

# KITSAP COUNTY COMPREHENSIVE PLAN ENVIRONMENT AND CLIMATE CHANGE

Kitsap County  
October 11, 2022



# MEETING FLOW

## Brief Presentation on:

- Regional Guidelines
- Existing Conditions
- Planning for Climate Change
- County Role in Environment and Climate Change
- Current 2016 Comprehensive Plan – Environment Chapter

## Break-Out Groups: Interactive Discussions

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# REGIONAL PLANS

## **VISION 2050 - Puget Sound Regional Council**

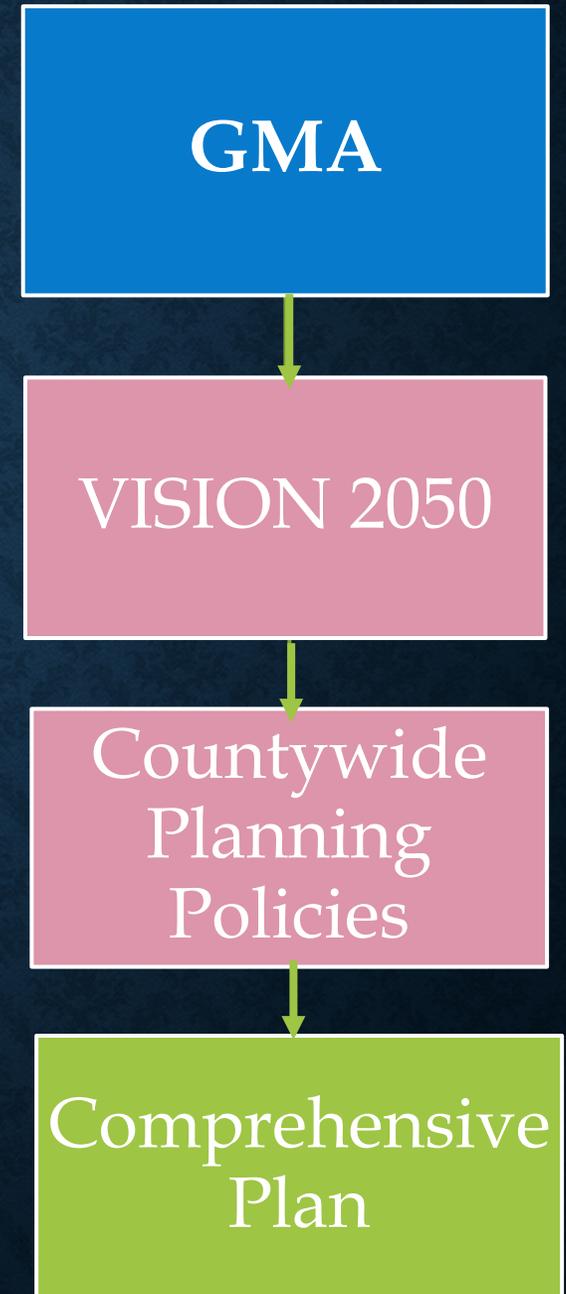
VISION 2050 guides planning in Kitsap, Snohomish, King, and Pierce Counties.

Establishes population and employment targets.

## **Countywide Planning Policies - Kitsap Regional Coordinating Council**

Guiding document for County and city planning and local transportation funding.

GMA requires consistency.





# GMA PLANNING GOAL

- Protect the environment
- Enhance state's quality of life
- Protect air quality, water quality and water quantity

RCW 36.70A.020(10)



# VISION 2050

- Restore and protect natural systems
- Conserve habitat
- Improve water quality
- Consider impacts of land use, development, and transportation at all levels of planning
- Restore the health of Puget Sound
- Reduce greenhouse gas emissions

