



CITY COUNCIL

ANDY RYDER

Mayor

CYNTHIA PRATT

Deputy Mayor

LENNY GREENSTEIN

MICHAEL STEADMAN

CAROLYN COX

ED KUNKEL

MALCOLM MILLER

CITY MANAGER

SCOTT SPENCE

LACEY CITY COUNCIL AGENDA

SEPTEMBER 16, 2021

4:00 P.M.

REMOTE ATTENDANCE

The Lacey City Council meeting will be conducted remotely, not in-person. You may view the Council meeting by watching live using one of following platforms: [Live Meetings](#), [YouTube](#), [Facebook](#), Thurston Community Media, Channel 3 with your local cable provider, or Zoom:

https://us02web.zoom.us/webinar/register/WN_LSQGiTsBSwKFmXNNLnBQug

The public may listen to the meeting via telephone by dialing toll-free: **(888) 788-0099** or **(877) 853-5247** - when prompted enter Webinar ID **829 3881 3369**

CALL TO ORDER:

1. PLEDGE OF ALLEGIANCE

2. APPROVAL OF AGENDA & CONSENT AGENDA ITEMS:*

- A. [Council Worksession minutes of August 26, 2021](#)
- B. [Council Meeting minutes of September 2, 2021](#)
- C. [A motion to approve payment of claims, wages, and transfers for August 25, 2021, through September 3, 2021](#)

**Items listed under the consent agenda are considered to be routine and will be enacted by one motion and one vote. There will be no separate discussion of these items. If discussion is desired, that item will be removed from the Consent Agenda and will be considered separately.*

3. PUBLIC RECOGNITIONS AND PRESENTATIONS:

- A. Lacey Youth Council Report (Mayor Justin Begley; Deputy Mayor Alejandra Linares)

4. PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA**

**VERBAL PUBLIC COMMENT

Persons wishing to provide verbal public comment on items NOT on the agenda must preregister to speak at https://us02web.zoom.us/webinar/register/WN_LSQGiTsBSwKFmXNNLnBQug. Instructions and access details will be provided once registration is complete. Registration for verbal public comment closes at 3:00 p.m. on September 16, 2021.

**WRITTEN PUBLIC COMMENT

Public comments may also be submitted by email to publiccomment@ci.lacey.wa.us. Written comments will be provided to the City Council electronically prior to the meeting. Comments will not be addressed during the Council meeting; however, comments received will be added to the official record. The commenting period will close at 12:00 p.m. on September 16, 2021.

5. PUBLIC HEARING:
6. PROCLAMATIONS:
7. REFERRAL FROM PLANNING COMMISSION:
 - A. [2021 Comprehensive Plan Amendments \(Ordinance 1599\)](#)
(Ryan Andrews; Jessica Brandt)
8. REFERRAL FROM HEARINGS EXAMINER:
9. RESOLUTIONS:
10. ORDINANCES:
 - A. [Ordinance 1600 - 2021 Budget Amendment](#) (Scott Spence)
 - B. [Ordinance 1601 - Increase to the Board of Park Commissioners Membership](#)
(Jen Burbidge)
11. MAYOR'S REPORT:
12. CITY MANAGER'S REPORT:
13. STANDING GENERAL COMMITTEE:
14. OTHER BUSINESS:
15. BOARDS, COMMISSIONS AND COMMITTEE REPORTS:
 - A. Mayor Andy Ryder:
 1. Mayors' Forum
 2. Thurston Chamber Shared Legislative Committee
 3. Transportation Policy Board (TPB)
 - B. Deputy Mayor Cynthia Pratt:
 1. Joint Animal Services Commission (JASCOM)
 2. LOTT Clean Water Alliance
 3. Olympic Region Clean Air Agency (ORCAA)
 - C. Councilmember Carolyn Cox:
 1. Intercity Transit (IT)
 2. Regional Housing Council
 - D. Councilmember Lenny Greenstein:
 1. Emergency Medical Services (EMS)
 2. TCOMM911
 - E. Councilmember Malcolm Miller:
 1. Lodging Tax Advisory Committee (LTAC)
 2. Thurston County Coalition Against Trafficking (TCCAT)
 3. Thurston Regional Planning Council (TRPC)
 4. Thurston Thrives

F. Councilmember Michael Steadman:

1. Community Action Council
2. Nisqually River Council
3. Thurston County Law & Justice

G. Councilmember Ed Kunkel:

1. Economic Development Council (EDC)
2. Lacey South Sound Chamber
3. Olympia-Lacey-Tumwater Visitor & Convention Bureau (VCB)
4. Solid Waste Advisory Committee (SWAC)

16. EXECUTIVE SESSION:

- A. Real Estate Purchase (RCW 42.30.110(1)(b))

17. ADJOURN

MINUTES OF THE LACEY CITY COUNCIL WORKSESSION

THURSDAY, AUGUST 26, 2021

4:00 P.M. – 5:58 P.M.

REMOTE ONLY

COUNCIL PRESENT: MAYOR RYDER, DEPUTY MAYOR PRATT, COUNCILMEMBERS
GREENSTEIN, COX, KUNKEL, MILLER

COUNCIL EXCUSED: COUNCILMEMBER STEADMAN

STAFF PRESENT: S. SPENCE, J. BURBIDGE, S. KELLEY-FONG, D. SCHNEIDER,
E. FONTAINE

ACTION: APPROVE WORKSESSION AGENDA

MOTION: MOTION MADE, SECONDED AND CARRIED BY COUNCILMEMBER GREENSTEIN AND
DEPUTY MAYOR PRATT

CAPITOL LAKE EIS

PRESENTER: MIKE STRUB, EXECUTIVE DIRECTOR, LOTT
MATT KENNELLY, ASSISTANT EXECUTIVE DIRECTOR, LOTT
LISA DENNIS-PEREZ, DIRECTOR OF ENVIRONMENTAL PLANNING AND
COMMUNICATIONS, LOTT

ACTION: INFORMATION ONLY

LOTT reviewed and commented on the draft Environmental Impact Statement (EIS). It was advised the Estuary Alternative provides greatest benefit to Budd Inlet water quality, therefore providing the greatest benefit to LOTT ratepayers.

The no action approach and Managed Lake Alternatives would have significant detrimental impact on water quality in Budd Inlet and on LOTT ratepayers.

LOTT recommended that the draft EIS water quality analysis should be revised to include the following:

- Consider impacts and benefits within the same study areas as that utilized for the Budd inlet – Capitol Lake TMDL (West Bay and East Bay).
- Apply the same water quality standard when assessing impacts from Capitol Lake, as that utilized for other contributors to water quality impairment – that human-caused impairment cannot exceed 0.2 mg/L.
- Fully incorporate findings of the Budd Inlet – Capitol Lake TMDL regarding the significant impact of the lake on oxygen.

A worst-case scenario was reviewed and contained the following topics:

- Failure of other sources to address their contributions
- Ecology places further restriction on LOTT BITP discharge
- Zero discharge for limiting season (Aug/Sept)
- Would need to expand reclaimed water to 15 MGD
- Treatment, conveyance, and multiple infiltration sites
- Cost estimate = \$208.7M

LOTT Board of Directors submitted a letter detailing estuary alternative providing the greatest benefit. Scott Spence, City Manager, inquired about a preliminary rate analysis for the alternatives.

GREG CUOIO PARK & GREENWAYS MASTER PLAN

PRESENTER: JEN BURBIDGE, PARKS, CULTURE & RECREATION DIRECTOR
JULIET VONG, HBB LANDSCAPE ARCHITECTS

ACTION: INFORMATION ONLY

Jen Burbidge, Parks, Culture & Recreation Director, and Juliet Vong, with HBB Landscape Architects, presented an update on the Greg Cuoio Park & Greenways Master Plan.

Greg Cuoio Park & Greenways is located between the Crossroads and Hawk's Prairie neighborhoods of Lacey, just north of I-5. Part of the area also extends into the City's Urban Growth Boundary, which means it's not currently in the city limits, but could be in the future.

The Master Plan encompasses large areas of public open space, including:

- Greg Cuoio Park
- Pleasant Glade Park
- Palm Creek Headwaters

The existing park and greenways are largely undeveloped and dominated by mature forests, streams and creeks, wetlands, and other natural systems. There is a small picnic area and open lawn at Pleasant Glade Park and a few informal trails through the park and greenways. There are also open fields from where farming activities used to occur.

The update reviewed the following agenda items:

- Context & Site Analysis
- Open House #1 & Surveys
- Programming Alternatives
- Questions/Comments
- Stay Informed
- Next Steps

Site analysis included:

- View corridors
- Neighborhood connections
- Topography
- Circulation and access
- Availability of utilities
- Sensitive areas and buffers
- Wetland banking opportunities
- RCO conversion and RCO/WWRP funding requirement
- Water resource protection areas
- Wildlife habitat
- Vegetation character
- Historical and cultural review

The park vision is to provide open space preservation, water quality protection, and enhancement of the natural environment, while balancing recreation opportunities to create a place for visitors and residents to experience and learn.

A review of park alternatives was highlighted and discussed. Programming included the following categories:

- Access & Circulation
- Trail Programming
- Informal Passive Recreation (family activities)
- Education
- Environmental Protection/Restoration
- Recreation Programming

A review of survey results highlighted public interest in the following experiences:

- Disc golf
- Play area
- Multi-use fitness or adventure trails

- Demonstration gardens
- Dog parks
- Picnic areas
- Open lawn
- Food forest
- Pickleball courts

Staff provided detailed information and analysis on several park alternative concepts to include various features. Popular features included, but were not limited to:

- Play areas
- Pedestrian access only
- Environmental learning space
- Mountain bike trailheads
- Disc golf
- Flexible event space
- Open lawn
- Fish incubators
- Environmental learning center

A proposal review is currently scheduled to be presented at the October 14, 2021, Worksession, before going to the Board of Park Commissioners for review and recommendation of a final master plan. Also, an Open House #3, is currently scheduled for November 10, 2021, at 5:30 p.m.

LACEY CARES UPDATE

PRESENTERS: SHANNON KELLEY-FONG, ASSISTANT CITY MANAGER
JASON ROBERTSON, J. ROBERTSON & COMPANY

ACTION: INFORMATION ONLY

Shannon Kelley-Fong, Assistant City Manager, and Jason Robertson with J. Robertson & Company, provided an update of the Lacey Cares Community Outreach Initiative.

Lacey Cares is an initiative to engage community members about what they want Lacey to look, feel, and be in the future. The goal is to learn what matters most to our residents, businesses, students, and visitors – and how they think Lacey can become an even better place to live, work, learn, and play.

The Initiative has a phased approach, using the following targets:

Phase 1: Open-ended public survey at LaceyCares.org, beginning March 23 through the end of May 2021.

Phase 2: Major areas of interest identified within survey results, followed by community conversations to shape goals and opportunities around the areas of interest.

Phase 3: Community helps prioritize potential actions through a variety of engagement methods, including town hall meetings and telephone surveys.

Results from the open-ended public survey and community input were reviewed and included in the following highlights:

Survey Participants

- 1,300 Total Participants
- 80.7% Lacey Residents
- 57.7% Work/Own a Business in Lacey
- 84.4% Attend a School in Lacey
- 64.4% Visit Lacey frequently

Most Valued by Survey Participants

- Parks, Trails, Trees, and Open Space
- Clean, Safe, Quiet
- Right Mix of Urban and Rural
- Infrastructure, Design, and Maintenance
- Family-friendly
- Local, Small, and Independent Businesses
- Responsive Government
- Schools and Library

A review of subtopics, priorities, and next steps were also discussed.

CITY MANAGER ANNUAL REVIEW

STAFF: SCOTT SPENCE, CITY MANAGER
ACTION: INFORMATION ONLY

August 2021 marks Scott Spence's 10-year anniversary as City Manager. Following discussion regarding options to conduct the City Manager's annual performance review, Council directed Scott Spence, City Manager, to follow the direction of the previous year and present accomplishments from the past year, as well as goals for

the upcoming year. Once the presentation is complete, Council and City Manager will break to an Executive Session to finalize the review.

MINUTES OF A REGULAR MEETING OF THE
LACEY CITY COUNCIL HELD THURSDAY,
SEPTEMBER 2, 2021, REMOTE ATTENDANCE

- CALL TO ORDER: Mayor Ryder called the meeting to order at 4:00 p.m.
- PLEDGE OF ALLEGIANCE: Mayor Ryder led the Pledge of Allegiance.
- COUNCIL PRESENT: A. Ryder, C. Pratt, C. Cox, L. Greenstein, , E. Kunkel, M. Miller
- COUNCIL EXCUSED: M. Steadman
- STAFF PRESENT: S. Spence, R. Almada, J. Burbidge, S. Egger, M. Hardie, S. Kelley-Fong, D. Schneider, R. Walk, T. Woo, P. Edmonds
- APPROVAL OF AGENDA
AND CONSENT AGENDA: Consent Agenda Items:
A. Council Worksession minutes of August 12, 2021.
B. Council meeting minutes of August 19, 2021
C. A motion to approve payment of claims, wages and transfers for August 5, 2021, through August 24, 2021.
- COUNCILMEMBER GREENSTEIN MOVED TO APPROVE THE AGENDA AND CONSENT AGENDA. DEPUTY MAYOR PRATT SECONDED. MOTION CARRIED.
- PUBLIC COMMENT: Persons wishing to provide public comment on items not on the agenda must pre-register to speak. Registration closed at 3:00 p.m. today.

Wayne Olsen, a Lacey resident, commented on the 6th Assessment Report published recently by the Intergovernmental Panel on Climate Change.

Public comments may also be submitted by email by 12:00 p.m. today. Comments will be provided to the City Council electronically prior to the meeting. Comments will not be addressed during the meeting; however, comments received will be added to the official record.

Four written public comments were received and made part of the official record.

ORDINANCES:

Troy Woo, Finance Director, presented Ordinance 1598 to approve the Final 2021 Budget Amendments.

Throughout the year, adjustments to the budget become necessary as a result of City Council actions, activity levels that were not anticipated during budget development, and grant awards (or other receipts of outside funding). Historically, the budget has been amended once per year immediately prior to the development of the next year's proposed budget document.

Significant budget amendments were identified since the adoption of the 2021 Budget.

DEPUTY MAYOR PRATT MOVED TO ADOPT ORDINANCE 1598 APPROVING THE 2021 BUDGET AMENDMENTS. COUNCILMEMBER COX SECONDED. MOTION CARRIED.

MAYOR'S REPORT:

MAYOR RYDER MOVED TO APPROVE THE APPOINTMENT OF GARY LARSEN TO THE BOARD OF PARKS COMMISSION. COUNCILMEMBER GREENSTEIN SECONDED. MOTION CARRIED.

Jen Burbidge, Parks, Culture & Recreation Director, reported the Parks Board will submit a letter to the City Council to recommend an increase in the number of board members from five (5) to seven (7).

Council directed staff to add this item to a future Council meeting for consideration.

CITY MANAGER'S REPORT: Ryan Andrews, Planning Manager, provided an update on the Capitol City Estates and Chambers Estates completed annexation. The annexation was effective September 1, 2021.

Ryan Andrews, Planning Manager, presented the Pacific and Marvin Annexation, Project No. 19-239. The City received a notice of intent to commence annexation proceedings filed by DeTray Family Partnership, which is the first step in the annexation process under the petition method. The petition method requires a petition filed by property owners representing a minimum of 10% of the valuation of the area proposed for annexation.

The next step is for the City Council to pass a motion notifying the petitioners of its approval, rejection, or modification of the annexation area's geographical boundaries. If the Council votes to approve the 10% petition, then the applicant moves forward on obtaining a petition from a total of 60% of the assessed valuation of the area.

Staff recommends the City Council approve a motion to proceed with the proposed Pacific and Marvin annexation proposal that includes the following provisions:

- 1) Authorize the applicants to circulate a petition and gather signatures of property owners representing at least 60% of the assessed value of the annexation property demonstrating their consent to annex;

- 2) Require the surrounding parcels with existing power of attorney agreements (assessor's parcel no.'s 11814430500, and 11814430100) also be included within the boundary of the area to be considered for annexation;
- 3) Require the assumption of all or any portion of existing City indebtedness by the area to be annexed; and
- 4) Waive the requirement for completion of an annexation study in accordance with the City's annexation policies prior to adoption of an ordinance to formally annex the area or make application to the Boundary Review Board.

COUNCILMEMBER GREENSTEIN MOVED TO APPROVE PACIFIC AND MARVIN ANNEXATION PROJECT NO. 19-239 AS RECOMMENDED. COUNCILMEMBER KUNKEL SECONDED. MOTION CARRIED.

Ryan Andrews, Planning Manager, presented the Lake Lois Pacific Avenue Annexation Project No. 21-235. The City has initiated a notice of intent to commence annexation proceedings for the area around Lake Lois between Carpenter Road SE and Kinwood Street SE. The filing of the notice is the first step in the annexation process under the petition method, which requires a petition filed by property owners representing a minimum of 10% of the valuation of the area proposed for annexation.

The next step is for the City Council to pass a motion notifying the petitioners of its approval, rejection, or modification of the annexation area's geographical boundaries. If the Council votes to approve the 10% petition, then the applicant moves forward on obtaining a

petition from a total of 60% of the assessed valuation of the area.

Staff recommends the City Council approve a motion to proceed with the Lake Lois Pacific Avenue Annexation proposal that includes the following provisions:

1. Authorize a petition be submitted representing at least 60% of the assessed value of the property to be annexed; and
2. Require the assumption of all or of any portion of existing City indebtedness by the area to be annexed.

DEPUTY MAYOR PRATT MOVED TO APPROVE THE LAKE LOIS PACIFIC AVENUE ANNEXATION, PROJECT NO. 21-235 AS RECOMMENDED. COUNCILMEMBER GREENSTEIN SECONDED. MOTION CARRIED.

Scott Spence, City Manager, reported the following Interlocal Agreement was signed pursuant to Resolution 1067 and the Interlocal Agreement Approved Process Policy:

- Interlocal Agreement between Thurston County and the City for collection of water quality data on Hicks Lake.

STANDING COMMITTEES:

Finance & Economic Development Committee

Mayor Ryder reported the Committee met on August 24, 2021, regarding the 2021 Budget Amendments, 2021 Mid-Year Financial Report, and CED Development Report.

General Government & Public Safety Committee

Deputy Mayor Pratt reported the Committee met on August 24, 2021, regarding the Food Trucks at the Depot, Public Records Activities Report, Boards and Commissions Handbook, and the City Website.

Land Use & Environment Committee

Councilmember Cox reported the Committee met on August 24, 2021, regarding the Thurston Regional Climate Action Plan Implementation Strategy, Solar and Energy Efficiency Permitting Process, and Committee Renaming.

BOARDS & COMMISSIONS:

Regional Housing Council

Councilmember Cox reported there is a funding gap for the Phase 2 supportive housing project. The Regional Housing Council recommends that Olympia, Lacey, and Tumwater each contribute 1406, ARPA, or other funds to help address the gap.

DEPUTY MAYOR PRATT MOVED TO ENDORSE THE RECOMMENDATION OF THE REGIONAL HOUSING COUNCIL TO PROVIDE UP TO TWO YEARS OF 1406 FUNDS IN SUPPORT OF THE LIHI PROJECT. MAYOR RYDER SECONDED. MOTION CARRIED.

Councilmember Cox also reported on a parcel of land for sale that could be used for short-term RV parking.

TCOMM911

Councilmember Greenstein reported on the budget and radio system.

Solid Waste Advisory Committee
Councilmember Kunkel reported on the WARC
Conceptual Master Plan, PaintCare, and SWAC
By-laws.

Mayor Ryder adjourned the meeting at 5:24 p.m.

MAYOR: _____

ATTESTED BY CITY CLERK: _____

DATE APPROVED: _____



LACEY CITY COUNCIL MEETING

September 16, 2021

SUBJECT: Disbursement Approval

RECOMMENDATION: By motion, approve payment of claims, wages, and transfers.

STAFF CONTACT: Troy Woo, Finance Director 

ORIGINATED BY: Troy Woo, Finance Department

BACKGROUND:

The action requested of the City Council is by motion to approve payment of claims, wages and transfers for 8/25/2021 through 9/3/2021. The disbursements consist of the following:

Checks:	<u>Week of</u>	<u>Beg. Check No.</u>	<u>End. Check No.</u>	<u>Amount</u>
	8/27/2021	258093	258181	1,144,310.20
	*8/31/2021	258182	258184	1,565.13
	9/3/2021	258185	258287	137,920.83

Electronic Transfers:	<u>Week of</u>	<u>Amount</u>
	8/13/2021	6.15
	8/25/2021	121,511.15
	8/11/2021	16,803.78
	8/27/2021	131,723.83
	8/27/2021	68,874.39

Payroll:	<u>Month Ended:</u>	<u>Wages</u>
	*8/31/2021	1,612,632.87

Significant Disbursements:

<u>Vendor</u>	<u>Amount</u>	<u>Description</u>
Active Construction, Inc.	\$ 829,774.05	Cap City Water/Sewer Ph. 2
North Thurston Pub. Sch.	\$ 77,264.02	Utility Refund
Puget Sound Energy	\$ 122,912.03	Utilities

* Disbursements for employee out-of-pocket deductions and employee benefits.



LACEY CITY COUNCIL MEETING

September 16, 2021

SUBJECT: 2021 Comprehensive Plan Amendments

RECOMMENDATION: Approve the ordinance to adopt the 2021 annual Comprehensive Plan Amendments as recommended by the Planning Commission.

STAFF CONTACT: Scott Spence, City Manager *SS*
Rick Walk, Community and Economic Development Director *RW*
Ryan Andrews, Planning Manager *RA*
Jessica Brandt, Associate Planner

ORIGINATED BY: Community and Economic Development Department

ATTACHMENTS:

1. [Ordinance to adopt annual Comprehensive Plan Amendments](#)
2. [Urban Forest Management Plan and associated Planning Commission Record](#)
3. [Thurston Climate Mitigation Plan and associated Planning Commission Record](#)
4. [Housing Action Plan and associated Planning Commission Record](#)

FISCAL NOTE: Implementation of the 2021 Comprehensive Plan Amendments will require additional resources to complete.

PRIOR REVIEW: The City Council has reviewed the 2021 Comprehensive Plan Amendments at various Worksessions and Committee meetings over the last year.

BACKGROUND:

The Growth Management Act requires that the City's Comprehensive Plan be amended only once a year. As part of the annual cycle of comprehensive plan amendments for 2021, the City completed an update to the City's Urban Forest Management Plan and developed, with regional partners, the Thurston Climate Mitigation Plan and Housing Action Plan.

Urban Forest Management Plan: This plan is the overarching policy document that guides the City's urban forestry vision and efforts. The review process examined challenges, issues, and experiences related to the implementation of the Plan since its last update.

The review of the Urban Forest Management Plan included both the Plan and the implementing regulations within Lacey Municipal Code 14.32. The proposed amendments to these regulations will be provided to the City Council for action at a future regular meeting.

Thurston Climate Mitigation Plan: This plan sets a framework for carbon emission reduction for Thurston County. It was developed with Thurston Regional Planning Council, the cities of Tumwater and Olympia, and Thurston County. The plan has a thirty-year time horizon with ongoing implementation at the local and regional level. Thurston Climate Mitigation Plan will be incorporated into the Environment Element of the Comprehensive Plan as an appendix to support local carbon reduction actions.

Housing Action Plan: This plan describes actions that the City can take that can increase the stock of affordable housing. It was developed in conjunction with the cities of Tumwater and Olympia to ensure coordination across jurisdictions. The Housing Action Plan will be incorporated into the Housing Element of the Comprehensive Plan as an appendix to support housing policies and actions and to compliment Lacey's existing Affordable Housing Strategy.

Each of the 2021 Comprehensive Plan Amendments had significant public outreach programs. Outreach consisted of a broad number of methods including but not limited to: virtual open houses, surveying, newsletters, reports, forums, presentations and social media. Public input was a vital part of each of these plans and the information gathered has been integrated into each of the Comprehensive Plan amendments.

The Planning Commission conducted a public hearing for the annual Comprehensive Plan amendments at their meeting on May 18. The Planning Commission received oral and written comments for the private amendments, which are captured in the meeting minutes and included with the record for each amendment. At the conclusion of the public hearing, the Planning Commission voted unanimously to recommend approval on the Thurston Climate Mitigation Plan and Housing Action Plan amendments to the City Council. After a follow-up Worksession on June 1, the Planning Commission voted unanimously to recommend approval on the Urban Forest Management Plan amendments to the City Council.

ADVANTAGES:

1. Adoption of the Plan amendments completes the priority items established by the City Council related to the 2021 Planning Commission work program.
2. Approving the Urban Forest Management Plan amendment will support the City's goals to balance tree protection and accommodate growth.
3. Approving the Thurston Climate Mitigation Plan will support the City's goals to protect the environment and support economic growth.
4. Approving the Housing Action Plan will support the City's goals to provide a variety of housing types and affordable housing options for residents.

DISADVANTAGES:

1. None identified.

ORDINANCE NO. 1599

CITY OF LACEY

AN ORDINANCE RELATED TO THE CITY’S COMPREHENSIVE PLAN, APPROVING CHANGES TO SAID PLAN AND APPROVING A SUMMARY FOR PUBLICATION.

WHEREAS, pursuant to the Growth Management Act as set forth in Chapter 36.70A RCW, the City may amend the Comprehensive Plan once per year, and

WHEREAS, this annual amendment is intended to provide a coordinated review to ensure the various plan elements are consistent with each other, and

WHEREAS, the Planning Commission has reviewed, conducted a public hearing, and voted to forward to the Council its recommendation to adopt the Housing Action Plan; and

WHEREAS, the Planning Commission has reviewed, conducted a public hearing, and voted to forward to the Council its recommendation to adopt the updated Urban Forest Management Plan with amendments; and

WHEREAS, the Planning Commission has reviewed, conducted a public hearing, and voted to forward to the Council its recommendation to adopt Thurston Climate Mitigation Plan; and

WHEREAS, the City Council finds that adoption of the Housing Action Plan, the updated Urban Forest Management Plan, and the Thurston Climate Mitigation Plan will be in the public interest; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, AS FOLLOWS:

Section 1. Section 16.03.015 of the Lacey Municipal Code is hereby amended as follows:

16.03.015 Lacey Comprehensive Land Use Plan

That certain series of documents identified as the Land Use Element for the Lacey Urban Growth Area, Housing Element for the City of Lacey and the Lacey Urban Growth Area, Pedestrian and Bicycle Plan for Lacey and the Lacey Urban Growth Area, Housing Action Plan, Environmental Element for the City of Lacey, City of Lacey Transportation Plan, City of Lacey Capital Facilities Plan, Utilities Element for the Lacey Comprehensive Plan, Parks and Recreation Comprehensive Plan, City of Lacey Water System Comprehensive Plan Update 2013, City of Lacey Wastewater Comprehensive Plan, Lacey Urban Forest Management Plan, City of Lacey Woodland District Strategic Plan, Depot District Subarea Plan, City of Lacey Stormwater Comprehensive Plan, ~~and~~ Economic Development Element for the City of Lacey together with the Comprehensive Plan Downtown Element as supplemented by the City of Lacey Woodland District Guidelines and the Northeast Area Plan, and Thurston Climate Mitigation Plan constitutes the Lacey Comprehensive Plan and all regulatory and zoning ordinances of the city shall be construed to be consistent with said plan as adopted or hereafter amended.

Section 2. That certain document entitled Housing Action Plan, attached hereto as Exhibit A, as the same may hereafter be amended by action of the City Council, is hereby adopted as the Housing Action Plan referenced in Section 16.03.015 of the Lacey Municipal Code as a portion of the Lacey Comprehensive Plan.

Section 3. That certain document entitled Urban Forest Management Plan, attached hereto as Exhibit B, as the same may hereafter be amended by action of the City Council, is hereby adopted as the Urban Forest Management Plan referenced in Section 16.03.015 of the Lacey Municipal Code as a portion of the Lacey Comprehensive Plan.

Section 4. That certain document entitled Thurston Climate Mitigation Plan, attached hereto as Exhibit C, as the same may hereafter be amended by action of the City Council, is hereby adopted as the Thurston Climate Mitigation Plan referenced in Section 16.03.015 of the Lacey Municipal Code as a portion of the Lacey Comprehensive Plan.

Section 5. SEVERABILITY. If any section, sentence, clause or phrase of this ordinance should be held to be invalid by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

Section 6. CORRECTIONS. The City Clerk and the codifiers of this ordinance are authorized to make necessary corrections to this ordinance including, but not limited to, the correction of scrivener's/clerical errors, references, ordinance numbering, section/subsection numbers and any references thereto.

Section 7. The Summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY,
WASHINGTON, at a regularly-called meeting thereof, held this 16th day of
September, 2021.

CITY COUNCIL

By: _____
Mayor

Approved as to form:

City Attorney

Attest:

City Clerk

SUMMARY FOR PUBLICATION

ORDINANCE NO 1599

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on September 16, 2021, Ordinance No. 1599, entitled “AN ORDINANCE RELATED TO THE CITY’S COMPREHENSIVE PLAN, APPROVING CHANGES TO SAID PLAN AND APPROVING A SUMMARY FOR PUBLICATION.”

The main points of the Ordinance are described as follows:

1. The Ordinance amends section 16.03.015 of the Lacey Municipal Code to include the Housing Action Plan, the Urban Forest Management Plan, and the Thurston Climate Mitigation Plan in the Lacey Comprehensive Land Use plan.
2. The Ordinance adopts the document entitled “Housing Action Plan” as the document named “Housing Action Plan” as referenced in LMC 16.03.015.
3. The Ordinance adopts the document entitled “Urban Forest Management Plan” as the document named “Urban Forest Management Plan” as referenced in LMC 16.03.015.
4. The Ordinance adopts the document entitled “Thurston Climate Mitigation Plan” as the document named “Thurston Climate Mitigation Plan” as referenced in LMC 16.03.015.
5. The Ordinance approves this Summary for Publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: September 20, 2021.

