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# PLANNING COMMISSION

## Regular Meeting Agenda

Council Chambers- Mercer Island City Hall  
9611 SE 36TH STREET | MERCER ISLAND, WA 98040  
PHONE: 206.275.7605 | [www.mercergov.org](http://www.mercergov.org)



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## Wednesday, July 31, 2019

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### Planning Commissioners

Carolyn Boatsman

Tiffin Goodman, Chair

Daniel Hubbell

Jennifer Mechem

Lucia Pirzio-Biroli

Craig Reynolds, Vice Chair

Ted Weinberg

**CALL TO ORDER & ROLL CALL**

**6:00 PM**

**MINUTES**

**6:05 PM**

June 19, 2019

**APPEARANCES**

**6:15 PM**

**REGULAR BUSINESS**

**6:30 PM**

**Agenda Item #1: Rooftop Railing Zoning Standards**

Review draft code amendment to MICC 19.02.020(E)(3)

Staff Person: Robin Proebsting

**Agenda Item #2: Comprehensive Plan Amendment Docket 2019**

Continue review of draft Comprehensive Plan Amendment 2019

Staff Person: Robin Proebsting

**OTHER BUSINESS**

Directors Report

Planned Absences for Future Meetings

Next Regularly Scheduled Meeting: August 7, 2019

**ADJOURN**

**8:30 PM**

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# PLANNING COMMISSION

## MEETING MINUTES



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Wednesday, June 19, 2019

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### CALL TO ORDER

The Planning Commission was called to order by Chair Goodman at 6:07 pm in the City Hall Council Chambers at 9611 SE 36<sup>th</sup> Street, Mercer Island, Washington.

### ROLL CALL

Chair Tiffin Goodman, Vice Chair Craig Reynolds, Commissioners, Carolyn Boatsman, Daniel Hubbell, Jennifer Mechem, Lucia Pirzio-Biroli, and Ted Weinberg were present.

### STAFF PRESENT

Evan Maxim, CPD Director, and Andrea Larson, Senior Administrative Assistant were present.

### MINUTES

It was moved by Weinberg, seconded by Hubble to:

**Approved the May 29, 2019 minutes.**

Passed 7-0

It was moved by Weinberg, seconded by Hubble to:

**Approved the June 2, 2019 minutes**

Passed 7-0

### APPEARANCES

Matt Goldbach. Live on Mercer island. He spoke about his concerns regarding the Community Facilities Zone.

Julie Garwood, 9772 SE 42<sup>nd</sup> St. She spoke regarding the screening regulations as currently written in the second draft of the Communities Facilities Zone and her concerns regarding them.

Gardener Morelli, 8454 W Mercer Wy, President of MI Beach Club. He spoke regarding the Community Facilities Zone and how it could affect the Beach Club if in the future they are required to "opt in" to the new zone.

Laura Musso, 16964 NE 39<sup>th</sup> Pl, Bellevue, she is the Board president of FASPS. She thanked the Commission on their continued review of the Community Facilities Zone.

Bruce Bethards 4295 Shoreclub Drive. He is Secretary to the Shoreclub. He spoke regarding the Community Facilities Zone and how it could affect the Shoreclub in the future if they are required to "opt in" to the new zone.

John Hall 9970 SE 40<sup>th</sup> St. He spoke regarding his concerns regarding the Community Facilities Zone.

## **REGULAR BUSINESS**

### **Agenda Item #1: Community Facilities Code**

Evan Maxim, CPD Director, provided a presentation on the continued review of the 2<sup>nd</sup> draft of the Community Facility Code Amendment.

The Commission reviewed the additional materials supplied in the June 19, 2019, Planning Commission Packet.

The commission took a break until 7:11pm.

The Commission continued their discussion of the performance approach.

The Commission requested that staff come back with more information regarding if both the Design Commission and the Hearing Examiner can have quasi-judicial decision making on the same project.

The Commission provided staff with feedback regarding the Master Plan Threshold.

The Commission took a break until 9:15pm.

The Commission gave feed back on directions to take for the third draft of the Community Facility Code.

## **OTHER BUSINESS**

Evan Maxim, CPD Director, provided an updated on the CAO & SPM adoptions by City Council, about interim small cell regulations that have been implemented, and about commuter parking.

## **PLANNED ABSENCES FOR FUTURE MEETINGS**

Hubble will be absent on July 31, Prizio-Biroli will be absent on August 21.

## **ANNOUNCEMENTS AND COMMUNICATIONS**

The next Planning Commission meeting is on June 19, 2019 at 6:00PM.

## **ADJOURNMENT**

The meeting was adjourned at 9:59PM.

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# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

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## PLANNING COMMISSION

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**To:** Planning Commission

**From:** Robin Proebsting, Senior Planner

**Date:** July 25, 2019

**RE:** ZTR18-006 Fall 2018 Code Cleanup: Rooftop railings above residential zoning height limit

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### SUMMARY

Regulations regarding rooftop railings and their relationship to residential zoning height limits was part of the Fall 2018 code clean up (project ZTR18-006). Staff worked with the Planning Commission to develop code language to clarify the status of rooftop railings, and this language was rejected by the City Council at its May 21, 2019 meeting. The Council then remanded the issue to the Planning Commission, directing staff to discuss allowing rooftop railings to exceed the residential zoning height limit in special circumstances. This memo introduces revised code language based on this direction.

### BACKGROUND

The Fall 2018 Code Cleanup (ZTR18-006) included the question of whether to allow rooftop railings above the 30-foot height limit allowed by the residential zoning code. MICC 19.02.020(E) establishes height standards, and MICC 19.02.020(E)(3) lists items that are allowed to extend above the 30-foot height limit, including antennas, lightning rods, and chimneys. This code subsection also notes that “other similar appurtenances may extend to a maximum of five feet above the height limit allowed for the main structure.” The question the code cleanup item intended to resolve was whether rooftop railings, for example as used for a rooftop deck, should be considered a “similar appurtenance” as described by this code section.

Staff worked with the Planning Commission to develop proposed clarifying code language as part of the Fall 2018 Code Cleanup, however, this proposed code language was not adopted by the City Council. The Council remanded this portion of the code to the Planning Commission and directed staff to discuss allowing roof top railings to exceed the 30-foot height limit in special circumstances such as when a lot is constrained by steep slopes and/or critical area buffers.

In response, staff have developed draft code language (Attachment 1) aimed at fulfilling this direction in a manner that is contextual, given the potential range of lot sizes and degree of constraint by critical areas across properties. The draft code language establishes a threshold at which rooftop railings may exceed the 30-ft height limit, which is proposed to be on lots on which the area unencumbered by wetlands, watercourses and associated buffers or steep slopes is smaller than the area allowed to be lot coverage plus 2,000 square feet.

The 2,000 square foot figure was chosen because was intended to be a threshold under which a site would be so constrained as to not be able to make full use of the maximum lot coverage allowed by code as well as provide an opportunity for recreational space. A 90-foot wide lot would have a front yard of 1,800 square feet, roughly 200-600 square feet of which is likely to be driveway (which is counted as lot coverage), with side yards approximately comprising the remaining 400-800 square feet, which yielded the 2,000 square foot figure. If a lot were to be unable to accommodate unconstrained front and side yards to be used as recreational space, the draft code would allow a rooftop railing above the allowed height limit to that lot, providing an opportunity for recreational space.

#### **NEXT STEPS**

Please review draft code language and come prepared to provide input to staff.

#### **ATTACHMENTS**

1. Draft rooftop railing code language, amending MICC 19.02.020(E).

- 1 E. Building Height Limit.
- 2 1. Maximum Building Height. No building shall exceed 30 feet in height above the average building
- 3 elevation to the highest point of the roof.
- 4 2. Maximum Building Height on Downhill Building Facade. The maximum building facade height on
- 5 the downhill side of a sloping lot shall not exceed 30 feet in height. The building facade height
- 6 shall be measured from the existing grade or finished grade, whichever is lower, at the furthest
- 7 downhill extent of the proposed building, to the top of the exterior wall facade supporting the
- 8 roof framing, rafters, trusses, etc.
- 9 3. Antennas, lightning rods, plumbing stacks, flagpoles, electrical service leads, chimneys and
- 10 fireplaces, solar panels, and other similar appurtenances may extend to a maximum of five feet
- 11 above the height allowed for the main structure in subsections (E)(1) and (2) of this section;
- 12 provided:
- 13 a. Solar panels shall be designed to minimize their extension above the maximum allowed
- 14 height, while still providing the optimum tilt angle for solar exposure.
- 15 b. Rooftop railings may ~~not~~ extend above the maximum allowed height for the main structure
- 16 if the following criteria are met:
- 17 (i) The subject lot is constrained by watercourses, wetlands, and associated buffers or
- 18 steep slopes and the unconstrained lot area is less than the total square footage of the
- 19 lot coverage allowed by this chapter plus 2,000 square feet.
- 20 For example, a lot with a net lot area of 10,000 square feet at a 20% slope would be
- 21 allowed 3,500 square feet of lot coverage. If 6,000 square feet of the lot were wetland,
- 22 watercourse and associated buffer or steep slope, the unconstrained lot area of this lot
- 23 would be 4,000 square feet. A rooftop railing above the height limit would be allowed in
- 24 this scenario, because the total of the 3,500 square feet of lot coverage plus 2,000
- 25 square feet is 5,500 square feet, which is greater than the unencumbered area of 4,000
- 26 square feet.
- 27 (ii) The proposed railing is no taller than the height required by the Washington
- 28 State Amendments to the International Residential Code as adopted by the City.