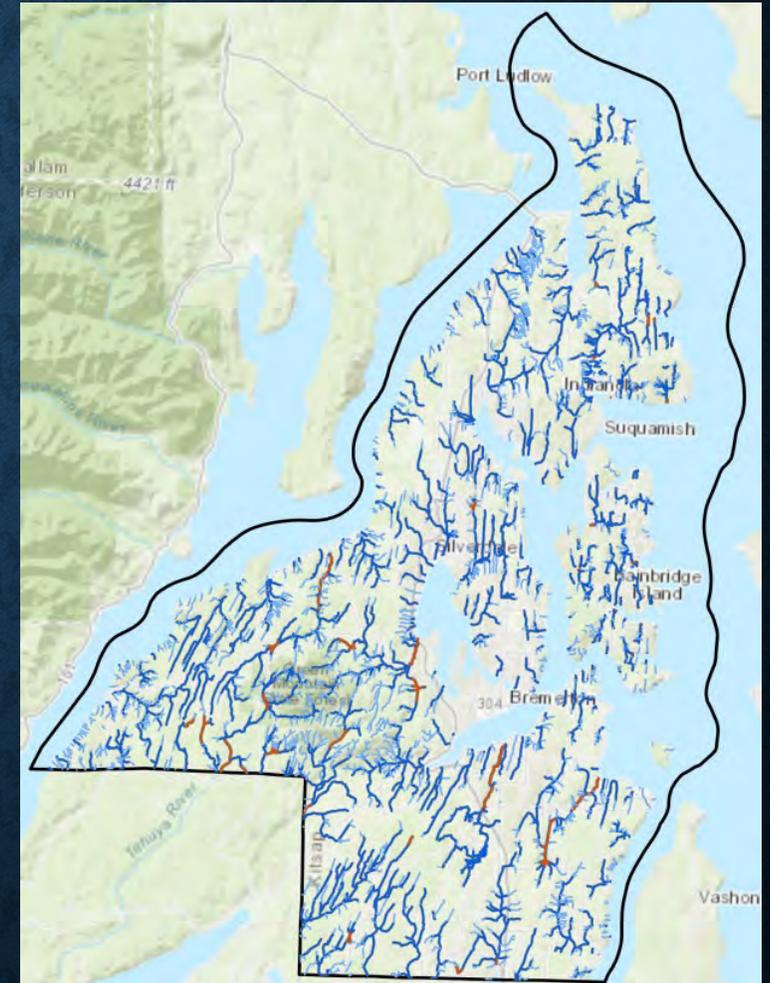


# COUNTYWIDE PLANNING POLICIES

- Reduce impacts to vulnerable populations
- Conserve and enhance natural resources
- Protect air quality, water quality, and water quantity
- Preserve and protect ESA listed species and habitats
- Coordinate watershed planning
- Address climate change

# EXISTING CONDITIONS

- Streams ~ 560 miles
- Stream buffers ~ 28,973 acres
- Wetlands ~ 32,606 acres
- Waterbodies:
  - Reservoir ~ 5 acres
  - Marine shoreline ~ 259 miles
  - Gravel pit with water ~ 3.5 acres
  - Lakes and Ponds ~ 3,171 acres



# EXISTING CONDITIONS

- Hydric Soils ~ 18,742 acres
- Areas of Moderate Geologic Hazard ~ 50,147 acres
- Areas of High Geologic Hazard ~ 41,018 acres

Approximately 67%



# SURVEY QUESTION

What aspect of Kitsap County's natural environment  
are you **most concerned** about protecting?



# PLANNING FOR CLIMATE CHANGE

**Kitsap County Climate Change Resiliency Assessment, 2020**  
**Green House Gas Emissions Inventory and Analysis, 2022**



# PLANNING FOR CLIMATE CHANGE

Kitsap County Climate Change Resiliency Assessment, 2020

Figure 1. Relationship between Changes in Climate, Associated Biophysical Impacts, and Impacts to Economic and Social Systems

## CLIMATE DRIVERS



## BIOPHYSICAL IMPACTS



## IMPACTS TO ECONOMIC + SOCIAL SYSTEMS



# RESILIENCY ASSESSMENT

## Public Health

- Heat related illnesses
- Acute injury from extreme weather
- Communities of concerns, frontline communities

## Economic Impacts

- Cost of climate change

## Culture and recreation

- Tribal cultural, ceremonial, and harvesting



# RESILIENCY ASSESSMENT

## Public Infrastructure

- Coastal infrastructure

## Land Use and Development

- Land use affects local climate impacts

## Geologic and Natural Hazards

- Storm surge and coastal flooding
- Landslides and bluff erosion



# RESILIENCY ASSESSMENT

## Hydrology and Hydrogeology

- Hydrological changes
- Stream and river flooding

## Habitat

- Freshwater and aquatic habitat

## Fire

- Wildfires
- Wildland – urban interface



# SURVEY QUESTION

What impact of climate change are you most concerned about in Kitsap County?