CITY OF LACEY

URBAN FOREST MANAGEMENT PLAN



August 2021

Lacey Urban Forest Management

LACEY CITY COUNCIL

Andy Ryder, Mayor
Cynthia Pratt, Deputy Mayor
Lenny Greenstein
Michael Steadman
Carolyn Cox
Ed Kunkel
Malcolm Miller

LACEY PLANNING COMMISSION

David Wasson, Chair
Gail Madden, Vice Chair
Peg Evans-Brown
Eddie Bishop
Mark Mininger
Daphne Retzlaff
Shaunesy Walden Behrens
Robin Vasquez
Kyrian MacMichael

LACEY CITY MANAGER

Scott Spence

LACEY COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT

Rick Walk, AICP, Director
Ryan Andrews, Planning Manager
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Table of Contents

	<u>Page</u>
Table of Contents	5
Executive Summary	
Background	7
Methodology for Developing the Plan	9
Urban Forester's Technical Review and Recommendations	10
Urban Forest Management Plan	
A. Introduction	13
B. Goals and Policies for the Urban Forestry Management Plan	22

Technical Appendixes - (Separate Document)

Appendix 1 Background and Baseline

Information

- A. Council's First Visioning Work-session for the Development of the Urban Forestry Management Plan
- B. Soils and Site Information
- C. Forested Cover
- D. Street Trees and Maintenance Evaluation
 - 1. Private Street Trees
 - 2. City Maintained Street Trees
 - 3. Tree Diversity and Planting Spot Data
 - 4. City Street Tree Maintenance Evaluation
 - 5. Condition of the Urban Forest
 - 6. Priority Pruning
 - 7. Clearance Requirements
 - 8. Overhead Utilities
 - 9. Curb Lawn Zone Widths
 - 10. Maintaining the Safety of the Urban Forest
 - 11. Removals
 - 12. Sidewalk Damage
 - 13. Stump Removal
 - 14. Size Class Distribution

Appendix 2 Considerations and Forester Recommendations for Ordinance Adjustments:

- A. Tree Protection Issues
- B. Urban Forestry Advisory Board
- C. Summary

Appendix 3–Tree Planting Specifications for Lacey Street Tree Planting

Projects Appendix 4 – Tree Protection Guidelines for Native Trees

Appendix 5 Street Tree Program

- A. Introduction
- B. Goals of the Comprehensive Street Tree Planning Process
- C. The Street Tree Planning Process
- D. Planting Design Patterns (Themes)
- E. Mature Tree Size
- F. Longevity of the Species
- G. Tree Character
- H. Hardiness of the Pacific Northwest
- I. Diversity of Street Trees
- J. Current Tree Conditions
- K. Recent Plantings
- L. Soils in Lacey
- M. Microclimatic Considerations
- N. Tree Selection
- O. General Tree List (Table 2)
- P. Street Tree Themes
- Q. Street Tree Themes (Table 3)
- R. Street Tree Profiles
- S. Planting Space Recommendations
- T. Street Tree Planting and Maintenance
- U. Budget
- V. Stock Quality
- W. Preparing the Planting Hole
- X. Orientation of the Tree
- Y. Tree Grates
- Z. Street Tree Planting Detail (Figure 17)
 - AA. Burlap and Wire Baskets
 - BB. Fertilization
 - CC. Watering
 - DD. Mulching
 - EE. Staking
 - FF. Trunk Wraps
 - GG. Root Collar Protectors
 - HH. Pruning
 - II. Inspections
 - JJ. Timing of Tree Planting
 - KK. Maintenance Recordkeeping
 - LL. Street Tree Management Units (Figure 18)
 - MM. Calendar for Tree Planting and Maintenance
 - Activity NN Trees and Planting Specifications

Appendix 6 Street Tree Inventory Report



Streetscape in Horizon Pointe, Lacey

Executive Summary

Background:

The City of Lacey has been regulating the protection of trees and vegetation since the mid-1970's. Policy development regarding the City's role in protecting trees, vegetation and landscape were first reviewed and adopted a few years later with the adoption of the 1985 "City of Lacey Urban Beautification Project" which was co-sponsored by the United States Department of Agriculture and Washington State Department of Natural Resources. That plan was fairly specific about recommendations for "street" corridors, parks and public space furnishings and City maintenance recommendations. It did not consider landscape concepts or tree and vegetation preservation or protection for residential and commercial development on private properties. Official City guidelines regarding tree and vegetation protection was not formulated or developed by public policy other than adoption of regulations.

The next iteration of policy development occurred with the development and adoption of the Environmental Protection and Resource Conservation Plan developed under the Growth Management Act in 1992. This Plan was prepared as an element of the Growth Management Act (GMA) Comprehensive Land Use Plan for the City of Lacey and its urban growth area which was later adopted in 1994. Trees and vegetation were a specific focus of the environmental element's Urban Forest Resources section and policies discussed the value of preserving some of the natural characteristics of the area and emphasized the importance the urban landscape with the increased intensity of urban style development. In 2002 - 2004 the City of Lacey adopted a major update of the 1994 plan, but did not change anything in the environmental

Lacey Urban Forest Management Plan

element's Urban Forest Resources section that would affect the preservation and protection of trees and vegetation. The Environmental Element and implementing habitat and wetland protection ordinances did however update and strengthen the policies that address "urban" habitats.

Following the adoption of the updated land use plans, implementation regulations were approved by the City of Lacey that continued and re-enforced earlier strategies put in motion to promote the urban style development projected in the Comprehensive Land Use Plan. Most of the implementation was not changed dramatically from what was required prior to the GMA plans-update. However, beginning in 2000, the first influx of development using the new urban development provisions started to be reviewed and in 2003 and 2004 a much accelerated rate of private property development came on line as the inventory of lots from pre-GMA development was almost totally absorbed. Much of the private property being proposed for development was in areas with second growth forest species on site and appeared heavily forested.

Since the intensity of urban development was causing nearly all the trees to be removed from development sites, the Lacey City Council started receiving more complaints from Citizens about removal of trees. Council in general shared those concerns. In 2001, the Council decided we needed to update our tree and vegetation protection and preservation regulations. In order to facilitate the update or create new standards it was determined that we should have strong policies to support any updates of the regulations. It was also determined that policies should be consistent with the vision Council had for balancing intense urban development and what the City should look like regarding the forested character the City currently possesses. With the assistance of the City of Lacey urban forester to look at the technical realities of the forested nature of the City, this plan defines Lacey's vision of urban forest and directs how we will maintain the look and feel of the Pacific Northwest Woodland character of the area.

In early February of 2005, the Council began the process of updating the forestry section of the environmental element and started a series of work-sessions including the Planning Commission. The work-sessions were designed to outline and refine the Council's vision for the city urban forestry program through development of an entirely new Urban Forestry Plan. The Urban Forestry Plan was adopted by the Lacey City Council on July 27, 2006.

In keeping with the goals of the Urban Forestry Plan to be updated every five years, the Urban Forestry Plan was updated in 2013 with a revision to technical data as well as addressing design and administration issues associated with implementation of the plan since 2006 including:

- Adding regulations for administering Class IV Forest Practices
- Applications Establishing a fee-in-lieu program for tree tracts in certain location
- Clarification of regulations contained in LMC 14.32 pertaining to tree replacement on individual lots

Lacey Urban Forest Management Plan

- Clarification of definitions contained in LMC 14.32

Improve inspection procedures for trees in right-of-way

The 2013 update was preceded by a total inventory of all street trees on city arterials and collectors as well as all city-maintained street trees. The data from that inventory was included as an update to the plan.

In 2020 the City began the process of updating this plan again. The Planning Commission and staff created an ad hoc citizen task force, “Tree Task Force”, to help with reviewing the policies, goals, and regulations. The Task Force, city foresters, and city staff identified preliminary issues and then engagement to the community helped guide priority areas for updates. The task force generally agreed on the importance of outreach and education about trees to residents, businesses, and landscaping companies.

The Task Force also recognized the shift in perspective of our community that once focused on trees as an aesthetic benefit to a now more holistic view of their benefits and values. Trees are part of our urban infrastructure and are closely aligned with our goals for maintaining air quality, reducing stormwater runoff, and providing shade in the hot summer months. The UFMP has always recognized the many benefits of trees, but trees as public infrastructure denotes asset management planning, maintenance, repair, and life cycle analysis, which will take time to fully implement.

The Task Force also recognized Lacey is a growing community where buildable lots are becoming scarce. The City is already in a transition to a more urban community where growth and development is focused on going vertical instead of horizontal. Developing up instead of out creates its own challenges with preserving tree canopy in the urban core. Urban tree canopy can be maintained and expanded with replanting, street trees, parking lot landscaping, open spaces, and simply giving young trees a little time to grow.

A tree canopy assessment, using remote sensing, was completed in August 2020. (See Appendix 1 Section C). The assessment showed 28.3% coverage in the City Limits and 31.3% coverage within the Urban Growth Area. Earlier canopy assessments used a different methodology but are assumed to be as accurate. Tree canopy coverage has decreased since the last assessment in 2004 where tree canopy coverage was 43%. The Northeast Area of Lacey has grown substantially since 2004, which may explain the change in canopy coverage. Trees planted as a requirements of new developments will mature and canopy coverage will increase over time.

The City recently updated its Climate Mitigation Plan, with regional partners, and trees are a key issue for the City to consider as it moves forward with implementing that plan. The focus on that plan is to reduce carbon emissions from buildings, energy, transportation, land use, water and waste. The other side of the equation in reducing emissions is to capture carbon. Trees capture and store carbon, so just as

Lacey Urban Forest Management Plan

we reduce emissions we also will need to capture carbon emissions to meet our climate goals and targets as a community. That does not equate to stopping all development and tree removals, it means doing a full review of where it would be appropriate to replant, plant more, and protect existing stands of trees in Lacey. That review will be done at the local and regional level.

Another important issue is the growing challenges attributed to climate change. Our urban trees are facing more stress and mortality due to drought and heat. There is a need to begin long term forestry planning for our parks, forests, and non-irrigated areas of the city. As we choose tree species for landscaping and planting we will need to consider our changing climate.

The Task Force raised a number of issues related to enforcement of regulations, and have been addressed in the Goals and Policies. Just as any aspect of the implementation of this plan and tree protection regulations, an issue of resources is always a challenge.



Wonderwood Park, Lacey

Methodology for Evaluating Lacey's Urban Forest:

The first step in management of any resource is an inventory to determine the extent, condition, and needs of, in this case, the urban forest. Since all life is rooted in the soil, geologic and soil survey information was examined to determine the physical characteristics of the soils in Lacey. The information pertinent to management of trees includes: general fertility levels, drainage, depth to root restrictions, organic matter contents, plant available water capacity, and windthrow potential. The suitability for wildlife, construction and engineering properties was also examined. This information was then considered when recommendations were made with regard to tree protection areas, tree species selection, and planting designs.

The evaluation of Lacey's urban forest was undertaken through the following

Lacey Urban Forest Management Plan

activities:

- Collection of maps, aerial photos, Landsat images, the transportation plan, and materials relating to the City of Lacey and its urban growth area.
- Interview of City Council members regarding their perceptions about the Lacey urban forest.
- Discussion of Lacey's urban forestry and landscape ordinances with staff in Community Development, Public Works, and Parks Maintenance.
- Obtain current contract language from Public works for tree planting contracts.
- Street tree inventory and location data.
- Inventory all private trees that function as street trees on the major and minor arterials, and collectors. Determine species, size and condition of trees.
- Evaluate the condition of the City maintained street trees. Conduct an inventory and evaluation of the general forest canopy conditions in the City of Lacey and its urban growth area. The inventory utilized aerial photos with ground truthing of a sample of stands (city property).
- Review of the past and current street tree profiles and how well trees fit and grow in these growing conditions.
- An assessment of the city was made to determine appropriate tree species for use in the rights-of-ways for comprehensive street tree planning.
- Continue hazard tree evaluation in all Lacey Parks.
 - General review of other tree conditions that exist in the City of Lacey.
 - Review of ordinances that relate to tree protection and planting.

Urban Forester's Technical Review and Recommendations:

Using the methodology discussed above over the last several years, the City Urban Forester has completed a technical review of the woodland character and current wooded areas of the City of Lacey and the City's history of the being forested. At the time of incorporation, 1966, the area of the City and its urban growth area was a combination of open prairie and forest lands. Urban Forests are cyclical and our Urban Forester's findings appear to reinforce those characteristics. The following is his summary:

This study found that in 2006, 43% of Lacey and its urban growth area is covered with 1) native forests, 2) trees retained in parks, critical areas, and developed residential, commercial, and 3) residential areas, and ornamental trees planted along streets, parks, and developed areas. The remaining 57% of the land area is developed, logged and not replanted, pastures, lawn, or other areas without trees.

Lacey Urban Forest Management Plan

Tree cover in 1966, before Lacey was incorporated was only slightly higher, with 48% of the city and the urban growth area covered by trees. The remainder (52%) was cutover forest land, pastures, lawns, and development.

What appears to be a very small forested cover loss is due to significant tree retention in our older developments, replanting of streets, landscaping of parking lots, and continued retention in new developments. However, as areas such as the Hawks Prairie industrial area (Meridian Campus) continues to develop, the canopy loss will likely accelerate.

An inventory of the arterials and collectors completed in 2012, found 3,208 (an increase of 363 trees since an inventory completed in 2001) privately maintained street trees in addition to the 2,973 (an increase of 1,699 since 2001) street trees that the Parks Maintenance staff already maintains. These are in addition to all of the trees in the city parks that staff cares for.

The study found few open planting spaces within the city maintained street tree areas, indicating that staff is doing an excellent job of replacing mortality or damaged trees. The quality of maintenance of the street trees is very good, though some additional corrective pruning is needed in certain areas.

The quality of maintenance is quite variable for the private street trees. Most have received little corrective pruning to remove storm damage and extra branches. In the worst cases, required landscape trees that also serve as street trees are being severely topped or removed for perceived view improvement of business signage.

Based on the City Forester's evaluation of the urban forest in Lacey, the ordinances, visits with staff and citizens, and maintenance procedures - the following priority is recommended to improve protection and management of the Lacey urban forest

- Continue annual maintenance activity on the existing street trees for sign clearance, corrective pruning, and clearance pruning, and complete annual hazard tree evaluations.
- Budget adequate annual funding to complete basic maintenance tasks for city street trees and some replanting.
- Continue to review all commercial and industrial projects with one or more trees. This is important in cases when, as an example, only a few Oregon white oaks occur on the site. Tree retention may have an even higher impact in areas nearly devoid of trees. Also, continue to require a minimum percentage area for tree tracts in all types of developments as well as establishing a fee-in-lieu of tree tract program in certain instances. Language regarding tree removal on private property needs to be clarified.
- Implement education programs to prevent improper pruning of required landscape trees and implement procedures for better inspection of required

Lacey Urban Forest Management Plan

landscaping in the right-of-way.

- Continue to require that all trees and shrubs planted on projects within the City of Lacey meet the current ANSI Z60.1 American Standard for Nursery Stock.
- Consider appointing a tree advisory board.
- Create a 'Lacey Friend of Trees' award to be given to citizens, developers, or companies that have taken special care to protect, plant, or maintain significant trees or stands of trees in Lacey.
- Conduct a 'Big Trees in Lacey' contest to find and recognize large or specimen trees in the city.
- All new street tree plantings should be taken from the prescribed species list and matched to the growing space of the planting site. All landscape tree plantings in required landscaping on projects should be taken from the general tree list for Lacey. Other trees can be incorporated in the design upon approval of the site plan review committee.
- Solicit grant funding, corporate donations, and other funds to expand tree planting and maintenance.
- Revise the urban forest management plan every 5 years.

Goals:

The goal of managing city trees is to improve canopy cover and the aesthetic and physical benefits of trees to a community, while protecting the infrastructure from tree damage. This can have positive environmental and economic benefits to the community. In short, the urban trees should be compatible and functional, while minimizing maintenance costs. This management plan provides a detailed Goal and Policy section and technical appendixes that will assess the current urban tree conditions and make recommendations for preservation, protection, restoration, species selection, design, planting, and citizen involvement.



St. Martins University Campus, Lacey, WA

City of Lacey

URBAN FOREST MANAGEMENT PLAN

Introduction

Today, more than ever, we are a population of city dwellers. Over 75% of our citizens live within 50 miles of our shorelines in increasingly large and dense cities. Implementation of the Growth Management Act has pressed on our remaining undeveloped green spaces within growth areas, and shrunk lot sizes to the point that tree planting, not individual tree protection, is often the order of business. Areas outside the adopted urban growth areas are seeing less pressure to convert from resource and agricultural lands. While this may preserve more net “green” spaces in the long run, other islands of green such as parks, wetlands and undeveloped green spaces within the urban growth areas are becoming more precious.

Cities have embraced a combination of tree protection and tree planting to ensure that the hard concrete lines of development are softened by tree lined boulevards, curved and planted walkways, shady parks, and natural

Lacey Urban Forest Management Plan

areas. These planted and protected areas are enhanced by the natural instincts of humans to plant trees around their dwellings.

Urban trees provide both visual and emotional solace in our world of stressful jobs, family commitments, smart phones, and tablet computers.

As we continue to press on the edges of our native forests with our increasingly dense urban and suburban structure, the need to design for trees, implement sound tree protection practices, and create long-term planting plans becomes more and more critical.

A significant element of maintaining a livable city is to instill pride in its character. By working to make our cities more comfortable and pleasant we instill pride in our citizens. Proud citizens will get more involved and work even harder to preserve, protect, and enhance our cities.

The City of Lacey has recognized the need to protect and manage its valuable urban forest. This Urban Forest Management Plan is one of many steps the City of Lacey has undertaken to improve the benefits that its urban forest provides to the community.

Recognized Benefits of the Urban Forest:

The urban forest provides numerous environmental, psychological and economic benefits. It is critical in providing a healthy environment for people, fish and wildlife. It affects our health and sense of well being. It provides economic benefits by reducing the need for power, and water treatment. Most benefits can be measured, some cannot, and all are significant.

Environmental Benefits:

Water Quality - Clean water is vital to the health of our environment. In every area of the city, the urban forest helps to provide clean water. The urban forest intercepts rain, reducing runoff before it can occur. It absorbs and stores water which reduces the impacts of stormwater pulses, especially in developed areas, along streets and highways and in parking lots. It helps remove pollution from water and reduces excess sedimentation. Riparian vegetation shades and cools the water surface and the air in riparian areas, providing better habitat for fish and wildlife.

Erosion Control - The hard surfaces common to urban areas are impervious to water infiltration, thereby increasing stormwater runoff volume and flow. The rapidly moving water erodes soil, increases siltation in urban waterways and creates water pollution problems. Trees and other plants play a role in stabilizing soils and preventing erosion. The roots slow runoff by holding soil in place and absorbing water. Leaves diminish the impact of raindrops on bare land and mitigate stormwater volume (McPherson et al 2002).

Lacey Urban Forest Management Plan

Energy Efficiency and Temperature Control - The role of vegetation in temperature control in the Pacific Northwest is becoming more important with rising energy costs and conservation concerns. Well placed vegetation can significantly reduce energy needs and increase energy efficiency by reducing heat loss in winter and increasing cooling in summer.

In winter, evergreen vegetation can reduce wind velocity that pulls heat out of buildings and provide an insulating effect by trapping air close to buildings. Deciduous vegetation around buildings allows for solar gain in winter months, reducing heating costs. In summer, well placed trees can intercept up to 90% of the solar energy, reducing the need for air conditioning (The National Arbor Day Foundation).

Trees reduce the temperatures of heat islands that form in urban centers by shading pavement and structures. Considering this cooling effect, the larger the size of trees and the bigger the size of the green spaces, the greater the effect of the trees on climate.

Plants can be used to manipulate air movement by strategically placing them to block undesirable prevailing winds and to provide effective barriers. Walls of vegetation can be used to direct air to sites where cooling is wanted.

Improved Air Quality - Many plants of the urban forest can reduce the effects of air pollution by removing pollution, both particulates and gases, from the air. This occurs because plants reduce winds, causing particulates to settle out of the atmosphere onto plants and the ground where precipitation washes the particulates into the soil. Certain gases such as nitrogen oxides, carbon monoxide, chlorine and fluorine halogens, ammonia, and ozone are removed by absorption and stored in leaves and needles of some woody vegetation. Trees also sequester and reduce atmospheric carbon dioxide (National Arbor Day Foundation) (McPherson et al. 2002). Trees improve air quality as they release oxygen through photosynthesis and they reduce ozone levels by reducing urban temperatures.

Sound Control - The leaves, twigs and branches on vegetation absorb sound energy, as do grasses and other low growing plants, especially sounds in the higher frequencies which are the most bothersome to people. Plants dissipate sound energy by refraction that occurs when sound passes through vegetation barriers and bends around plant structures. Barriers of trees and vegetation in conjunction with walls and landforms can reduce traffic and highway noise (McPherson et al. 2002). Such barriers can be used as part of a noise mitigation strategy for new development.

Vegetation also masks unwanted sound by providing sounds of nature, rustling leaves and singing birds, to cover unwanted noise. People can focus on those natural sounds that are more pleasing than the noise of the city.

Fish and Wildlife Habitat - The urban forest provides habitat for many species of birds, mammals, fish, insects and amphibians that enrich urban life and offer

Lacey Urban Forest Management Plan

opportunities for study. The larger the area, the greater the possibility for diversity of habitat and wildlife. While forested natural areas with native understory offer more biological diversity than other parts of the urban forest, all provide some habitat. Squirrels and chipmunks live in and around trees; numerous species of birds abound in vegetation; bats dwell in secret places; and fish inhabit the creeks, streams, and rivers. Wetlands, riparian areas, connected natural areas, and urban landscapes provide important biodiversity.

Psychological Benefits:

Mental and Emotional Benefits - People generally feel that the urban forest increases the enjoyment of everyday life and provides a meaningful connection with the natural environment. Research now provides the scientific basis to support those feelings. Urban forests have a clear role to play in reducing stress-related impacts on health such as lowering blood pressure.

Studies show that exposure to nature and urban forest reduces stress and provides significant restorative benefits. Various studies using slides of different subjects show that natural scenes and urban nature settings hold the viewer's attention more effectively than urban scenes without nature. Even slides of unspectacular natural scenes produce more positive emotional states than urban scenes without trees (Hull and Ulrich, 1991).

Significance and Symbolism - Trees have deep significance to people, especially in the urban setting that may offer little of the natural world. Trees and forests provide beauty and serenity that we can experience in the sensory realm. The constantly changing sights, sounds and smells of plants fascinate and delight us.

Trees may have symbolic meaning. Many cultures associate trees with strength and wisdom, and we often remember loved ones with memorial tree plantings (Dwyer 1994). Planting trees shows a commitment to the future and a desire to improve places where we live.

Aesthetics - Positive emotional states are also associated with being in or looking at things that are pleasing. Trees and vegetation provide much of the color, variety, texture, shape and sound that are pleasing in all seasons of the year. Visual preference surveys have shown that small parks and open spaces are uniformly desirable in all settings of a city. Such surveys show that people prefer scenes that have well maintained trees and vegetation. Research substantiates what people have known intuitively, that trees and natural areas bring pleasure and provide benefits beyond their economic values (Dwyer 1994).

Economic Benefits:

A healthy urban forest can improve water quality, prevent erosion, reduce heating and cooling costs, convert carbon dioxide into oxygen and has positive effects on our health and wellbeing.

Lacey Urban Forest Management Plan

Trees generally provide benefits in their immediate location and to the surrounding community. From the individual property owner who has a more comfortable environment and increased resale value, to community members who have better water and air quality, to the fish and wildlife who have better habitat - all benefit from healthy trees and vegetation.

Increased Resale Values - Studies show that landscaping with trees is associated with an increase in the value of residential properties. Generally larger trees have greater effect on the resale values than smaller trees. Properties with trees show better and sell faster. Increased property values increase a community's tax base (McPherson et al. 2002).

Stormwater Benefits - In addition to increased resale value, trees and vegetation mitigate stormwater runoff from new construction, reducing or eliminating the need for more costly systems.

Economic Stimulus - Trees make the city more attractive to both residents and businesses. The National Arbor Day Foundation explains that "trees can be a stimulus to economic development, attracting new businesses and tourism. Commercial retail areas are more attractive to shoppers, apartments rent more quickly, tenants stay longer, and space in a wooded setting is more valuable to sell or rent." (Coolcommunities.org).

In a study conducted by the University of Washington, consumers indicated they would be willing to pay 12% more for goods purchased in a well landscaped district. The study also indicated 15% higher interaction between consumers and merchants, and tree-lined sidewalks were rated 80% higher for amenities and comfort (Wolf, 1999).

Recreational Value - Lacey's urban forest includes wonderful recreation areas such as Wanscher's Community Park and Wonderwood Park. While it is important to provide ample open space for active recreation, it is equally important to provide places for passive recreation. Lacey's urban forest includes many areas where wetlands and associated wooded buffers have been preserved. These areas provide places to observe wildlife, commune with nature and escape the pressures of daily life.

Traffic Management - Trees function as "traffic calming" devices effectively slowing speeding drivers while also adding to the aesthetics of the urban landscape. Vertical elements, including trees, reduce the "optical width" of the narrow street, thereby discouraging speeding (Project for Public Spaces "Traffic Calming" <http://www.pps.org>). Trees and other plants may be used to direct not only vehicular traffic, but pedestrian traffic as well (Grey and Deneke 1992).

Challenges:

Since the 2006 adoption of the Urban Forest Management Plan, there have been several issues, challenges, and experiences with the implementation of the plan that are important to examine.

Lacey Urban Forest Management Plan

The first item is the challenge with application of tree tract standards in cases of infill or redevelopment where tracts previously did not exist. In Lacey's core area, specifically the Woodland District and Central Business District 5, many of the properties developed in the 1960's and 70's and predated even the earliest landscaping requirements, let alone, tree tract requirements. As properties redevelop under current policy, they would be required to set aside a 5% tree tract. If no trees exist, then they would be required to replant this area with trees to meet a certain coverage requirement in 15 years. This standard also runs somewhat contrary to Lacey's goals of establishing the core area as the urban center. Very few urban centers (if any) have set aside 5% tree tracts on all developable parcels. It may be prudent for the City to require a fee-in-lieu that may be used to either further urban forestry goals in other areas of the City or be used even in the same Planning Area to provide additional tree canopy to balance the City's urban forestry goals with its goals to urbanize. The priority areas for installation of any additional trees should be public (City-owned) properties.

Second, there have been challenges with maintenance responsibilities for street trees between the City and adjacent property owners. The City's policy has been to maintain street trees on City arterials, commercial areas, and City transportation projects and adjacent property owners or owners associations maintain the remainder. However, this has not been evenly applied across the board and there is a large amount of confusion between adjacent property owners and the City as to who has the maintenance responsibilities. The street tree inventory completed in 2012 will address some of the issues as it will provide a map of all City-maintained trees in Lacey and will therefore provide better information delivery to the public. The City adopted an ordinance in 2015 related to street tree maintenance. The ordinance provides additional clarity and consistency when it comes to maintenance responsibilities.

Another benefit of the street tree ordinance is that it clarifies notice and abatement procedures for trees on private property that may impact city right-of-way. This ordinance helps the City better define procedures where a tree on private property is hazardous or potentially hazardous that may fall and damage city property (right-of-way) or other situations where liability could be a concern.

Finally, there are financial challenges related to residential homeowners and homeowners associations in Lacey's neighborhoods when it comes time to replace trees. The need to replace trees can be for various reasons including being hit by a car, hazard tree, etc, but many need to be replaced due to damage or replacement due to an inappropriate species being initially installed. Many Lacey neighborhoods were developed using a street tree that, due to aggressive root structures or being a species susceptible to damage, needs to be replaced. However, many of our homeowners and homeowner's associations do not have the financial means to be able to replace the trees. The City should consider establishing a grant program or other means, including potential fee-in-lieu funds, to be able to assist our neighborhoods in these efforts.

Conclusion:

Washingtonians have chosen to protect farm and forest land by limiting expansion of urban growth boundaries under the Growth Management Act. While this results in more efficient use of urban land for development, it reduces the space available in the city for trees and vegetation. As cities become denser, there is a greater need to maintain, protect, and manage our urban forest.

While many people think of street trees when they think of the urban forest it is much more than that. The urban forest is a complex system of trees and smaller plants, wildlife, associated organisms, soil, water, and air in and around our city. It is the trees along the streets, the landscaping around our homes and institutions, the vegetation in commercial and industrial areas, the multilayered forests in our natural areas and the plants and landscaping in our parks.

The urban forest provides water and air quality benefits, improves the local climate by providing cooling and shading and improves the ecological health of the urban environment. Managing the urban forest for these benefits is sometimes difficult. Housing, commerce, transportation, public safety, and recreation must be accommodated. Successful urban forest management accommodates these uses, provides environmental benefits and improves the quality of life for our residents.

Our urban forest is managed by the city for many reasons, healthy watersheds, prime wildlife habitat, excellent outdoor recreation and exceptional trees. A healthy urban forest is essential to our quality of life and increasingly important to the city's efforts to improve the quality of the environment of our city. A healthy urban forest is an asset that increases in value over time, one that provides service as well as beauty to Lacey residents.

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Goals and Policies Of the Urban Forest Management Plan



Horizon Point, Lacey WA

1. GOAL - Achieve and maintain a vibrant, healthy and diverse urban forest in Lacey and Lacey's urban growth area consisting of both native and non-native landscape components.

Policies:

- A. Base decisions for preservation of trees and re-vegetation on privately owned lands upon the requirements of individual development sites considering criteria necessary for maintaining healthy, safe tree stands. Ensure trees planned for preservation or replanting can be integrated with expected uses given the zoning classification and anticipated urban development characteristics.
- B. Base landscaping plans and landscaping decisions, concerning species selection, upon requirements of individual development sites, desired function, and anticipated urban development characteristics.
- C. Create and maintain a street tree program that takes advantage of indigenous trees, provides a coordinated and deliberative approach on selection of preferred deciduous street tree species, and provides diversity of species, interest, and aesthetic quality
- D. Develop landscaping themes as part of the city design review program promoting the desired wooded look and feel for specific traffic corridors and selected areas. In designated areas, where the width is sufficient to accommodate mature conifers, design landscape plans which include coniferous evergreens and native under-story vegetation in planter strips, medians and traffic islands.
- E. Enforce tree protection regulations as part of the city's code enforcement program and respond quickly to complaints about illegal tree removals.

2. GOAL - Preserve and maintain native forest components in areas conducive to the lifecycle of native plants such as critical areas (wetland and habitat areas and buffers), conservation parks, large tracts of open space and other areas that can be naturalized while maintaining compatibility with the anticipated land use of the surrounding area.

Policies:

- A. Utilize the Open Space Institutional (OSI) zone for preserving and maintaining natural indigenous vegetation and habitat.
- B. Preserve natural vegetation in all designated privately owned wetland and habitat sensitive lands and buffers. Emphasize the preservation and use of natural vegetation on lands zoned OSI where the urban use is expected to be institutional.
- C. Preserve natural vegetation or use indigenous, or landscaping resembling indigenous, vegetation in all large buffer areas preserved or created for the separation of one land use category from another. Provided the existing vegetation is sufficient to accommodate the desired function of separation of uses and mitigation of identified impacts.
- D. Create and maintain programs that identify potential conservation areas and strategy to protect them through public acquisition.

3. GOAL - Preserve natural forest components recognizing and considering the nature of the urban zoning classifications and limitations particular zones and uses have on the preservation of indigenous trees.

Policies:

- A. Replant and maintain non-native landscape components in areas of urban density and intensity where the natural life cycle of existing vegetation conflict with the built environment envisioned by the Comprehensive Land Use Plan.
- B. When replanting is required give priority to the use of vegetative species that resemble native species in areas of the built environment not conducive to the native plant life cycle.
- C. When making decisions for tree preservation or re-vegetation consider land use zoning designations and urban land use characteristics and expectations for development.
- D. Develop specific urban forestry landscape expectations and standards for each land use zone. Standards should consider urban requirements and limitations pertaining to urban forestry.

Lacey Urban Forest Management Plan

- E. Small lot areas should have reduced emphasis on preserving indigenous vegetation because of physical development constraints and more intensive density. These areas should be planned for intensive re-vegetation with an appropriate combination of indigenous and non-native tree species.
- F. Large lot areas can have more emphasis on preserving indigenous trees as lot sizes permit. However, efforts for preservation, particularly evergreen trees, should also recognize individual preference for residential landscaping options and the benefits of replacement of indigenous evergreens with deciduous tree species sensitive to residential home limitations and functions. Deciduous trees may be preferred given advantages for solar access, climate control and gardening.
- G. Commercial areas anticipating intense development and little opportunity for saving trees because of significant grading, utility provisions, parking lot areas and access should emphasize preserving select tree stands with dedicated tree tracts and significant re-planting of preferred tree species throughout the site.
- H. Trees in parking lots should emphasize deciduous trees that are preferred in parking areas given advantages of solar access and climate control. Pedestrian areas, particularly walkways required in design criteria for pedestrian access across parking lots should be edged with trees providing a canopy over walkways.
- I. Buffers should emphasize preservation where practical, considering tree health and longevity and should emphasize re-planting native vegetation and evergreens where re-vegetation is necessary.
- J. In both residential and commercial developments emphasis for preservation should be focused on selected sites or groves of healthy trees. Design of the site should protect these groves as part of the open space or as part of the overall landscape theme and requirement.