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## PLANNING COMMISSION

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**To:** Planning Commission

**From:** Robin Proebsting, Senior Planner

**Date:** July 25, 2019

**RE:** Comprehensive Plan Amendments 2019

### SUMMARY

This memo provides follow-up information on the Planning Commission's May 29, 2019 discussion on the 2019 Comprehensive Plan Amendment docket. At its July 31, 2019 meeting, the Commission will further develop and refine the policies that will make up its recommendation for the 2019 docket.

### BACKGROUND

The Planning Commission last reviewed the 2019 Comprehensive Plan Amendments on May 29, 2019. At that meeting, the Commission provided input on draft policies that had been developed by staff. A discussion of the changes made to the previous draft policies and rationale behind those changes follows.

#### **Item No. 2: Establish goals and policies to prevent and/or mitigate the impacts of climate change**

The Planning Commission directed staff to advance the ideas presented in the draft policies in Attachment 1 of the May 29, 2019 meeting with some adjustment in focus and scope. The revised policies (Attachment 1) incorporate this direction, together with policy ideas from Commissioner Boatsman (Attachment 2) and the Lightstone Consulting report prepared for Island Vision, dated November 21, 2018 (Attachment 3). Draft policies addressing docket item No. 2 have been reviewed to verify consistency with the current King County Planning Policies and Multicounty Planning Policies, excerpted in Attachments 5 and 6. Lastly, draft goal, and policy numbers have been added to the draft.

Revisions to the draft goals and policies are based on the following:

- Land Use Goal 28 and associated policies have been added in response to Planning Commission feedback and policy ideas pertaining to 1) the measurement, tracking, and goal-setting of GHG emission reduction, as well as 2) working with existing efforts.
- Land Use Policy 18.10 was included in order to keep carbon sequestration a component of the overall goal of preventing climate change.
- Land Use Policy 21.6 was added in response to the Planning Commission's direction to address the connection between land use and greenhouse gas emissions without prescribing one urban form.

- Transportation Policies 3.4 and 2.7 respond to recommendations from the Lightstone Consulting report, calling for a standardized methodology for calculating Vehicle Miles Traveled (VMTs) and reducing VMTs.
- Solid Waste Policy 5.10 was revised to incorporate a recommendation from Lightstone Consulting and addressed the impact of GHGs emissions generated by organic materials sent to landfills.

**Item No. 4: Goals and policies supporting the review and possible establishment of multi-modal transportation level of service**

The last item on the 2019 draft policies concerned multimodal levels of service. The Planning Commission’s direction at the previous meeting was to connect hubs and nodes throughout the City, create a complete transportation network, and to create a long-range plan for transportation improvements. In response, staff have drafted policies to 1) assign higher levels of service for all transportation modes near community connection points and commercial areas and streets connecting these areas, and 2) set active transportation levels of service at a level that allows access between all points using only active transportation.

Staff’s goal for the July 31, 2019 meeting is to confirm the Planning Commission’s direction and obtain any additional direction needed to develop a public hearing draft.

**NEXT STEPS**

Please review the attached materials and come prepared to provide direction to staff at the July 31, 2019 meeting.

**ATTACHMENTS**

1. Draft Comprehensive Plan Policies for 2019 Preliminary Comprehensive Plan Docket
2. Possible goals and policies for Planning Commission discussion, prepared by Carolyn Boatsman, dated May 29, 2019
3. Combined Report to Island Vision, prepared by Lightstone Consulting, LLC, dated November 21, 2018
4. Public comment from Neighbors in Motion, dated February 4, 2019
5. Excerpts from the 2012 King County Countywide Planning Policies, as amended through June 2016
6. Excerpts from Vision 2040, Puget Sound Regional Council



## Draft comprehensive plan goals and policies

July 31, 2019

### Item No. 1: Remove Specific Town Center subarea designations from the Land Use Element

#### **Suggested Amendments:**

- Remove Figure TC-1 (Town Center Subarea map) from the Land Use Element of the comprehensive plan.
- Revise Land Use Policy 3.2 as follows: Locate taller buildings on the north end of the Town Center and step down building height through the center to lower heights on the south end, bordering Mercerdale Park. ~~See Figure TC-1.~~

### Item No. 2: Establish goals and policies to prevent and/or mitigate the impacts of climate change

#### **Suggested Amendments:** Revise comprehensive plan goals and policies as follows:

- Land Use Goal 28: The City aims to reduce the carbon footprint generated on Mercer Island.
  - Land Use Policy 28.1: Total City GHG emissions should be 50% below 2011 emissions by 2030 and 80% below 2011 emissions by 2050, in alignment with current King County targets.
  - Land Use Policy 28.2: The City will calculate its greenhouse gas emissions using a standardized methodology, and report findings to the King County - Cities Climate Collaboration (K4C) and to the public.
  - Land Use Policy 28.3: The City should remain an active participant in the King County - Cities Climate Collaboration (K4C) in order to leverage its limited staff capacity.
  - Land Use Policy 28.4: By Council action, the City supports the goals of, and the United States' ratification of, the Paris Climate Agreement.
  - Land Use Policy 28.5: The City should use greenhouse gas emissions data to inform decision-making for City operations and community-wide programs, favoring solutions that generate fewer emissions.
- Land Use Policy 18.10: The City encourages carbon sequestration through an increase in tree canopy and increased vegetation coverage.
- Land Use Policy 21.6: Focus future land development where utility and transportation investments have been made and encourage land use patterns to be carbon-efficient.
- Land Use Policy 21.7: Energy-saving retrofits of existing homes should be encouraged and incentivized by the City, in partnership with existing Puget Sound Energy (PSE) programs.

- Transportation Policy 3.4: Improvements to the City's transportation network should enable and encourage active modes of transportation.
- Transportation Policy 2.7: Develop a standardized method for calculating Vehicle Miles Traveled (VMT) comparable to that used by neighboring cities.
- Utilities Element, Solid Waste Policy 5.10: Strive to eliminate solid waste disposed of via landfill or incinerator in favor of recycling, reuse, and organics composting, and seek to meet or exceed King County diversion goals

Item No. 3: Placeholder for the development of goals and policies supporting economic development

No amendments proposed at this time.

Item No. 4: Goals and policies supporting the review and possible establishment of multi-modal transportation level of service

**Suggested Amendments:** Revise comprehensive plan goals and policies as follows:

- Transportation Policy 10.6: The City should establish transportation levels of service for pedestrian, bicycle, and transit transportation modes.
- Transportation Policy 7.8: The City should have a complete, connected active transportation system allowing any part of the Island to be accessed from any other using only active transportation.
- Transportation Policy 12.4: The City strives to build community through the in-person interactions facilitated by active transportation at community connection points (schools, library, community center, bikeshare hubs, etc).
- Transportation Policy 12.5: Areas near schools and commercial areas should have higher multi-modal levels of service.

Possible goals and policies for Planning Commission discussion

Carolyn Boatsman

May 29, 2019

Add to the Sustainable Community Vision Statement in the Introduction:

Climate action goals and policies

“Cities have a vital role to play in mitigating and adapting to climate change. Most greenhouse gas emissions (GHG) come from cities and people living in cities will be most affected by climate change. City leaders and residents are closest to these issues and, in many cases, are best situated to take action.

Goals and policies guide the City for the purpose of making effective decisions regarding actions that can reduce greenhouse gas emissions to meet City targets. The City’s coherent vision and climate actions present a hope to the public, private businesses, and partnering organizations that together we can make meaningful progress on climate change.