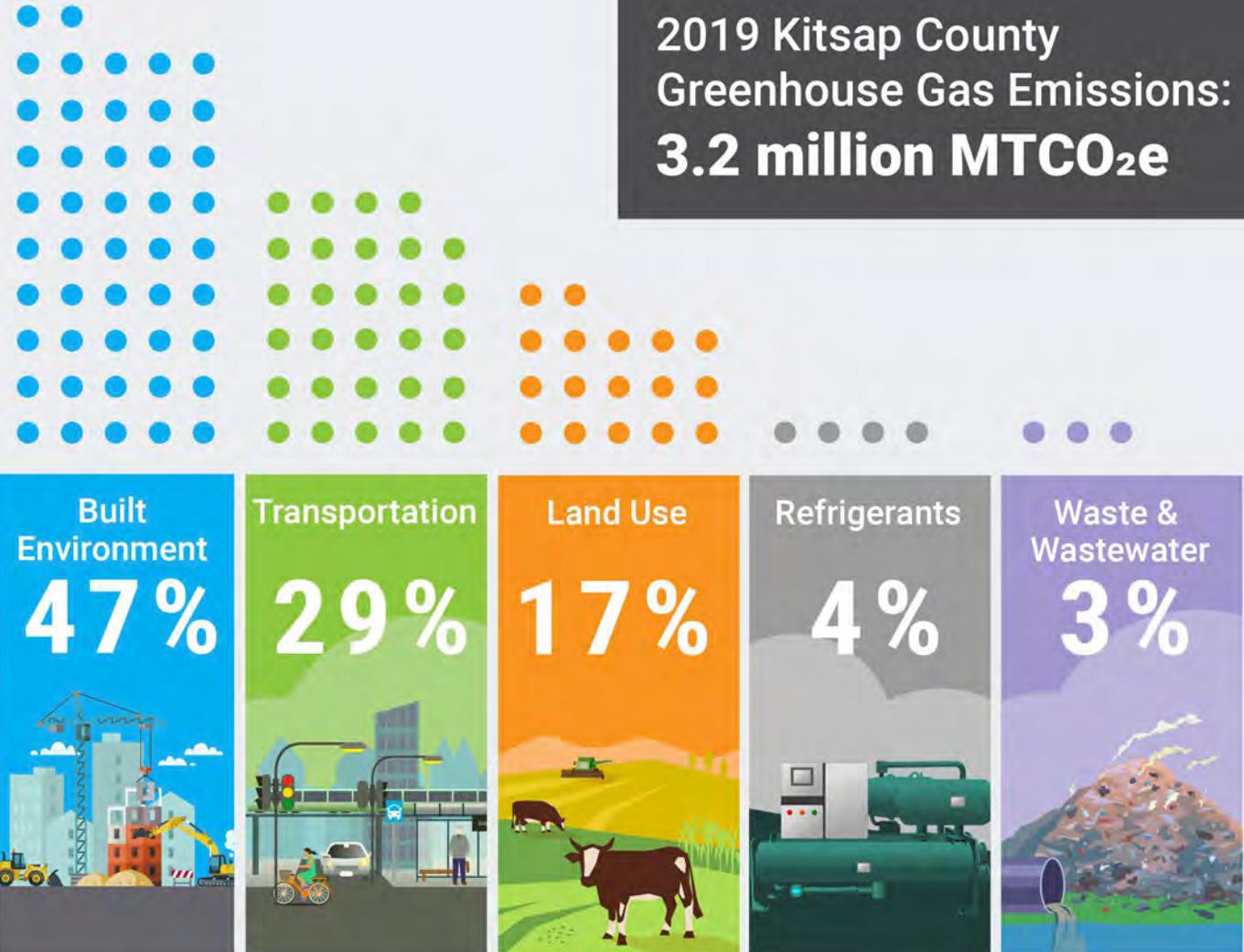
# GREENHOUSE GAS EMISSIONS

<b>Geographic Inventory Sectors &amp; What's Included</b>			
<b>Transportation</b>		<b>Building Energy</b>	
	Driving within county limits, flights from county travelers, maritime/rail travel, non-road vehicle and equipment use		Residential, commercial, and industrial electricity and natural gas use and associated loss and leakage, residential fuel oil and propane, and industrial processes
<b>Solid Waste &amp; Wastewater</b>		<b>Refrigerants</b>	
	Solid waste generation and disposal and wastewater processes		Substitution of ozone-depleting substances
<b>Land Use</b>		<b>Sequestration</b>	
	Agriculture and tree cover loss		Solid waste disposal sequestration and sequestration from trees and forests