4. GOAL - Recognize the benefits of tree cover in consideration of drainage and watershed planning, habitat management, passive recreation opportunities, urban aesthetics and pedestrian benefits for street design, and maintain and improve Lacey's overall tree canopy for these benefits and purposes.

Policies:

- A. Achieve no net loss or maintenance of Lacey's tree canopy. A 2020 tree canopy analysis showed 28% canopy cover in the City. Every three years conduct a tree canopy analysis and if canopy coverage drops below baseline, staff is directed to review tree protection regulations. Consider a tree density requirement for each land use zone based upon the zones capability for supporting tree cover.
- B. Strive to achieve no net loss of forest canopy through preservation of

Lacey Urban Forest Management Plan

conservation tracts, sensitive areas, community planting programs, and replanting of properties developed under the vision of the Comprehensive Land Use Plan.

C. Apply a tree canopy requirement, or tree density requirement considering canopy, to individual development projects and require each project to comply with the standard by preservation of existing trees during construction, providing or replacing trees through intensive landscaping of development sites after construction, and/or designation and preservation of tree tracts.

D. Base plans for tree preservation or replacement upon expectations for the specific zoning designation the project is located in.

E. Craft development regulations to emphasize and promote saving existing trees with size and age by providing more credit towards established trees.

5. GOAL - Provide significant habitat value in Lacey's urban

forest. Policies:

A. As is appropriate to the location and function, trees should be considered for wildlife habitat value. Trees well adapted to our area that provides food value and cover to wildlife is preferred in development of landscaping plans.

B. Consideration needs to be given to sighting of certain trees to avoid dropped fruit on sidewalks, patios and parking areas, or enticing animals into dangerous areas of roads that will result in road kill, but where landscaping opportunities allow for placement of trees in appropriate areas trees with food value for wildlife should be given special emphasis.

6. GOAL - Integrate urban forestry concepts and preferences with development design.

Policies:

A. Designation of tree tracts, preserving and planting trees in common areas, and landscaping of individual lots with tree cover shall be strategies used to meet a tree density/canopy requirement. This shall be required in the zoning and subdivision ordinances to support Lacey's urban forestry program. The tree density/canopy standards shall be applied during review and conditioning of the land division, prior to final approval of the land division. These standards shall also be applied to individual lots over the long term as building permits are approved. This can provide an expectation for a certain percentage of tree cover over the long term. It can also promote preservation or establishment of preferred species and tree stands.

Lacey Urban Forest Management Plan

B. Consider establishing a fee-in-lieu of program as an option to meet tree tract requirements for redevelopment and infill projects in the City's Midtown District and Central Business District 5 in situations where no stands of trees currently exist. Fees collected should be used to plant new trees or expand the urban forest canopy on public property.

C. Tree protection, preservation and/or replacement plans shall be considered early during land division planning, prior to preliminary approval, to promote integration of urban forestry concepts with the overall land division design.

D. Create a balanced look in landscaping plans between natural and manicured landscape. Consider the urban context, site use, location, and zoning designation in designing the landscaping plans.

E. Promote creative landscape designs that avoid a cookie cutter design but still provide interest, visual relief, and break up expanses of hard surface and walls.

F. Allow flexibility in landscaping development sites to preserve areas of native vegetation where appropriate or create areas of native vegetation design by providing credit towards traditional prescriptive landscape methods and requirements.

G. Consider crown-raising on street and landscape trees to improve visibility into commercial properties consistent with sub-area or district-wide planning efforts.

7. GOAL - Maintain tree canopy in developed areas.

Policies:

A. Developed residential lots will be required to maintain a certain minimum canopy/tree density over the long term to promote the overall urban forestry program. This expectation or minimum standard should be based upon what is reasonable to expect based upon the size and design of the individual lot and the zoning designation it is located in, and the longevity of the trees planted.

B. A certain amount of flexibility will be provided for individual lot owners once lots are purchased to allow for individual tastes and landscaping preferences and needs. However, the goal of maintaining Lacey's tree canopy/density should be maintained. Unless physical constraints make it impractical, each lot should support its prorated share of the tree canopy/density.

C. Develop a program to monitor trees required in landscaping plans that are the responsibility of the land owner, lot owners association, or home owners association. Provide assistance in educating responsible parties regarding strategies and techniques of tree maintenance, and enforce landscaping

Lacey Urban Forest Management Plan
requirements for trees.

- D. Better utilize the city's tree protection specialists to conduct site visits of properties that received an exemption permit requiring replanting.

8. GOAL - Develop a street tree program as an essential component of Lacey's Urban Forestry Plan.

Policies:

- A. Provide for a street tree program with specific emphasis on designing streets for pedestrian comfort and security and promote species that provide the desired street canopy, are disease resistant, low maintenance, have root systems that do not create street and sidewalk buckling, and have attractive features adding interest to the urban street environment.
- B. Provide for a street tree program that has both naturalized and non-indigenous species components.
- C. Develop a street tree program that is integrated with landscaping plans and design for specific street corridors.
- D. Develop an ongoing tree planting program to replace mortality, damaged trees, and to increase canopy cover.
- E. Develop a program to monitor street trees and follow up on enforcement where street trees are part of a required landscape plan and the maintenance is the responsibility of the land owner.
- F. Explore establishment of a dedicated street tree maintenance fund, utility fund, or other similar program that would fund street tree replacement in neighborhoods.

9. GOAL - Create a heritage and specimen tree program that recognizes special trees worthy of extra attention, notoriety and protection.

Policies:

- A. Develop definitions of heritage and specimen trees that emphasize the special distinctions that lead to such characterization, in context with Lacey's history.
- B. Hold contests annually on Arbor Day for identification and qualification of these special trees.
- C. Develop standards for protection of such trees and methodology for registering trees so that new land owners are notified of what they are purchasing and expectations associated with the distinction, including the tree's health and expected life cycle

10. GOAL - Develop an Urban Forestry Plan that promotes safety and healthy trees.

Policies:

- A. Develop a program that incorporates decisions for preservation of trees that are related to development projects that consider safety issues associated with the potential built environment.
- B. Assure that safety issues are considered by a qualified tree professional when developing plans for tree protection, preservation or landscaping design.
- C. Develop a program that assures that tree species are considered for adaptation to our area, localized environmental conditions, resistance to disease, and compatibility with the planned urban use of the site.
- D. Develop a program for regular inspection and maintenance of street trees that is ongoing to promote healthy well formed and functional street tree resources.
- E. Provide for a tree removal process for removal and replacement of dead, dying or diseased trees.
- F. Maintain the program for the tree professional(s) to be available to the public for tree inspections, and considerations of tree issues on individual lots, at cost for review.

11. GOAL - Create an Urban Forestry Program that is publicized, easily understood, has broad support, promotes pride in our Tree City USA distinction and is enforced.

Policies:

- A. Develop a public education program that promotes Lacey's distinction as a Tree City USA and provides support to individual citizens and home owner associations concerning tree issues.
- B. Develop a program for meetings with home owner associations to help associations manage privately owned tree resources.
- C. Develop and implement a program of informing new residents of expectations for tree emphasis and tree regulations.
- D. Develop and implement an enforcement method that is fair, based upon professional evaluation, and promotes the vision of the Urban Forestry Plan.

Lacey Urban Forest Management Plan

E. Develop an enforcement program that includes education of the benefits of trees and maintenance of trees, and involves fines for non-compliance. Fines shall be based upon a fair value of the trees lost and replacement of trees. Fines may be used to support the city urban forestry program through maintenance and planting of street and park trees.

F. Work with private and public entities to create partnerships for developing education and community action programs promoting the value of maintaining and conserving natural vegetation and habitats.

G. Develop interpretive trails and view sheds within conservation areas and natural parks to provide recreation opportunities and education to the citizens of Lacey.

12. GOAL - Create a citizen advisory board for urban forestry issues.

Policies:

A. Develop an Urban Forestry Board that is made up of tree specialists and citizens representative of the scope of urban forestry issues in our city.

B. Develop a set of operation criteria for the Urban Forestry Board that has it develop and consider urban forest plan amendments, work on special urban forestry projects and advise the council on urban forest issues.

13. GOAL - Develop a method to process Class IV Forest Practice Applications pursuant to requirements of RCW 76.09.240.

Policies:

A. Develop a process to include in the city tree and vegetation protection ordinance for review and action on Class IV Forest Practice Applications.

B. Require all Class IV Forest Practice Applications to satisfy the intent and vision of the Urban Forestry Management Plan.

APPENDIX 1

Background and Baseline Information

A

Council's First Visioning Work-session for the Development of the Urban Forestry Plan

In early February of 2005, the Council held a work session to determine what each individual member thought was important in regards to maintaining trees and vegetation. Without priority, the following results are individual thoughts of Council members from that visioning effort

1. Observation: “don’t like – for site planning and tree retention; need to know where building footprint is in relation to trees – keep tree clusters if possible.”
2. Retain the “NW Woodland Character” – we are losing this. NW look and feel which is not just “ornamental” or “street trees” look.
3. Don’t need cookie cutter designs: be more innovative in our designs. Develop designs to look more natural than the street trees on 35’ centers. (Retail vs. Commercial).
4. No net loss of trees; need to preserve rather than replant.
5. Not real interested in large firs in residential, one ice storm will cause problems. Need to breakup walls with plantings.
6. Like mixing oil & water – have natural look at entry points or “open spaces”, buffers native doesn’t mix with density we are trying to keep or develop.
7. Replace trees with trees that meet our vision (rather than replacing like for like)
8. Find appropriate trees for a given area which retains the look and feel of the NW Woodlands. Not the typical street/landscape sculptured look.
9. Heritage/specimen trees need a definition – look at location and health. Be sure evaluation looks at long term.
10. Protection of the natural habitat – trees are a key component of this.
11. Look at when and where we plant trees. Don’t waste the resource (mindless construction projects)
12. Heritage or specimen trees on private property. Owners need to understand what they are buying. Our vision can’t take away personal property rights by imposing “our vision” on them.
13. Look and feel should apply to housing development and commercial. Hard on very small lots. Set aside tree tracts instead of how we do it now, trees in parking lot landscaping.
14. Need balance between natural and “landscaped look”.
15. Adjoining development and differing standards and look/feel. Like, orchard style

Lacey Urban Forest Management Plan

- urban environment looks urban. Entry ways – public spaces (parks, open spaces and planters)
- 16. With innovative thought from our engineers, landscape architects, etc. we can have more natural looking parking lots.
- 17. Like: “the green of Lacey”
- 18. Trees that grow where you plant them. Species selected need to be the right choice for the location.
- 19. Education of public Home Owners Associations (HOA’s). HOA’s need to be aware of our tree preservation ordinances and the importance of trees. Use public events to promote healthier urban forest.
- 20. Exercise more judgment to all the NW look and feel – change landscaping ordinances to accommodate trees. (meander sidewalks)

It was also mentioned that there should be some public education about what does “Tree City USA” mean and what an urban forest is.

As with our citizens, opinions of individual council members vary greatly in regards to tree and vegetation preservation. But, when working together, as was done during the vision exercise, you can see that similar interests are reflected in their statements. It is the intent of this plan to take advantage of the common themes which have developed to create a plan that is widely supported by the Citizen’s of Lacey.

B Soils and Site Information

The City of Lacey occurs entirely within the Puget Sound Trough which extends the entire length of Washington from the Canadian border to Oregon. The soils were formed during the most recent Vashon glaciation epoch. The terminal moraine of the Vashon glaciation is found in southwest Thurston County.

The topography of Lacey is undulating to rolling on uplands. The soils are predominantly formed in glacial drift deposited by the most recent of several continent-sized glacial ice sheets. The soils generally consist of compact basal till covered by a thin, discontinuous layer of ablation till. The predominant gravelly soil types formed from this material include the Alderwood gravelly sandy loam, Everett very gravelly sandy loam, and the Spanaway gravelly sandy loam. Also commonly found are the Indianola loamy sand, Nisqually loamy fine sand, Skipopa silt loam, and Yelm fine sandy loam. These sandy soil types are formed from outwash material and are found along the major stream courses and broad flats.



Photo A. Typical glacial till derived soils found in Lacey.

The windthrow potential for all of the soil types found in Lacey is slight (except the Alderwood which is moderate); meaning that blowdown of healthy trees is less likely during normal winter storm events. The moderate windthrow risk indicates a higher windthrow potential, especially during periods of wet weather and high winds. Perched water tables above the Alderwood hardpan contribute to this increased hazard. Inclusions of poorly drained soils such as the McKenna gravelly loam (small areas that generally occur within wetlands) also have a moderate to high potential for windthrow.

The productivity of these upland soils is moderate to high, and competition for new seedlings is moderate to high. Weed control is usually necessary during the first 3 years after planting seedlings in forested areas or gaps in the canopy.

The soils found on the outwash materials are slightly drier, but have no barriers to root penetration and a slight windthrow potential.

C

Forested Cover

The forest cover in the City of Lacey is within what is classified in forestry as the *Tsuga heterophylla* Zone, the most extensive vegetation zone in western Washington. It is famous for its subclimax Douglas-fir and climax western hemlock-western red cedar formations. The seral stands that occur today are dominated by second-growth Douglas-fir. Though they are climax associations, even old-growth stands (400 to 600 years old)

still have significant components of Douglas-fir in addition to the climax western hemlock, western red cedar, and grand fir species.



Photo B. View of remnant second-growth Douglas-fir along Golf Club Road SE in Lacey.

In east Lacey, an oak woodland type occurs that is often intermixed with Douglas-fir. The Oregon white oak (*Quercus garryana*) colonized former prairies and is now being overtopped by invading Douglas-fir. The Oregon white oak occurs predominantly on the excessively drained Spanaway gravelly sandy loam soil type, but scattered trees and groves of trees are found on other types (Photo C). Common snowberry and Oregon grape are the predominant shrub species under the oak stands.

Douglas-fir is the most common native tree found in Lacey. Western red cedar, western hemlock, bigleaf maple, black cottonwood, red alder, cherry, and Scouler willow are also found depending on the location with the topography and level of disturbance. The understory is dominated by salal, Oregon grape, bracken fern, swordfern, red mountain huckleberry, common snowberry, and *Rubus* species. This combination of conifer overstory and diverse understory, with the productive soils produces good to excellent wildlife habitat potential.



Photo C. View of a majestic Oregon white oak protected during development of the Senior Center in Lacey, WA.

The forest canopy is becoming more fragmented as development has spread into the urban growth areas, particularly in the Hawks Prairie Area. The industrial development on Marvin Road and Willamette Drive NE areas, along with Britton Parkway and the large commercial project development are impacting the forest canopy significantly.

On the other hand, some areas are growing trees that were non-forested in 1966. Undeveloped prairie areas are reforesting on their own, the city is planting trees on rights-of-ways, and residents are planting trees in yards and open space areas. This has combined to increase the forest cover in the original core of Lacey, and slow the overall forest loss since 1966. Figures 1 and 2 are based on examination of aerial photos from 1966 and 2001 (plus known changes in 2002-04).

Figure 1. % Forest Cover in Lacey - 2004

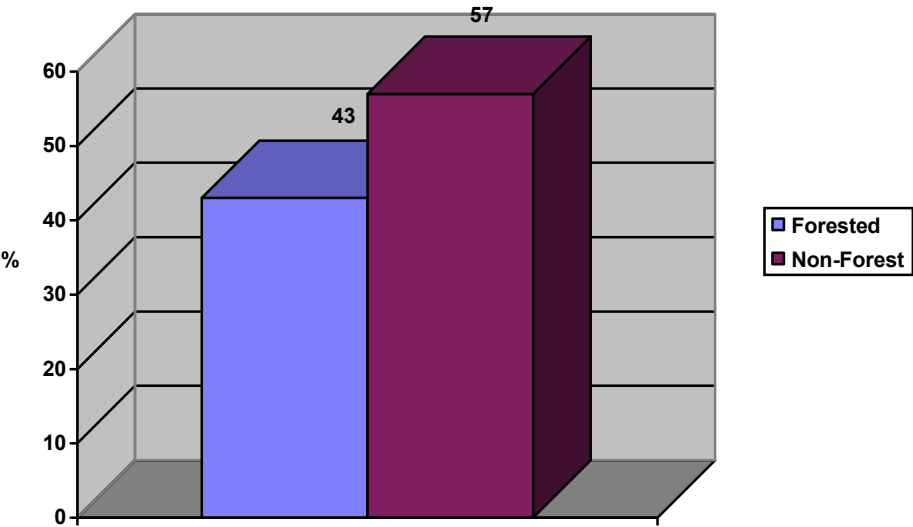
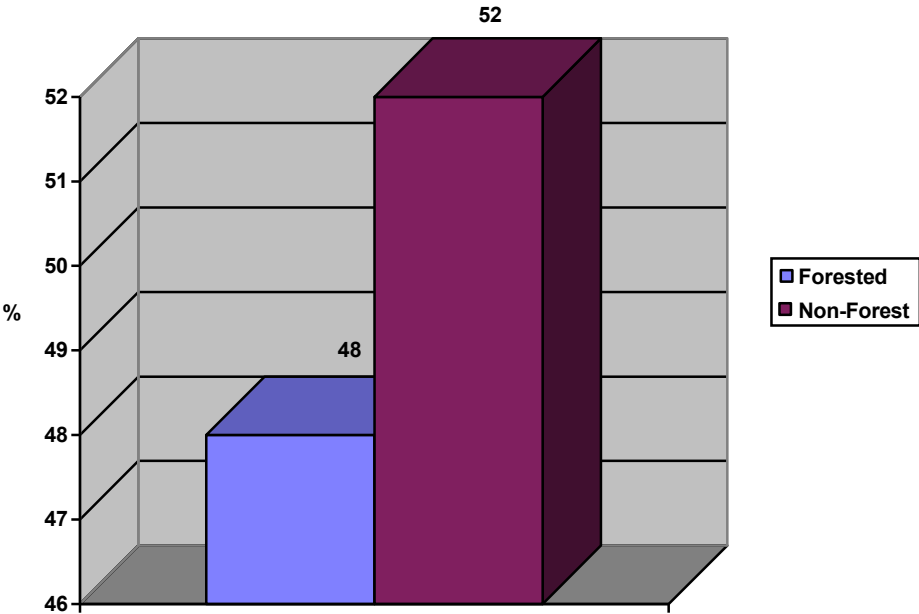


Figure 2. % Forest Cover in Lacey - 1966



Figures 1 and 2 illustrate the changes in forest cover between 1966, several years before Lacey became a City, and 2004. The 2001 photos were updated to 2004 by removal of acreage for projects constructed since 2001 to determine an approximate acreage.

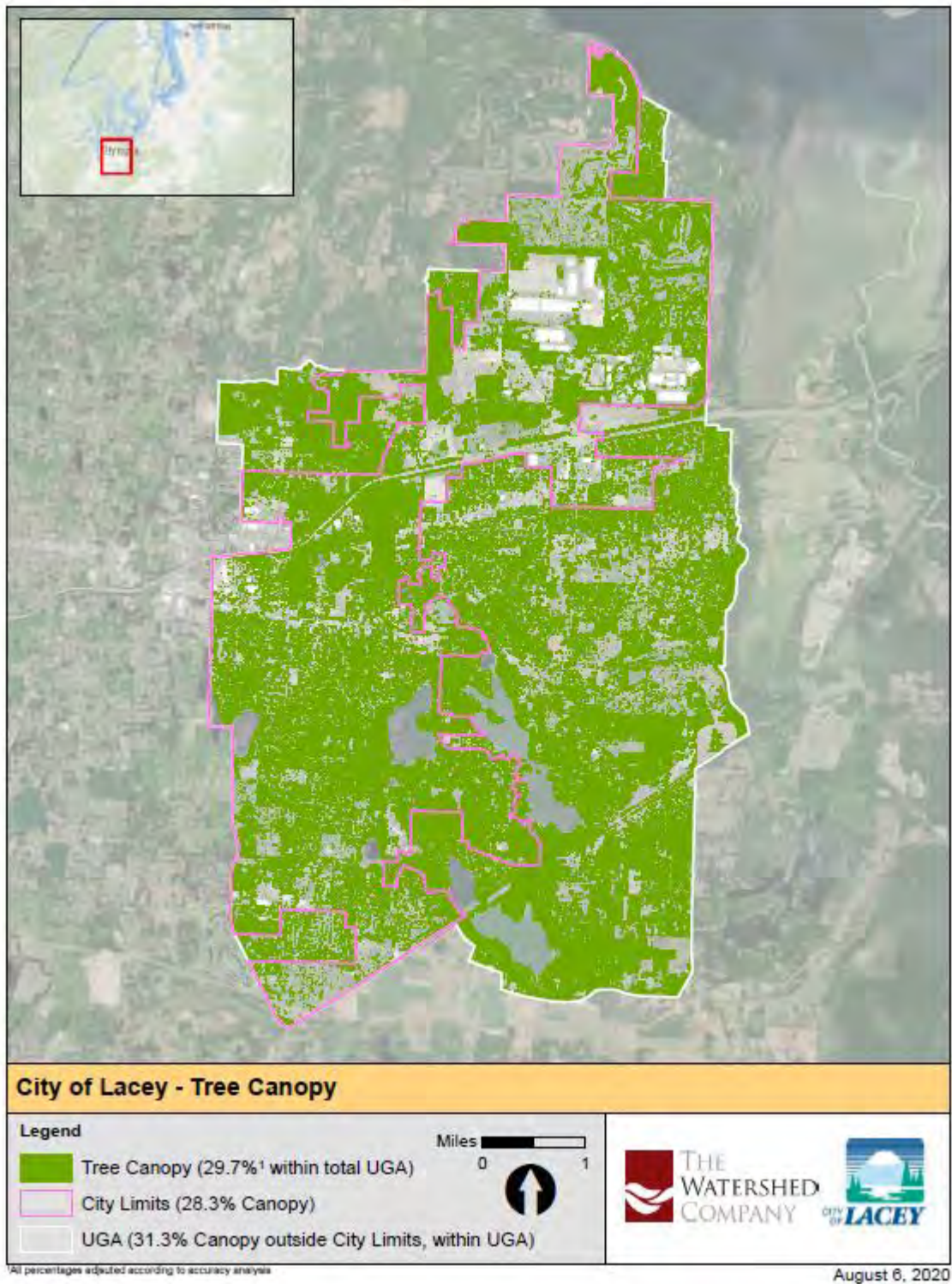


Figure 3 illustrates tree canopy in the City and UGA as of August 2020.

D Street Trees and Maintenance Evaluation

Private Street Trees

A 100% inventory of all 'private street trees' was completed for all major and minor arterials and collectors in Lacey. A 'private street tree' is one that is maintained by the adjacent property owner and is situated in the curb lawn zone or behind the sidewalk, and serves as the street tree for that location. These are areas where there are no city maintained street trees.

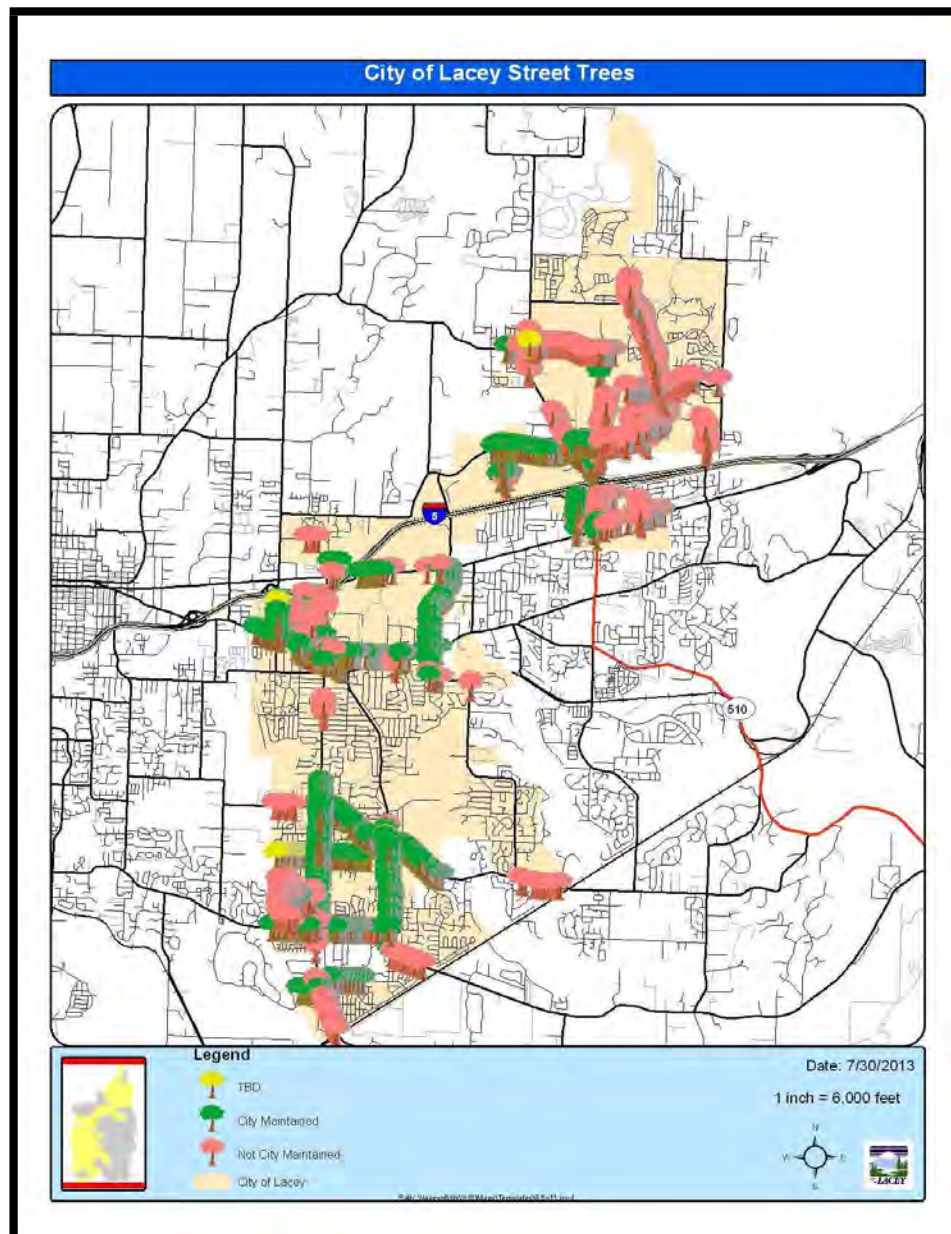


Figure 4. 2012 Street Tree Inventory

Lacey Urban Forest Management Plan

Table 1. Summary list of street trees on all arterials and collectors.

Species	Diameter Range	# Trees	% Composition
Ash – Green/White	1-26	1,102	19.08
Sweetgum	1-19	839	14.53
Ash – Patmore	1-22	692	11.98
Pear - Callery	1-12	547	9.47
Oak – Red	2-17	349	6.04
Maple – Red	2-26	217	3.76
Crabapple	1-8	197	3.41
Cherry – Kwanzan	3-19	161	2.79
Maple – Norway	2-10	153	2.65
Ash – Autumn Purple	2-10	142	2.46
Maple - Vine	1-6	114	1.97
Dogwood – Flowering	1-6	100	1.73
Cherry - Flowering	1-9	91	1.58
Zelkova – Japanese	4-10	80	1.39
Maple – Norway	2-7	79	1.37
Plum - Flowering	1-16	75	1.30
Various Other Species		837	14.49
		5,775	100.00

Sweetgum and ash (green and white ash cultivars) dominate the streets of Lacey and its urban growth area. This is due to a Merritt and Pardini study of 1985 that recommended ash and sweetgum as the main trees for Lacey's central business district, plus the availability at nurseries and general popularity of the species among landscape architects for years. Red maple, flowering plum, and flowering cherry were the next most populous species found along streets that were under private maintenance. The private street trees were, for the most part, in good condition.

The two major exceptions were:

1. Sweetgum trees that were heavily damaged by the 1996 and 2012 ice storms and other heavy wet snowstorms, and
2. Trees that have been topped or otherwise mal-pruned by the landowners.



Photo E. View of recent topping of private street trees in 'Old Lacey' area.

Few of the trees were receiving maintenance such as corrective pruning, including crown raising or crown cleaning to remove dead, dying, diseased, defective, crossing, or extra

branches. These trees will continue to be more susceptible to storm damage, will be more costly to maintain as they get large, and their useful lifespan will be shorter.

The majority of these private trees are located in the required landscaping of commercial properties. In some cases the form and severity of pruning has destroyed the trees natural shape, and shortened its projected lifespan. In some cases, it does not appear that the trees meet the intent of the requirements in the landscaping ordinance.

City-Maintained Street Trees

A 100% inventory of city-maintained right-of-way trees was conducted by Washington Forestry Consultants, Inc. in 2012. Individual trees were evaluated and data on species, size, location, and condition was collected.

Tree Diversity and Planting Spot Data

The inventory found 2,973 street trees. Trees were identified and recorded by common name. Specific cultivars were determined in the field. The average diameter measured at 4.5 feet above the ground line was 8 inches. This is a reflection of how young the street tree population is in the City of Lacey, however this has increased from an average of 4- inch diameter since the last inventory was completed in 2001. The majority of the trees are planted in curb lawn zones, though some are in tree grates within the sidewalks.

Diversity is key in any urban forest. This helps insure that entire urban canopies are not wiped out by common maladies such as the Dutch elm disease did to many elms across the U.S., the chestnut blight on American chestnut, and ash decline on several species of ash.

As a rule of thumb, no more than 10% of the urban tree population should be of the same species, no more than 20% of any genus, and no more than 30% of any family. Some tree species such as red maples, green ash, London plane, and sweetgum tend to be over planted in the Pacific Northwest urban areas. In Lacey, the green ash cultivars, cherry and flowering plum, and sweetgums are over planted. The focus for future street tree plantings should shift away from ash, cherry, flowering plum and sweetgum to other quality species and cultivars.

Selection of cultivars resistant to known insect or disease problems help to insure that mortality will be limited if outbreaks occur. Ice and snow storms, wind storms, or extended droughts also may impact some tree species differently. Diversity is the key to minimizing damage from abiotic and biotic

Lacey Urban Forest Management Plan
influences.

There is adequate space in many locations for larger scale street trees. Many of the best and longest-lived street trees are the larger tree varieties. Many of the small flowering tree species are plagued by leaf diseases, twig blights, cankers, and other problems. Even some resistant varieties will still have problems.

It is recommended that the species selection for street trees be diversified to improve the quality of the urban forest.

City Street Tree Maintenance Evaluation

The 4,554 street trees maintained by the City of Lacey are generally described as being young, and in fair to good condition. Staff has routinely raised crowns on young trees to provide sidewalk and street clearances, performed some corrective pruning, and day lighted trees from overtopping competition by adjacent forest trees. The quality of this work is excellent when evaluated against the current standard for proper pruning¹.



Photo F. Street trees planted in the urban growth area. Design is the City of Lacey’s standard which is working very well.