General goals and policies:

Goal 1: The City aims to reduce its overall carbon footprint.

Policy 1: The City Council, on May 7, 2007, resolved to set a GHG reduction target of 80% by 2050. The City uses 2011 as the benchmark year from which to measure GHG reductions due to lack of data going back to 2007.

Policy 2: The City should adopt an interim goal of 50% reduction in GHG by 2030 in order to plan and track progress on reaching the 2050 target.

Goal 2: The City works collaboratively locally, regionally, statewide, nationally, and internationally toward reduction of GHG.

Policy 1: The City commits to GHG reduction so that citizen activists who stand ready to help with this effort can be sure that their efforts will be met with corresponding commitment on the part of the City.

Policy 2: The City participates in the King County and Cities Climate Collaboration (K4C) to coordinate and enhance the effectiveness of local government climate action.

Policy 3: The City supports GHG reduction to meet the Paris Agreement, the first global commitment to fight climate change (*mayor signed pledge June 15, 2017*).

Policy 4: The City’s coherent and regularly updated climate action vision, goals, policies, and actions make it attractive as a candidate for grants and loans to reach goals and implement policies.

Goal 3: In recognition of the substantial effort needed to address climate change and the rapidly changing status of the problem, the City initially establishes high-level goals and policies and then, using

the method of annual review and update, adds additional inputs to further develop the approach and adapt to changing conditions.

Policy 1: The City will place the highest priority on mitigation of climate change but will annually consider the addition of policies to address adaptation to climate change.

Policy 2: Accurate assessment of existing GHG emissions is necessary in order to commence consideration of remedies. The City should continue to report GHG emissions in its participation with K4C.

Policy 3: A standard system of vetting, analyzing, and scoring GHG reduction activities should be developed in collaboration with the community. Metrics for decision-making can include potential GHG reductions, costs, technical barriers, financial barriers, community acceptance and participation, legal requirements, organizational challenges, and other metrics. Carbon saved must be worth the time and investment.

Policy 4: The City will report annually to K4C and the public on GHG emissions.

Policy 5: The City should engage the community in a City-wide effort. Leadership and organizational structures should be established including participation from citizens, businesses, schools, churches, community organizations, etc. This team should advise the City and other players on annual priorities using the decision matrix in Policy 3.

Policy 5: The City should continue to minimize carbon footprint as a way of doing business, considering carbon footprint in all relevant decisions, and choosing feasible options that minimize impacts.

Goal 4: Improve measurement of GHG emissions in the community

Policy 1: The City should document the method used to determine Vehicle Miles Travelled (VMT), including the identification of a peer review/oversite process by the City.

Policy 2: The City should consider amending the approach to determining VMT using the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories.



**Combined Report to Island Vision**

**GHG Emissions:**  
**A Mercer Island Community Verification Report**

**And**

**Carbon Reduction Pathways**

**Gary (Wolf) Lichtenstein**  
**Principal, Lightstone Consulting, LLC**



**November 21, 2018**



**Table of Contents**

Introduction ..... 3

Part 1: Verification..... 4

    Verification Summary..... 4

    Verification Criteria..... 4

    Technical review..... 5

    Verification Recommendations..... 7

Part 2: Carbon Reduction Strategies..... 9

    Summary and Analysis of Part 1..... 9

    Recommendations for Carbon Reductions..... 11

Conclusion .....15



## Introduction

As sole proprietor of Lightstone Consulting, LLC, a Washington State company, I am pleased to present this greenhouse gas (GHG) emissions and carbon reduction pathway report for Island Vision of Mercer Island. This work is conducted in response to Island Vision accepting the July 23, 2018 proposal (Appendix A).

This report addresses two areas of inquiry; an assessment of the community GHG report and a set of recommendations for focus areas, processes and activities that will be effective in reducing the Mercer Island community carbon footprint. International standards, community guidance documents and reports informed this work, as well as discussions with the Island Vision Board of Directors.

The assessment and recommendations contained in this report is to support the achievement of Mercer Island goals for carbon emission reductions. Data from the official King County benchmark of 2007 is not available. Our benchmark, or “base year” for this report is 2011. The City of Mercer Island goal, as expressed in City Resolution No. 1389 (May 7, 2007), is to reduce Mercer Island GHG Emissions by 80% in 2050.

While the 2017 values are not yet available, the 2016 emissions for the Mercer Island Community are estimated to be 203,028 MtCO<sub>2</sub>e<sup>1</sup>. This includes direct emissions from the combustion of natural gas, and petroleum based fuels used for transportation, and indirect emissions from electricity use on the island. Understanding the emission sources as contributors to the community’s carbon footprint, recommendations are then directed to address emission reductions from these identified sources.

Part 1 of this report is on the verification of the Mercer Island community’s carbon footprint. This includes the verification criteria, boundary assessment, scope of the verification, analysis, findings and outcomes.

Part 2 addresses recommendations for community carbon reduction.

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<sup>1</sup> Metric tons of greenhouse gases, measured in equivalency to CO<sub>2</sub>.



## Part 1: Verification

### Verification Summary

Independent third party GHG verification is a standard industry practice for GHG reporting. Verification may be mandated, or simply preferred by a GHG reporting program. A reporter interested in having greater assurance in the reported emissions also may request independent third party verification. In this circumstance, Island Vision is requesting the verification and not the reporting entity, the City of Mercer Island (City). The City voluntarily report GHG emissions in its participation with the King County Cities Climate Collaboration<sup>2</sup> (K4C). The GHG emissions from city operations and from the community at large are included in this public disclosure<sup>3</sup>. The City data is housed in the Scope 5 software service, with its publically accessible dashboard.

The typical rigor involved in third party verification requires a detailed review of records, reporting processes and in-person assessments of the reporting entity's operations. Given the resources available for this effort, it was not possible to directly interview and assess the data and processes used by the City for its GHG report. However, access was given to the data account, allowing for a limited data review and strategic assessment. The sources of data were provided, while the data records were not. Data records can include reports, invoices or other documents used to build the annual GHG emissions report.

Sufficient information is available to conduct a high level assessment of the GHG sources that contribute to the community's carbon footprint. It was found that the major GHG emissions contributors are the Vehicle Miles Traveled (VMT) attributed to Mercer Island, and the emissions from energy use in the homes and businesses located on the island. Minor sources of emissions and the savings in emissions from sustainable activities also are considered as part of the technical review.

### Verification Criteria

- Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories: An Accounting and Reporting Standard for Cities<sup>4</sup> (2014) by the Greenhouse Gas Protocol

This guidance document results from a collaboration between the World Resources Institute, C40 Cities Climate Leadership Group, and ICLEI – Local Governments for Sustainability. It provides guidance on boundaries, calculation methodologies and many other areas of consideration for a community-wide GHG emissions report. Other standards and references include:

- The International Standards Organization (ISO) 14064 part 3: Specification with guidance for the validation and verification of greenhouse gas assertions

<sup>2</sup> <https://www.kingcounty.gov/services/environment/climate/strategies/k4c.aspx>

<sup>3</sup> <https://k4c.scope5.com/dashboards/11>

<sup>4</sup> <https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities>





- The King County 2015 Strategic Climate Action Plan (SCAP) and its update, the King County Strategic Climate Action Plan 2017 Biennial Report (June 2018)

**Technical Review**

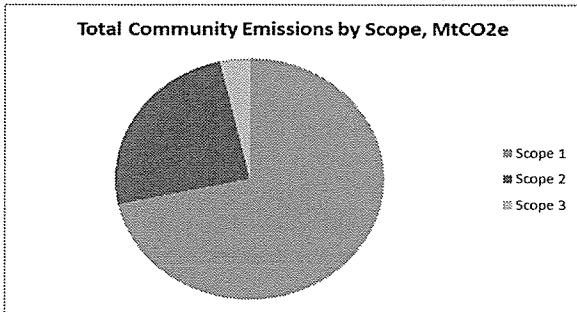
The analysis of the data shows that the major GHG emission sources from the Mercer Island community are Vehicle Miles Traveled (VMT), mainly passenger vehicles. The other major sources are from electricity and natural gas use in residential and commercial buildings. Four percent of the total emissions reported for the Mercer Island community are from activities outside the physical boundary of Mercer Island.

Greenhouse gas emissions are categorized by Scope. Scope 1 accounts for direct emissions from combustion or other sources within the reporting boundary. Scope 2 emissions are indirect, resulting from the consumption of electricity generated by combustion of fossil fuels outside the reporting boundary. Scope 3 emissions are from activities outside the Mercer Island reporting boundary, such as waste treatment by King County. Table and Chart 1 show the contributions to the total community footprint by Scope.

