

Planning for Climate Change in Clackamas County Analysis of English Language Survey Responses

August 12, 2022

The Climate Action Plan Project Management Team developed a non-scientific, online survey to gather feedback from residents and other interested parties in spring 2022 about actions needed to respond to climate change and help the county reach its goal of being carbon neutral by 2050. The survey, offered in both English and Spanish, included up to 50 questions depending on the interests of the respondent.

SURVEY RESULTS: TOP FIVE TAKE-AWAYS

A: There is a lot of interest in the topic of climate change.

- 935 people responded to this survey. (Another 22 responded to the Spanish-language survey; those results are compiled separately.)
- The average amount of time spent responding was 21 minutes, considerably more than the average of 7-10 minutes people usually spend on a 15-30-question survey, per SurveyMonkey.
- 86% of respondents said climate change is very important or important to them personally.

B. Everyone has a role to play in responding to climate change.

67% of respondents said “all of the above” when asked who they thought is responsible for addressing climate change. The options were community and grassroots organizations; non-profits; city, county, state or federal governments; private businesses, and/or individual, all or none; and they could choose as many as they wanted. Only 9% said “none of the above.”

C. Concerns about the impact of climate change reflect experiences with climate change.

- 77% of respondents said they had experienced the impacts of climate change – especially wildfires, extreme heat and cold, storms, health problems, economic losses and damage to native plants and animals.
- 80% or more of respondents were concerned or somewhat concerned about climate changes they have already experience or the expected impacts of those changes, including:
 - Prolonged drought, water shortages and/or reduced water quality
 - Impact on native wildlife and native vegetation
 - More wildfires and smoke and/or reduced air quality and increased asthma
 - Economic impacts on agriculture and/or disruptions to production and distribution of products
 - More frequent periods of intense cold and extreme heat
 - Energy insecurity (reduced reliable, predictable access to electricity and natural gas)

D. There is broad support for the county to take climate action.

- 74% to 94% of respondents support the county doing the following in a variety of areas:
 - taking climate action in its own facilities and operations,
 - supporting climate action in the community
 - advocating for climate action with other jurisdictions and organizations
- Opposition to the same measures was relatively low, from only 3% to 21% per action.

E. Many people are interested in taking individual climate actions, but some need support – education, access to resources and/or financial assistance -- to help make it happen.

- 43% to 67% said they were interested in making improvements energy efficiency in their home
- Most respondents said they would need at least some financial support, education, training, a link to resources or permission of a building owner in order to make the improvement.

BACKGROUND

RESPONDENTS

There were 935 respondents to the survey, which was open May 3 – June 30, 2022

- 90% live in the county,
- 37% work in the county,
- 9% own a business in the county,
- 57% are female, 37% are male, 2% identified as non-binary.
- Based on zip code information, 78% of respondents live inside the Portland Metro Urban Growth Boundary and 22% live outside the UGB.
- 51% are 50 years of age or older; another 39% are between 35 and 54.
- 81% identified as White or Caucasian, 4% as Hispanic or LatinX, 4% as two or more races, 3% as Asian and 2% as Native American.

CREATION/PROMOTION

The survey was constructed using Survey Monkey and promoted in a variety ways throughout the county, including:

- Emails to interested parties, county advisory groups, business organizations, etc.
- Social media
- County publications -- #ClackCo Monthly, #ClackCo Weekly, #MyClackCo magazine
- Media release
- Dedicated webpage, linked from the front page of www.clackamas.us
- Presentations to county and community groups

SURVEY CONTENT

The survey was divided into four sections:

- I. Overview
- II. Climate Actions
- III. Demographic Information
- IV. Conclusion

The second section, Climate Actions, was sub-divided into the following five categories to give people the option to respond to questions in the areas of most interest to them:

1. *Buildings and Energy Generation* -- our built environment, and the energy we use to light, heat, cool and operate it (573 respondents)
2. *Transportation and Land Use* -- how we get people and goods from one place to another; how and where we build the places in which we live, work, shop and play (579 respondents)
3. *Water and Wastewater* -- the water we consume or use, and how we treat polluted water generated from rainwater runoff and human activities (503 respondents)
4. *Consumption and Waste* -- the things we buy, use and throw away (506 respondents)
5. *Carbon Sequestration* -- the process of capturing and storing atmospheric carbon dioxide (488 respondents)

The percentages detailed for each answer/finding below are based on the total number of people who answered that specific question, not on the total number of survey respondents.