Normally, in cities with more and larger trees, all work is prioritized based on the urgency of the work. Future evaluations will require prioritization. The following is the recommended prioritization for the trees.

Lacey Urban Forest Management Plan

¹ ANSI A300 (Part 1) – 2001 --Pruning for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices, American National Standards Institute, New York, NY.

- *Priority 1 Tree Removal:* Trees designated for removal have structural defects that cannot be cost-effectively or practically treated. The majority of the trees in this category have a large number of dead branches which present a safety hazard. Removal of these branches would leave a severely deformed tree, the live crown would be reduced to the point that mortality was sure, or that the tree is already in irreversible decline. Removal of trees before they are dead and in severe decline helps to prevent property damage or injury, and the tree removal is safer and theoretically less costly for a tree service to remove.
- *Priority 2 Tree Removal:* Trees on public property that are recommended for priority removal should be removed after priority one removals are completed. These trees may be in irreversible decline, but still be structurally sound.
- *Priority 1 Large Tree Pruning:* Trees are recommended for priority one pruning if there is a need to remove hazardous deadwood, hangers, cracked or broken branches. If conditions cannot be determined from the ground, then a lift truck or climber may need to be employed to do a closer inspection of the above ground parts.
- *Priority 2 Small Tree Pruning:* These trees require routine corrective pruning to establish scaffold branches and to raise crown for sidewalk or street clearances. Corrective pruning should be minimal after planting, and should remove crossing, damaged, and extra branches. Pruning for street clearances and sidewalk clearances depends on the length of the crown and growth rate of the tree.
- *Priority 3 Monitor:* Tree has structural defect that cannot be repaired, or is showing minor symptoms of decline. Tree should be monitored in spring after leaf-out and fall before leaf drop and a prescription for care developed.
- *Planting Spot:* This category indicates a vacant planting spot or a stump where a previous street tree had died.

The causes for tree decline and mortality are many and varied. Planting shock or lack of irrigation are the most common causes of mortality for newly planted trees. The next most common cause of mortality is man-caused injury. Weed eater damage, lawnmowers, bicycles tied to trees, trees vandalized, root disturbance, or run over by cars are the most common reasons newly planted trees failed. Insect or disease problems usually are a problem in later years, unless a tree was infected with disease or infested with insects in the nursery.

It is important to remove and replace dying trees quickly to eliminate inoculum from disease or insect infestations, to maintain aesthetic quality, and

Lacey Urban Forest Management Plan

to get a new tree established and growing to maintain some uniformity of the planting.

Maintenance needs by priority is described below. Work should be accomplished by priority. This may require specialized tree contractor to deal with some of the larger hazard trees. Most of the small tree work can be accomplished with city staff.

All small street trees should be inspected on a 3-year cycle. This helps to assure that pruning is accomplished on a timely basis, that damage, decline, mortality, or other problems are addressed quickly. Decline and other insect or disease problems can be identified and control methods implemented before the tree is a total loss.

Individuals that maintain weeds near the bases of trees, mow curb-lawn zones, and do tree maintenance should be trained to recognize tree problems before they result in mortality.

All pruning should conform to the ANSI A300, Standard Practices for Trees, shrubs and Other Woody Plant Maintenance (2001). This is the recognized standard for all tree care. All pruning should be completed by an International Society of Arboriculture Certified Arborist, or be supervised by one. It is recommended that the City of Lacey retain at least one member of the parks maintenance staff that is certified.

Condition of the Urban Forest

A condition rating was assigned to each street tree to help assess the health of the street trees. The ratings are adapted from the *Plant Appraisal Guide* (2000), published by the International Society of Arboriculture. The condition of the foliage (if present), twigs, scaffold branches, stem, and roots is assessed, along with any hardware (stakes, cable and bracing) present in the tree. After the tree is evaluated it is rated as: Good, fair, poor, or dead.

Trees that are rated as dead or poor are usually recommended for immediate removal and replacement. Large trees rated as very poor usually are in irreversible decline due to root disturbance or some other factor. Small trees rated as very poor usually did not establish, or have been severely damaged since planting. Quick replacement of these trees simply gains a year of establishment and growth.

Trees rated as fair and good may need minor cultural care and are expected to be long-term trees. Trees rated as excellent are expected to be long-term trees and require no care at this time.

Approximately 94% of Lacey's trees were rated as fair to good. Based on this data more corrective pruning is needed to develop the crowns on the newly planted trees.

Priority Pruning

Pruning of the safety hazards identified in the inventory should be completed first, followed by routine maintenance pruning. The routine maintenance pruning should be completed in the dormant season between October 1st and February 15th.

All pruning should conform to the ANSI A300 (Part 1)—2008. This is the standard for proper tree care. All pruning should be done by an International Society of Arboriculture Certified Arborist.

When contracting with a professional tree service, it should be specified in the contract that they observe the safety guidelines for tree care operations: ANSI Z133.1 - 2001 -- Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush -- Safety Requirements. American National Standards Institute, Washington, D.C.

Clearance Requirements

The types of situations where trees can interfere with visibility include: signs, sidewalks, buildings, street lights, stop lights, or sight distances for pedestrians and motorists. In all cases trees can be pruned to provide adequate clearances.

Trees and other vegetation should be *monitored annually* to identify these types of safety hazards. The annual inspection of all rights-of-way is recommended to occur about June

1 when the first flush of deciduous tree growth begins to slow. Trees and other vegetation that are close to these signs will begin to obscure site distances and visibility. A second inspection is also recommended for early September, after vegetation growth is complete, but before leaf drop.

The tree that requires clearance pruning should be inspected and trimmed for clearance immediately. This should include native vegetation encroaching onto the streets and sidewalks as well as planted street trees.

Sidewalk overhead clearances should be a minimum of 8', but 10' is recommended. Pruning on smaller trees may need to be done over a 3-4 year period to achieve these clearances and avoid stress on the trees. Trees with thorns are especially a hazard. Generally, trees with thorns should not be planted as street trees. Where pruning for sidewalk clearance dramatically changes the look or shape of the tree, notification of the tree owner is recommended. As an option, they could be notified to prune their own trees to provide clearance with a time-frame before the City completes the work.

Street clearances must be maintained to prevent damage to vehicles and to the trees, and to maintain sight distances.

Lacey Urban Forest Management Plan

Trained city staff will recognize these clearance problems and correct them during routine maintenance. As a rule of thumb, branches should be pruned before they reach a diameter of 2 inches at the branch bark collar. This minimizes the wound size and allows a tree to quickly callus over the wound, protecting tree health.

Where branches of private trees encroach into the city rights-of-way, the city can only prune to the rights-of-way edge. In some cases this will leave stubs or unsightly branches that will die back. To maintain tree health and appearance it is recommended that all pruning cuts be made to the nearest lateral branch. Where pruning beyond the rights-of-way edge should occur to protect tree health, then landowner permission is recommended.

Overhead Utilities

The presence of overhead utility wires was noted for many trees and planting spots. Trees with a mature height of 20 feet or less should be planted under utility lines to avoid costly pruning and deformation of the appearance of trees.



Photo G. Tall growing green ash on Ruddell Road just south of Pacific Ave. SE. Trees require repeated pruning to prevent utility conflicts.

Overhead electrical wires were located over a portion of the existing street trees. Many of the street trees are inappropriate for these locations and will require extensive and repeated pruning to maintain reliability and safety for the public. If these trees are replaced due to mortality or other problems in the future, 'Utility Friendly' trees should be planted in those planting spots. A list of 'Utility Friendly' trees is provided in the section on street tree selections.

Curb Lawn Zone Widths

It is recommended that the designs for all new city streets include a curb lawn zone, the area between the sidewalk and the street, with a minimum width of 5 feet. Six to 8 feet is the optimum width. Currently the average curb lawn zone width is 5.5 feet.

In many cases, especially where large, canopy forming trees are desired; planting the street trees behind the sidewalk is the best location. This moves trees away from the street edge, reducing car damage, pruning for clearances, and will reduce sidewalk damage. Overhead utilities are less of a problem with these planting locations. Private easements for street trees can be obtained.

Maintaining the Safety of the Urban Forest

During the street tree inventory and evaluation, certain maintenance needs were identified for a small number of trees that are required for public safety. These needs include sign clearance, hazard tree removal, pruning, and sidewalk clearance pruning. As this work is completed, *systematic pruning programs* and *tree planting programs* can be considered.



Photo H. View of large stem failure on a bigleaf maple at the community center.

Annual evaluation of larger trees on and adjacent to rights-of-ways is necessary to identify developing hazard trees, and to identify clearance pruning

Lacey Urban Forest Management Plan needs.

Removals

The hazard tree evaluation program in parks has already identified a number of removals that are necessary. Parks and City owned property (utility sites, greenbelts, easements, vacant property) are evaluated by an independent every 3 years for hazard trees. City maintained street trees are pruned for hazards and clearance every 5 years.

The small street trees, and dead trees recommended for removal are less of a hazard, but should be scheduled for replacement.

The average lifespan of an urban street tree varies from 7 to 18 years. Mortality will be ongoing, and replacement should be completed during the next planting season.

Trees that require removal can be removed by city crews or on a lump-sum bid contract with private tree services. It is recommended that all large tree work and other difficult removals be handled by skilled contract tree professionals. Small tree pruning can effectively be handled by city staff.

When crews begin to remove hazard trees, public notices should be posted to avoid concerns by citizens. Much anxiety and public concern can be avoided if citizens understand that only hazard trees are being removed.

Sidewalk Damage

Street trees in Lacey are causing sidewalk heaving and there will need to be annual repair activity anytime trees grow near sidewalks or curbs.

Potential problems with new plantings can be minimized by use of root barriers along curbs and sidewalks to deflect or direct roots deeper. This will defer heaving, and with proper tree selection, can eliminate heaving problems.

Where roots of large native trees or ornamental trees adjacent to sidewalks begin to cause heaving, care must be used to avoid severe damage to the tree. Cutting of large lateral anchor roots can cause stability problems, may cause decay, and will reduce the lifespan of the tree.

Minor heaving can be temporarily repaired with an asphalt bridge between the lifted section of concrete, or the lifted edge can be ground flush. As the deflection of the section continues to rise, replacement of the section will be required. A decision to cut the root or bridge the root must be made at this time. If at all possible it is recommended that root cutting be avoided. Curving the sidewalk, leaving a cutout for the root, or raising the grade of the sidewalk to go over the top of the root is recommended. These decisions must be made on a

Lacey Urban Forest Management Plan

case by case basis. Trees in poor condition, or that would be made hazardous by the activity should be considered for removal.

The City's Public Works Transportation Division has a mini excavator and a vacuum tool called a sidewalk sucker to lift sidewalk panels without breaking them. Once lifted, the crews can prune the roots heaving the sidewalks and then re-grade the subsurface and replace the panel.

Stump Removal

Stump removal is necessary if a new tree will be planted in the same location. If the new tree can be moved to avoid costly stump grinding tree planting costs will be reduced. In cases of disease caused mortality, excavation of the stump is recommended to reduce the inoculum from the pathogen.

The following specifications are to be used to identify an open

- planting spot: A minimum of 4 feet is needed for a plantable area.
- The minimum distance to the adjacent planted trees is 25 feet.
- All planting spots are at least 25 feet away from intersections.
- All planting sites are at least 10 feet away from fire hydrants, driveway, utility poles and street lights.
- All planting sites are at least 10 feet away from any visible or identifiable underground electrical vaults.
- Planting spots with overhead (electrical conductors) or side restrictions for growing space are identified.
- Planting behind the sidewalk is preferable to narrow (4 feet) planting spots in many cases. This may require private easements to establish medium to large street trees.

Knowing the numbers of open spots, coupled with a street tree plan with recommended species easily allows preparation of grant proposals for additional tree planting funds. Having good, demonstrable data on the urban forest will improve success in acquiring grants. These projects are also excellent to get citizen involvement.

Size Class Distribution

All tree diameters were measured 4.5 feet above the groundline (called diameter at breast height or DBH).

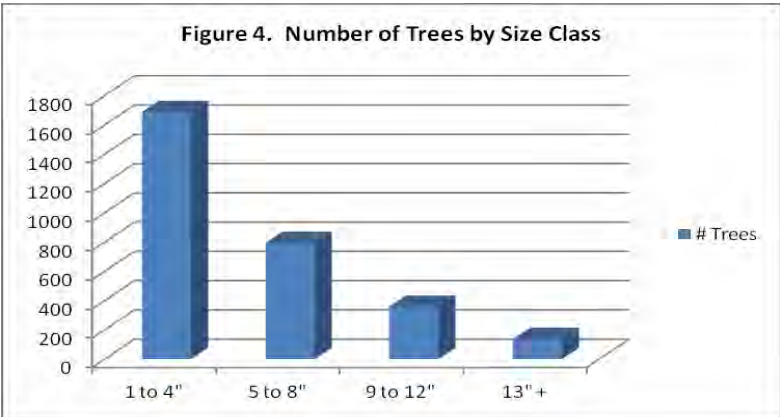


Figure 4 illustrates the young age of the Lacey city maintained street tree population.

The urban forest should have a diversity of size classes as well as species. This helps assure that the entire urban forest does not mature at the same time causing excessive maintenance costs, replanting costs, and major changes in the cities appearance.

The smaller trees grow vigorously and after establishment and early corrective pruning require low maintenance inputs. Ideally the urban forest would have a regular distribution of size classes from small to large trees, as well as a diverse species composition. Immediate replacement of dying trees or newly opened planting spots is recommended. The management practices help to spread and smooth annual maintenance costs over time.

APPENDIX 2

Tree Protection Objectives, Issues and Forester Recommendations for Ordinance Adjustments

Objectives /Activities of an Urban Forestry Program

The following are the basic activities recommended for Lacey's urban forestry program:

Maintaining the safety of the urban forest under management by the City of Lacey. Removing dead and dying trees, pruning trees for traffic and pedestrian clearances, mitigating other hazardous conditions that accomplish this goal.

Maintaining the Health of the Urban Forest will reduce maintenance and replanting cost associated with the trees. Corrective pruning of young trees will eliminate costly pruning in later years, and will protect tree health by eliminating large diameter wounds from delayed corrective pruning. A healthy, properly pruned tree requires protection but very little maintenance.

Perpetuating the Urban Forest through replacement tree planting, planting open planting spots, and filling gaps in forested stands must be done to perpetuate the forest. Trees and stands of trees are dynamic, living things. They live and die, and they respond to management and protection.

Management of the Urban Forest, like other city services is a benefit to the citizens. Public relations are fostered as the city works with adjacent landowners to manage trees on the rights-of-way.

Create public education programs that will assist the Citizens in perpetuating the goals of this plan.

Continue to support the "Tree City USA" designation of the City of Lacey.

Protection Vs Re-planting

Protection of existing trees should be given precedence over replanting in new developments. Native trees should be protected in clusters or in tree tracts as opposed to retaining individuals or a few trees. Projects should be evaluated by a qualified professional forester who has academic and field experience in urban forestry to identify trees for potential retention in new development.

Healthy, long-term trees that are identified to be protected must be fenced during construction to avoid damage to the root protection zone (RPZ). This protection is illustrated and described in III page 73.

Urban Forestry Advisory Board

It is recommended that the city consider the formation of a tree advisory board. The purpose of the board is to review city ordinances, practices, and policies with regard to trees and make recommendations back to council and staff.

The board can help find and recognize historic, rare, or specimen trees and to recognize the individuals who have cared for them. A 'Friend of Lacey Trees' awards can be given to citizens who have done an exceptional job of tree protection, tree planting, or other tree related community service. The tree board generally helps coordinate Arbor Day and other tree related activity. As with any city appointed board, staff time will be required to support the board along with a small budget to purchase plaques, educational materials, tree seedlings, and other items for activities the tree board generates.

Another concept is to appoint Tree Stewards. Tree Stewards promote tree protection, tree planting, tree care, and environmental stewardship in the community. Tree Stewards are provided annual training in different areas of urban forestry and asked to assist with Arbor Day, inventory projects in parts of the City, and for input on ordinance related tree issues. The idea is that the knowledge gained by Tree Stewards is spread through their contacts in the community. They are also a source of ideas, information, and enthusiasm for protection and planting of trees in the community.

Summary

This study found that 43% of Lacey is covered with native forests and planted or ornamental trees, with the remainder being developed.

We found 2,973 planted city maintained street trees and 3,208 private street trees. Few open planting spots occur within city maintained areas. Many open planting spots occur in privately maintained areas.

Street tree maintenance is good, but requires additional corrective pruning on the planted street trees. Species selections for planting, and matching species to site need to be modified. We need to diversify the species mix on Lacey's streets. Ongoing training is recommended and the staff should include at least one International Society of Arboriculture Certified Arborist®.

Based on our evaluation of the urban forest in Lacey, the ordinances, visits with staff and citizens, and maintenance procedures - the following priority is recommended to improve protection and management of the Lacey urban forest:

Lacey Urban Forest Management Plan

- Continue annual maintenance activity on the existing street trees for sign clearance, corrective and clearance pruning, and complete annual hazard tree evaluations.
- Budget adequate annual funding to complete basic maintenance tasks for city street trees and some replanting.
- Continue to require review of all commercial and industrial projects with one or more trees. This is important in cases when only a few Oregon white oaks occur on the site. Tree retention may have an even higher impact in areas devoid of trees. Also consider a minimum percentage area for tree tracts in all types of developments. Language regarding tree removal on private property needs to be clarified.
- Continue to educate the public to prevent improper pruning of required landscape trees. A procedure for inspection of required landscaping for compliance 3 plus years after the bond has been released needs to be established.
- Continue to involve the Lacey contract urban forester in the site plan review process on new projects, require the urban forester attend pre-construction conferences when trees are to be protected on site, and utilize the urban forester more in inspection of required landscaping on completed projects.
- Consider appointing a tree advisory board.
- Create a 'Lacey Friend of Trees' award to be given to citizens, developers, or companies that have taken special care to protect, plant, or maintain significant trees or stands of trees in Lacey.
- Conduct a 'Big Trees in Lacey' contest to find and recognize large or specimen trees in the city.
- All new street tree plantings should be taken from the prescribed species list and matched to the growing space of the planting site. All landscape tree plantings in required landscaping on projects should be taken from the general tree list for Lacey. Other trees can be incorporated in the design upon approval of the site plan review committee.
- Solicit grant funding, corporate donations, and other funds to expand tree planting and maintenance.
- Revise the urban forest management plan every 5 years.

APPENDIX 3

Tree Planting Specifications for Lacey Street Tree Planting Projects

Tree Planting Specifications

I. Description of Work

These specifications include standards necessary for and incidental to execution and completion of planting street trees.

A. Specifications for the planting hole design, tree planting, mulching and watering are included.

B. Protection of existing features. During construction, protect all existing trees, shrubs, and other specified vegetation, site features and improvements, structures, and utilities specified herein and/or on submitted drawings. Removal or destruction of existing plantings is prohibited unless specifically authorized by the owner.

II. Applicable Specifications and Standards

A. *Principles and Practice of Planting Trees and Shrubs*. 1997. International Society of Arboriculture, P.O. Box GG, Savoy, IL 61874

B. *American Standard for Nursery Stock*. 2004. American Association of Nurserymen, Inc. 1250 I Street NC Suite 500, Washington, D.C. 20005

C. *Standardized Plant Names*. 1942. American Joint Committee on Horticulture Nomenclature, Horace McFarland Company, Harrisburg, Pennsylvania. (Second edition).

III. Planting Season

A. Planting shall be done within the following dates:

Balled and Burlaped (B&B) trees and shrubs: October 15 to

May 1st Containerized trees and other: October 1st to May 1st.

Bare rooted trees and shrubs: February 15th to April 15th.

B. Variance: If special conditions exist that warrant a variance in the above planting dates, a written request shall be submitted to the project owner stating the special conditions and the proposed variance. Permission for the variance will be given if warranted in the opinion of project owner.

IV. Planting Locations

A. The landscape contractor (hereafter referred to as Contractor) shall plant at locations to be determined and marked by the owner or other person representing the owner (hereafter referred to as the Owner's Representative).

B. Locations for individual trees will be supplied by the Owner's Representative. In some cases, the location may be inferred from reference to some identifiable field object or from some line that can be constructed in the field.

C. No tree that grows over 25 feet at maturity shall be planted under electrical utility wires.

D. No tree or shrub shall be planted within 10 feet of fire hydrants, driveways, streetlights, or intersections, or as specified by local ordinance.

V. Underground Utility Location

A. The Contractor shall contact the local utility companies for verification of the location of all underground utility lines in the area of the work. The Contractor shall be responsible for all damage resulting from neglect or failure to comply with the requirement.

B. Trees shall not be planted closer than 10 feet from water service connections, sewer laterals, or gas lines, unless so directed by the Owner's Representative. The Contractor shall be responsible for moving trees if planted closer than the specified distance.

VI. Materials

A. Topsoil provided shall be declared by the Contractor to be free from subsoil, roots, stones over 1 inch (2.5 cm) in diameter, herbicides, contaminants, and other extraneous materials. The Contractor shall dispose of materials removed. Topsoil shall be silt loam or loamy sand with 4 to 6 percent organic matter (by weight). Topsoil shall not be used in a frozen or muddy condition. The Contractor shall remove all surplus materials.

Lacey Urban Forest Management Plan

B. Plants shall be true to species and variety specified and nursery-grown in accordance with good horticultural practices under climatic conditions similar to

those in the locality of the project for at least 2 years. They shall have been freshly dug (during the most recent favorable harvest season).

Unless specifically noted, all plants shall be of specimen quality, exceptionally heavy, symmetrical, so trained to favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. They shall be sound, healthy, vigorous, well-branched and densely foliated when in leaf; free of disease and insects, eggs, or larvae' and shall have healthy well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.

Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leaders, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over $\frac{3}{4}$ in (2 cm) in diameter that are not completely closed will be rejected.

Plants shall conform to the measurements specified, except that plants larger than those specified may be used if approved by the Owner's Representative. Use of larger plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.

Caliper measurements shall be taken on the trunk 6 inches (15 cm) above the natural ground line for trees up to and including 4 inches (10 cm) in caliper, and 12 inches (30 cm) above the natural ground line for trees over 4 inches (10 cm) in caliper. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to branch tip. Plants shall be measured when branches are in their normal position. If a range of size is given, no plant shall be less than the minimum size, and no less than 50 percent of the plants shall be as large as the maximum size specified. Measurements specified are minimum size acceptable after pruning, where pruning is required. Plants that meet measurements but do not possess a standard relationship between height and spread, according to the American Standards for Nursery Stock, shall be rejected.

Substitutions of plant materials will not be permitted unless authorized in writing by the Owner's Representative. If proof is submitted in writing that a plant specified is not obtainable, consideration will be given to the nearest available size or similar variety with a corresponding adjustment of the contract price.

C. The plant list at the end of this section is for the Contractor's information only, and no guarantee is expressed or implied that quantities

Lacey Urban Forest Management Plan

therein are correct or that the list is complete. The Contractor shall satisfy himself that all plant materials shown on the drawings are included in his bid.

D. All plants shall be labeled by plant name and size. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered.

Plant labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering.

E. Certificates of Plant Inspections: Certificates of inspection shall accompany invoices for each shipment of plants as may be required by law for transportation. Certificates are to be filed with the Owner's Representative prior to acceptance of the material. Passing inspection by federal or state governments at place of growth does not preclude rejection of plants at the work site.

VII. Selection and Tagging

A. Plants shall be subject to inspection for conformity to specification requirements and approval by the Owner's Representative at their place of growth and upon delivery. Such approval shall not impair the right of inspection and rejection during progress of the work. Inspection outside the state of Washington and Oregon shall be made at the expense of the Contractor. A Contractor's representative shall be present at all inspections.

B. A written request for the inspection of plant material at their place of growth shall be submitted to the Owner's Representative at least 10 calendar days prior to digging. This request shall state the place of growth and the quantity of plants to be inspected. The Owner's Representative may refuse inspection at this time if, in his/her judgment, sufficient quantities of plants are not available for inspection.

C. All plants shall be selected and tagged by the owner at their place of growth. For distant materials, photographs may be submitted for pre-inspection review.

VIII. Digging and Handling Plant Materials

A. Trees designated B&B shall be properly dug with firm natural balls of soil retaining as many fibrous roots as possible in sizes and shapes as specified in the most recent edition of the *American Standard for Nursery Stock*. Balls shall be firmly wrapped with nonsynthetic, rottable burlap and secured with nails and heavy nonsynthetic, rottable twine. Root collar will be apparent at surface of ball. No trees with loose, broken, or manufactured balls will be planted, **except with special written**

Lacey Urban Forest Management Plan

approval before planting.

B. Plants grown in containers shall be of appropriate size for the container as specified in the most recent edition of the *American Standard for Nursery Stock*, and be free of circling roots on the exterior and interior of the root ball.

C. All other types of nursery stock shall also conform to the *American Standard for Nursery Stock*.

IX. Transportation and Storage of Plant Material

A. Fresh dug material is given preference over plant material held in storage. Plant material held in storage will be rejected if excessive growth or dieback of branches has occurred in storage.

B. Branches shall be tied with rope or twine only, and in such a manner that no damage will occur to the bark or branches.

C. During transportation of plant material, the Contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, balls of earth broken or loosened, or areas of bark torn, the Owner's Representative may reject the injured tree(s) and order them replaced at no additional cost to the owner.

D. Plants must be protected at all times from sun or drying winds. Those that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil covered with wet wood chips or other acceptable material, and kept well watered. Plants shall not remain unplanted any longer than 3 days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled with suitable support of the soil ball to avoid damaging it.

X. Mechanized Tree Spade Requirements

Trees may be moved and planted with an approved mechanical tree spade. The tree spade shall move trees limited to the maximum size allowed for the similar B&B root ball diameter according to the *American Standard for Nursery Stock*, or the manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller. The machine shall be approved by the Owner's Representative prior to use. Trees shall be *planted* at the designated locations in the manner shown in the plans and in accordance with applicable sections of the specifications.

XI. Excavation of Planted Areas

A. Locations for plants and outlines of areas to be planted are to be

Lacey Urban Forest Management Plan

staked out at the site. Approval of the Owner's Representative is required before excavation begins. A minimum of 30 percent total planting must be staked out before inspection.

B. Shrub beds are to be excavated to a depth of 1 foot (30 cm) unless otherwise indicated. Ground cover beds are to be excavated to a depth of 6 inches (15 cm), unless otherwise indicated. Tree pits shall be excavated three times wider than the diameter of the ball, unless otherwise specified by the Owner's Representative,

and only as deep as the root ball to be placed in the hole. If initially dug too deep, the soil added to bring it up to the correct level should be thoroughly tamped. The sides of all plant holes shall be sloped and the bottoms horizontal. On slopes, the depth of the excavation shall be measured at the center of the hole. Poor quality subgrade soils shall be separated from the topsoil, removed from the area, and not used as backfill or otherwise spread around in the landscape area. Pits shall not be left uncovered or unprotected overnight.

C. Detrimental soil conditions: The Owner's Representative is to be notified, in writing, of soil conditions that the Contractor considers detrimental to the growth of plant material. These conditions are to be described as well as suggestions for correcting them. Proper water drainage must be assured.

D. Obstructions: If rock, underground construction work, tree roots, or obstructions are encountered in the excavation of plant pits, alternate locations may be selected by the Owner's Representative. Where locations cannot be changed as determined by the Owner's Representative, and where digging is permitted, submit cost required to remove the obstruction to the depth of not less than 6 inches (15 cm) below the required hole depth. Proceed with work after approval of the Owner's Representative.

XII. Planting Operations

A. Plants shall be set at the same relationship to finish grade as they were to the ground from which they were dug. Plants must be set plumb and braced in position until prepared topsoil has been placed around the ball and roots. Plants shall be set so that they will be the same depth 1 year later. The trunk of the tree is not to be used as a lever in positioning or moving the tree in the planting hole.

B. Ropes, strings, and wrapping from the root ball are to be removed after the plant has been set. All waterproof or water repellent wrappings shall be removed from the ball. Remove at least the top half of the wire basket before backfilling.

Lacey Urban Forest Management Plan

- C. The roots of bare root trees shall be pruned at the time of planting to remove damage or undesirable roots (those likely to become a detriment to future growth of the root system). Bare root trees shall have the roots spread to approximate the natural position of the roots and shall be centered in the planting pit. The planting soil backfill shall be worked firmly into and around the roots, with care taken to fill in completely with no air pockets.
- D. When specified by the Owner's Representative, amend the backfill soil by adding 4-6 percent (by weight, 20-35 percent by volume, depending on materials) composted organic matter.
- E. Basins are to be formed around tree and shrub root ball with a raised ring of soil as indicated on drawing.
- F. Planting areas are to be finish graded to conform to grades on drawing after full settlement has occurred.
- G. Plants are to be thoroughly watered immediately after planting.
- H. Any excess soil, debris, or trimmings shall be removed from the planting site immediately upon completion of each planting operation.

XIII. Guying, Staking, Wrapping, Pruning and Mulching

- A. Stake all deciduous trees over 1.5 inch caliper and all conifer trees over 5 feet tall.
- B. Staking and guying shall be completed immediately after planting. Trees up to 2.5 inches caliper are to be staked with two stakes and separate flexible ties as shown on drawings. For larger trees, use 3 guy wires and ground anchors. Ground anchors are to be driven at approximately a 45-degree angle to ground plane and distributed at 120 degree intervals around the trunk. Guying cables, turnbuckles, and hose are to be attached securely until the tree is well supported.
- C. Guying and staking materials: Ground anchors shall be arrowhead shaped earth anchors of malleable iron castings, aluminum castings, or stamped steel. Staking wire shall be pliable 12-gauge galvanized, twisted two strands. Guying cable shall be 5 strand, 3/16 in (5 mm) diameter steel cable. Vertical supporting stakes shall be sound hardwood or pine. They shall be a minimum of 2 x 2 in. (5 x 8 cm) in diameter, 6-8 feet (2.4 m) long, and pointed at one end. Rubber chain-link ties are to be used to secure the tree to the stakes.
- D. Plants are to be pruned at the time of planting and according to best horticulture practices. Pruning of all trees will include the removal of

Lacey Urban Forest Management Plan

injured branches, double leaders, watersprouts, suckers, and interfering limbs. Healthy lower branches and small twigs close to the center should not be removed, except as necessary to clear sidewalks or streets. All pruning cuts shall be clean and smooth, with the bark intact and uninjured at the edges. In no case shall more than 25% of the branching structure be removed, **leaving the normal shape of the plant intact.**

E. All trees, shrubs, and other planting beds will be mulched with a mixture of composted wood chips or bark previously approved by the owner. The composted mulch will be free of materials injurious to plant growth, branches, leaves, roots, and other extraneous matter. The mulch will be 2 to 3 inches deep on trees and

shrubs. The depth of mulch on the planting beds will be 2-3 inches. Mulch must not be placed within 3 inches (8 cm) of the trunks of trees or shrubs.

F. Antitranspirant, if required, shall be an emulsion that provides a protective film over plant surfaces and is nontoxic to all plants used. It shall be delivered in containers of the manufacturer and mixed according to the manufacturer's directions.

XIV. Maintenance of Trees, Shrubs and Vines

A. Maintenance shall begin immediately after each plant is planted and continue until the Owner's Representative has confirmed its acceptance.

B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, tightening and repairing guy and stakes, resetting plants to proper grades and to an upright position, restoration of the planting saucer, and furnishing and applying such sprays or other materials as are necessary to keep planting free of insects and diseases and in vigorous condition.