**Table 1. Emissions Contribution by Scope (2016)**

<b>GHG Scope</b>	<b>MtCO2e</b>	<b>%</b>
Scope 1	145,377	72%
Scope 2	50,300	25%
Scope 3	7,351	4%
Total GHG	203,028	

**Chart 1. Emissions Contribution by Scope**



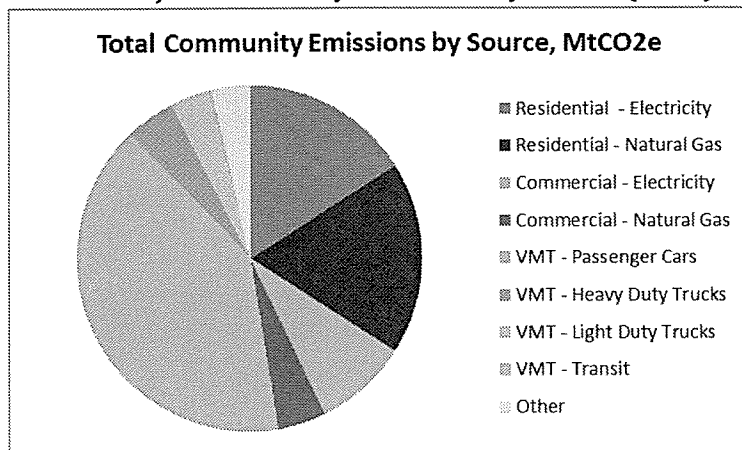


To further visualize the emissions profile, Table 2 and Chart 2 shows the totals from the major community GHG emission sources.

**Table 2. Emissions Contribution by Source (2016)**

Source	Scope	MtCO <sub>2</sub> e	% Total
Residential - Electricity	2	32,500	16%
Residential - Natural Gas	1	36,700	18%
Commercial - Electricity	2	17,800	9%
Commercial - Natural Gas	1	9,310	5%
Vehicle Miles Traveled (VMT) - Passenger Cars	1	81,900	40%
VMT - Heavy Duty Trucks	1	9,490	5%
VMT - Medium Duty Trucks	1	7,140	4%
VMT - Transit	1	837	0%
Other	3	7,351	4%
<b>Total</b>		<b>203,028</b>	

**Chart 2. Major Community Emissions by Source (2016)**



The major GHG contributions are from passenger car travel and from building energy consumption. These reported emissions are of the most concern, as the largest overall contributors.

The Mercer Island Community data is telling, as it indicates relative amounts of emissions that results from specific types of activities. Yet, full access to data and the responsible personnel are required when conducting third party verification. This was not available for the technical review. The sources of data are provided by the City of Mercer Island and those sources are reasonable. There is no reason to doubt the accuracy of the Mercer Island Community reported emission values. There are also references and resources listed in Scope 5 that are informative and are helpful with this limited analysis. Given the general criteria for verification, including a review of at least



some raw data (invoices, etc.), ISO 14064 part 3 requires other specific verification activities that should be conducted for this assessment. These include the verification of the following:

- management of the GHG data and information
- processes for collecting, processing, consolidating and reporting GHG data and information
- systems and processes that ensure the accuracy of the GHG data and information
- design and maintenance of the GHG information system
- systems and processes that support the GHG information system

A methodology or guidance<sup>5</sup> document employed by the City to report the community emissions was not in evidence. This together with no access to key City personnel in order to conduct interviews, it is not possible to assess the completeness of the GHG inventory.

An example of an unverified concern is home heating oil use. This potential emission source is not accounted for in the inventory. It is unclear if this is an oversight, or older home oil furnaces are no longer in use on the island. Despite that verification cannot be completed at this time, recommendations to strengthen the emissions report are provided as Opportunities for Improvement (OFI).

### **Verification Recommendations**

#### **OFI 1:**

- a. It is recommended that the methodology used to determine the Vehicle Miles Traveled (VMT) be well documented, including the identification of a peer review/oversight process by City of Mercer Island. The VMT data source is shown to be “via City Bellevue”, and there is no evidence of an oversight process conducted by the City of Mercer Island. The Puget Sound Regional Council (PSRC) Models and Modeling<sup>6</sup> is referenced in Scope 5. The PSRC website on VMT<sup>7</sup> has limited data aggregated at the county level. It is unclear how the VMT data set is developed and how it has been apportioned to Mercer Island. It is recommended by the GHG Protocol<sup>8</sup> that the ASIF framework be employed for VMT estimates.
- b. It is recommended that a complementary, top-down approach using fuel consumption (via gas station records) as a proxy for travel behavior be implemented. In the top-down approach, emissions will be the result of the amount of fuel purchased on the island, multiplied by the GHG emission factors for each fuel type (gasoline and diesel). This can be a transparent and quantitatively verifiable approach. This top-down approach will serve to

<sup>5</sup> A GHG management system is a set of procedures that a reporter uses to guide GHG reporting, supporting year to year consistency.

<sup>6</sup> <https://www.psrc.org/whats-happening/topic/models-and-modeling>

<sup>7</sup> <https://www.psrc.org/vehicle-miles-traveled>

<sup>8</sup> Global Protocol for Community-Scale Greenhouse Gas Emission Inventories; section 7 Calculation on-road transportation emissions



confirm the bottom-up approach of the ASIF framework or any other modeling methodology employed to calculate VMT. The top-down approach is recommended by the GHG protocol<sup>9</sup>.

**OFI 2:**

It is recommended that along with the data sources identified as “By request from PSE” be available for review, additional information on the size of the built environment (total building square ft.) be gathered. An aggregation of the energy use by building type, and square footage can provide valuable information. The inventory of building types and square footage on Mercer Island can be compared with standard databases, such as CBECS<sup>10</sup> for commercial buildings and RECS<sup>11</sup> for residential space energy consumption.

**OFI 3:**

It is recommended that a market-based electricity value be reported by the City, along with the location-based value that is currently being reported. The details on the current recommended reporting for electricity can be found in the GHG Protocol guidance document for Scope 2. The location-based reporting properly uses the EPA eGrid emission factor for our region. The market-based value will make use of the provider specific emission factor that more closely represents the actual energy mix (coal, natural gas, RE)<sup>12</sup> used to generate the electricity consumed on Mercer Island.

## Part 2: Carbon Reduction Strategies

The carbon reduction strategy is in two sections; summary and analysis of part 1, and recommendations for carbon reduction.

### Summary and Analysis of Part 1

The technical review has identified that the sources of concern are Vehicle Miles Traveled (VMT), Electricity and Natural Gas. The largest source is VMT, with passenger cars owning the lion’s share of those mobile GHG emissions. Commercial and residential electricity, and natural gas usage on the Island are also major contributors. Puget Sound Energy (PSE) supplies all the electricity and natural gas to the island.

The technical review identified weaknesses in the data. OFI 1 identified weakness in the VMT data, as the methodology is not transparent. An example of one such weakness, is in the calculation of Heavy Trucks. Given that there are no significant warehouse or shipping (fueling) operations originating on Mercer Island, and pass-through trips are not typically included in VMT calculations,

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<sup>9</sup> Ibid

<sup>10</sup> <https://www.eia.gov/consumption/commercial/>

<sup>11</sup> <https://www.eia.gov/consumption/residential/>

<sup>12</sup> Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories; section 6.5.1 Location-based and market-based calculation methods