# PLANNING FOR CLIMATE CHANGE

## WHERE DO OUR EMISSIONS COME FROM?

2019 Kitsap County  
Greenhouse Gas Emissions:  
**3.2 million MTCO<sub>2</sub>e**

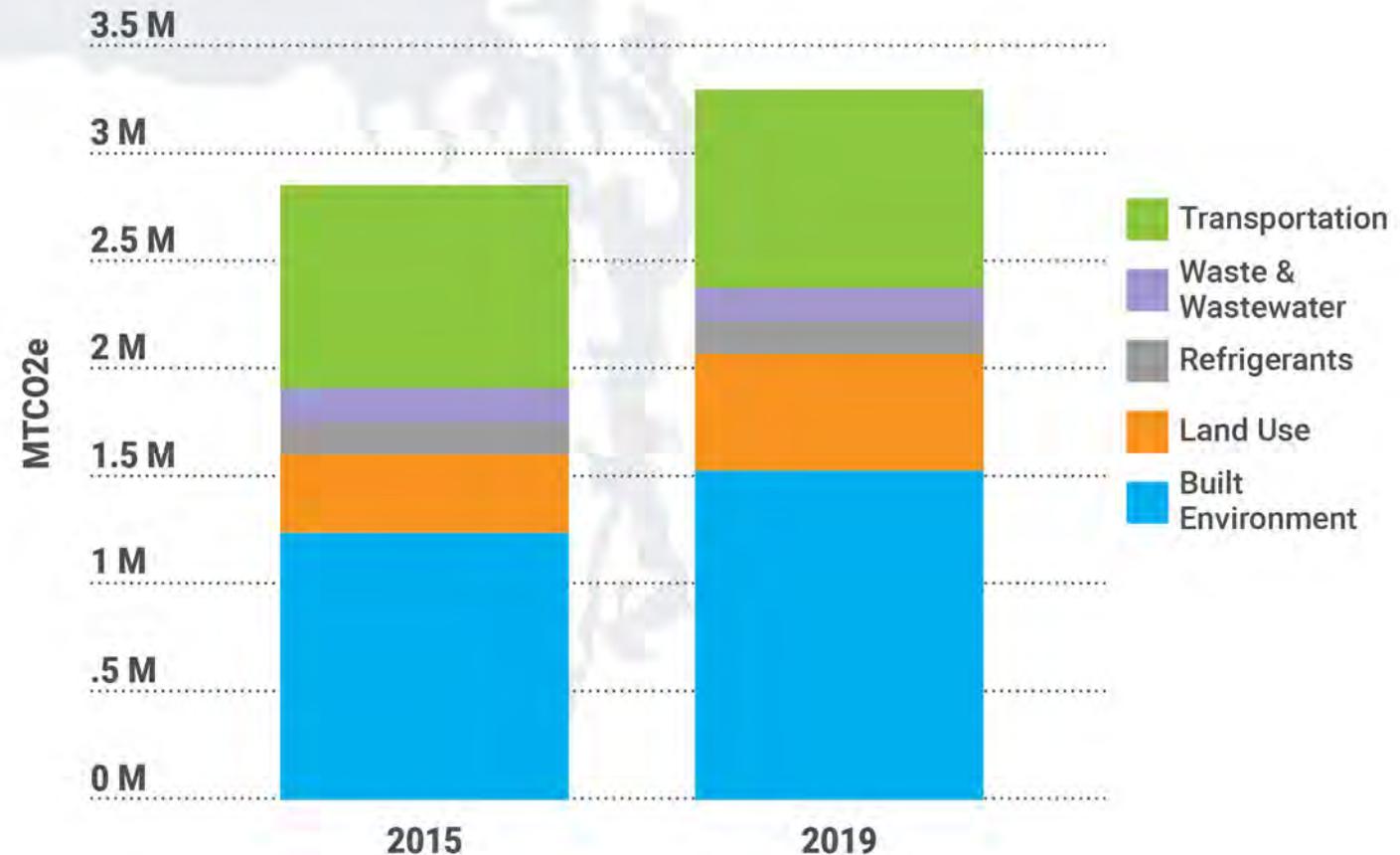


Green House Gas Emissions  
Inventory and Analysis, 2022

# PLANNING FOR CLIMATE CHANGE

## HOW ARE OUR EMISSIONS CHANGING OVER TIME?

From 2015 to 2019, Kitsap County increased overall emissions by about 16%. While population increased 5% during this same period, per capita emissions increased by 11%.



Green House Gas Emissions  
Inventory and Analysis, 2022

# PLANNING FOR CLIMATE CHANGE

## WHAT'S DRIVING CHANGES IN OUR EMISSIONS OVER TIME?

Top contributors to change in emissions between the 2015 and 2019 greenhouse gas inventories

 Drivers of **emissions increases** include:



Land use

+ 181k MTCO<sub>2</sub>e



More fossil fuels based electricity

+ 131k MTCO<sub>2</sub>e



Growing population

+ 110k MTCO<sub>2</sub>e



Colder winter

+35k MTCO<sub>2</sub>e

 Drivers of **emissions reductions** include:



Improved vehicle efficiency

- 99k MTCO<sub>2</sub>e



Decreased residential energy use (per home)

- 32k MTCO<sub>2</sub>e



Decreased commercial energy use (per job)

- 20k MTCO<sub>2</sub>e



Decreased waste generation (per person)

- 13k MTCO<sub>2</sub>e

Green House Gas Emissions  
Inventory and Analysis, 2022

# SURVEY QUESTION

How important is addressing climate change over the next 20 years at a local level?



# COUNTY'S ROLE



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Environment Chapter

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Development Regulations (Kitsap  
County Code)

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Incentivize protection of critical areas  
and habitat