C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If a plant becomes damaged or injured, it shall be treated or replaced as directed by the Owner's Representative at no additional cost.

D. Watering: Contractor shall irrigate, as required, to maintain vigorous and healthy tree growth. Over-watering or flooding shall not be allowed. Contractor shall use existing irrigation facilities and furnish any additional material, equipment, or water to ensure adequate irrigation. During periods of restricted water usage, all governmental regulations (permanent and temporary) shall be followed. Should modifications of existing irrigation systems and/or schedules facilitate adherence to these regulations, the Contractor shall notify the owner of the suggested modifications. The Contractor may have to transport water from other sources when irrigation systems are unavailable.

XV. Acceptance

A. The Owner's Representative shall inspect all work for acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection.

B. Acceptance of plant material by the Owner's Representative shall be for general conformance to specified size, character, and quality and shall not relieve the Contractor of responsibility for full conformance to the contract documents, including correct species.

C. Upon completion and reinspection of all repairs or renewals necessary in the judgment of the Owner's Representative, the Owner's Representative shall certify in writing that the work has been accepted.

XVI. Acceptance in Part

A. Work may be accepted in parts when the Owner's Representative and Contractor deem that practice to be in their mutual interest. Approval must be given in writing by the Owner's Representative to the Contractor verifying that the work is to be completed in parts. Acceptance of work in parts shall not waive any other provisions of this contract.

XVII. Guarantee Period and Replacements

A. The guarantee period for trees and shrubs shall begin at the date of acceptance.

B. The Contractor shall guarantee all plant material to be in a healthy and flourishing condition for a period of 1 year from the date of acceptance.

C. When work is accepted in parts, the guarantee periods extend from each of the partial acceptances to the terminal date of the guarantee of the last acceptance. Thus, all guarantee periods terminate at one time.

D. The Contractor shall replace, without cost, as soon as weather conditions permit, and within a specified planting period, all plants determined by the Owner's Representative to be dead or in an unacceptable condition during and at the end of the guarantee period. To be considered acceptable, plants shall be free of dead or dying branches and branch tips and shall bear foliage of normal density, size, and color. Replacements shall closely match adjacent specimen of the same species. Replacements shall be subject to all requirements stated in the specifications.

E. The guarantee of all replacement plants shall extend for an additional

Lacey Urban Forest Management Plan

period of 1 year from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of the said extended guarantee period, the Owner's Representative may elect subsequent replacement or credit for that item.

F. The Contractor shall make periodic inspections, at no extra cost, during the guarantee period to determine what changes, if any, should be made in the maintenance program. If changes are recommended, they shall be submitted in writing to the Owner's Representative.

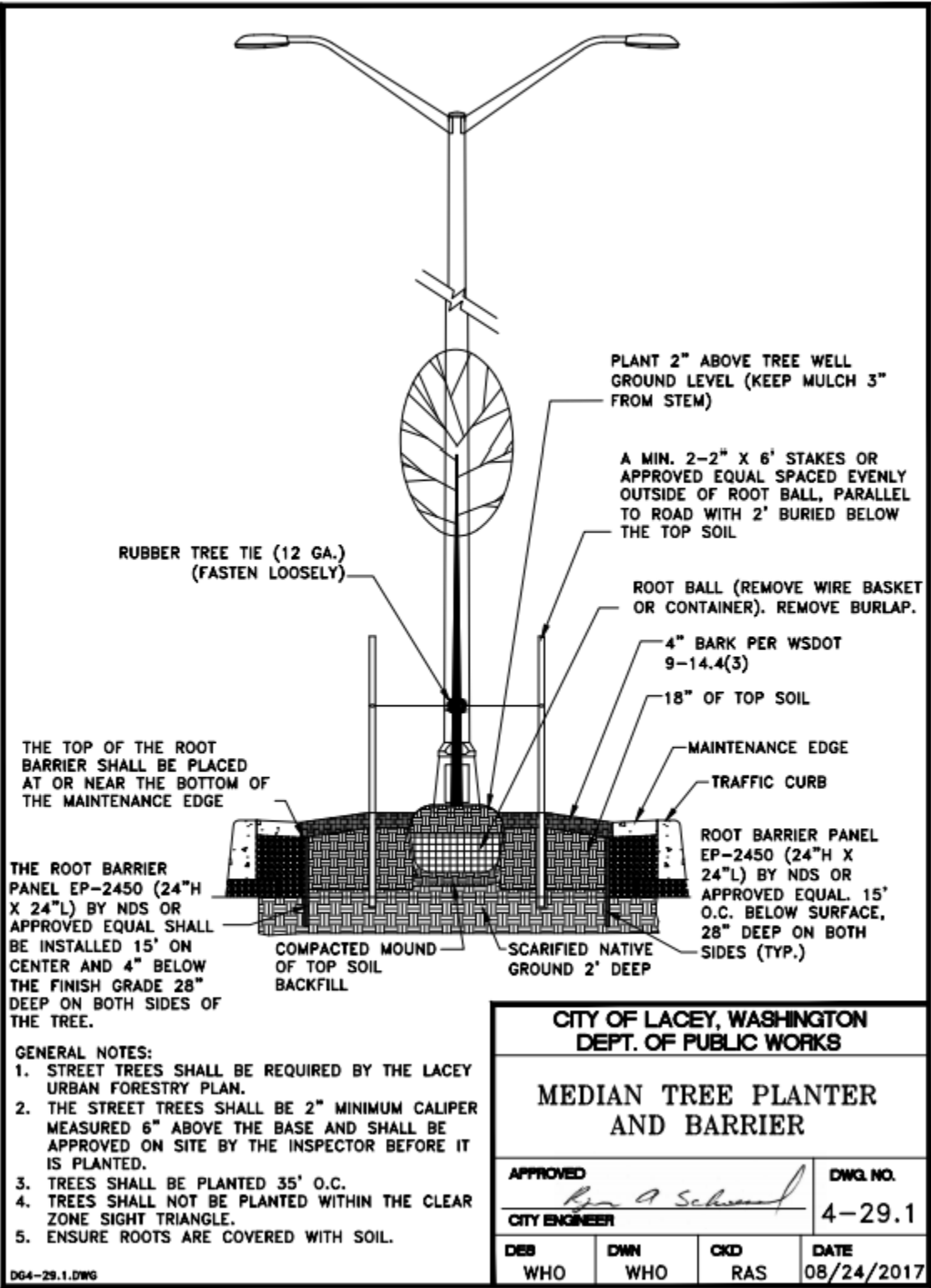
XVIII. Final Inspection and Final Acceptance

A. At the end of the guarantee period and upon written request of the Contractor, the Owner's Representative will inspect all guaranteed work for final acceptance. The request shall be received at least 10 calendar days before the anticipated date for final inspection. Upon completion and reinspection of all repairs or renewals necessary in the judgment of the Owner's Representative at that time, the Owner's Representative shall certify, in writing, that the project has received final acceptance.

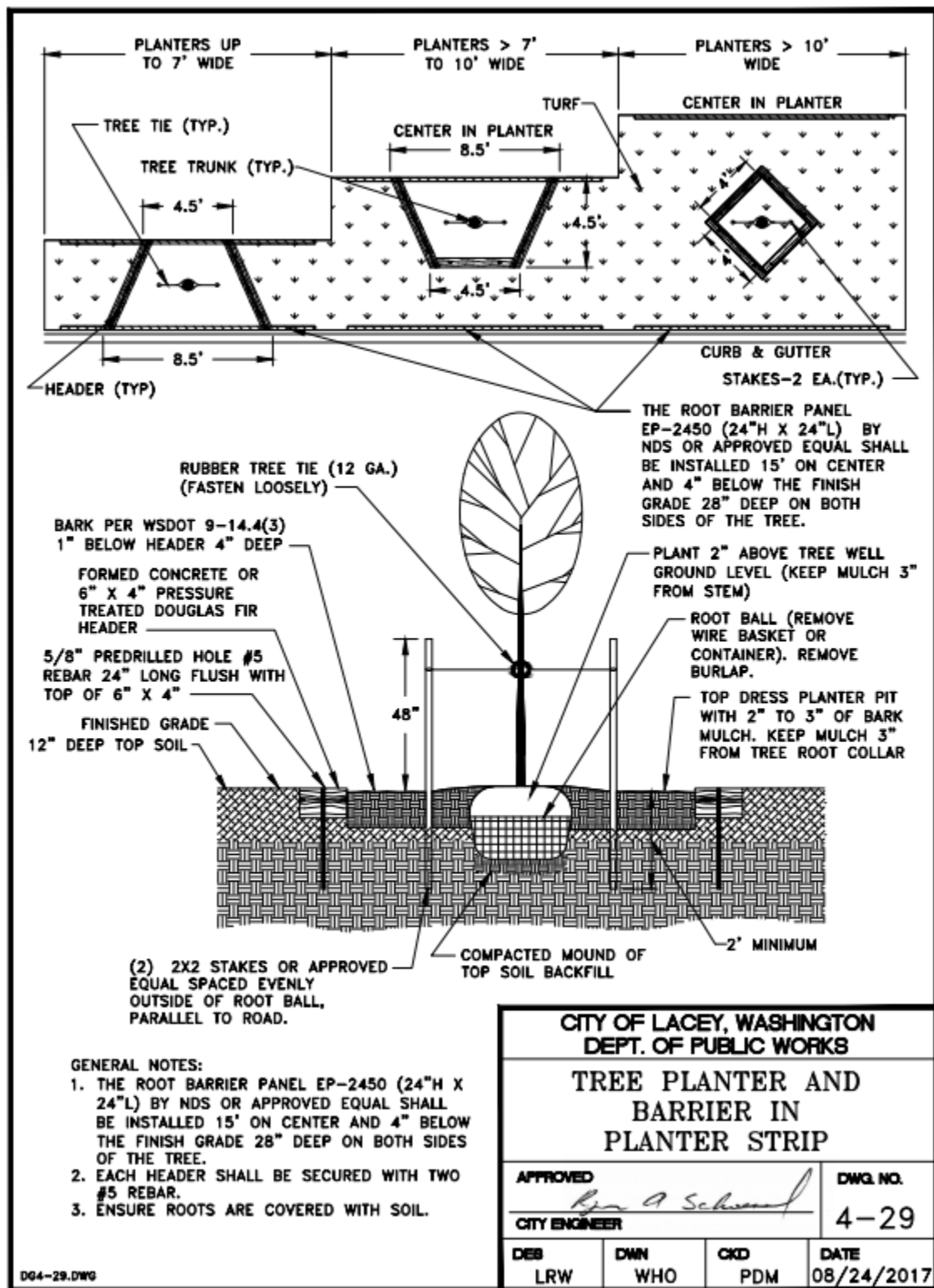
XIX. Planting Diagram STREET TREE PLANTING DETAIL

The City of Lacey Development Guidelines and Public Works Standards dictate street tree planting requirements. Drawing Numbers 4-29 and 4-30 in Chapter 4 Transportation are referenced below.

Lacey Urban Forest Management Plan



Lacey Urban Forest Management Plan



APPENDIX 4

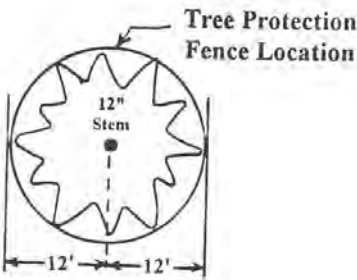
Tree Protection Guidelines

Pacific Northwest Native Trees

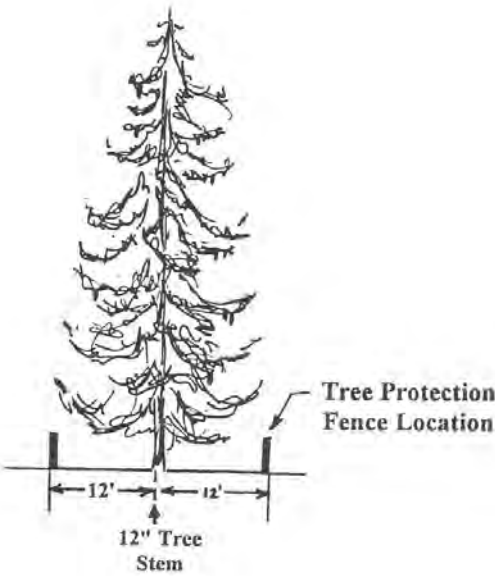
TREE ROOT PROTECTION ZONES

The root protection zone (RPZ) for Pacific Northwest native trees extends a distance of one (1) foot for every inch of tree diameter, measured 4.5' above the ground line. For example, the RPZ for a 12" diameter tree has a radius of 12' measured from the center of the tree stem. Ornamental or other high value or large trees should have the RPZ determined on a case by case basis.

TOP VIEW

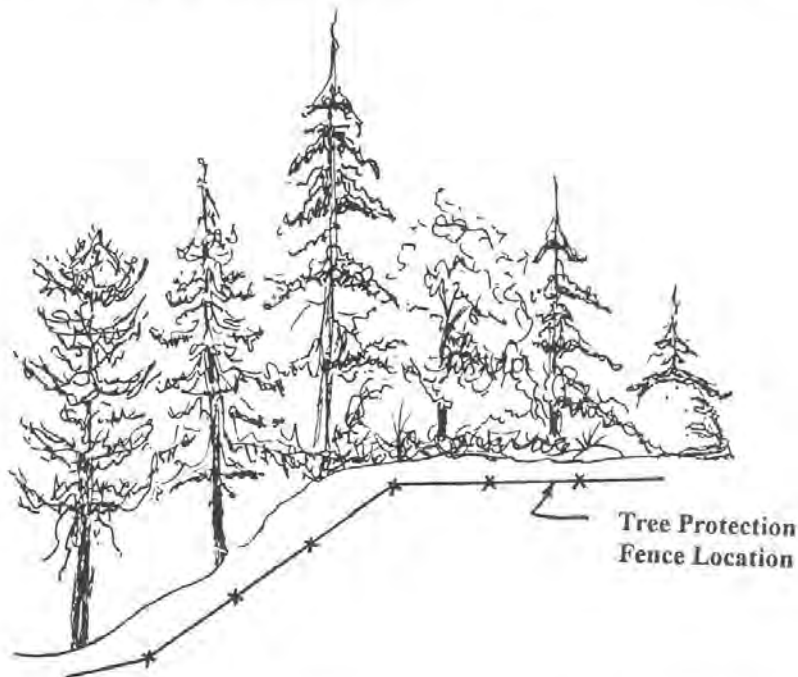


SIDE VIEW



Lacey Urban Forest Management Plan

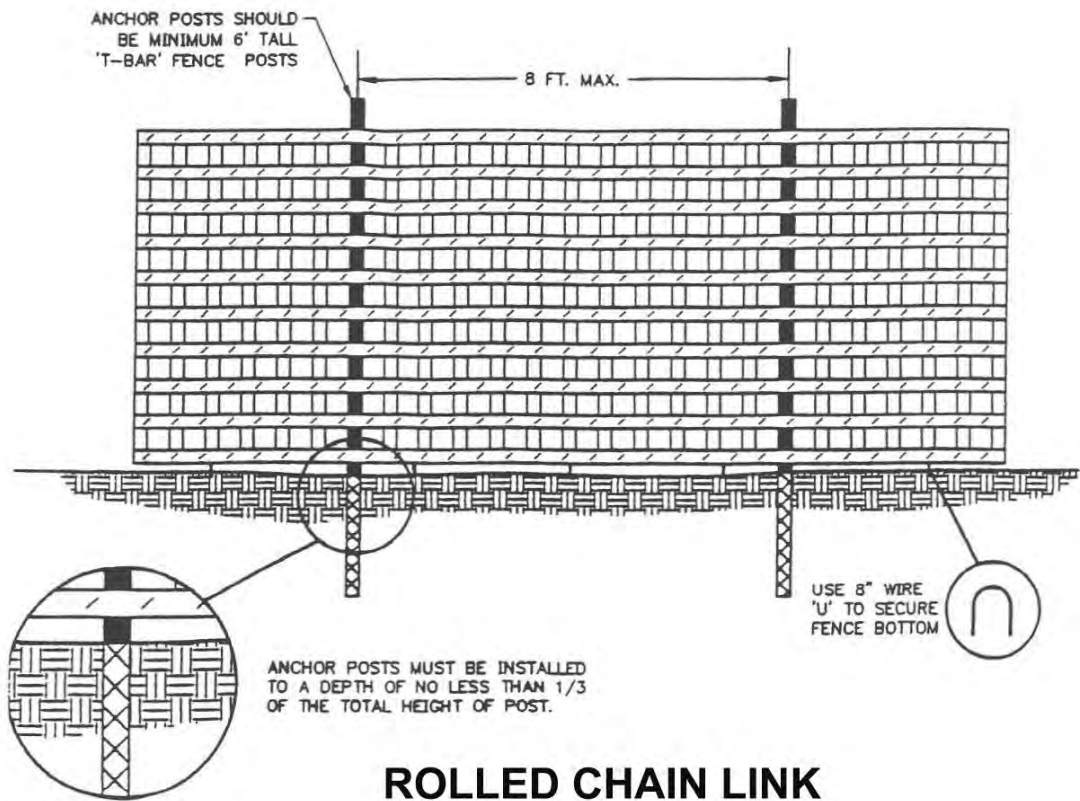
The RPZ for the edge of a forested area is determined using the diameters of the dominant edge trees, meandering the tree protection fence to correspond with the required RPZ distances.



The tree protection fence must be a minimum of 4' tall and be made of orange mesh plastic or chain link depending on recommendations in the tree plan. Posts must be T-top metal fence posts or a minimum 5/8" diameter rebar driven well into the soil. Posts should be spaced a maximum of 10' apart.

The fence should be maintained throughout the construction and grading, and not be removed until final landscaping is in progress. At no time should equipment enter into the RPZ and all brush clean-up should be completed by hand to prevent disturbance to native groundcovers. No cuts or fills, utility trenching, modifications to drainage, or concrete rinse water should impact the RPZ. No wires, cables, or other devices should be attached to protected trees during construction.

If impacts must occur within the RPZ, contact Washington Forestry Consultants prior to the operations to determine the proper procedure to protect the tree's health.



ROLLED CHAIN LINK

THE TREE PROTECTION FENCE SHOULD BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND GRADING, AND NOT TO BE REMOVED UNTIL FINAL LANDSCAPING IS IN PROGRESS. AT NO TIME SHALL EQUIPMENT ENTER INTO THE ROOT PROTECTION ZONE (RPZ). ALL BRUSH CLEANUP WITHIN THE RPZ SHOULD BE COMPLETED BY HAND TO PREVENT DISTURBANCE OF NATIVE GROUND COVERS NO CUTS OR FILLS, UTILITY TRENCHING, MODIFICATIONS TO DRAINAGE, OR CONCRETE RISE WATER SHOULD IMPACT THE RPZ. NO WIRES, CABLES, OR OTHER DEVICES SHOULD BE ATTACHED TO PROTECTED TREES DURING CONSTRUCTION.

IF IMPACTS MUST OCCUR WITHIN THE RPZ, CONTACT WFCI PRIOR TO THE OPERATIONS TO DETERMINE THE PROPER PROCEDURE TO PROTECT THE TREE'S HEALTH.

TREE PROTECTION FENCE DETAIL



City of Lacey

APPENDIX 5
COMPREHENSIVE STREET TREE PLAN

Introduction

The City of Lacey’s “physical and aesthetic character” will be preserved and enhanced with a long-term plan providing street tree ‘themes’ and space for trees. This street tree plan, coupled with creative landscape plantings and preservation of native trees in new developments, parks, critical areas, open spaces, and residential lots will insure that the environmental health, economic, and aesthetic benefits of trees to a community grow with time

Trees are one of the most useful design elements on individual projects, but must be planned on a community wide basis so that diverse elements of the entire city are linked. This linkage cannot possibly be achieved if urban forestry planning proceeds on a project by project basis. Space for trees must be created to achieve the long-term benefits that trees provide for the entire community.

Goals of the Comprehensive Street Tree Planning Process

The following are the goals of the street tree planning process:

1. Modify street standards to provide space for trees.

2. Modify street tree design and planting guidelines to provide for long-term development and health of the trees.
3. Update the tree selection list to provide durable, long-term street trees.
4. Require street trees to be planted on all public and private streets, and in all new industrial, commercial, and residential development.
5. Provide the budget necessary to maintain street trees.
6. Aggressively solicit funding to bring existing major and minor arterials up to this long-term plan.

The Street Tree Planning Process

The process of street tree planning encompasses all aspects of street design, soils and tree biology, planting, maintenance, and ordinances that affect street trees.

Planting Design Patterns (Themes)

There are four general designs for planting trees in the community. The type of design depends upon space available, both above and below ground, presence of other native tree stands, the character of the area, and effect desired. This approach was used by WFCI to develop the Hawks Prairie Annexation Area Beautification Plan in 1992.

1. **Formal Design:** This approach is strongly advocated to provide spatial definition to street corridors, and continuity between different types of areas within the city. This type of planting scheme works well in grid type street designs and long, linear corridors that lack space for groupings of trees. Trees are normally planted in rows. Species diversity is usually limited, but not so limited that monocultures are created.
2. **Informal Design:** This approach utilizes clustering, planting a variety of species, with irregular spacing intervals by design, or because of space limitations. This design is more often applicable in suburban areas or newly developing areas where space can be created on and off of rights-of-ways for tree plantings. It can however, be used in virtually every zone of the city achieving more species diversity. Informal plantings are most common in parks, and along park corridors.
3. **Combined Design:** In some cases, informal plantings can be used to break-up the more formal rows of trees, where space is provided. This is especially useful in commercial and industrial areas to help break up the moonscape of asphalt and buildings. Plant size, shape, color, seasonal flowering, fall coloration and growth rates are the most critical factors to consider when combining planting designs.
4. **Wildlife Design:** This concept utilizes clusters, layers of vegetation, and a variety of species of trees and shrubs to attract songbirds and small mammals. This design is best utilized near critical areas or other open spaces, and in parks. Safety and security must be considered when creating these types of dense plantings. Most trees with higher value for wildlife trees are not suitable for the street environment due to size, form, or fruit production.

Mature Tree Size

Street tree plantings are limited by space. Large trees require wide planter strips or areas for the tree roots to explore to avoid damage to curbs, sidewalks, and underground utilities. Power lines, adjacent buildings, overhanging awnings, and vehicle clearances are the most common above ground restrictions to growing space. Planting a tree with space to achieve its mature size will greatly increase the aesthetics and useful life of the street tree, while dramatically reducing the maintenance costs.

Longevity of the Species

Communities must fight the urge to plant fast growing tree species such as soft maples, poplar, and birch. Generally the fast growing tree species have shorter life-spans, are more easily damaged by storms, and cause more damage to curbs and sidewalks. This results in higher maintenance costs, requires replacement of trees years sooner, and upsets the visual and spatial continuity of the planting. Species such as Norway and sugar maple, linden, northern red and other oaks, and ash species tend to be more durable long-term trees.

Tree Character

The color of summer and fall foliage, presence of flowers, shape of the crown, color of bark, type of foliage and habit of branches (weeping, upright) give trees their color, texture, and form. These characteristics, along with size, longevity and growing space should be considered when selecting trees for all projects.

These tree characteristics should complement building architecture, define streets and sidewalks, accent adjacent landscaping, and add diversity along Lacey streets.

Trees are defined as having form that is:

1. Columnar
2. Round- full crowned, or spreading (upright, oval, globose)
3. Pyramidal (conical)
4. Vase shaped
5. Weeping
6. Irregular
7. Multi-stemmed
8. Fountain

Multi-stemmed trees are less desirable for street trees due to line-of-sight obstruction and sidewalk clearances. In most cases, tall growing trees are best since it is easy to raise crowns for ground and vehicle clearances. Signs for adjacent businesses can be exposed by crown raising. Monument-style signs work well with trees.

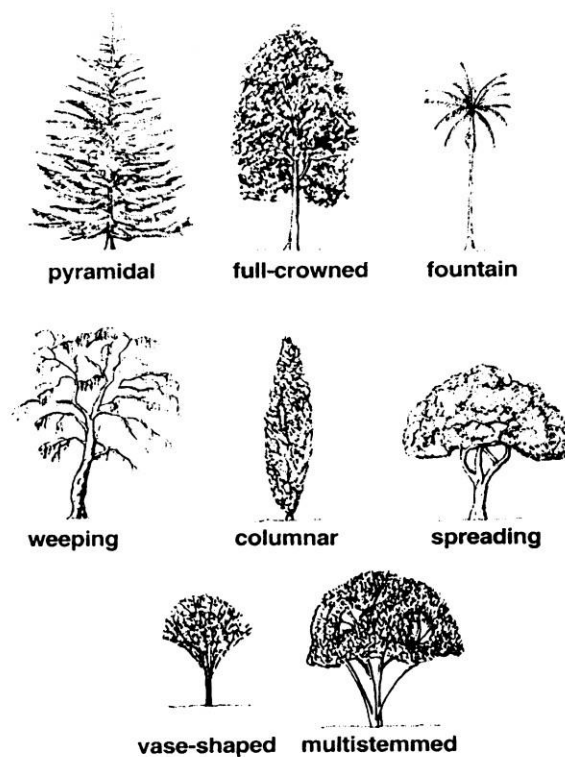


Figure 10. Illustration of Tree Shapes.

The form is critical in selecting trees to fit the growing space, and providing amenities such as screening of incompatible land uses or unsightly buildings, protecting views of vistas or signs, or lining streets in formal designs.

The summer color of a tree generally includes hues of green or shades of red or maroon. Reddish color summer foliage is used to break up the monotony of a formal, linear street tree planting, or accenting an informal design. Long rows of reddish foliage are considered more monotonous than facades created by tall, green canopies.

Fall color is more often considered when selecting seasonal color. Contrasting yellow fall coloration with occasional red or orange colored trees (or vice versa) catches the eye and stirs the 'ooh and aah' emotion common to the finale of a fireworks display.

The texture of a tree is not just apparent between conifers and deciduous trees. It varies greatly between deciduous tree species with simple leaves of differing shapes such as oaks and maples, to compound, bi- and tri-pinnately compound leaves on ashes, locusts, and mimosa. Subtle color differences accentuate the differences between leaf shapes.

Conifers also vary greatly in texture. Needle color, length, density, shape, and presence of cones create startling contrasts between tree species. Consider the

Lacey Urban Forest Management Plan

differences between western red cedar, western hemlock, Douglas-fir, noble fir, and western white pine. All are strikingly different and can create attractive clusters in informal, combined, or wildlife plantings. When combined with deciduous accent trees, year-round beauty is created.

Hardiness to the Pacific Northwest

The temperate climate of Lacey (hardiness zones 7-8-USDA Hardiness Zone Map) allows many tree species to thrive, though some insect and disease populations also are well suited to the climate. Most of our common and most valued street tree species are native to the Midwestern and eastern United States.

Genetic selection is constantly improving the trees available from nurseries, as is the knowledge of growing them. Some cultivars of Pacific Rim species further improve the disease resistance of small trees available for use on Lacey streets.

Diversity of Street Trees

It is very important to avoid over planting a single species. We learned from Dutch elm disease and Chestnut blight to populate our cities with a diversity of tree species. Threats from ash decline, an actinomycete that threatens red maple, sudden oak death, oak wilt, gypsy moths, and other maladies will require that urban foresters be vigilant.

Current Tree Conditions

Lacey is currently stocked with remnant second-growth conifer stands of the *Tsuga heterophylla* forest type. Douglas-fir, western red cedar, western hemlock, and grand fir are the dominant conifers. The deciduous associates include bigleaf maple, red alder, cherry, and black cottonwood.

Planted ornamental and native trees occur in residential and commercial properties, and a scattering of public street trees occur on major and minor arterials. Most of the older neighborhoods do not have street trees. In many cases, street designs did not provide space for them.

In commercial areas, sidewalks usually abutted the street on both sides, with occasional medians, planter strips, or other variations in design. If trees were planted, they were planted on private property behind the sidewalk. In many cases, this did not occur or plantings have failed or been removed over time.

Where trees were planted on commercial projects, the most common species encountered were flowering cherries and red maple. In virtually all cases these trees had been topped relegating them to the status of an overgrown shrub.

In short, the long-term outlook for Lacey's inventory of older street trees is poor. The species monoculture of flowering plum and the lack of continuity in plantings

Lacey Urban Forest Management Plan
will not form the linkages and tree-lined streets until additional plantings occur.

Recent Plantings

Recently, the newer subdivisions have been stocked with more durable, long-term tree species. Ash and Norway maple varieties, northern red oak, littleleaf linden, callary pear, and red maple, all better street tree species, appear to dominate the streetscape in these areas. Planter strips are being provided in many cases; however there are still many open planting spots.

The same is true for the major and minor arterials. Past losses of planted trees have created open planting spots, species were varied within short distances, street designs changed with no space for trees, stands of native trees encroaching on street rights-of-ways, and/or buildings abutting the street have prevented the visual and spatial unity created by rows of street trees.

Soils in Lacey

Most soils in Lacey tend to be moderately well- or somewhat excessively drained. Pockets of poorly drained soils occur in some drainages or wetlands. These soil types allow a wide variety of trees to be grown as street trees, often with only the addition of organic matter, water, and nutrients to provide an excellent growing media.

In the cases where trees will be planted in amended fill or disturbed or compacted soils, soil tests should be taken prior to planting of street trees to insure that the nutrient content, pH, water holding capacity, organic matter content, and bulk density will support healthy tree growth. Where hardpans occur, the pan should be fractured under the tree planting spot to allow drainage and added rooting zone. In all cases, supplemental irrigation will be required for at least 3 years after planting to re-establish the roots lost during transplanting.

Microclimatic Considerations

Street trees planted adjacent to native forest stands may need to be more shade tolerant than trees planted in open areas. Littleleaf linden and Norway maple are examples of more shade tolerant species.

Low points in the topography may be more susceptible to frost (frost pockets) than slopes or flats. Damage may occur to southern varieties of street trees in these areas. Other microclimatic features that may negatively impact trees include cold air drainages, areas where wind tunnel effects develop, poorly drained soils, or areas downwind of industry. Other types of pollution or air flow patterns may cause localized tree damage.

Tree Selection

The following selection of trees in Table 1 is suitable for planting landscape trees within the city of Lacey. Recommended street tree species are listed in the City of Lacey Development Guidelines and Public Works Standards. This list includes large, medium, and small size trees for planting in all types of growing spaces. Species of flowering trees are selected based upon their colors and resistance to insect and disease problems, and low amounts of plant debris.

Species include red, orange, maroon, and yellow fall coloration. There is however, a great variation as to the timing and interval of fall leaf drop. For example, green ash cultivars turn yellow and drop their leaves within a week, while cultivars of white ash will have maroon leaf color, and may persist for 2-3 weeks. Unfortunately, leaf drop is not something that can be controlled if diversity is desired in street tree populations.

Trees that hold and drop leaves all winter long (such as pin oak and sweetgum) are to be avoided. Severe damage has occurred to sweetgums from early snowfalls and ice storms. Most sweetgum varieties will hold their leaves until the end of December (occasional exceptions). While their fall coloration is exceptional, planting more than a few accent trees should be avoided until cultivars with earlier leaf drop are available.

The following is a general list of tree species that should be considered Lacey's Street Tree List. All commercial, industrial, and residential projects should utilize this list. Selections should be in concert with the continuity provided by existing trees planted on adjacent portions of the street. Where existing street trees are of an undesirable, unhealthy, or inappropriate species, consideration should be given to re-treeing the entire area.