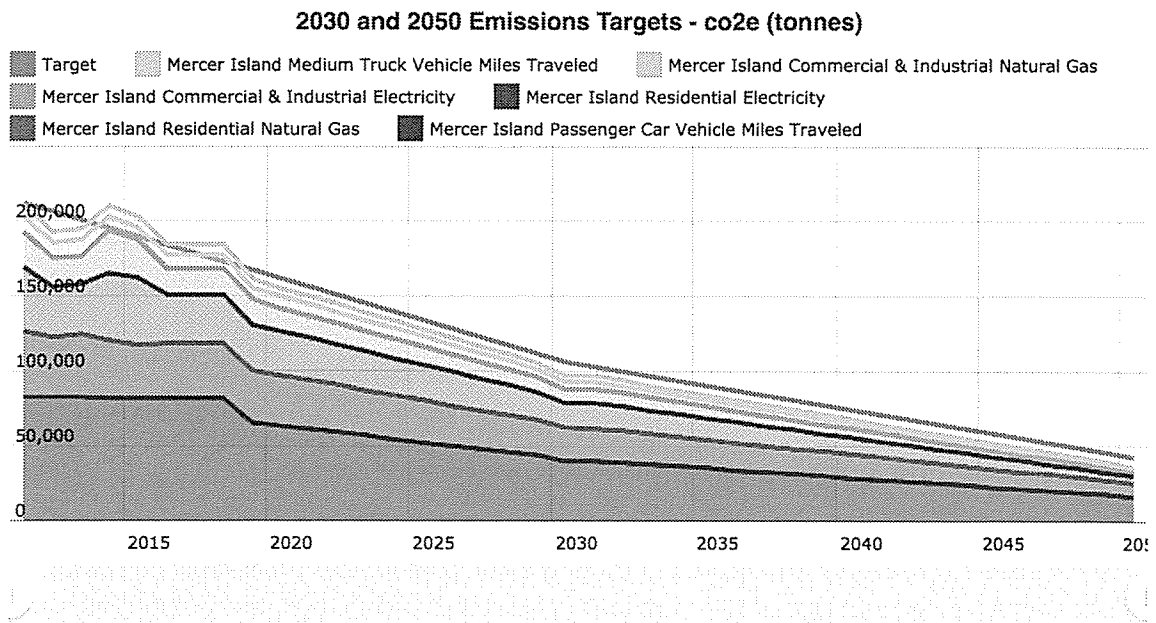
it is unclear how VMT from heavy trucks are determined, aside medium duty trucks that are used for local delivery on the island. The priority and majority sources addressed in this report include:

- Residential - Electricity
- Residential - Natural Gas
- Commercial - Electricity
- Commercial - Natural Gas
- VMT - Passenger Cars
- VMT - Medium Duty Trucks

The goal stated by the City of Mercer Island is a reduction in community GHG emissions of 50% by 2030, and a further reduction to 80% of the 2007 base year<sup>13</sup>. This means reducing fossil fuel use in VMT, natural gas and in the electricity supply correspondingly as much. The required reductions from 2011 through 2050 are visualized in Chart 3, a wedge chart showing comparable emission reductions across these six major sources. The first year with data, 2011, is the de facto base year, when emissions reporting started.

**Chart 3: Carbon Reduction Pathway for the Mercer Island Community**

**Mercer Island 2030/50 Targets - Aspirational**



This is a custom generated target that reflects the reductions targeted over 2011 emissions.

6 Selected Trackers of 49 Available. Data updated 2 minutes ago.

Chart 3 stacks each emission type on the next for each source type using 2011 as the base year. The x-axis shows dates from 2011 through 2050, and the y-axis as MtCO<sub>2</sub>e. The Target line in

<sup>13</sup> City of Mercer Island Resolution No. 1389 (May, 7, 2007)



represents the cumulative reduction target the six major community emission sources. The area underneath any one line indicates that sources contribution to the total. By 2050 the total of all these sources should be 42,440 MtCO<sub>2</sub>e to meet the King County goal. This pathway to 80% reductions are to be monitored against the actual reported emissions over time through 2050.

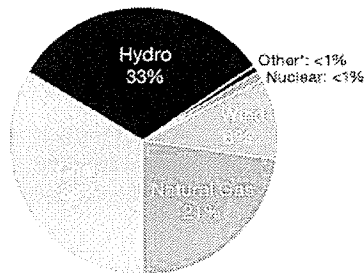
The different emission sources have different qualities and therefore different strategies for reduction. Natural gas usage on the island represents direct emissions as stationary combustion. VMT for passenger cars represents mobile fossil fuel (gas and diesel) combustion. Electricity, a Scope 2 emission source, is derived from diverse energy sources that include coal and natural gas. The 2017 PSE electricity report card<sup>14</sup> shows that the majority of PSE's electric supply is from these fossil fuels (*Fig. 1*).

### 2017 Electricity Fuel Mix

#### Diverse resources powering your home and business

The electricity generated for you uses a diverse mix of resources. The PSE fuel mix for electricity delivered to customers in 2016 is detailed in the chart and graph below

Fuel	Percentage
Coal	38%
Hydroelectric	33%
Natural Gas	21%
Nuclear	<1%
Other*	<1%
Wind	5%
Total	100%



\* Biomass, non-biogenic and petroleum.

Source: Published by the Washington Department of Commerce, October 2017, with data reported by PSE in August 2017.

**Fig. 1 PSE emission source for electricity production shows 59% from fossil fuel sources**

Successful reduction strategies will have to consider the PSE plan for fossil fuel reduction in its electricity supply. If coal and natural gas continue to be a significant contributor to electricity generation consumed on Mercer Island, then any reduction strategy that calls for increased electricity usage needs to acknowledge the fossil fuel consumption embedded in the electricity.

### Recommendations for Carbon Reductions

Reduction strategies address the main emission source outlined in Chart 3. For each recommendation, a careful analysis of costs, expected reductions, likelihood of being adopted by the

<sup>14</sup> <https://www.pse.com/pages/energy-supply/electric-supply>



community, and other relevant factors need to be considered. The recommendations below are either general strategies for community engagement, or specific tactics to lower emissions for a particular source.

#### **Recommendation 1:**

It is recommended that a standard system of vetting, analyzing and scoring carbon reduction activities be developed. Metrics used for decision-making can include potential amount of reductions, costs, technical barriers, financial barriers, social barriers (community acceptance and participation), legal requirements, organizational challenges and interactions with existing community assets. In general, decisions have are to be made that considers if the carbon saved is worth the time and investment, or is there a better path to GHG reductions. The decision matrix can be applied to all six main emission source areas identified above. A standard assessment approach, using assessment tools provides for objectivity and fairness in decision-making. A matrix of potential and ongoing programs that shows program costs (projected or actual), emissions reductions, and an assessment of adoption by community members will be informative to community leadership, government, business owners and residents.

#### **Recommendation 2:**

It is recommended that community engagement be a key component to emissions reductions. Project funding, budget restraints, appropriate expertise, community and stakeholder engagement, education and employment opportunities are all likely needs and outcomes of carbon reduction projects. Formalizing the leadership teams and organizational structures will help provide the Mercer Island community with opportunities to reduce GHG emissions. The Rocky Mountain Institute (RMI) has published a valuable guidance document, the Community Energy Resource Guide<sup>15</sup>. RMI has provided guidance for the development of a planning structure, engaging leadership and community stakeholders. RMI also describes structures, tools, and shares inspiration for a variety of energy efficiency and renewable energy projects that communities can champion.

Recommendations 1 and 2 are integral to a framework of decision-making that supports the following recommendations.

#### **Recommendation 3 (VMT reductions):**

It is recommended that the Mercer Island community consider a variety of modes to reduce emissions from passenger vehicles. There is no a single strategy, but a combination of strategies that can mitigate this mobile emission source. While it is unclear how the City has calculated VMT, the activity includes travel that originates and/or terminates on Mercer Island. As shown (Chart 3), passenger vehicle travel is the main source of VMT emissions.

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<sup>15</sup> [www.rmi.org/community\\_energy\\_guide](http://www.rmi.org/community_energy_guide)



Mercer Island is a stop for Metro and Sound Transit. Local bus service is complimented with park and rides, with more options of getting on mass transit at the North end of the island. The City of Mercer Island states on their website that the full East Link route will open in 2023, connecting Mercer Island via light rail to Capitol Hill, Downtown Seattle and the University of Washington. This link will also allow for efficient transit to the fast-growing communities of Bellevue and Redmond<sup>16</sup>.

The last mile problem, the issue of getting residents to public transit, will become a more acute problem as light rail attracts ridership. Park and ride parking spots are limited resulting in the challenge of getting Mercer Island residents to mass transit. The concept of a dockless shared bike rental service already has been piloted on Mercer Island<sup>17</sup> and there are other companies entering this space. One tactic is to fund the promotion of existing ride share options (TripPool<sup>18</sup>, rideshare online<sup>19</sup>, wheel options<sup>20</sup>) and bike share options (LimeBike<sup>21</sup> and Uber<sup>22</sup>) as ways to combat climate change. It will be important to attract bike share options to Mercer Island, which will be connected to ridership. Bike trails can be promoted through maps and other local marketing efforts.

