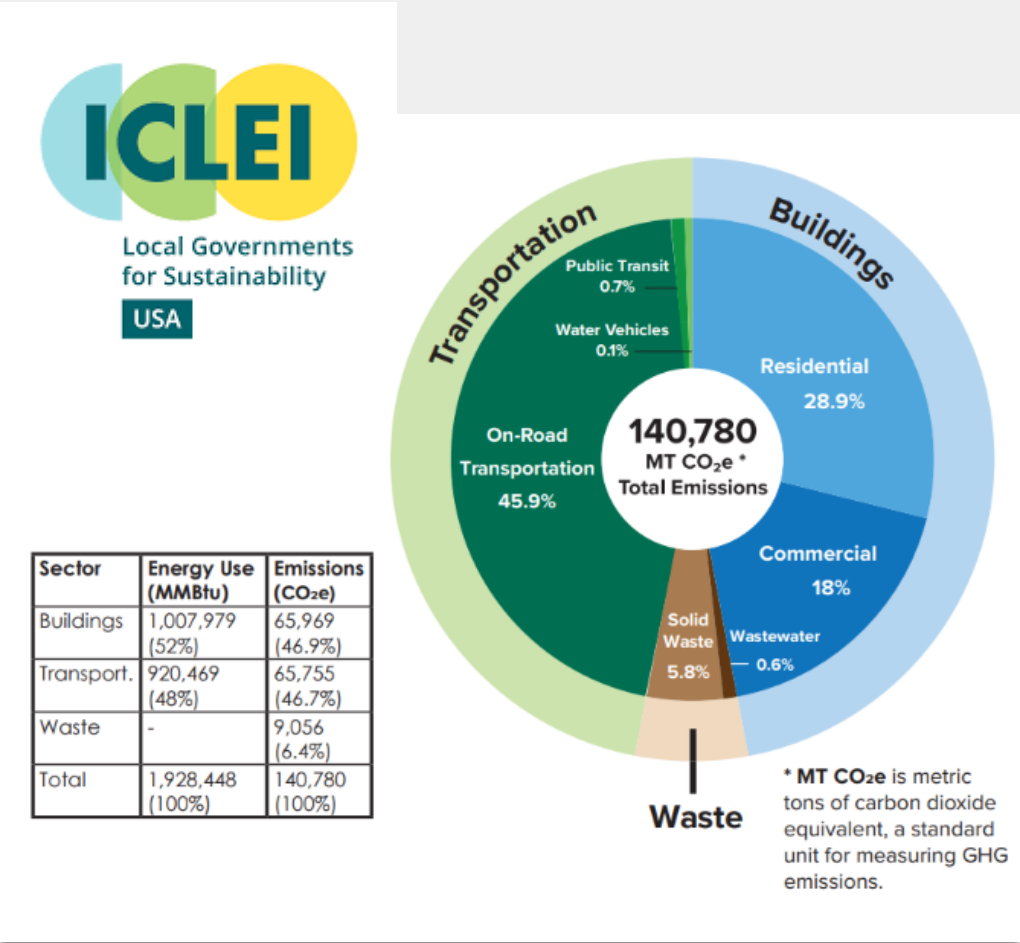






# Climate Action Planning Tools and Resources

## Greenhouse Gas Inventory

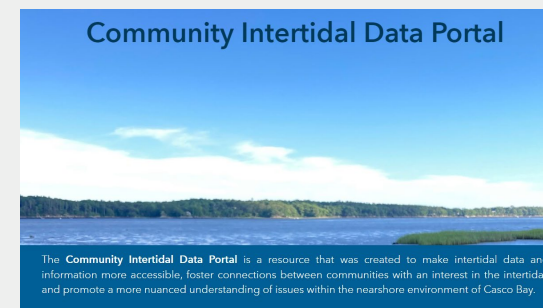
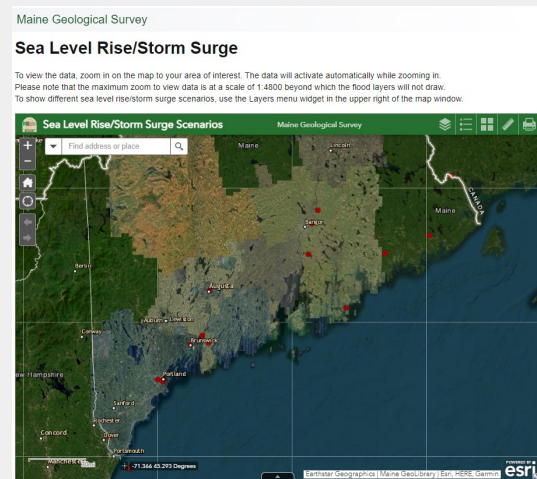