In short, trees can be chosen on a project basis, but must fit the overall plan for what has already been planted, or will be planted as part of the overall comprehensive street tree plan. More specific street tree themes will be provided for all major and minor arterials, and collectors in Table 2.

Lacey Urban Forest Management Plan

Table 1. General list of trees for Lacey.

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Large >50' Tall					40-50'
Sugar Maple	<i>Acer saccharum</i>	Commemoration or Bonfire	60'	35'	
European Beech	<i>Fagus sylvatica</i>		50'	35'	
Rivers Purple Beech	<i>Fagus sylvatica</i>	Riversii	50'	40'	
Autumn Purple Ash	<i>Fraxinus americana</i>	Autumn Purple	50'	35'	
Tuliptree	<i>Liriodendron tulipifera</i>		70'	35'	
Scarlet Oak	<i>Quercus coccinea</i>		60'	40'	
Northern Red Oak	<i>Quercus rubra</i>		70'	45'	
Oregon White Oak	<i>Quercus garryana</i>		120'	100'	
Medium-Narrow Crowns 40-50' Tall					25-35'
Parkway Maple	<i>Acer platanoides</i>	Columnar-broad	40'	25'	
Armstrong Red Maple	<i>Acer rubrum</i>	Armstrong	45'	15'	
Bowhall Red Maple	<i>Acer rubrum</i>	Bowhall	40'	15'	
Columnar Tuliptree	<i>Liriodendron tulipifera</i>	Fastigiatum	50'	15'	
Fastigate Beech	<i>Fagus sylvatica</i>	Fastigiata	45'	15'	
Skyrocket Oak	<i>Quercus robur</i>	Fastigiata	45'	15'	
Medium – Wider Crowns 40-50' Tall					35-40'
Norway Maple	<i>Acer platanoides</i>	Emerald Queen	45'	40'	
Red Maple	<i>Acer rubrum</i>	October Glory	45'	35'	
Red Horsechestnut	<i>Aesculus x carnea</i>	Briotti	40'	35'	
Katsura Tree	<i>Cercidiphyllum japonicum</i>		40'	40'	
Summit Ash	<i>Fraxinus pennsylvanica</i>	Summit	45'	25'	
Patmore Ash	<i>Fraxinus pennsylvanica</i>	Patmore	45'	35'	
Autumn Gold Ginkgo	<i>Ginkgo biloba</i>	Autumn Gold	40'	30'	
Honeylocust	<i>Gleditsia triacanthos</i>	Shademaster	45'	35'	
Littleleaf Linden	<i>Tilia cordata</i>	Greenspire	40'	30'	
Small Trees <35' Tall					30-40'
Trident Maple	<i>Acer buergerianum</i>		20'	20'	
David's maple	<i>Acer davidii</i>		30'	25'	
Flame Maple	<i>Acer ginnala</i>	Flame	20'	20'	
Paperbark Maple	<i>Acer griseum</i>		25'	20'	
Apollo Maple	<i>Acer saccharum</i>	Barret Cole	30'	15'	
Tatarian Maple	<i>Acer tatarian</i>		25'	20'	
Norwegian Sunset Maple	<i>Acer truncatum</i> x <i>A. platanoides</i>	Keithsform	35'	25'	
Pacific Sunset Maple	<i>Acer truncatum</i> x <i>A. platanoides</i>	Warrenred	30'	25'	
Pyramidal European Hornbeam	<i>Carpinus betulus</i>	Fastigate	35'	25'	
American Hornbeam	<i>Carpinus caroliniana</i>		25'	20'	
Japanese Hornbeam	<i>Carpinus japonica</i>		20'	15'	
Eastern Redbud	<i>Cercis Canadensis</i>	Forest Pansy	20'	25'	

Lacey Urban Forest Management Plan

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Pink Flowering Dogwood	<i>Cornus florida</i>	Rubra	20'	20'	
Chinese Kousa Dogwood	<i>Cornus kousa</i>	Chinensis	20'	20'	
Thornless Cockspur Hawthorn	<i>Crataegus crus-galli</i>	Inermas	25'	25'	
Cascara	<i>Rhamnus purshiana</i>		20'	20'	
Tricolor Beech	<i>Fagus sylvatica</i>	Roseomarginata	30'	20'	
Goldenrain Tree	<i>Koelreuteria paniculata</i>		30'	30'	
Rustica Rubra Saucer Magnolia	<i>Magnolia soulangiana</i>	Rustica Rubra	20'	20'	
Flowering Crabapple	<i>Malus spp.</i>	Snowdrift, Red Baron, Prairiefire	20'	20'	
Tschonoskii Crabapple	<i>Malus spp.</i>	Tschonoskii	30'	15'	
Black Tupelo	<i>Nyssa sylvatica</i>		30'	20'	
Sourwood	<i>Oxydendron arboreum</i>		35'	20'	
Parrotia	<i>Parrotia persica</i>	Persian Spire, JL Columnar, Ruby Vase or Vanessa	30'	15-20'	
Flowering Plum	<i>Prunus cerasifera</i>	Thunder-cloud	20'	20'	
Sargent Cherry	<i>Prunus sargentii</i>		30'	30'	
Snowgoose Cherry	<i>Prunus spp.</i>	Snowgoose	20'	20'	
Callery Pear (not for street tree use)	<i>Pyrus calleryana</i>	Redspire or Cleveland Select	35'	25'	
Japanese Stewartia	<i>Stewartia pseudocamellia</i>		30'	20'	
Japanese Snowbell	<i>Styrax japonicus</i>		25'	25'	
Redmond Linden	<i>Tilia americana</i>	Redmond	35'	25'	
Small Trees – Narrow <35' Tall					25-30'
Douglas Maple	<i>Acer glabrum</i>		25'	15'	
Rocky Mt. Glow Maple	<i>Acer grandidentatum</i>	Schmidt	25'	15'	
Crimson Sentry Maple	<i>Acer platanoides</i>	Crimson Sentry	25'	15'	
Golden Desert Ash	<i>Fraxinus oxycarpa</i>	Aureafoia	20'	18'	
Galaxy Magnolia	<i>Magnolia 'Galaxy'</i>	Galaxy	30'	15'	
Spire Cherry	<i>Prunus x hillieri</i>	Spire	30'	10'	
Red Cascade Mt. Ash	<i>Sorbus americana</i>	Dwarfscrown	18'	8'	
Tree Lilac	<i>Syringa meyeri</i>	Palibin	7'	5'	

*Other species or cultivars may be appropriate but must be approved by the City of Lacey.

Lacey Urban Forest Management Plan

If conifers are used in informal plantings, then the following species are appropriate for use in Lacey:

Western red cedar (*Thuja plicata*)

Mt. Hemlock (*Tsuga mertensiana*)

Douglas-fir (*Pseudotsuga menziesii*)

Canada Hemlock (*Tsuga canadensis*)

Western Hemlock (*Tsuga heterophylla*)

Giant sequoia (*Sequoia gigantea*)

Alaska Yellow Cedar (*Chamaecyparis nootkatensis* and 'Pendula')

Austrian pine (*Pinus nigra*)

Deodar Cedar (*Cedrus deodara*)

Noble Fir (*Abies procera*)

Shore Pine (*Pinus contorta* var. *contorta*)

Western white pine (*Pinus monticola*-blister rust resistant cultivars)

Blue Atlas Cedar (*Cedrus atlantica* 'Glauc')

Serbian Spruce (*Picea omorika*)

Dawn Redwood (*Metasequoia glyptostroboides*)

Incense Cedar (*Calocedrus decurrens*)

Tree species specifically **forbidden** for planting in the City of Lacey:

Silver Maple (*Acer saccharinum*)

Boxelder (*Acer negundo*)

American Sycamore (*Platanus occidentalis*)

London Planetree (*Platanus x acerifolia*)

Red Sunset Maple (*Acer rubrum* 'Red Sunset')

Sycamore Maple (*Acer pseudoplatanus*)

Sweetgum (*Liquidambar styraciflua*)

Lombardy Poplar (*Populus nigra* 'Italica')

Silver Poplar (*Populus alba*)

Black Locust (*Robinia pseudoacacia*)

Tree of Heaven (*Ailanthus altissima*)

Scotch pine (*Pinus sylvestris*)

Tree species discouraged:

Elms (*Ulmus* spp.)

European White Birch (*Betula pendula*)

Willows (*Salix* spp.)

Leyland Cypress (*Cupressus x leylandii*)

Colorado Blue Spruce (*Picea pungens*)

Callery pear (*Pyrus* spp.) as street trees

Lacey Urban Forest Management Plan

All trees planted as street trees and other landscape trees in Lacey should meet the standards defined as the American Standard for Nursery Stock (ANSI Z60-1-2004). This standard specifies height, caliper, and rootball diameter standards for nursery stock. It also provides standards for container stock and shrubs.

In addition to specifying that stock meet the ANSI standard, the stock should have 1) strong central leaders for all but small, spreading trees, 2) show evidence of cultural pruning by the nursery, including corrective pruning and crown raising, 3) be free of damage from nursery lifting and shipping to site, 4) be free of insects, diseases, and other pests, and 5) the rootball should be intact, not broken from rough handling.

The trees should not be picked up from the nursery until time to plant the trees. Most project sites are not set up to protect trees from freezing temperatures, drying, vandalism, theft, and other maladies. If they are brought in early, all balled and burlap material should have rootballs covered with sawdust or clean woodchips, and irrigation must be provided daily in absence of rains (except during the dormant season). During the dormant season the woodchips or sawdust must just be kept moist. Container stock must be irrigated daily during the growing season. The trees must be monitored closely. Holdover time should be minimal (less than 1 week if possible).

Trees must be handled carefully when they arrive from the nursery to avoid stem and branch damage, and to avoid breaking the rootball. Plan the operation to minimize handling of the trees. If the rootball is broken, then consider that the tree is now a bare root tree, and the potential for survival and rapid establishment has been greatly reduced. Do not accept broken root balls from the nursery.

If trees are included as part of a contract, provide detailed specifications to prevent planting of inferior or damaged trees. Do not be afraid to reject trees due to poor quality. A detailed tree specification for use on projects is provided in Appendix III.

To help insure that proper size of high quality trees of the desired species are procured for street projects, it is recommended that the City of Lacey procure their own trees and bid only the installation of the trees on projects. For large future projects, it is recommended that a reputable nursery be contracted to provide the species, quality, and numbers of trees needed for the project. Tree quality will be greatly improved and the street tree design plan will continue to move in the planned direction.

Street Tree Themes

The following street tree themes are recommended to provide tree-lined corridors, canopies over the streets, and linkages between differing zones in the city. Detailed descriptions are provided for what were determined to be the highest need, and highest profile areas. The remainder of the arterials and collectors are described in Table 3.

Martin Way – Desmond Drive to Marvin Road (Mostly Urban Growth Area)

This major arterial serves as a linkage between the Lacey Central Business District and Hawks Prairie area. It includes only a few mixed species of street trees maintained by the City of Lacey, a few private trees, and barren street sides the remainder of the way. The sidewalks and ditches were reconstructed by Thurston County; however no street trees were planted.

The street profile for almost the entire corridor is a four lane boulevard with sidewalks abutting a narrow grader ditch. There is space for trees, both on rights-of-way and on private property behind the sidewalk, depending on the location.

It is suggested that funding be sought to re-tree Martin Way to provide the linkage between the two commercial zones. It is recommended that canopy forming trees be planted in all possible locations. In many cases these trees would be planted on private property.

The design should establish trees on a wide spacing, incorporating several different canopy forming and flowering tree species along the way. There are additional obstacles to a uniform design, including distribution power lines along portions of the route.

Summary: Planting design – Formal

 Primary street tree species – Autumn purple ash, Scarlet oak, and

Lacey Urban Forest Management Plan

Shademaster Honeylocust

Secondary street tree species – Saucer magnolia, Norwegian
sunset maple and scarlet oak

Accent tree species – Amur maple, black tupelo, and snowgoose cherry

Utility Trees –Kousa dogwood, Japanese snowbell, and flowering
plum

This planting scheme, coupled with replacement of some poor quality trees and creation of additional planting spots will change this segment of Martin Way into a tree-lined corridor. The green canopy of foliage and splendid fall coloration will warm the appearance of the street and traffic will slow. Residents will find this a friendly and comfortable street to walk, bike and jog along, most unlike the conditions today. The linkage between the Hawks Prairie and Martin Village areas will be complete.

The following is a listing of other high need sections of Lacey streets that would benefit from trees. Refer to Table 3 – Street Tree Themes for recommended tree species:

1. Lacey Blvd from Sleater-Kinney Road to Golf Club Road.
2. Pacific Ave. from Sleater-Kinney Road to Golf Club Road.
3. 3rd Ave. from I-5 off ramp to College St.
4. Rainier Road from Yelm Hwy. to the south city limits.
5. Kinwood Street – entire length.
6. Union Mills Road – entire length
7. Marvin Road from 3rd Ave. to Pacific Ave.

Only arterials and collectors in developed areas that are not likely to have projects are listed. Undeveloped areas will likely be planted as adjacent parcels develop.

The following table provides a summary of the proposed street tree themes for all major and minor arterials and collectors in Lacey.

Lacey Urban Forest Management Plan

Table 3. 'Street Tree Themes' for all major and minor arterials and collectors.

STREET	SEGMENT		PRIMARY TREE	SECONDARY TREE	ACCENT TREE	UTILITY TREE
	FROM	TO				
Sleater-Kinney Road	Martin Way	14 th Ave.	Autumn Purple Ash	Northern Red Oak	Flowering plum	Snowdrift crabapple
Sleater-Kinney Road	14 th Ave.	Chambers Lk. Rd.	Emerald Queen	Parkway Maple Redmond	Prairiefire crabapple	Prairiefir e
Golf Club Road	I-5	Chambers Lk. Rd.	Patmore Ash	Rustica Rubra Saucer	Japanese Snowbell	Prairiefir e
Judd St.	Ruddell Road	28 th Ave.	Japanese Stewartia	Rustica Rubra Saucer	Kousa Dogwood	Trident Maple
Clearbrook Dr.	Lacey Blvd.	To End	London Plane	Emerald Queen	Rustica Rubra Saucer	Galaxy Magnolia
College St.	15 th Ave.	Pacific Ave.	Northern Red Oak	Shademaster	Galaxy Magnolia	Trident Maple
College St.	Pacific Ave.	32 nd Lane	Norwegian Sunset Maple	Shademaster	Prairiefire crabapple	Desert Ash
College St.	32 nd Lane	Yelm Hwy.	Patmore Ash	Norwegian Sunset Maple	Snowdrift Fl. Crab	Pacific Sunset
Rainier Road	Yelm Hwy.	City Limits	Greenspire Linden	Emerald Queen	Rustica Rubra Saucer	Trident Maple
Ruddell Road	Martin Way	Yelm Hwy.	Summit Ash	Tuliptree	Japanese Snowbell	Pacific Sunset
Ruddell Rd. Extension	Israel Road	Dennis St.	Summit Ash	Tuliptree	Flowering Cherry	--
Carpenter Road	Hawks Pr. Road	Pacific Ave.	Tuliptree	Rustica Rubra Saucer	Japanese Snowbell	Pacific Sunset
Carpenter Road	Pacific Ave.	Mullen Road	Sugar Maple	Emerald Queen	Kousa Dogwood	Hedge Maple
Kinwood St.	Capitol Blvd.	City Limits	Shademaster	Patmore Ash	Flowering Plum	Pacific Sunset
Hensley, Ranger, School St.	14 th Ave. NE	Pacific Ave.	Red Horsechestnut	Redmond Linden	Rustica Rubra Saucer	Amur Maple
Union Mills Rd.	Pacific Ave.	Marvin Rd.	Scarlet Oak	Shademaster	Amur Maple	Underground

Lacey Urban Forest Management Plan

STREET	SEGMENT		PRIMARY TREE	SECONDARY TREE	ACCENT TREE	UTILITY TREE
	FROM	TO				
Kagy Rd.	Mullen Rd.	58 th Ave.	Sugar Maple	Norwegian Sunset Maple	Flowering Dogwood	Rocky Mt. Maple
Marvin Road	44 th Ave. NE	Martin Way	Northern Red Oak	Emerald Queen	Flowering Plum	Galaxy Magnolia
Marvin Road	Martin Way	Pacific Ave.	Scarlet Oak	Shademaster	Snowgoose Cherry	Red Cascade Mt. Ash
Marvin Road	Pacific Ave.	City Limits	Norwegian Sunset Maple	Red Maple	Rocky Mt. Maple	Rocky Mt. Maple
Hogum Bay Road	Willamette Pkwy.	Marvin Road	Summit Ash	Callary Pear	Kousa Dogwood	Amur Maple
Willamette Pkwy.	Marvin Road	Hogum Bay Rd.	Sweetgum	Patmore Ash	Kousa Dogwood	Rocky Mt. Maple
Hoh St.	Martin Way	Steilacoom Rd.	Scarlet Oak	Shademaster	Prairiefire Fl. Crab	Golden Desert Ash
Meridian Road	46 th Ave. NE	Martin Way	Tuliptree	Patmore Ash	Black Tupelo	Rocky Mt. Maple
Meridian Road	Pacific Ave.	Yelm Hwy.	Katsura Tree	Pacific Sunset	Snowgoose Cherry	Flowering Dogwood
Dutterow/Deerbrush Dr.	Martin Way	Pacific Ave.	Katsura Tree	Norwegian Sunset Maple	Rocky Mt. Maple	Trident maple
Hawks Prairie Road	Carpenter Road	Hogum Bay Road	Norwegian Sunset Maple	Tuliptree	Sargent Cherry	Flowering Plum
31 st . Ave. NE	Marvin Road	Meridian Road	Emerald Queen	Red Sunset Maple	Flowering Plum	Golden Desert Ash
Britton Parkway	Carpenter Rd.	Hogum Bay Rd.	Sugar Maple	Autumn Purple	Sargent Cherry	Japanese
Orion Drive	Willamette Pkwy.	Meridian Road	Northern Red Oak	Sugar Maple	Snowgoose Cherry	Amur Maple
Martin Way	College St.	Kinwood St.	Autumn Purple Ash	Rustica Rubra Saucer	Amur Maple	Kousa Dogwood
Martin Way	Kinwood St.	Ranger Dr.	Scarlet Oak	Norwegian Sunset Maple	Black Tupelo	Japanese Snowbell
Martin Way	Ranger Dr.	Marvin Road	Shademaster	Scarlet Oak	Snowgoose Cherry	Flowering Plum
Steilacoom Road	Pacific Ave.	City Limits	Katsura Tree	Pacific Sunset	Snowgoose Cherry	Flowering Dogwood
Pacific Ave.	West City Limits	Carpenter Road	Patmore Ash	Autumn Purple	Kousa Dogwood	Amur Maple
Pacific Ave.	Carpenter Road	Marvin Road	Tuliptree	Greenspire Linden	Black Tupelo	Japanese

Lacey Urban Forest Management Plan

STREET	SEGMENT		PRIMARY TREE	SECONDARY TREE	ACCENT TREE	UTILITY TREE
	FROM	TO				
Pacific Ave. 14 th Ave.	Marvin Road Carpenter Road	City Limits Union Mills	Greenspire Linden Norwegian Sunset Maple	Tuliptree Parkway Maple	Flowering Plum Red Cascade Mt. Ash	Golden Desert Ash Amur Maple
Lacey Blvd. 21 st Ave. 22 nd Ave.	Sleater- Kinney Rd. Chambers Lk. Dr. Golf Club Rd.	Pacific Ave. Golf Club Rd. Shady Lane	Patmore Ash Red Maple Redmond Linden	Autumn Purple Ash Pacific Sunset Scarlet Oak	Paperbark Maple Photinia Tree Galaxy Magnolia	Golden Desert Ash Galaxy Magnolia Japanese
Shady Lane 25 th Ave.	Lilac St. Ruddell Road	Carpenter Road Lilac St.	Sargent Cherry Redmond Linden	Flowering Plum Sargent Cherry	Paperbark Maple Goldenrain Tree	Tree Lilac Kousa Dogwood
Mullen Road	West City Limits	Ruddell Road	Red Horsechestnut	Black Tupelo	Japanese Snowbell	Amur Maple
Mullen Road	Ruddell Road	Carpenter Road	Tuliptree	Black Tupelo	Snowgoose Cherry	Amur Maple
Mullen Road 54 th Ave. 58 th Ave.	Carpenter Road East of Ruddell Rd. Kagy Road	Meridian Road To End Meridian Road	Sugar Maple Redspire Callery Pear Greenspire Linden	Northern Red Oak Scarlet Oak Black Tupelo	Sargent Cherry Flowering Plum Rocky Mt. Maple	Japanese Galaxy Magnolia Trident Maple
Yelm Hwy.	West City Limits	Ruddell Road	Norwegian Sunset Maple	Flowering Plum	David's Maple	Red Cascade Mt. Ash
Yelm Hwy.	Ruddell Road	Fair Oaks Road	Sugar Maple	Northern Red Oak	Tree Lilac	Trident Maple
Yelm Hwy.	Fair Oaks Road	Meridian Road	Autumn Purple Ash	Pacific Sunset	Paperbark Maple	Japanese hornbeam
Compton Blvd. Ext.	Rainier Road	Yelm Hwy.	Greenspire Linden	European Beech	Tatarian Maple	Tree Lilac

Figure 11. Map of Lacey Arterials and Collectors
Street Trees Designed for Mapped Streets

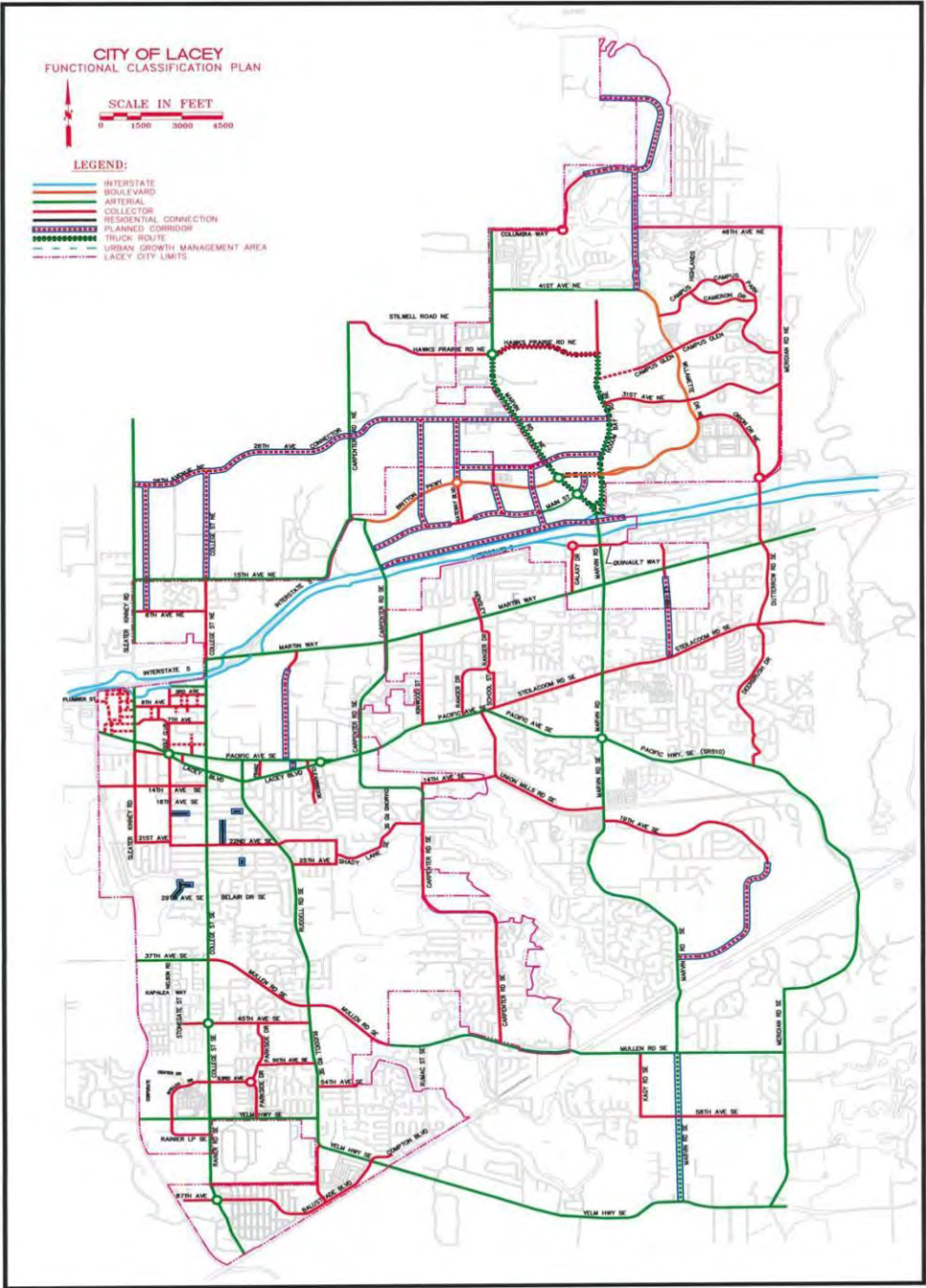


Figure 4
Functional Classification
of Roadways
Page 38

Street Profiles for Trees

The ideal street profile to create a tree-lined street with canopy forming trees would include 8' planter strips plus a 12-18' wide medians. Future designs of major and minor arterials should consider this type of design where rights-of-ways permit. This design provides adequate space above and below ground for trees, minimizing damage to curbs and sidewalks. The feel and look of driving, bike riding, jogging, and walking on these types of streets in 30 years will please residents of Lacey. To achieve this effect, we must plan for it and plant it today.

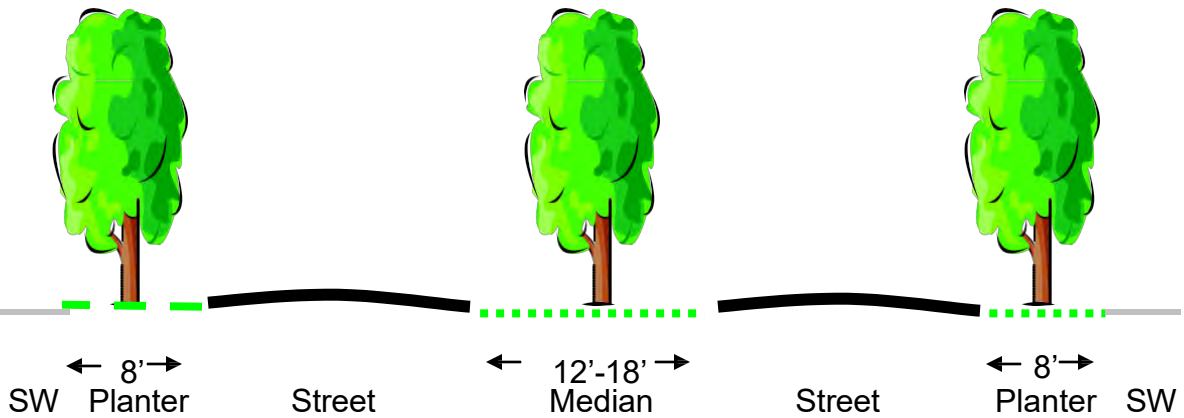


Figure 12. Ideal street design for development of maximum canopy, while providing separation between streets and sidewalks.

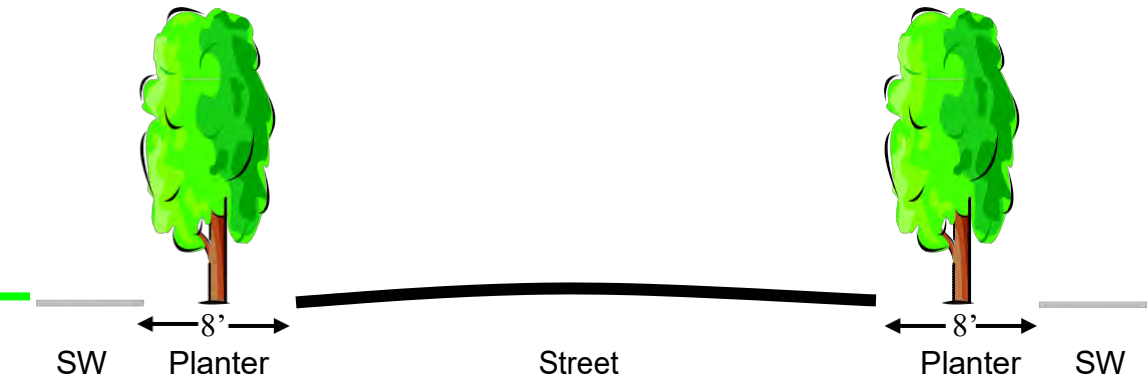


Figure 13. When space does not allow development of a full median, providing 8' planter strips will allow development of large, canopy forming trees. Planter strips should not be less than 6' wide. These narrow widths will only allow planting of small to medium sized trees that will not produce the canopy effect.

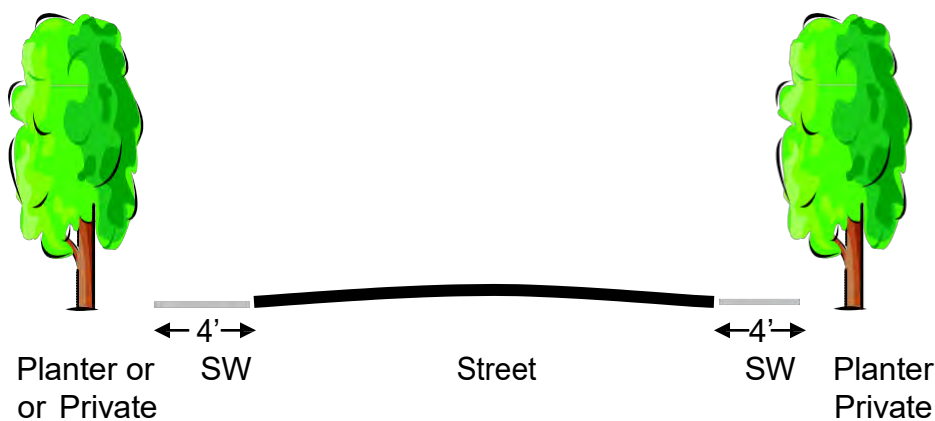


Figure 14. This is a commonly occurring street design in Lacey. Street trees, when they occur, are located on private property, or occasionally in planter strips.

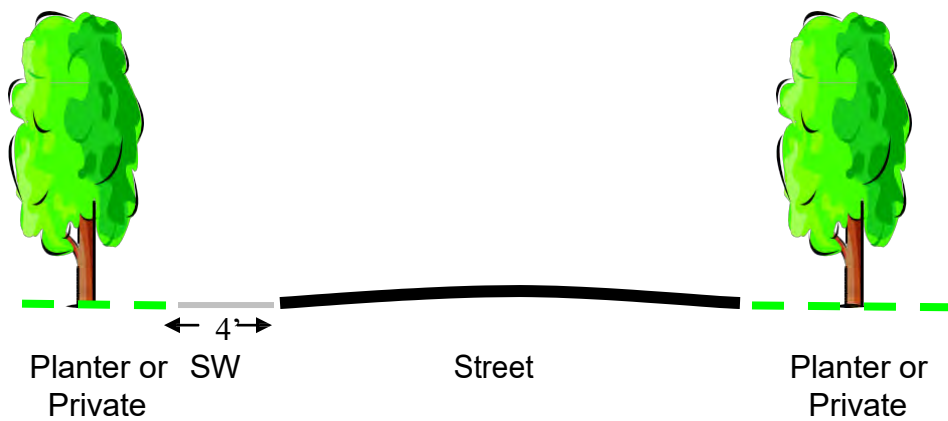


Figure 15. This is a commonly occurring street design in older neighborhoods in Lacey. In some cases no sidewalks occur. Most street trees are privately planted, without uniformity of design or occurrence.