It is further recommended that a task group form with City government, transit, community, business representation and other stakeholders to study local ridership options. In an ongoing basis, the task group will monitor programs to lower VMT from passenger vehicles, and provide input on where and how to best promote low carbon options. The task group will gear up the Mercer Island community to the 2023 launch of light rail. Effective “last mile” promotion efforts will maximize the number of people getting out of their passenger cars to get around Seattle, Mercer Island and the region

*Note: The sophistication of measuring GHGs from VMT will have to be commensurate with the changing transit modalities.*

**Recommendation 4 (VMT reductions):** Electric vehicles (EV) offer a low carbon intensity transportation option, dependent on the energy mix of the supplied electricity (*Fig 1*). Washington State has a goal of registering 50,000 plug-in electric vehicles by 2020<sup>23</sup>. It is recommended that the VMT modeling for Mercer Island break out EV’s, when appropriate, as these types of vehicles do not contribute to climate change as standard fueled vehicles do. Sufficient charging stations in commercial districts and a program of neighborhood charging stations may be developed. This can support the growth of EVs (and be co-configured for electric bikes). Mercer Island can lead this effort by registering EV owners and assessing the needs of EV owners as a stakeholder group.

<sup>16</sup> <http://www.mercergov.org/Page.asp?NavID=3036>

<sup>17</sup> <http://www.mercergov.org/Page.asp?NavID=3274>

<sup>18</sup> <https://kingcounty.gov/depts/transportation/metro/travel-options/rideshare/programs/trippool.aspx>

<sup>19</sup> <https://kingcounty.gov/depts/transportation/metro/travel-options/rideshare.aspx>

<sup>20</sup> <https://www.kingcounty.gov/depts/transportation/commute-solutions/Marketingtools/Wheeloptions.aspx>

<sup>21</sup> <https://www.li.me/>

<sup>22</sup> <https://www.seattletimes.com/seattle-news/transportation/uber-launching-seattle-bike-share-monday/>

<sup>23</sup> <https://www.commerce.wa.gov/growing-the-economy/energy/electric-vehicles/>





**Recommendation 5 (natural gas reductions):** It is recommended that natural gas use for heating in residential and commercial buildings be replaced with a “hybrid heating” systems when possible. A hybrid heating system geared towards sustainability includes radiant heating panels and heat pumps. These devices rely on electricity, and not on the direct combustion of natural gas. The overall success of efficient heating by electricity will be mitigated by the fossil fuel consumption for electricity generation (*Fig. 1*). Complementary to heating system upgrades is sufficient building insulation. Getting a free home energy assessment from PSE<sup>24</sup> is a great first step.

**Recommendation 6 (reductions in emissions from electricity):** It is recommended that the Mercer Island community work as a strong voice providing input to the Puget Sound Energy integrated resource planning process<sup>25</sup>. The Mercer Island community can also work directly with King County and City government to join the efforts to meet the King County adopted reductions goal of supplying renewable energy for 90% of county-wide needs for all residents<sup>26</sup>. The King County Renewable Electricity Transition Pathways (July 2018) emphasizes that local and voluntary actions will play an important part in achieving this King County goal.

Local action can include community solar projects, LED lighting everywhere, community organized outreach for PSA home energy audits, local “community sustainability hero” award programs, and other imaginative scenarios to raise awareness to motivate public engagement and community action.

**Recommendation 7 (Community waste management):** It is recommended that a partnership of local grocery stores, restaurants and residents investigate locating a small-scale community bio-digester that converts organic waste into electricity. Impact Bioenergy<sup>27</sup>, a local company, provides community waste to energy solutions that can be sized to fit a community’s needs. Digesters also provide solid fertilizer and nutrient rich “Organic Compost Tea” that can be an enhancement to local gardeners or commercial produce growers. Such a device located at a school, grocery store, or other community accessible location serves multiple functions – not the least of which is education on sustainable low carbon systems.

**Recommendation 8 (GHG Management for the Community):** It is recommended that Mercer Island make better use of their investment in Scope 5, the Sustainability Management Software deployed to store, archive and report GHG emission measurement outcomes. Scope 5 already hosts a City of Mercer Island Sustainability Dashboard<sup>28</sup> providing information about the current Mercer Island emissions profile. Scope 5 also has the ability to model forecasts of emissions reductions and integrate scenario planning. Scenario planning includes the modeling of carbon reduction projects

<sup>24</sup> [https://www.pse.com/rebates/home-energy-assessment?utm\\_source=sem&utm\\_campaign=energyassessment&utm\\_term=save%20energy&utm\\_medium=cpc&utm\\_content=hea&gclid=EAlalQobChMIrY-z863k3gIVohx9Ch1ObgGPEAAAYASAAEgJLyPD\\_BwE](https://www.pse.com/rebates/home-energy-assessment?utm_source=sem&utm_campaign=energyassessment&utm_term=save%20energy&utm_medium=cpc&utm_content=hea&gclid=EAlalQobChMIrY-z863k3gIVohx9Ch1ObgGPEAAAYASAAEgJLyPD_BwE)

<sup>25</sup> <https://www.pse.com/pages/energy-supply/resource-planning>

<sup>26</sup> [King County Renewable Electricity Transition Pathways: Prepared for King County \(July 2018\);](#)

<sup>27</sup> <http://impactbioenergy.com/>

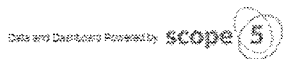
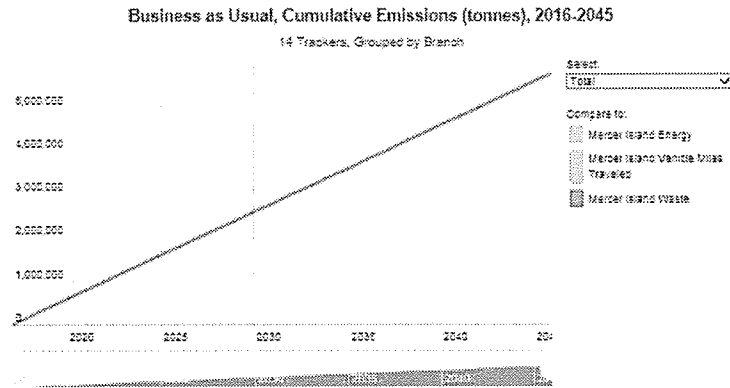
<sup>28</sup> <https://k4c.scope5.com/dashboards/11>



against forecasts of emissions. The Mercer Island dashboard powered by Scope 5 does show A Look into the Future (Fig. 2)<sup>29</sup> which does not look promising if Business as Usual continues unimpeded.

**A Look into the Future**

Based on current trends, if no additional GHG reduction programs were implemented on Mercer Island, over the next 29 years Mercer Island would emit nearly 8.4 million tonnes of CO<sub>2</sub>e into the atmosphere (an average of 286,000 tonnes per year) in addition to the amount it already emits today.



Credible sustainability programs start with credible data. [Learn More](#)  
© Copyright 2020 - 2019 Scope 5

**Fig. 2: Emissions Growth under Business as Usual**

**Conclusion:**

Shown above (Fig. 2), business as usual cannot continue, if we are to meet the climate action goals set by the City and by King County. Action has to be taken voluntarily in our households and in our communities to find a new level of sustainability in our collective low-carbon future. Policy implemented at the City, County and State level is further complemented by community action. The recommendations presented here are only a sampling of potential solutions.

The foundation that Island Vision has created in holding discussions, creating community actions and working with City officials has set the stage for greater action and engagement. Recommendation 1 and 2 are the most critical of all the suggestions and analysis of this report. Formalizing the structures for change, building the container for others to enter and engage is important.

A multi-disciplined approach can be undertaken for any one recommendation to determine the cost of implementation and ownership. Cost can be accounted for in dollars and volunteer time, etc. Community engagement takes time and persistence, but a community educated on the issues, and having opportunities to participate will create the momentum necessary for real change.

<sup>29</sup> <https://k4c.scope5.com/pages/63>



*"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."*

-- Margaret Mead

A handwritten signature in cursive script, appearing to read 'Gary Lichtenstein'.

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Gary (Wolf) Lichtenstein  
Lightstone Consulting, LLC

November 21, 2018

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**Wolf's Bio**



**Gary (Wolf) Lichtenstein** is the principal of Lightstone Consulting, LLC. He is a greenhouse gas (GHG) accounting expert, developing greenhouse gas inventories, conducting third party GHG verification and helping organizations with their GHG management and mitigation efforts. Wolf is also a practitioner of community engagement, helping communities to better understand their role in GHG pollution and mitigation scenarios. With a passion for the achievement of sustainable development goals, Wolf also brokers carbon credit sales in the U.S. and internationally with carbon projects that meet these goals with his business service, Evergreen Carbon.