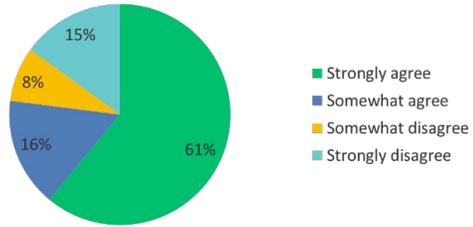
KEY FINDINGS

NOTE: These key findings are rounded to the nearest whole number.

GENERAL/DEMOGRAPHICS

1. Agree or disagree with the statement: *I have personally experienced the effects of climate change.*

- Agree (strongly or somewhat) – 77%
- Disagree (strongly or somewhat) – 23%



2. If you checked agree, please give an example.

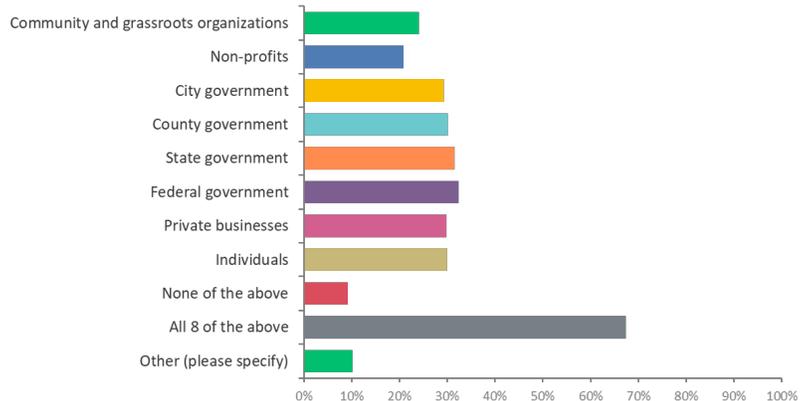
- Wildfires, heat, ice storm and extreme weather were the items mentioned the most.
- There were also many comments about economic impacts of weather changes, fires, drought, receding glaciers; concerns about personal health, and negative impacts on plants and animals.

"I used to think, Why would I ever need air conditioning in my car or my house."

"Wild fires, extreme weather, changes in plant growing seasons..."

3. Who do you think should be responsible for addressing climate change?

- 67% said "all of the above" (community and grassroots organizations; non-profits; city, county, state and federal governments; private businesses; individuals)
- 9% said "none of the above"
- 29% to 32% laid the responsibility at the feet of city, county, state or federal government; private businesses or individuals.



4. Why do you think this [your response to who's responsible for addressing climate change)?

- Over half the people who responded to this open-ended question commented that everyone is responsible for responding to climate change because everyone has contributed to creating climate change and/or is impacted by climate change and/or climate change is such an urgent issue that we can only be successful if everyone works together.
- Some felt that government has to take the lead and set requirements; others felt that it will only be successful if individuals take the lead
- A few people expressed their view that climate change is not an issue and therefore does not need to be addressed.

"We all make the mess, we all need to clean it up."