Planting Space Recommendations

When designing sidewalks for street tree plantings, an 8' wide planter strip is recommended to accommodate large, canopy-forming trees. Narrower strips increase the potential for heaving of the sidewalks and curbs. Placing trees between the vehicle and the pedestrian provides a feeling of safety for sidewalk users, though trees are more susceptible to vehicle damage in this location.

For trees, the most desirable location is behind the sidewalk where the tree can exploit the larger soil volumes of yards and open space. Development of a canopy over the street will take longer, and will be less effective. However, trees in this location will have greater longevity and cause less hardscape damage.

Often driveways, water meters, signs, and other obstructions limit strict, uniform spacing for street trees. Compromises must then be made to achieve the visual and spatial effects provided by rows of street trees. Street tree spacing will be determined primarily by the mature size of the tree being planted. However, the purpose of the tree also is a factor.

If one is trying to screen objectionable views or less attractive structures, then tighter street tree spacing may be desirable. In an area where attractive architecture, signage, or views are to be preserved, then widen the tree spacing. Do not over plant. This will simply increase initial establishment costs, as well as future maintenance costs. Always consider the desired future visual and spatial effects – linkage, beauty, and shade.

The following are the recommended targets for street tree spacing, understanding that

variations may occur due to obstacles or the desired effect.

<u>Tree Type/Size</u>	<u>Spacing Between</u>
<u>Trees</u> Large Street Trees	40'-50'
Medium Street Trees	35'-40'
Columnar Trees	25'-35'
Small Trees	25'-35'

Informal planting designs utilizing conifers in cluster plantings should be 12'-15' on center, depending on the use of accent trees in the cluster. Each conifer must have two sides of its crown free to grow. These types of clusters of tall growing trees must be planted at least 25' from overhead utilities, and 15' from awnings, buildings, and signage. Screen plantings should be designed on a project by project basis and the plant spacing designed for the species used and the effect desired. Species other than listed in Table 1 may be used when dense screens are desired.

Compromises to this ideal design while still achieving some of the feel, would be 6' planter strips with a median. Any design that places the sidewalk against the curb with the trees behind the sidewalk will sacrifice the separation of pedestrians from traffic that the planter strip provides. Though planting trees behind the sidewalk where unlimited root zone occurs is good for the tree, the same feeling of security and visual beauty is not achieved.

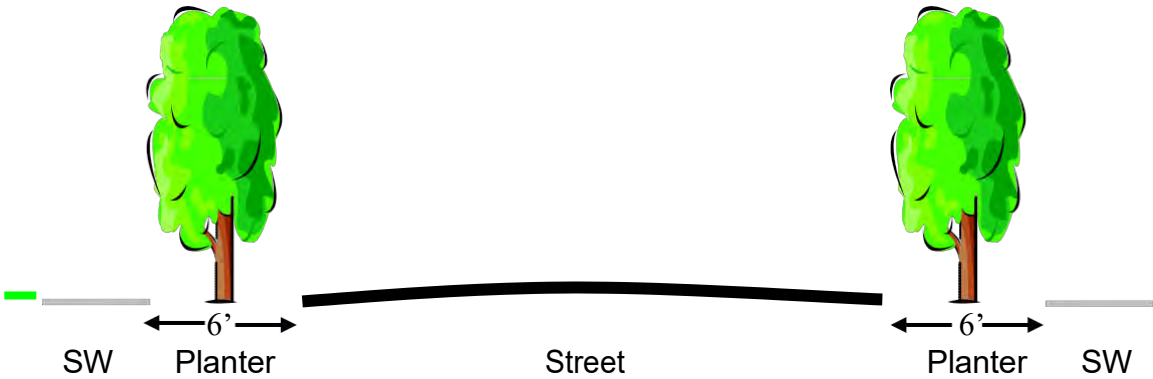


Figure 16. If space does not allow for 8' wide planter strips, then 6' can still be planted with medium to large street trees, however potential for root damage is higher.

Street Tree Planting and Maintenance

The responsibility and budget for the planting and maintenance of street trees should be with the Parks Maintenance division of the Public Works Department.

The selection and design of street tree plantings should be completed by a landscape architect or urban forester, and be reviewed by Community Development Department and the Parks Maintenance Division to insure that it furthers goals outlined in the comprehensive street tree plan, is compatible with the existing site conditions and the overall goals of the city.

Budget

As the street tree numbers grow, the maintenance, and thus the maintenance budget must grow. An adequate annual budget dedicated to street tree maintenance is required to provide adequate care for a street tree population. As the street tree population matures, these numbers will increase. The budget should be increased annually based on the new plantings, and with a modifier for inflation.

Stock Quality

All trees should meet the American National Standard for Nursery Stock (ANSI A60.1- 1996), have a strong, central leader and show evidence of cultural care in the nursery. The trees should not be damaged, and should be free of insect, insect eggs, disease, and other problems. The root balls should be well-wrapped with burlap and unbroken. Trees with broken root balls, damage, poor form, or other problems should be rejected. A detailed contractual specification is included in Appendix III for street projects.

It is strongly recommended that the City of Lacey remove the street tree

Lacey Urban Forest Management Plan

procurement from the overall street project contract, and only contract for planting. The city should

contract for trees in advance with a reputable nursery to insure that the numbers, species, size, and quality of trees are available when a project is constructed. This will eliminate substitution, accepting less than high quality trees, and holding stock on site for extended periods of time (1 week is the target).

Preparing the Planting Hole

The planting hole within the planter strip or behind the sidewalk often contains structural soils used in the preparation of the sub grade for the street and sidewalks. If the planter strip will be planted with grass, the entire planter strip should be backfilled with topsoil that has a silt loam or loamy sand texture. The organic matter content should be 4-6%. It should be free from contaminants.

The area where the tree is to be planted should be excavated to the proper depth so the root ball sits on native soil, and the top of the root ball will be 1 inch above the final soil grade. The planting hole should be at least 3 times the diameter of the rootball of the street tree. The edges of the planting hole should be shaved off to eliminate the glazed or compacted hole edge.

If a hardpan or other compacted layer occurs that will cause perching of water in the planting hole, this layer should be fractured by over excavating the hole and backfilling the native material. The area under the rootball should be firmed to prevent settling of the tree. In cases where drainage cannot be improved by over excavating, installation of drain tile may be necessary to drain the planting hole and the surrounding root zone.

Orientation of the Tree

Plant the tree in the same orientation as it grew in the nursery. Most trees will be marked at the base to indicate the north side of the tree. This will reduce the potential for sunburn of the bark.

Tree Grates

The use of tree grates are not recommended by the City's tree protection specialists under any circumstance.

Burlap and Wire Basket

Remove all twine ties from the root collar of the tree and remove the burlap.. If the tree has a wire basket, leave it on until the tree is in the ground and stabilized. Prior to completing backfill, cut out the upper 2/3's of the wire basket and remove from the hole. If the tree has been in-ground fabric bag grown, remove all synthetic and plastic material materials prior to tree placement the planting hole.

Complete backfilling with the topsoil mix. In areas with gravelly soils, blend the topsoil with native soils. In areas of Lacey with sandy loams, utilize the native material or imported topsoil with additional silt and organic matter. If native sandy loams are used, then incorporate organic matter as described on the planting diagram.

Fertilization

Trees should be fertilized with a granular formulation of 20-10-10 at a rate of 6 pounds per 1000 square feet of surface area. This amounts to approximately 2 ounces per tree. Do not incorporate the fertilizer into the planting hole or fill soils. Salt burn of the new roots may occur. Do not apply any other root stimulants. Good weed control must accompany fertilization treatments.

Watering

All trees should be thoroughly watered in to eliminate air pockets and settle the soil around the rootball. Create a small 4 inch high berm with soil to create a well for holding water from irrigation. This berm should be located 12 inches outside of the rootball.

The rule of thumb for water is to apply 2 inches of water per week, or follow the rates listed below:

<u>Tree Caliper (in)</u>	<u>Gallons per</u>
1	5
2	10
3	13
4	18
5	23

Monitor soil moisture contents in the root ball and the surrounding soil to determine the actual watering frequency and amounts.

Mulching

All trees should be mulched for a distance of at least 2 times the rootball diameter with 2- 3 inches of bark mulch or composted wood chips.

Staking

All deciduous trees 1.5 inch to 2.5 inches caliper and conifers taller than 5 feet should be staked with two stakes. Trees should be staked with 2 in. x 2 in. or round wooden stakes that are 6 feet long. The stake must be tall enough to provide support to the tree. The stakes should be driven firmly into the ground outside of the root ball. They should be placed straight up and down, and be equidistant from the tree. Trees should be oriented to support the tree against the prevailing winds.

The stake ties should be rubber chain-link, installed snug but not stretched. The tree needs to be able to move slightly to develop normal stem diameter and taper. Avoid wire and hose ties.

The stakes and ties should be inspected several times in the first year. Vandalism and accidental damage occurs frequently. Once the tree becomes established, usually one year, remove the stakes and ties. Ties left on trees long-term will often girdle the tree. Trees larger than 2.5 inches caliper will require 3 stakes. Trees larger than 4 inches caliper should be guyed with three cables and buried earth anchors.

Trunk Wraps

Trunk wraps are used to prevent sunburn on new trees. This is usually not a problem, however if trunk wraps are used, they should be made of paper and left on the tree for 1 year.

Transit guards should not be left on the tree as trunk wraps. They are designed to protect the stem of the tree during transport only. Molds, insects, and other fungi may be attracted to the moist, shady confines of the transit guard.

Root Collar Protectors

Plastic sleeves should be installed on all newly planted trees to protect the root collars from lawn mowers and weed eaters. These protectors should be left on the trees until trees are 6" caliper, or the protector becomes snug.

Grass and weeds should not be allowed to grow in the tree well, removing the temptation to mow or weed eat near the stems. Root collar damage from weed eaters is a major cause of tree mortality, and/or reduced vigor.

Pruning

Newly planted trees that were well cultured in the nursery should need only minor pruning to remove crossing branches, or branches damaged during transport

Lacey Urban Forest Management Plan
and planting.

Pruning in successive years to provide sidewalk and street clearance, improve the branch structure of the tree, and maintain central leaders should conform to the American National Standard ANSI A300 (2001), Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning).

This small tree pruning is critical to provide a strong tree and branch structure for the future, minimizing storm damage, and the need for additional pruning. Pruning should be completed by an arborist certified by the International Society of Arboriculture, or supervised by a certified arborist. No more than 20% of the live branches should be pruned in any one year.

Inspections

The newly planted trees should be inspected several times in the first year to adjust stakes and note other cultural concerns. Prior to release of the 1 year bond or end of the 1 year guarantee for trees planted as part of a street project, the trees should be inspected by a certified arborist. Trees that were unhealthy or poorly handled often ‘hang on’ for some time after planting. Specialized expertise is needed to identify the trees that are in decline, but still alive. This inspection must take place when trees are foliated.

Timing of Tree Planting

Tree planting should not occur between May and October. Trees planted during this time will be stressed and survival and establishment will be reduced. The following is a general window for planting the different types of trees.

<u>Stock Type</u>	<u>Timing of Planting</u>
Balled and Burlap	October 15 th through May 1 st
Containerized	October 15 th through May 1 st
Bare-Root Stock	February 15 th through April
15 th In-ground Fabric Bag	October 15 th through May 1 st

Fall planting of B&B and containerized stock is preferred, since tree roots will grow for part of the winter. This will improve establishment and early growth.

Maintenance Recordkeeping

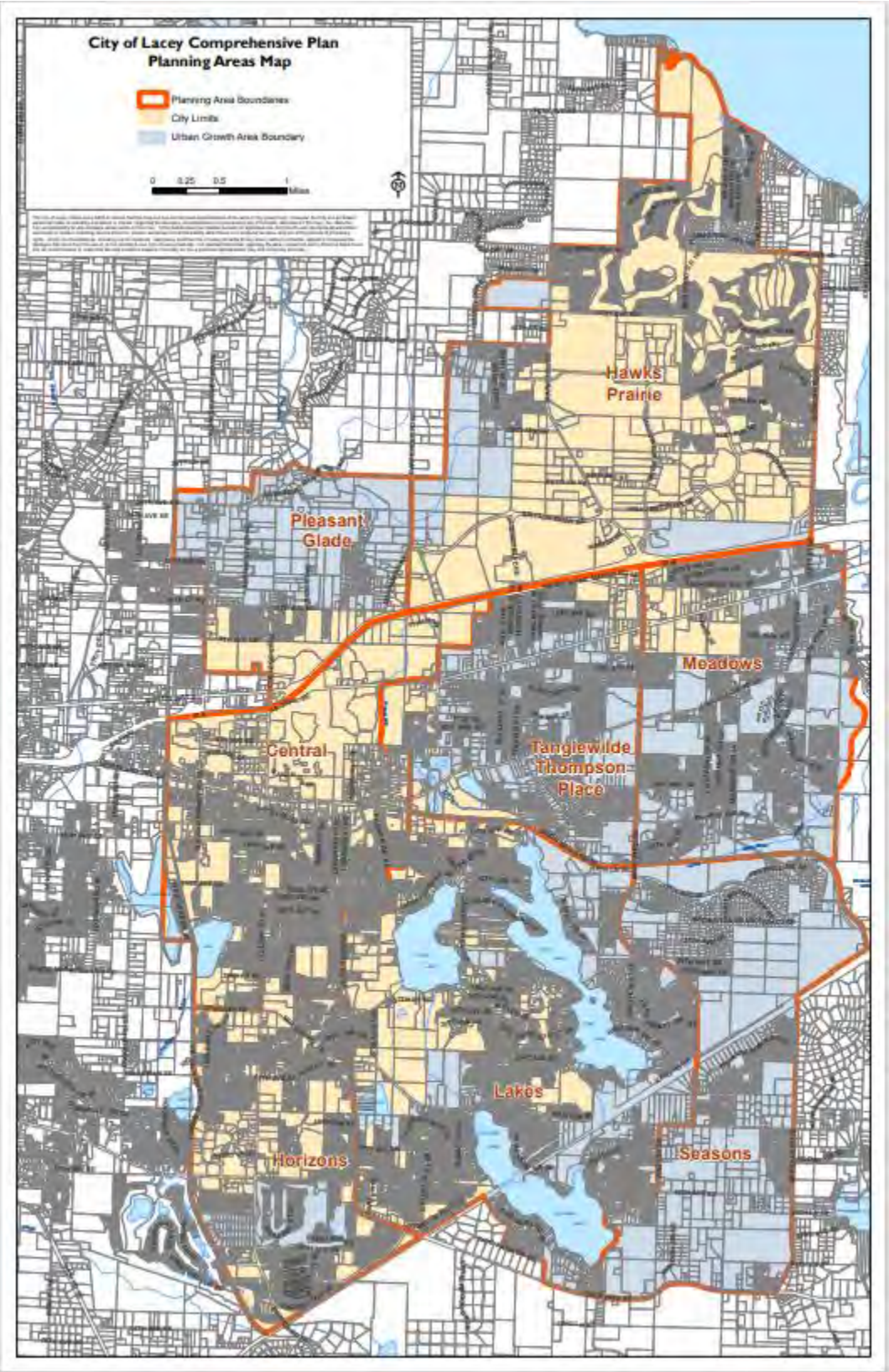
As trees are planted in the city of Lacey, maintenance records need to be updated on the street tree inventory system. This will help with tracking of stake removal, weed control, pruning needs, and hazard assessment. This system is up and running, and simply needs to be maintained and refined as needed.

Street Tree Management Units. – The only soils based separation in Lacey street tree populations are soils that are 1) excessively drained gravels, 2) sandy soils, and 3) poorly drained soils.

Lacey Urban Forest Management Plan

Geographically, it is recommended that the management units be based on the Lacey planning areas.

Figure 17. Proposed street tree management units. Lacey Planning Areas



Lacey Urban Forest Management Plan

Figure 18 Calendar for tree planting and maintenance activity.

ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Tree Planting:										←→	←→	←→
Balled & Burlap and Containerized	←→	←→	←→	←→								
Bare-Root Stock		←→	←→	←→								
Fertilization: Surface Applied			↔		↔					↔		
Watering					←→	←→	←→	←→	←→			
Weed Control			←→	←→	←→	←→	←→	←→	←→	←→		
Integrated Pest Management – Scouting		←→	←→	←→	←→	←→	←→	←→	←→	←→		
Pruning:												
Spring Flowering Trees					↔							
Summer Flowering Trees	←→	←→	←→							←→	←→	←→
All Other Shade Trees and Conifers	←→	←→	←→							←→	←→	←→
Storm Damage Assessment-As Needed	←→	←→	←→	←→	←→	←→	←→	←→	←→	←→	←→	←→

Trees and Planting Specifications

The following summarizes the tree and planting specifications:

All trees and shrubs should conform to the American Standard for Nursery Stock ANSI Z60.1-2004, for size, root ball diameter, and quality, and be planted according to industry standards, including mulching. All street trees should have a well-defined central stem and show evidence of corrective cultural pruning in the nursery.

Tree planting should occur in the spring between March 1 and June 1, or preferably in the fall between October 1 and December 1. Irrigation should be provided to the trees and shrubs at least weekly during the summer, in the absence of adequate rainfall.

APPENDIX

6

WASHINGTON FORESTRY CONSULTANTS, INC.
FORESTRY AND VEGETATION MANAGEMENT SPECIALISTS**W F C I**360/943-1723
FAX 360/943-41281919 Yelm Hwy SE, Suite C
Olympia, WA 98501

-Street Tree Inventory-

CITY OF LACEY STREET TREES

Lacey, WA

Prepared for: Ryan Anderson
Community Development

Department Prepared by: Washington Forestry

Consultants, Inc. Date: October 22, 2012

**Introduction and
Purpose**

We have completed an evaluation and inventory of the city maintained street trees in the City of Lacey. In addition, we did the street trees in the Lacey Corporate Center.

The purpose was to map the street trees, and provide an inventory and assessment of trees. This will be a brief summary report in lieu of a formal report as requested.

Methodology

Washington Forestry Consultants, Inc. (WFCI) was provided with an aerial photo layer of the city along with shapefiles for the arterials and collectors and parcel layers in the City of Lacey. We designed a data collection template for ArcPad 10.0 for ease of collection of the inventory information on the street trees. The following is a list of all of the major data collection parameters for the inventory:

- Species
- Diameter
- Condition
- Tree problems
- Work needed
- Work priority
- Field notes

City of Lacey –Street Tree Inventory - Summary

The work was completed by a ground inventory using a Trimble Nomad GPS handheld data collector. All trees within what appeared to be the city rights-of-way were inventoried. The rights-of-way edge was not always clearly defined in the field.

Native trees and planted trees on the rights-of-way were inventoried. Smaller, quality native tree species (e.g. a free-to-grow 3 inch caliper Douglas-fir) were also inventoried.

Observations

Tree Species

We found 5,557 trees of over 60 species of trees on the City of Lacey rights-of-ways that are maintained by the city. They ranged from 1 to 49 inches DBH.

Table 1. Species Summary of City of Lacey Street Trees.

Species	Diameter Range	# Trees	% Composition
Ash - Autumn Purple	2-10	142	2.46%
Ash - Golden Desert	2-4	19	0.33%
Ash - Green/White	1-26	1,102	19.08%
Ash - Mountain	2-3	4	0.07%
Ash - Patmore	1-22	692	11.98%
Ash - Raywood	1-9	53	0.92%
Ash - Summit	2-6	22	0.38%
Basswood - American	6-9	17	0.29%
Birch - Jacquemontii	2-7	53	0.92%
Birch - Paper	4-14	14	0.24%
Cascara	3	1	0.02%
Cedar - Deodar	1-2	4	0.07%
Cedar - Incense	1-12	37	0.64%
Cedar - Port Orford	6	1	0.02%
Cedar - Weeping Alaska	1-16	69	1.19%
Cedar - Western red	2-6	10	0.17%
Cherry - Flowering	1-9	91	1.58%
Cherry - Kwanzan	3-19	161	2.79%
Cherry - Other	6	1	0.02%
Crabapple	1-8	197	3.41%
Cypress - Other	2-6	30	0.52%
Dogwood - Flowering	1-6	100	1.73%
Fir - Douglas	1-49	29	0.50%
Fir - Grand	19-26	2	0.03%
Giant Sequoia	18-20	2	0.03%
Hawthorne	2-9	16	0.28%

City of Lacey –Street Tree Inventory - Summary

Hemlock - all	1-4	25	0.43%
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City of Lacey –Street Tree Inventory - Summary

Species	Diameter Range	# Trees	% Composition
Hornbeam - American	2-9	69	1.19%
Hornbeam - European	3-7	18	0.31%
Katsura tree	2-14	61	1.06%
Lilac - Jap. Tree	2-3	13	0.23%
Linden	3-6	46	0.80%
Magnolia	3	8	0.14%
Maple - Nor. Sunset	2-7	79	1.37%
Maple - Norway	2-10	153	2.65%
Maple - Other	2-5	18	0.31%
Maple - Pacific Sunset	4-6	4	0.07%
Maple - Paperbark	2-3	8	0.14%
Maple - Parkway	3-6	24	0.42%
Maple - Red	2-26	217	3.76%
Maple - Sugar	6-12	5	0.09%
Maple - Tatarian	2-3	10	0.17%
Maple - Vine	1-6	114	1.97%
Oak - OR White	1-22	23	0.40%
Oak - Other	2-8	15	0.26%
Oak - Red	2-17	349	6.04%
Oak - Scarlet	2-4	3	0.05%
Other - Deciduous	2-10	16	0.28%
Pear - Callery	1-12	547	9.47%
Persian Perrotia	1-2	4	0.07%
Pine - Austrian	3-14	26	0.45%
Pine - Other	4-6	4	0.07%
Pine - Shore	2	1	0.02%
Plum - Flowering	1-16	75	1.30%
Redwood - Coast	2	3	0.05%
Spruce- other	2-3	14	0.24%
Sweetgum	1-19	839	14.53%
Sycamore	21-32	6	0.10%
Tuliptree	3-13	29	0.50%
Zelkova - Japanese	4-10	80	1.39%
Summary		5,775	100.00%

City of Lacey –Street Tree Inventory - Summary

A rule of thumb when managing a cities street trees is to avoid having more than 10% or so of a single genus of tree species to avoid major tree loss if an insect or disease outbreak occurs that affects a particular genus of trees. The following table shows that the City of Lacey is heavy to trees in the Fraxinus genus, but fairly well balanced overall.

Table 2. Breakdown of individual genera as a % of the street tree population.

Genera-Species	% of Total
Fraxinus-Ash species	35.2%
Liriodendron -Sweetgum	14.5%
Acer - Maple species	10.9%
Callery Pear	9.5%
Prunus - cherry cultivars	4.4%
Malus - crabapple cultivars	3.4%
Summary of Major Species	77.9%

The surprising number is that maple only makes up 10.9% of the street tree population. Over time the Sweetgum population will go down since it is no longer being planted as a street tree due to structural concerns in storms.

Tree Condition

The condition of each tree was recorded as good, fair, poor, dead, or hazardous. We found over 56% of the street trees to be in Good condition and 30 trees that were dead or hazardous.

Table 3. Summary of Tree Conditions of City of Lacey Street Trees.

Condition	# of Trees	%
Good	3,212	56%
Fair	2,263	39%
Poor	270	5%
Dead	18	<1%
Hazard	12	<1%
Summary	5,775	

Tree Maintenance

Hazard pruning was prescribed for trees damaged by the recent 2012 ice storm. Necessary pruning included broken and hanging branches or where pruning was necessary to stabilize or balance the crown of a tree.

More often, structural pruning was prescribed to raise and thin crowns on the smaller street trees that needed cultural pruning to develop long-term scaffold branches or required lifting of the crown to provide future sidewalk and road

City of Lacey –Street Tree Inventory - Summary
clearances.

City of Lacey –Street Tree Inventory - Summary

Sidewalk, road clearance, and corner pruning were prescribed when branches were already encroaching into these zones. Generally, the parameters were 8 ft. over sidewalks, 15 ft. over roads, and anything impacting stop sign or corner visibility. Many trees were prescribed to receive sidewalk and road clearance pruning. A small number of trees required corner or sign visibility pruning.

Table 4. Summary of Tree Work Needed for City of Lacey Street Trees.

Work Needed	# of Trees	%
None	4,792	83%
Prune	566	10%
Remove	255	4%
Other	162	3%
Summary	5,775	

Tree work categorized as 'Other' includes work to remove tree stakes, and removing nails from trees.

Most of the trees require only routine maintenance. However there are 14 trees that require immediate action to mitigate potential threats posed by the tree.

Table 5. Summary of Work Priority for City of Lacey Street Trees.

Work Priority	# of Trees	%
Routine	5,761	99.8%
Immediate	14	<1%
Summary	5,775	

The effort of the City of Lacey to encourage and plant new street trees is evident by thousands of new street trees in the city. However, many opportunities still exist to plant new street trees where there are no planted or native trees today. These opportunities occur in planter strips that are empty or are being used as parking strips, and in front yards along streets with no sidewalks.

City of Lacey –Street Tree Inventory - Summary

Lacey Corporate Center

In addition to the City of Lacey trees we inventoried one area of private trees. This area was the Lacey Corporate Center Drive, and the Roxanna Drive and Loop. These trees were summarized separately from the city owned trees. The following tables include those areas.

Table 6. Species Summary of Lacey Corporate Center street trees.

Species	Diameter Range	# Trees	%
Ash - Green/White	2-18	198	49%
Birch - Paper	8-14	5	1%
Hawthorne	6-9	5	1%
Maple - Red	2-12	157	39%
Oak - Red	3-5	22	5%
Pear - Callery	2-6	11	3%
Plum - Flowering	2-5	6	1%
Sweetgum	2	2	<1%
Summary	2-18	406	

Table 7. Summary of Tree Conditions of Lacey Corporate Center.

Condition	# of	%
Good	225	55%
Fair	161	40%
Poor	16	4%
Dead	1	<1%
Hazard	3	<1%
Summary	406	

Table 8. Summary of Tree Work Needed for Lacey Corporate Center.

Work	# of	%
None	349	86%
Prune	37	9%
Remove	18	4%
Other	2	<1%
Summary	406	

Table 9. Summary of Work Priority for Lacey Corporate Center.

Work Priority	# of	%
Routine	398	98%
Immediate	8	2%
Summary	406	

City of Lacey –Street Tree Inventory - Summary

Summary

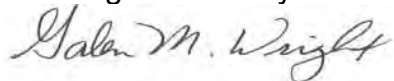
In summary, we inventoried 5,775 City of Lacey street trees that are maintained by the city. Four hundred six private trees were also inventoried and assessed for a total of 6,181 trees.

The City of Lacey Public Works staff is doing an excellent job of maintaining the trees with over 95% being classified as being in Fair or Good condition and only 17% requiring some type of maintenance work at this time.

Please give me a call if you have further

questions. Respectfully submitted,

Washington Forestry Consultants, Inc.



Galen Wright, ACF, ASCA
ISA Board Certified Master Arborist PN-0129
Certified Forester No. 44

MINUTES

Lacey Planning Commission Meeting
Tuesday, May 18, 2021 – 5:00 p.m.
Conducted remotely via videoconference

Meeting was called to order at 5:00 p.m. by Dave Wasson.

Planning Commission members present: Dave Wasson, Gail Madden, Peg Evans-Brown, Daphne Retzlaff, Kyrian MacMichael, Mark Mininger, Eddie Bishop, and Robin Vasquez. Staff present: Rick Walk, Ryan Andrews, Martin Hoppe, and Jessica Brandt.

Dave noted a quorum present.

Gail Madden made a motion, seconded by Mark Mininger, to approve the agenda for tonight's meeting and the May 4 meeting minutes. All were in favor, the motion carried.

1. **Public Comments:** None.
2. **Commission Members Reports:** None.
3. **Director's Report:** Rick Walk reported that Shaunesy Behrens has resigned from Planning Commission and the position is open to applicants.
4. **Public Hearings:**
 - 6-Year Transportation Improvement Plan (TIP): Martin Hoppe, Transportation Manager.**
 - Martin Hoppe explained that the TIP is a list of projects the City plans to start in the next six years, and its main purpose is to track State and Federal funds and identify regionally significant projects through TRPC.
 - Martin went over the projects and answered questions.
 - No public testimony was given. Dave closed the public hearing.
 - **Peg Evans-Brown made a motion, seconded by Robin Vasquez, to refer the 6-year TIP to Council for approval. All were in favor, the motion carried.**

2021 Comprehensive Plan Amendments: Ryan Andrews, Planning Manager; Jessica Brandt, Associate Planner.

- **Thurston Climate Mitigation Plan.**
 - o Jessica Brandt gave some background info and went over survey results.
 - o Wayne Olsen, Sue Madeiros, Lynn Fitz-Hugh, Roy Treadway, Aaron Dumas, Sally Vogel, Carolyn Treadway, Robert Jensen, and Heather MacMaster spoke in favor of the plan and urged Planning Commission to refer it to Council for approval.
 - o Dave closed the public hearing. A brief discussion followed.
 - o **Gail Madden made a motion, seconded by Robin Vasquez, to refer the TCMP to Council highly recommended by Planning Commission for approval. All were in favor, the motion carried.**
- **Housing Action Plan.**
 - o Ryan Andrews gave some background info, went over the plan, and answered questions.
 - o Wayne Olsen spoke in favor of the Urban Forest Management Plan and asked that staff ensure that the housing plan does not conflict with the TCMP. Sally Vogel agreed.
 - o Sue Madeiros and Carolyn Treadway thanked staff and Planning Commission for all the work they've done on this plan.
 - o Robert Jensen asked Planning Commission to consider the recreational aspect, more people in the City means more recreation is needed and more of a need to preserve recreational areas.
 - o There was a discussion as to whether Planning Commission should refer the plan to Council or discuss further. Staff answered questions and clarified some issues.
 - o **Robin Vasquez made a motion, seconded by Peg Evans-Brown, to refer the Housing Action Plan to Council for approval. All were in favor, the motion carried.**

- **Urban Forest Management Plan and Associated Regulations.**

- o Jessica went over the plan amendments and timeline, and discussed public outreach.
- o Wayne Olsen reiterated the importance of coordination between TCMP and Urban Forest Management Plan.
- o Sue Madeiros asked that the city stop allowing clearcutting to make way for warehouse development.
- o Lynn Fitz-Hugh asked Planning Commission to not approve the plan but to send back to the committee for further amendments as it does not reflect the committee's dialog, include the survey results, or meet the tree goals of the TCMP.
- o Roy Treadway said he'd like to see a stronger tree plan for Lacey.
- o Marianne Thompkins spoke on the importance of protecting large trees.
- o Sally Vogel agreed with previous speakers.
- o Carolyn Treadway seconds the previous comments and would like to see the plan amended.
- o Robert Jensen urged Planning Commission to review the plan further and try to strengthen tree protection measures.
- o Lisa Ceazan urged Planning Commission to send the plan back to tree task force to be reworked to provide more protection and align with State regulations and TCMP.
- o Phyllis Farrell expressed her concerns over the loss of Lacey's tree canopy over the years and the importance of protecting older trees. She urged Planning Commission to review the plan further.
- o A brief discussion followed.
- o **Robin Vasquez made a motion, seconded by Eddie Bishop, to discuss the plan further before referring to Council. All were in favor, the motion carried.**
- o Dave closed the public hearing. Rick noted discussion of the plan will be added to the next agenda.