**Neighbors in Motion**  
**Mercer Island**  
NeighborsinMotion.org

February 4, 2019

Dear Mercer Island Planning Commission:

Re: Long Term Multimodal Transportation Policy

**BACKGROUND**

For nearly ten years Neighbors in Motion (NIM), an organization of Mercer Island residents, has supported and advocated on behalf of Mercer Island residents to improve bicycle and pedestrian safety. We have investigated attitudes and priorities concerning transportation issues with residents and regional stakeholders by working in cooperation with the Cascade Bicycle Club, Washington Bikes and other transportation groups; holding public meetings; conducting a survey of 500 Mercer Island residents; and polling of residents at Leap For Green and the MI Farmers' Market. Based on the results of these efforts and our own experience, we wish to share recommendations for long term policy changes needed to improve the safety, enjoyment and transportation efficiency on Mercer Island.

**LONG TERM CHALLENGES**

In the coming years and decades multimodal traffic on and across Mercer Island will increase substantially due to continued population growth, new investments in non-motorized infrastructure in neighboring communities, and the emergence of new forms of transportation. Key factors in these changes include:

- Increased automobile congestion and commute times due to population growth and constraints on SOV infrastructure such as lane reductions on the I-90 floating bridge;
- Increased bicycle traffic and parking requirements to support the light rail station and bus turnaround on the Island;
- Over \$200 million in new investments in bicycle and pedestrian infrastructure underway in the Seattle and Eastside communities;
- Increased emphasis by area employers on alternatives to single-occupancy vehicle commuting to and from work; and
- Increased usage of new and diverse forms of multimodal transportation such as e-bikes, e-scooters, hoverboards, and driverless cars.

**CURRENT MERCER ISLAND TRANSPORTATION ISSUES:**

In 1996 and again in 2010 the City sponsored two pedestrian/bicycle facility plans that each recommended the gradual build out of pedestrian and bicycle infrastructure. A key pillar of the [2010 Plan](#) is the creation of “safe and convenient connections among neighborhoods and key destinations, which requires the build out of “backbone” biking and walking corridors across and around the Island.” Unfortunately, this “backbone” remains unfinished. The city’s recent Citizen Satisfaction Survey indicates that residents continue to see improving roads, trails, bicycle and pedestrian infrastructure as a priority.

In order to enhance transportation options and the safety of our residents, we recommend the following principles be integrated into the city’s planning policies:

**SUGGESTED DESIGN PRINCIPLES:**

**1. Complete Streets**

Complete Streets is a design approach used to provide a transportation network that addresses the needs of all road users, including pedestrians, bicyclists, motorists and transit riders. It emphasizes regular consideration for different transportation modes into everyday transportation planning, design and operation decisions. Complete Streets policies support a transportation system that protects vulnerable road users, provides mobility options and creates livable communities. It can also be a source of funding via the Washington State Complete Streets Award Program. <https://www.wsdot.wa.gov/LocalPrograms/ATP/CompleteStreets.htm>

**2. Safe Routes to School**

The city should commit to increasing the number of children walking and biking to school safely. Both help and funding are available via the WSDOT Safe Routes to School program, which provides technical assistance and funding to public agencies to improve conditions and to encourage children to walk and bike to school. Since its inception in 2005, the program has awarded funds for projects targeting 291 schools across the state. To achieve these improvements, approximately \$71 million has been awarded to 182 projects from over \$242 million in requests. The post project numbers of children biking and walking at the project locations have increased by approximately 20 percent. <https://www.wsdot.wa.gov/LocalPrograms/SafeRoutes/default.htm>

**3. Vision Zero**

The city should support a Vision Zero program similar to Seattle’s and Bellevue’s, as well as the state’s commitment, which uses design considerations to reduce and maintain traffic fatalities to zero. <https://transportation.bellevuewa.gov/safety-and-maintenance/traffic-safety/vision-zero>

**4. Sustainable Transportation Principles**

The city should support the most environmentally sustainable options for transportation. Transportation is the state’s biggest contributor to greenhouse emissions.

**5. Bicycle Friendly City**

Seattle and Bellevue and many other communities in the US have been certified as a Bicycle Friendly City by the League of American Bicyclists. The certification process evaluates a community’s overall transportation system and policies to determine if it meets specific criteria for a Bronze, Silver, or Gold

rating. These criteria offer communities guidelines for improving multimodal transportation. NIM has had conversations with city staff about assisting in applying for a Bicycle Friendly Community certification to determine what, if any, additional steps are required to qualify.

<https://bikeleague.org/community>

**SPECIFIC NEAR TERM PROJECTS:**

The following specific projects deserve community priority to complete the ‘backbone’ described in the City’s 1996 and 2010 Pedestrian and Bicycle Transportation Plans.

**1. A dedicated North-South Bike and Pedestrian Trail across the Island**

Mercer Island needs a safe trail to enable families, commuters and students to safely walk, bicycle, or use other forms of multimodal transportation to connect South end neighborhoods, North end neighborhoods, Island schools, the City Center, and off Island transportation networks. The city has made substantial progress in recent years, but one “missing link” remains: the section from 53<sup>rd</sup> and Island Crest Way to the intersection of 68<sup>th</sup> Street and 84<sup>th</sup> Avenue Southeast. The current TIP funds an initial engineering study and community engagement process to identify the optimal multimodal path through this area, but funding for subsequent implementation will be required.

**2. Completion of shoulders along East/West Mercer Way**

The current TIP includes a commitment to complete the shoulders on East and West Mercer Ways in 2023. In addition, the city is now beginning to sign a clockwise route along East and West Mercer as “The Mercer Island Loop”. While these shoulders are shared by pedestrians, parked cars and bicycles, they provide additional space to reduce conflicts among these users. Families, drivers, recreational walkers and cyclists all benefit from these shoulders.

Pedestrians, bicyclists and those using other forms of non-SOV transportation will be traveling around and across our Island in increasing numbers. Mercer Island needs long term policies that will support meeting these expanding uses to avoid dangerous safety issues in the future.

Neighbors in Motion would be happy to discuss these programs further.

Respectfully,

**Neighbors in Motion, Mercer Island**

Jim Stanton, Kirk Griffin, Jeff Koontz,  
Robert Olson and Mark Clausen

**EN-15** Establish a multi-jurisdictional approach for funding and monitoring water quality, quantity, biological conditions, and outcome measures and for improving the efficiency and effectiveness of monitoring efforts.

### ***Air Quality and Climate Change***

Greenhouse gas emissions are resulting in a changing and increasingly variable climate. King County’s snow-fed water supply is especially vulnerable to a changing climate. Additionally, the patterns of storm events and river and stream flow patterns are changing and our shorelines are susceptible to rising sea levels. Carbon dioxide reacts with seawater and reduces the water’s pH, threatening the food web in Puget Sound. While local governments can individually work to reduce greenhouse gas emissions, more significant emission reductions can only be accomplished through countywide coordination of land use patterns and promotion of transportation systems that provide practical alternatives to single occupancy vehicles. Efficient energy consumption is both a mitigation and an adaptation strategy. Local governments can improve energy efficiency through the development of new infrastructure as well as the maintenance and updating of existing infrastructure.

**EN-16** Plan for land use patterns and transportation systems that minimize air pollution and greenhouse gas emissions, including:

- Maintaining or exceeding existing standards for carbon monoxide, ozone, and particulates;
- Directing growth to Urban Centers and other mixed use/ high density locations that support mass transit, encourage non-motorized modes of travel and reduce trip lengths;
- Facilitating modes of travel other than single occupancy vehicles including transit, walking, bicycling, and carpooling;
- Incorporating energy-saving strategies in infrastructure planning and design;
- Encouraging new development to use low emission construction practices, low or zero net lifetime energy requirements and “green” building techniques; and
- Increasing the use of low emission vehicles, such as efficient electric-powered vehicles.

**EN-17** Establish a countywide greenhouse gas reduction target that meets or exceeds the statewide reduction requirement that is stated as the 2050 goal of a 50 percent reduction below 1990 levels.

**EN-18** Reduce countywide sources of greenhouse gas emissions, compared to a 2007 baseline, by 25% by 2020, 50% by 2030, and 80% by 2050. Assuming 1% annual population growth, these targets translate to per capita emissions of approximately 8.5 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) by 2020, 5 MTCO<sub>2e</sub>, and 1.5 MTCO<sub>2e</sub> by 2050.