5. How important is the issue of climate change to you personally?

- Important – 86%
- Not important – 14%

6. How much do the following impacts of climate change concern you?

Respondents were asked to indicate their level of concern with 18 climate change impacts. The following impacts were of concern to 80% or more of respondents. They are listed in order with the area of most concern first; percentages reflect those who said they were concerned or somewhat concerned:

1. Prolonged drought and water shortages (84%)
2. Impact on native wildlife, including salmon and other fish, and animals that pollinate crops such as (bees, birds and bats) (83%)
3. More wildfires and smoke (83%)
4. Reduced water quality (82%)
5. Economic impacts on agriculture (82%)
6. Reduced air quality and increased asthma (81%)
7. Impact on native trees and other vegetation (81%)
8. Disruptions to production and distribution of products that reduce access to food and other goods (81%)
9. More frequent periods of intense cold and extreme heat (80%)
10. Energy insecurity, e.g., reduced reliable, predictable access to electricity and natural gas (80%)

Extreme sustained impact on Indigenous and other marginalized communities magnified by climate change

CLIMATE ACTION CATEGORIES

In this section, respondents were asked to let us know their degree of support for actions that could be taken by the county for its own operations; to educate, incentivize and/or regulate in the community, or to advocate with other agencies and organizations. Then they were asked about actions they might be willing to take and what could be done to support them. Responses are listed from highest to lowest support.

BUILDINGS AND ENERGY GENERATION

8. County actions. Rate your degree of support for each of the following possible future actions related to how the county operates its own facilities and programs.

Possible Future County Action	% Support	% Oppose	% Need more information
a) The county reduces the amount of energy used for heating, cooling, equipment, lighting and appliances in its buildings	84	9	7
b) All new county-owned buildings are built to be carbon-neutral (meaning the design and operations do not emit greenhouse gases)	83	14	3
c) The county increases the number of its buildings that have solar panels	81	13	6
d) All electricity for county-owned buildings comes from zero-carbon energy sources (e.g., wind, solar, water)	79	17	3
e) All current county-owned buildings are retro-fitted to be carbon-neutral in coming years	74	21	5

9. County supports action in the community (education, incentives, regulations, grants, etc.) Rate your degree of support for each of the following possible actions.

Possible Future County Support	% Support	% Oppose	% Need more information
a) Support energy efficient design and operations of all new buildings constructed in Clackamas County, including houses, apartments, offices, schools and commercial and industrial buildings.	85	12	4
b) Support the use of clean energy sources to heat, cool and power homes.	83	13	4
c) Support the use of clean energy sources to heat, cool and power commercial and industrial buildings.	82	14	4
d) Support the installation of solar on all suitable buildings, especially new buildings.	79	15	6

10. County advocates: Rate your degree of support for each of the following possible future actions.

Possible Future County Advocacy	% Support	% Oppose	% Need more information
a) Reduce amount of energy used to heat, cool and power equipment, lighting and appliances in buildings located in Clackamas County	84	10	6
b) Encourage residents and businesses to subscribe to 100% renewable electricity (from a source such as water, wind or solar power)	75	21	4

11. Which of the following energy efficiency improvements are you interested in making? (check all that apply)

- Installing solar panels – 67%
- Improving building insulation – 66%
- Installing more efficient heating/cooling system – 63%
- Installing more efficient windows/doors – 60%
- Replacing older appliances with more efficient options – 57%
- Installing low-flow showers, faucets and toilets – 43%
- Other – 25%

“I am limited in ability and resources to make these changes myself, but do support them.”

“Planting more trees to shade buildings from summer sun, help with cooling remodeling like buying and installing attic fans, cross ventilation, screen doors, etc.”

12. What support would you need to make the above changes? (check all that apply)

- Partial financial support – 54%
- List of recommended professionals and contractors – 48%
- Information on making changes myself – 37%
- Education – 36%
- Full financial support – 30%
- Already made these changes – 22%
- Agreement/support of building owner – 15%
- Not interested in making these changes – 6%

TRANSPORTATION AND LAND USE

14. County operations: Rate your degree of support for each of the following possible future actions.

Possible Future County Action	% Support	% Oppose	% Need more information
a) Reduce amount of employee commuting by increasing teleworking / working from home	84	12	3
b) Transition all county-owned vehicles to zero-emissions vehicles (e.g., patrol cars, pick-up trucks, delivery vans)	79	19	2

15. County supports action in the community (education, incentives, regulations, grants, etc.): Rate your degree of support for each of the following possible future actions.