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Incentivize restoration of natural  
systems and shorelines

# EXISTING PROGRAMS

- Open Space Program
- Shore Friendly Kitsap Program
- Conservation Futures Program
- Clean Water Kitsap Program
- Salmon Recovery Lead Entity
- Local Integrating Organization for Puget Sound Recovery



# ENVIRONMENT CHAPTER - GUIDING DIRECTIVES

- Provides direction and path forward to:
  - Protect environment through regulations
  - Preserve and recover salmon stock
  - Participate in Puget Sound Recovery
  - Implement “Water as a Resource” policy
  - Protect quality and quantity of groundwater
  - Work with Tribes to protect natural environment Tribal Treaty rights



# ENVIRONMENT CHAPTER - GOALS & POLICIES

- Treat natural environments as an essential asset
- Coordinate with internal and external partners on management and recovery
- Use incentive-based approaches and regulations to reduce risk of damage to natural environments
- Provide opportunities for stewardship, education and public dialogue on management and protection



# ENVIRONMENT CHAPTER - STRATEGIES

- Develop framework to evaluate ecosystem services
- Ensure natural environment functions receive first consideration
- Compliance reporting for flood and environmental regulation requirements
- Develop monitoring program to evaluate changes to natural environments
- Coordinate conservation and restoration strategies



# BREAKOUT GROUPS

**All the groups will discuss the same set of questions  
and you will be directed at random to one of the groups**



# GROUP SUMMARIES

**What ideas and issues were discussed in each group?**



# MORE INFORMATION?

## Kitsap County Comprehensive Plan

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