**EN-18A** King County shall assess and report countywide greenhouse gas emissions associated with resident, business, and other local government buildings, on road vehicles and solid waste at least every two years. King County shall also update its comprehensive greenhouse gas emissions inventory that quantifies all direct local sources of greenhouse gas emissions as well as emissions associated with local consumption at least every five years.

**EN-19** Promote energy efficiency, conservation methods and sustainable energy sources to support climate change reduction goals.

**EN-20** Plan and implement land use, transportation, and building practices that will greatly reduce consumption of fossil fuels.

**EN-21** Formulate and implement climate change adaptation strategies that address the impacts of climate change to public health and safety, the economy, public and private infrastructure, water resources, and habitat.

**Growth Management and Air Quality**

The Puget Sound Clean Air Agency’s emphasis on growth management planning as a means of improving air quality presents an opportunity to reinforce VISION 2040. Alternatives to single-occupancy vehicle travel, including carpooling, biking, telecommuting, and a wider range of transit options, are important ways to improve air quality.

In 2007, the Puget Sound Clean Air Agency adopted six policies for local jurisdictions to use in their growth management planning efforts.

- Implement air- and climate-friendly design, construction and operation
- Promote cleaner travel choices
- Reduce exposure to air pollution
- Install clean fireplaces and stoves in new home construction
- Support environmental justice
- Use the State Environmental Policy Act as a tool and safety net

— including indoor and outdoor burning, construction dust, and lawn care — affect air quality, motor vehicles are by far the largest source of air pollution in the region.

Development that accommodates walking, biking, and transit use, such as in centers and compact, mixed-use communities, can have air quality and climate benefits. Well-designed communities with good access and mobility provide alternatives to driving alone, which in turn reduce emissions.

VISION 2040 calls for improving air quality and reducing airborne pollutants and emissions.

**AIR QUALITY GOAL AND POLICIES**

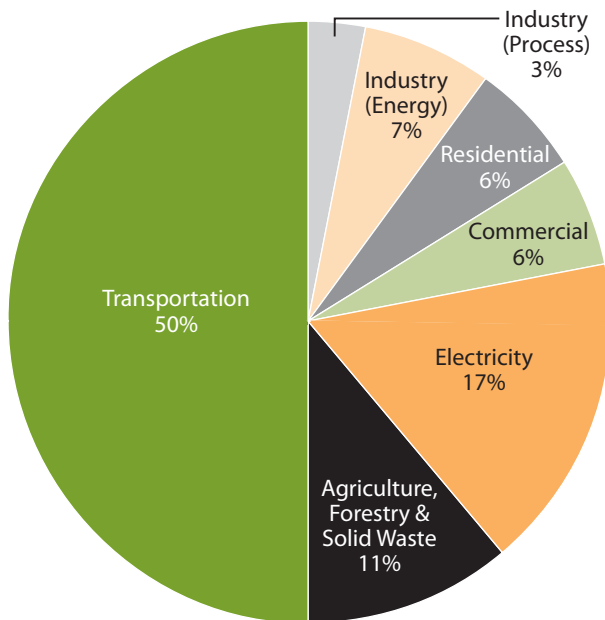
**Goal:** The overall quality of the region’s air will be better than it is today.

**MPP-En-17:** Maintain or do better than existing standards for carbon monoxide, ozone, and particulates.

**MPP-En-18:** Reduce levels for air toxics, fine particulates, and greenhouse gases.

**MPP-En-19:** Continue efforts to reduce pollutants from transportation activities, including through the use of cleaner fuels and vehicles and increasing alternatives to driving alone, as well as design and land use.

**Sources of Greenhouse Gas Emissions in the Central Puget Sound Region**



Source: Puget Sound Clean Air Agency, 2000

**Climate Change**

Climate change has the potential to affect almost every other issue identified in VISION 2040. Though a global issue, local governments can play an important role in reducing its impacts. According to the Puget Sound Clean Air Agency, for every gallon of gasoline used, automobiles release roughly 20 pounds of carbon dioxide, one of the primary greenhouse gases contributing to climate change. In the central Puget Sound region, cars and trucks contribute more greenhouse gas emissions than any other source. Burning conventional diesel and gasoline in our motor vehicles and equipment is responsible for the bulk of our greenhouse gases and other air toxics. Choosing cleaner alternatives and retrofitting older machinery to be less-polluting are affordable ways to protect our air.

VISION 2040 calls for reducing our contribution to greenhouse gas emissions and preparing for the anticipated impacts of climate change. Agencies at all levels of government should seek ways to both mitigate and adapt

to climate change. This includes efforts to maximize energy efficiency and increase renewable energy, reduce greenhouse gas emissions of new vehicles, reduce motor vehicle miles traveled, improve the convenience and safety of nonpolluting transportation modes such as bicycling and walking, protect the natural landscape and vegetation, and increase recycling and reduce waste.

**CLIMATE CHANGE GOAL AND POLICIES**

**Goal:** The region will reduce its overall production of harmful elements that contribute to climate change.

**MPP-En-20:** Address the central Puget Sound region’s contribution to climate change by, at a minimum, committing to comply with state initiatives and directives regarding climate change and the reduction of greenhouse gases. Jurisdictions and agencies should work to include an analysis of climate change impacts when conducting an environmental review process under the State Environmental Policy Act.

**MPP-En-21:** Reduce the rate of energy use per capita, both in building use and in transportation activities.

**MPP-En-22:** Pursue the development of energy management technology as part of meeting the region’s energy needs.

**MPP-En-23:** Reduce greenhouse gases by expanding the use of conservation and alternative energy sources and by reducing vehicle miles traveled by increasing alternatives to driving alone.

**MPP-En-24:** Take positive actions to reduce carbons, such as increasing the number of trees in urban portions of the region.

**MPP-En-25:** Anticipate and address the impacts of climate change on regional water sources.

**Initiatives in Washington to Address Climate Change**

*In 2007 both the Governor and the Legislature took actions to address climate change. While using different benchmark reference points, the two initiatives are compatible in their targets.*

**Washington Climate Change Challenge**

*In February 2007, the Governor established greenhouse gas emission targets, calling for the state to reduce emissions to 1990 levels by 2020, 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050 — a 70 percent reduction below normal projections. The order further directs state agencies to move forward with the Challenge, a process designed to consider the full range of policy options that may be enacted to achieve the state’s targets. The Challenge also calls for the full implementation of existing Washington laws for emission standards, building efficiency standards, and biofuel and renewable energy initiatives.*

**Legislative Action**

*The Washington Legislature has established specific greenhouse gas emission targets to address climate change. By January 1, 2020, the annual statewide greenhouse gas emission levels must be no greater than the emission levels that occurred in 1990. By January 1, 2035, the annual statewide greenhouse gas emission levels must be 25 percent below the levels in 1990. By 2050 the levels must be 50 percent below 1990 levels. (RCW 80.80.020)*

*This legislation also affirms the Governor’s targets for reducing greenhouse gases by reducing energy imports and increasing energy jobs. It also sets emissions performance standards for major new power plants or power purchases. The law authorizes additional financial incentives for electric utilities to invest in energy conservation. Finally, it authorizes electric utilities and counties to continue to invest in reducing their contributions to climate change.*

**Cities and Counties**

*Individual cities and counties in the region have already taken steps to address climate change by establishing action plans, including both King County and Seattle. Seattle, Bremerton, Everett, Tacoma, and more than a dozen other cities across the region have signed on to the U.S. Mayors Climate Protection Agreement.*

**VISION 2040 and Climate Change**

Climate change is an issue that affects all facets of VISION 2040 — the natural environment, the built environment, the economy, transportation, and other infrastructure and services. With this recognition, VISION 2040 provides guidance in all policy sections of the plan for reducing air pollution and protecting the climate.

While the entire set of multicounty planning policies has been crafted to be integrated and mutually supportive, the following list identifies those policies that address climate change, the reduction of greenhouse gas emissions, or related environmental impacts.

En- 3	En-22	T-6
En-16	En-23	T-22
En-17	En-24	T-23
En-18	En-25	T-25
En-19	DP-45	PS-1
En-20	Ec-15	PS-12
En-21	T-5	PS-13

In addition, VISION 2040 includes an implementation action calling for the development of a regional climate change action plan (see En-Action-7). Other actions that contribute to protecting the climate and reducing emissions include:

- En-Action-6
- DP-Action-9
- T-Action-14

Finally, VISION 2040 includes monitoring provisions in the Implementation section that call for measuring emissions of greenhouse gases and tracking local jurisdictions' programs and efforts to address climate change (En-Measure-5, En-Measure-6).