Possible Future County Support	% Support	% Oppose	% Need more information
a) Provide additional infrastructure (sidewalks, bike paths, etc.) to make it easier and safer for people to walk or bike	85	13	2
b) Increase infrastructure to support electric vehicles, e.g., electric charging stations	80	17	2
c) Provide support for people to use transit, ride in vehicles with two or more occupants (carpool or ride-share), walk and bike	79	17	4
d) Build most new housing in and near current and planned population centers and major travel corridors	75	16	9

16. County advocates: Rate your degree of support for each of the following possible future actions.

Possible Future County Advocacy	% Support	% Oppose	% Need more information
a) Transit companies purchase and use electric buses that operate on renewable electricity	80	15	5
b) Increase the number of zero-emission vehicles sold and registered in the county	77	18	5
c) Expand high capacity transit services, such as bus rapid transit or light rail	75	20	5

17. Are you interested in purchasing or leasing an electric vehicle? (check one)

- Yes – 61%
- No – 25%
- I already own one – 15%

18. Are there any barriers to you purchasing an electric car or truck? (check all that apply)

- Cost – 60%
- Concern about lack of charging stations – 43%
- Hard to find one – 24%
- Other – 23%
- Maintenance concerns – 14%

“As a renter, can't install charger at home so need charging stations to be regularly available.”

- Not interested – 12%
- Already own or lease electric vehicle – 11%
- No barriers – 6%
- I don't drive – 2%
- Unsure how to dispose of current vehicle – 2%

19. If the county were to invest in infrastructure to support lower transportation emissions, where would you prefer they focus? (check all that apply)

- Expand infrastructure for walking and biking – 61%
- Infrastructure to support zero emissions vehicles, e.g., EV charging stations – 56%
- Expand bus transit service – 44%
- Other – 16%
- None of the above – 12%

“Grocery shopping is not optional and a focus on bringing small grocery outlets or safe walking/ bike access to stores would be beneficial.”

WATER AND WASTEWATER

21. County Operations: Rate your degree of support for each of the following possible future actions.

Possible Future County Action	% Support	% Oppose	% Need more information
a) County wastewater treatment facilities with sufficient capacity generate and capture renewable natural gas from wastewater treatment for use on-site.	79	3	18

22. County Supports Action in the Community (education, incentives, regulations, grants, etc.): Rate your degree of support for each of the following possible future actions.

Possible Future County Support	% Support	% Oppose	% Need more information
a) County wastewater treatment facilities with sufficient capacity generate and capture renewable natural gas from wastewater treatment for use on-site.	77	4	19

23. County Advocates: Rate your degree of support for each of the following possible future actions.

Possible Future County Advocacy	% Support	% Oppose	% Need more information
a) Increase public education and resources to encourage water conservation.	91	5	3

“Education isn’t enough—will need regulations and fees.”

24. The actions of individual households can make a difference in maintaining a healthy and adequate supply of water. What would encourage you to conserve water at home? (check all that apply)

- Knowing I am helping to protect the environment – 65%
- Knowing that I will save money – 61%
- Knowing that I am helping to protect wildlife – 57%
- I already conserve and don’t think there is more to do – 33%
- Other – 9%
- I’m not interested in conserving water at home – 3%

“For those of us with large acreage how about some thanks for saving water and not using chemicals. We need incentives and at least a thank you.”

25. Are there any barriers to you conserving water at home? (check all that apply)

- There are no barriers – 45%
- Cost of installing or replacing equipment – 30%
- I need information on how to conserve – 21%
- Other – 14%
- I don’t have enough information to answer – 8%
- I don’t control water use in my household – 6%

“Live in a rental, so cannot replace the appliances or install alternative options.”

26. Other suggestions for actions individuals can take to save water and wastewater.

Suggestions included replacing lawns with native plants, use of rainwater and educating people about and promoting the use of grey water.