# Climate Action Planning Tools and Resources

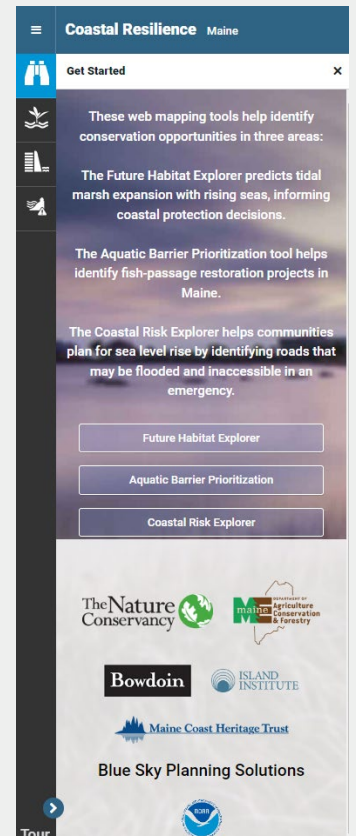
## Vulnerability Assessments

- Use a range of data sources—  
social, environmental, economic, infrastructure
  - Census data
  - Sea level rise viewers
  - Surveys and workshops



### Maine Flood Resilience Checklist

A self-assessment tool for Maine's coastal communities to evaluate vulnerability to flood hazards and increase resilience







# Climate Action Planning Tools and Resources

- C40 Resource Center
- Maine Community Resilience Workbook

## Climate Action Plans

**C40  
CITIES**

CLIMATE LEADERSHIP GROUP

**DRAFT**  
**Maine Community Resilience Workbook**  
*A framework and how to guide for  
climate change assessment,  
taking collective actions, and  
achieving community resilience outcomes*

**Beta Version 1.0**

Initially submitted December 23, 2021  
*Revised up to November 21, 2022*

Submitted to The Nature Conservancy and  
the Governor's Office of Policy Innovation and the Future  
by  
The Senator George J. Mitchell Center for Sustainability Solutions  
at the University of Maine



Maine Climate Resilience Workbook – Draft (November 21, 2022)



# Climate Action Planning Tools and Resources

## Project Screening Tool

- Incorporate sustainability into the budgeting process
- Shows the benefit of the project beyond the cost

Project Name

Project Summary

Tentative Start Date

Project Score

Overall Score

0

Equity and Community Wellbeing Score	0
Environmental Stewardship Score	0
Infrastructure and Technology Score	0
Economic Development Score	0
Planning Score	0

Environmental Stewardship						
Criteria	Sub-criteria	Sub-criteria Grade: Yes (1-3), N/A (0), or No (-1)	Sub-criteria Weight (optional)	Sub-criteria Score (optional)	Potential Indicators	Reviewer Comments
Direct/Indirect emissions reduction	Directly reduces emissions from source activity within the town boundary		1	0	Increases building efficiency (i.e. replaces with led, install heat pumps, utilize smart technology, invest in retrofits, etc.)	
	Promotes the purchase or use of Electric Vehicles (including charging technology)		1	0	# of electric cars being used Percent increase in charging capacity	
	Promotes the use of public or active transportation		1	0	Distance of sidewalk or bike lane added Outreach campaign or educational program on public or active transportation Percent or # increase in the public transit fleet, stops served or miles served	
	Promotes or incorporates electrification		1	0	Upgrades # of watts or kilowatts to electric in municipal facilities Outreach or engagement campaign Incentivizes residential or small business electrification	





Thank you

Questions and  
Discussion