CONSUMPTION AND WASTE

28. County Operations: Rate your degree of support for each of the following possible future actions.

Possible Future County Action	% Support	% Oppose	% Need more information
a) Clackamas County prioritizes purchasing services and products that minimize the release of greenhouse gases	85	8	7

29. County Supports Action in the Community (Education, incentives, regulations, grants, etc.): Rate your degree of support for each of the following possible future actions.

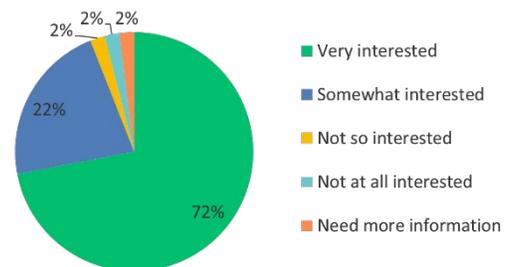
Possible Future County Support	% Support	% Oppose	% Need more information
a) The county supports the production, processing and sale of locally grown food.	93	4	3
b) The county sponsors repair fairs and other activities to support reuse of materials and products.	92	4	4

30. County Advocates: Rate your degree of support for each of the following possible future actions.

Possible Future County Advocacy	% Support	% Oppose	% Need more information
a) Encourage the purchase of products and services that are designed to be reused and easy to repair.	94	4	3
b) Reduce the amount of food and other organic waste sent to landfills	89	5	6

31. The amount of waste is we create is impacted by individual decisions such as how much we buy, what we buy, how we take care of what we buy and what we do with things when we are done with them. How interested are you in reducing your waste?

- Interested (very or somewhat) – 94%
- Not interested (not or not at all) – 4%
- Need more information – 2%



32. What support would you need to make the above changes? (check all that apply)

- Information on making changes myself – 55%
- Education – 48%
- I've already made these changes – 36%
- Other – 20%
- Authority/permission from building owner – 7%
- I'm not interested in these changes – 3%

"More options to recycle programs that include a wider variety of materials."

"People need education and better choices. Businesses need to change the way they make things."

33. Other suggestions for actions individuals can take to reduce consumption and waste.

There were multiple suggestions for increased recycling services and education, composting opportunities, less packaging materials and producing less waste in the first place.

“Pressure for Improved waste stream from corporations- less plastic packaging.”

CARBON SEQUESTRATION

35. County Operations: Rate your degree of support for each of the following possible future actions.

Possible Future County Action	% Support	% Oppose	% Need more information
a) Implement forest management practices that increase carbon sequestration and growth	81	7	11

36. County Supports Action in the Community (education, incentives, regulations, grants, etc.): Rate your degree of support for each of the following possible future actions.

Possible Future County Support	% Support	% Oppose	% Need more information
a) Support forest and agricultural management and practices that increase carbon sequestration	83	8	9
b) Identify and encourage financial incentives for farm and forest landowners to increase carbon sequestration	78	12	9

37. County Advocates: Rate your degree of support for each of the following possible future actions.

Possible Future County Advocacy	% Support	% Oppose	% Need more information
a) Continue to investigate carbon sequestration capacity and opportunities	81	11	8

38. Other suggestions for actions individuals can take to sequester carbon.

- Most suggestions were related to trees and native plants:
 - Planting and saving trees, both in rural and urban areas
 - Educating people about forest management, gardens and ground covers
- A couple of people suggested more regulations to preserve trees and limit development

49. Please share any other climate action ideas you think we should consider.

There were hundreds of suggestions and comments, ranging from chiding the county for moving too slowly and advising the county set the example, adding or strengthening regulations, increasing incentives and public education, to advising the county to quit wasting money on something it can't fix or that isn't really a problem. Some of the most commonly-mentioned suggestions related to:

- Recycling and reducing waste
- Different power sources
- Transportation improvements such as more transit, bicycle paths, e-charging stations
- Requiring or encouraging planting trees and native plants for businesses and developers
- Incentive “green” actions by individuals and businesses