5. **Communications and Announcements:** None.

6. **Next meeting:** June 1, 2021.

7. **Adjournment:** 7:25 p.m.

MINUTES

Lacey Planning Commission Meeting
Tuesday, June 1, 2021 – 5:00 p.m.
Conducted remotely via videoconference

Meeting was called to order at 5:00 p.m. by Dave Wasson.

Planning Commission members present: Dave Wasson, Gail Madden, Peg Evans-Brown, Daphne Retzlaff, Kyrian MacMichael, Eddie Bishop, and Robin Vasquez. Staff present: Rick Walk, Ryan Andrews, and Jessica Brandt.

Dave noted a quorum present.

Peg Evans-Brown made a motion, seconded by Kyrian MacMichael, to approve the amended agenda, excluding the New Business item, for tonight's meeting. All were in favor, the motion carried. Robin Vasquez made a motion, seconded by Eddie Bishop, to approve the May 18 meeting minutes. All were in favor, the motion carried.

1. Public Comments:

- Dan Tufford expressed concerns regarding the proposed homeowners association exemption for open space tree removal in the Urban Forest Management Plan.
- Nancy Winters urged the City to provide greater tree protection.
- Dianna Moore asked Planning Commission to disallow the HOA exemption and keep UFM plan as is.
- Lynn Fitz Hugh spoke in favor of leaving the plan as is or amending it to provide more protection for trees, older trees in particular.
- Roy Treadway agreed with other public comments and urged Planning Commission to provide more protection for older trees.
- Wayne Olsen agreed with previous speakers.
- Carolyn Treadway urged the City to take immediate action to protect older trees.

2. Commission Members Reports: Robin reported that she participated in a conversation with Parks regarding outreach on a Parks plan and said that she has volunteered to assist.

3. Director's Report: None.

4. Old Business:

Urban Forest Management Plan and Associated Regulations: Jessica Brandt, Associate Planner.

- Jessica gave a presentation that included background information on growth management and planning, goals and policies, City of Lacey growth and developable land, tree review process, public comments, proposed amendments, task force work and process, and tree canopy inventory.
- **Robin Vasquez made a motion, seconded by Peg Evans-Brown, to recommend to Council that the City hire an arborist and establish an urban forest advisory committee to support a more comprehensive urban forestry program. All were in favor, the motion carried.**
- **Robin Vasquez made a motion, seconded by Eddie Bishop, to recommend establishing a target of maintaining 28% tree canopy across the city based on a regularly-updated urban tree canopy inventory. All were in favor, the motion carried.**
- **Gail Madden made a motion, seconded by Eddie Bishop, to direct staff to remove the exception for homeowners associations to be able to remove healthy trees contained in the draft regulations. All were in favor, the motion carried.**
- Ryan suggested that staff add Planning Commission recommendations into the plan and make suggested changes, and present an amended draft at the next meeting.
- Daphne asked for more clarification on the tree removal stipulations. Robin asked that the plan be reviewed again in 2022.

5. Communications and Announcements: None.

6. Next meeting: June 15, 2021.

7. Adjournment: 7:15 p.m.

#001

Posted by **7509L** on **04/24/2021** at **9:43am** [Comment ID: 67] - [Link](#)

Agree: 0, Disagree: 0

I cannot comprehend why Lacey allows huge groves of fir trees to be crushed and ripped out for large construction. Is it not possible to keep the carbon protective old growth fir trees and put construction in pockets within them? It makes no sense to cut them down and then "landscape" with your "tree plan" that are ornamental trees and don't have the same footprint as a fir tree. If the developer or warehouse can't drive around some trees then deny the permit. The small ornamental trees take years to grow and still don't clean the air like native PNW tree.

#002

Posted by **7509L** on **04/24/2021** at **9:37am** [Comment ID: 64] - [Link](#)

Agree: 1, Disagree: 0

Cattle are huge polluters with it running into the streams also. So yes, more can be done here and with manure management.

#003

Posted by **7509L** on **04/24/2021** at **9:39am** [Comment ID: 66] - [Link](#)

Agree: 1, Disagree: 0

Yes, What are the golf courses and HOA landscapers using, not to mention homeowners? Emissions aren't the only problem - pesticides are destructive to wildlife and bees. The run off from these applications gets into ground water and streams.

Reply by **Marianne** on **04/24/2021** at **11:14am** [Comment ID: 69] - [Link](#)

Agree: 0, Disagree: 0

I completely agree! There are many Eco-friendly options that we should be using for the health of the soils and ourselves. Chambers Bay Golf Course is an example of sustainable land practices. In the US, 36 of the 50 states anticipate freshwater shortages within the next 10 years. Americans apply more than 7 billion gallons of water a day outdoors and stormwater runoff from gardens and lawns is a major source of water pollution. Lawn irrigation consumes up to 60% in the west. Majority of irrigation comes from municipal drinking water. Residential properties are part of the solution.

#004

Posted by **Carolyn** on **04/30/2021** at **2:40pm** [Comment ID: 100] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Regenerative agriculture and forestry are imperative if we are going to significantly decrease greenhouse gas emissions.
capturing carbon in the soil is the BEST way to sequester carbon (besides not emitting it in the first place). Let's get on with it, NOW.

#005

Posted by **Connie Campbell** on **04/01/2021** at **11:45pm** [Comment ID: 20] - [Link](#)

Agree: 3, Disagree: 0

We need to keep the trees we have and plant more! Trees help us in so many ways--beauty, shade, reduce stormwater run off and provide oxygen for us to breathe!

#006

Posted by **Marianne** on **04/01/2021** at **6:34pm** [Comment ID: 16] - [Link](#)

Agree: 0, Disagree: 0

Mature trees increase your property value by 7-19%.
<http://www.hgtv.com/design/real-estate/increase-your-homes-value-with-mature-trees>.
Trees keep us cool in the summer heat. Trees keep our drinking water clean.

#007

Posted by **7509L** on **04/24/2021** at **9:47am** [Comment ID: 68] - [Link](#)

Agree: 1, Disagree: 0

Yes, we need to reforest. But Lacey needs to stop rubber stamping all development and allowing groves of trees to be destroyed. The city is a hopscotch of concrete, a road with bike path, retail business, then freeway, then a few houses, then wide roads with roundabouts to warehouses with housing around warehouses. It doesn't appear its age in comparison to other cities nearby who also have established neighborhoods and businesses - Olympia, Dupont, Tacoma.

#008

Posted by **Marianne** on **04/24/2021** at **11:15am** [Comment ID: 71] - [Link](#)

Agree: 0, Disagree: 0

Yes!

#009

Posted by **Marianne** on **04/24/2021** at **11:15am** [Comment ID: 70] - [Link](#)

Agree: 0, Disagree: 0

Yes! Education is key.

#010

Posted by **Roy** on **04/30/2021** at **2:41pm** [Comment ID: 101] - [Link](#)

Agree: 0, Disagree: 0

It is very important that we use nature (not technology) to help us not only store carbon but also to keep of us emitting more carbon. Do not let our trees be cut down unnecessarily and support regenerative agriculture.

#011

Posted by **Randy** on **04/01/2021** at **5:54pm** [Comment ID: 6] - [Link](#)

Agree: 0, Disagree: 0

That's terrific!

#012

Posted by **Randy** on **04/01/2021** at **5:59pm** [Comment ID: 7] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Good Regs which could be more effective with consistent enforcement. There are commercial tree cutting companies consistently topping and removing trees without permits. They should be warned once and then forbidden from working within Lacey after the second offence. They know the rules and know it's not a big deal to violate.

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 1:05 PM
To: 'dianam1814'
Cc: Jessica Brandt
Subject: RE: The tree report in the climate mitigation plan

Diana: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: dianam1814
Sent: Tuesday, May 18, 2021 9:13 AM
To: Ryan Andrews
Subject: The tree report in the climate mitigation plan

External Email Warning! Use caution before clicking links or opening attachments.

Staff at the Lacey Planning Commission,

Would you please forward? Thank you.

Members of the Lacey Planning Commission,

I am writing to ask that you pass the climate mitigation plan **in full** and include it in your master plan. If you have problems with the portion that covers trees, please send it back to the committee to be reworked. The tree report makes almost no changes over 5 years ago and does not reflect the work of the urban forestry committee or the vast majority of comments by citizens.

The climate survey asked for the citizen's priority on trees. It split protection in two between enforcing current ordinance or making stronger ones. The survey clearly showed that the public wants protection for trees as a first priority.

Rather than protecting the trees the two proposed changes would make it easier to cut them! It removes the number limit on cutting and gives HOA's free reign at cutting. This is NOT what citizens wanted. Nor is it not what the mitigation plan calls for. It is clear we must **preserve** trees and plant more to meet the science-based goals of the plan.

This report does tell that 15 years ago 43% of land in Lacey was covered in trees and that now there is 28% covered. In 15 years, 15% of tree coverage has disappeared. This is about 1% tree loss a year – somewhat unnoticeable per year but grave. We **cannot** keep going at this rate!

This report does not set tree canopy goals, it does not create protections for exceptional trees (the biggest ones that draw down the most carbon), nor does it provide a mechanism for enforcement of tree-cutting rules. It in fact will **accelerate** the tree cutting.

This part of the work should **not** be accepted and should be sent back to committee to be reworked in line with the committee and the public's actual view point.

Thank you for receiving my comments,

Diana Moore

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 1:32 PM
To: 'Carolyn Treadway'
Cc: Jessica Brandt
Subject: RE: Comments for the MAY 18 meeting of the Lacey Planning Commission: Do not support Lacey Urban Forestry Plan

Carolyn: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Carolyn Treadway
Sent: Monday, May 17, 2021 12:26 PM
To: Ryan Andrews
Subject: Comments for the MAY 18 meeting of the Lacey Planning Commission: Do not support Lacey Urban Forestry Plan

External Email Warning! Use caution before clicking links or opening attachments.

Dear Ryan Andrews:

Please send the letter below to each of the Lacey Planning Committee members. It has my comments to the Commissioners about the Lacey Urban Forestry Plan.

Thank you.

Carolyn Treadway

1951 Circle Lane SE
Lacey, WA 98503
May 15, 2021

Dear Lacey Planning Commissioners:

As a resident of Lacey, I urgently request that you do NOT support the Lacey Urban Forestry Plan. It is inadequate in protecting our trees!! It does not accurately reflect public comments, which were overwhelmingly in support of tree protection. It does not reflect the goals of the Thurston Climate Mitigation Plan.

Instead, please ask the committee to revise their suggested plan. This plan is not acceptable, and will not help us meet the greenhouse reduction targets to mitigate climate change.

Most Sincerely,

Carolyn Treadway

Carolyn@PlanetCare.us

Ryan Andrews

From: lynn@thurstonclimateaction.org
Sent: Monday, May 17, 2021 10:13 AM
To: Jessica Brandt
Subject: re: urban forestry report

External Email Warning! Use caution before clicking links or opening attachments.

Hi Jessica:

As you know the draft report was released Friday. I have to tell you I was very surprised reading it. My understanding from both you and Marianne was that the committee had been this year discussing how to better protect trees and certainly in your tree survey results that is what the vast majority of respondents were asking for. Thus I am very baffled to see a plan that has little changed in it other than two things that remove tree protections. I don't think there is anything about HOA that should give them special rights to cut down trees. But the other item is written in such a confusing way that it appears to take away the limit of cutting 5 trees in three years, and replace it with getting special permission from the city arborist. It is still allowing cutting. Elsewhere it is reported that the over the last 15 years there has been a 15% loss of tree canopy. This is exactly how that happens. If you make a minimum number of trees required then people keep cutting and you keep having losses. The goal needs to be to preserve as much as is without restricting necessary building. Also because big trees hold the most carbon allowing them to be cut and replaced by a same number of young trees is a huge carbon loss.

Regretfully I do not feel like I can support this plan being in place for 5 years if we are trying to sync it up with the mitigation plan. I will be testifying that we should send it back to the urban forestry commission to work further on how to create actual tree protections as the citizens' of lacey have asked for.

Respectfully,

Lynn Fitz-Hugh

Lynn Fitz-Hugh
Community Engagement Director
Thurston Climate Action Team
She/her pronouns

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:54 AM
To: 'jhawk@gglbbs.com'
Cc: Jessica Brandt; Peri Edmonds
Subject: RE: urban tree protection

Jan: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: jhawk@gglbbs.com
Sent: Monday, May 17, 2021 11:46 PM
To: Ryan Andrews ; City Council
Subject: urban tree protection

External Email Warning! Use caution before clicking links or opening attachments.

City Council etal,

I am frankly pretty deeply disturbed by the Lacey Planning Commission's intention to vote on the Urban Forest Management Plan, a plan which has entirely missed the mark. I have followed the process, and can't fathom how this plan addresses the survey results of the citizens of Lacey...who overwhelmingly asked for tree protection in their City. Your plan does the opposite.

We expected changes to the plan to BETTER protect trees and to line up goals with the acceptance and implementation of the **Thurston Climate Mitigation Plan**. Your plan does NOT do either.

I am on vacation and cannot attend Tuesday's meeting, but I want you all to know that I am absolutely opposed to the plan as is, and ask you strongly to send this plan back to committee and work earnestly to take seriously the mission at hand, and that is to specifically INCREASE protection of trees in Lacey.

This plan does not set tree canopy goals, nor create protections for exceptional trees (large trees which sequester the most carbon).

It does not provide a meaningful mechanism for enforcement of tree cutting rules. It in fact will accelerate tree cutting, if anything.

Please, reject this poorly conceived plan and let's figure out how to actually move the City of Lacey into position to align values to actions when it comes to all the benefits which trees provide humans in the urban setting--from carbon sequestration to lowered energy costs, higher property values, cleaner air, storm water retention and mitigation, beautification, and the health of our citizens.

Send this one back.

Thank you~
Jan Lindsey

From: lynn@thurstonclimateaction.org
To: [Jessica Brandt](#); [Ryan Andrews](#); [Rick Walk](#)
Subject: re: resolving the new and old language
Date: Wednesday, June 9, 2021 1:30:23 PM



Dear Jessica/Rick/Ryan:

This morning I woke up thinking about the planning commission's request that you clarify the elimination of the "5 trees in 3 years" rule as it was not clear to some of the commissioners. I was thinking about it and I suddenly realized that actually their passage of the canopy goals easily allows the elimination of the 5 trees in 3 years rule. When Rick and I spoke last week and he explained to me how that was just a clean up of language because the charts of tree minimums really were the bottom line of the situation right now. I said: "Well I could see that if you had canopy goals instead of minimum trees, but this way still allowed tree loss."

So, if you actually remove the tree charts as well as the "5 trees in 3 years", then the guideline becomes maintenance of the 28% tree canopy on a yard. The rule becomes simple and straight forward. (Tree canopy can be measured by aerial views of their yard on Google Maps or by "drip line" more commonly known as the shade around a tree.) For people who already have less than 28% or actually exactly 28%, they will not get to cut any more. For people who have more canopy, they could cut down to that level. For cases in which people would want to cut below the goal, the rule does require replacement trees. This addresses the inequity issue Ryan was speaking of in which the hard and fast number of 5 allowed people with very big properties to do less cutting than people with a regular size lot. By removing both the 5 in 3 and the tree chart, the rule would be equal for everyone: 28%. It should simplify the decisions of those who have to give permission.

In the case of lots being developed setting a 28% canopy goal should do exactly what one hopes. It will incentivize keeping existing trees because it is much easier and cheaper to accomplish that by keeping trees around the border of the property (which is generally where new homeowners want them anyway). Construction crews can enter bring building equipment through the drive-way space. By keeping trees, they don't have to pay for replacement trees.

I also noted some ambiguities that should be clarified. In the existing section on ground clearing permits for development, that 40% of existing trees be left. It is hard to say whether this is more or less than a requirement to leave 28% of the land covered in trees. If, for example, ten trees were on a 6,500 sq ft lot, only four of the trees would be required to remain which could result in less than 28% canopy. If it was 28% goal applied, at least four tree or maybe more dependent upon size would need to remain. On the other hand, on a fully treed lot, leaving 40% of existing trees would certainly be more than a 28% canopy. These two different methods for development properties will need to be reconciled. The type of trees and size of trees determine which approach actually is most protective and which would result in more tree removal. I would encourage you to figure out which measurement for developing lots will result in less tree removal and go with that.

What does 28% look like on a developed residential lot?

My house sits on a 6,500 sq ft lot (granted in Olympia but a very typical lot size). It currently has two big trees (one in the front yard and one in the back) three medium and eight smallish trees (based on their DBH). They are all around the perimeter of the yard. It would be difficult to add any more. I think their canopy would be about 30% of the entire lot. Most people would likely say that is fairly ideal - lots of trees, not in the way of anything, still allowing a large grassy area. But if the minimum tree number of chart were to be applied I could cut down all but 5 of them - in other words 8 of them. AND I could cut down the biggest if I wanted. Leaving the 5 smallest would result in very little canopy. And if we went solely by the "5 trees in 3 years" rule I could cut down all 5. Five is less bad than the 8 by the chart but still a loss. Thus I think it is clear that the canopy goal of 28% would keep a status quo in my backyard which if the goal is reducing canopy loss in Lacey, would be just right.

In conclusion, I hope that while incorporating the changes passed by the planning commission that both the chart and the "5 trees in 3 year rule" can simply be removed so that the now passed

From: [Ryan Andrews](#)
To: ["jhawk@gglbbs.com"](mailto:jhawk@gglbbs.com)
Cc: [Jessica Brandt](#); [Peri Edmonds](#)
Subject: RE: urban tree protection
Date: Tuesday, May 18, 2021 8:54:03 AM

Jan: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: jhawk@gglbbs.com <jhawk@gglbbs.com>
Sent: Monday, May 17, 2021 11:46 PM
To: Ryan Andrews <Randrews@ci.lacey.wa.us>; City Council <council@ci.lacey.wa.us>
Subject: urban tree protection



City Council etal,

I am frankly pretty deeply disturbed by the Lacey Planning Commission's intention to vote on the Urban Forest Management Plan, a plan which has entirely missed the mark.

I have followed the process, and can't fathom how this plan addresses the survey results of the citizens of Lacey...who overwhelmingly asked for tree protection in their City. Your plan does the opposite.

We expected changes to the plan to BETTER protect trees and to line up goals with the acceptance and implementation of the **Thurston Climate Mitigation Plan**.

Your plan does NOT do either.

I am on vacation and cannot attend Tuesday's meeting, but I want you all to know that I am absolutely opposed to the plan as is, and ask you strongly to send this plan back to committee and work earnestly to take seriously the mission at hand, and that is to specifically INCREASE protection of trees in Lacey.

This plan does not set tree canopy goals, nor create protections for exceptional trees (large trees which sequester the most carbon). It does not provide a meaningful mechanism for enforcement of tree cutting rules.
It in fact will accelerate tree cutting, if anything.

Please, reject this poorly conceived plan and let's figure out how to actually move the City of Lacey into position to align values to actions when it comes to all the benefits which trees provide humans in the urban setting--from carbon sequestration to lowered energy costs, higher property values, cleaner air, storm water retention and mitigation, beautification, and the health of our citizens.

Send this one back.

Thank you~
Jan Lindsey

From: [Marianne Tompkins](#)
To: [PublicComment](#)
Subject: Urban Forest Management Plan
Date: Sunday, August 22, 2021 4:11:51 PM



Dear Lacey City Council,

I was on the Lacey Tree Task Force. I am a Lacey resident.

First, I want to thank you for having in the budget to hire a city arborist, and to hire a new full time climate staff person. This is great news!

I support the Climate Mitigation plan, and I know that it requires much more tree planting – we cannot be cutting down a lot of trees. That being said, I am really baffled by our Lacey City Council.

I testified at planning commission meetings and sent letters, and I know of many others that did as well. The Planning Commission listened to us and told you not to make tree cutting exemptions for HomeOwner Associations. Why do we have this process if you are going to ignore your own staff, and most importantly, your constituents?

In your own tree survey, Lacey residents, and the public, clearly voiced more protection of trees. Only 3% stated the desire to have restrictions removed so they could cut – why are you ignoring us and listening to one squeaky wheel? Why should HOA's have different rules than other homeowners or businesses? It gives the appearance of special interest.

In order for Condos to be built, careful agreements are made with the planning department regarding trees that will be saved, and where new plantings should be placed on the property – why would we undo all that with this new provision?

I am disappointed that the revision of the urban forestry plan removes a rule that said only 5 trees could be cut down in 3 years. Current Planning and Zoning states, "A residential property owner can remove up to five trees during a three-year period provided the required minimum ratio of **four trees per each 5,000 square feet of total lot area** remain on the site or are re-planted." I can tell you that walking in my neighborhood, and observing, this rule is clearly not enforced. Taking tree rules away will make it far easier to remove trees, and it is obviously impossible to enforce planting.

Please vote to **leave the code as it is** with no special permission for cutting at HOA's. Please **leave the UFMP alone**, and maybe revisit it in a year. Lacey has made it clear---we want more tree protections, not less.

Thank you,

Marianne Tompkins

"Nothing we use for a few minutes should pollute our environment and harm wildlife for hundreds of years."

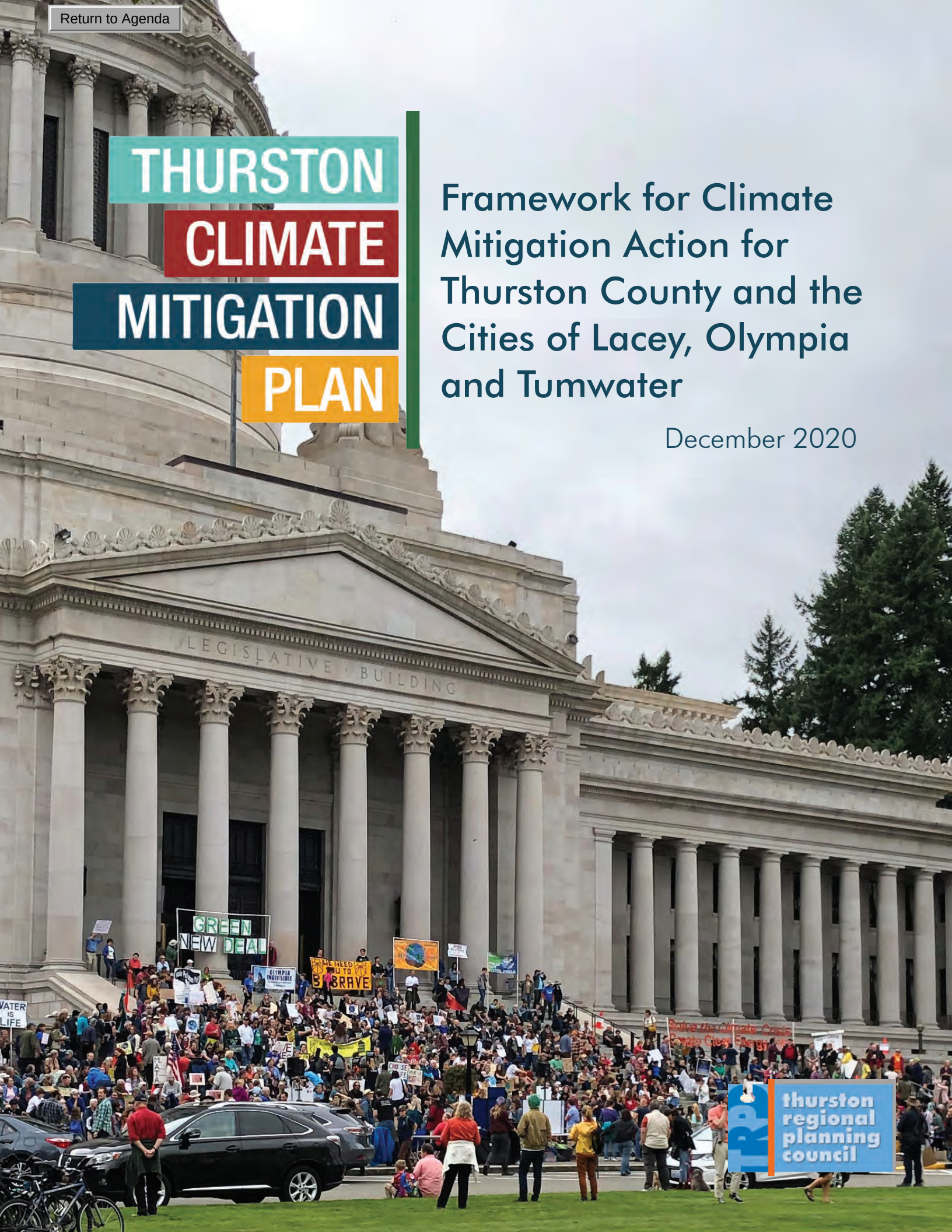
canopy goal remains in its place, and that you can resolve whether to equally apply it to developing properties or to remain with the requirement of leaving 40% of existing trees.

Thank you for your attention to this.

THURSTON CLIMATE MITIGATION PLAN

Framework for Climate Mitigation Action for Thurston County and the Cities of Lacey, Olympia and Tumwater

December 2020



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THURSTON REGIONAL PLANNING COUNCIL (TRPC) is a 23-member intergovernmental board made up of local governmental jurisdictions within Thurston County, plus the Confederated Tribes of the Chehalis Reservation and the Nisqually Indian Tribe. The Council was established in 1967 under RCW 36.70.060, which authorized creation of regional planning councils.

TRPC’s mission is to **“Provide Visionary Leadership on Regional Plans, Policies, and Issues.”**

To Support this Mission:

- A. Support **regional transportation planning** consistent with state and federal funding requirements.
- B. Address **growth management, environmental quality, economic opportunity**, and other topics determined by the Council.
- C. **Assemble** and **analyze data** that support local and regional decision making
- D. Act as a **“convener”** to build regional **consensus** on issues through information and citizen involvement.
- E. Build **intergovernmental consensus** on regional plans, policies, and issues, and advocate local implementation.

2020 MEMBERSHIP
THURSTON REGIONAL PLANNING COUNCIL

<u>Governmental Jurisdiction</u>	<u>Name of Representative</u>	
City of Lacey	Malcolm Miller, Councilmember	
City of Olympia	Clark Gilman, Councilmember	
City of Rainier	Dennis McVey, Councilmember	
City of Tenino	David Watterson, Councilmember	
City of Tumwater	Tom Oliva, Councilmember	
City of Yelm	JW Foster, Mayor	
Confederated Tribes of the Chehalis Reservation	Amy Loudermilk, Staff	
Nisqually Indian Tribe	David Iyall, Tribal Treasurer	
Town of Bucoda	Alan Carr, Mayor	
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Intercity Transit	Carolyn Cox, Authority Member	
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 <u>Chair</u>	 <u>Vice Chair</u>	 <u>Secretary</u>
JW Foster	Cynthia Pratt	Clark Gilman
City of Yelm	LOTT Clean Water Alliance	City of Olympia
	Marc Daily, Executive Director	

Table of Contents

- 1. Introduction 9**
 - 1.1 What is Climate Mitigation? 11
 - 1.2 A Foundation of Regional Sustainability Planning 11
 - 1.3 What is in this Plan...and What is Not 14
- 2. Vision, Goals, and Guiding Principles 17**
 - 2.2 Emissions Targets and Project Goals 20
 - 2.3 Guiding Principles..... 23
 - 2.4 Equity and Climate Action 24
- 3. Background..... 29**
 - 3.1 Greenhouse Gas Emissions 30
 - 3.2 Emissions Sectors..... 35
- 4. Plan Development 47**
 - 4.1 Plan Development Framework..... 48
 - 4.2 Community Engagement 51
 - 4.3 Communitywide Action List 57
 - 4.4 Emissions Target Analysis..... 59
- 5. Mitigation Strategies and Actions..... 69**
 - 5.1 Chapter Organization 70
- 6. Implementation Strategy 103**
 - 6.1 Implementation Approaches 105
 - 6.2 Levers and Mechanisms for Implementation 109
 - 6.3 Funding the *Thurston Climate Mitigation Plan* 112
 - 6.4 Implementation Timeline 112
- 7. Next Steps..... 115**
- 8. Glossary and Acronyms 119**
 - 8.1 Glossary 119
 - 8.2 Acronyms..... 120
- 9. References 121**
- 10. Appendices 123**
 - Appendix 10.1 Resolutions Adopting Common Targets to Reduce Communitywide Greenhouse Gas Emissions..... 125
 - Appendix 10.2 2018 Greenhouse Gas Emissions Inventory 139
 - Appendix 10.3 Communitywide Actions List 197
 - Appendix 10.4 Multicriteria Analysis 211
 - Appendix 10.5 Scenarios Analysis Report 271
 - Appendix 10.6 Communitywide Implementation Strategy 297
 - Appendix 10.7 Monitoring Protocol 311
 - Appendix 10.8 Community Engagement Summary 317
 - Appendix 10.9 Resolution Accepting the Thurston Climate Mitigation Plan 423



People gather at the Washington State Capitol Building in September 2019 to rally for action on climate change. Source: TRPC

1. Introduction

“It is no longer enough just to change our lifestyles. We need to be changing our communities.”

Kaylee Shen,
Olympia High School student

It's September 20, 2019, and a crowd is growing on the steps of the Washington State Legislative Building in Olympia. Although it's the middle of a school day, the more than 2,000 people flooding up the pathways are mostly middle and high school-aged youth. They hold up colorful hand-printed signs with slogans like “Time is Running Out” and “The climate is changing, why aren't we?” Students from across the Thurston region have walked out of classes this day as part of a Global Youth Climate Strike. They ask their government to recognize climate change as an emergency that threatens their future, and demand that those in power take ambitious action to address it. At a podium, young organizers of the rally speak with poise and passion about their fears for a world impacted by climate change, their determination to steer a different course, and their hope that local leaders are listening...



Climate change is already affecting our communities. Impacts like hotter summers, wildfire smoke, and flooding endanger our homes, damage public health, and affect local business. The *Thurston Climate Mitigation Plan* is a continuation of the efforts of the Thurston Regional Planning Council (TRPC), Thurston County, and the cities of Lacey, Olympia, and Tumwater to prepare for and reduce the impacts of climate change. This plan presents a framework for climate mitigation in our region. It includes actions these local governments can take to make measurable progress toward greenhouse gas emission reduction goals, while maintaining—and even improving—quality of life in our region. Transforming our community to meet the challenges of climate change will require participation from every segment of society—public agencies and private businesses, parents, students, scientists, artists, producers, and consumers. This plan is not intended to be the last word on climate action, and it doesn't have all the answers. Instead, it begins a conversation about how local governments can best act together, and enable and empower their residents to build a future in which we can all thrive. While that future brings risk and uncertainty, it also promises great opportunity.

We have one planet but many climate solutions, so let's get to work.



A firefighter overlooks damage resulting from a wildfire in eastern Thurston County. A warming climate is projected to exacerbate wildfire risks in coming decades.
Source: McLane Black Lake Fire Department

1.1 What is Climate Mitigation?

Climate mitigation refers to actions that take heat-trapping greenhouse gases like carbon dioxide out of the atmosphere or prevent them from entering the atmosphere in the first place. The amount of greenhouse gases we emit is directly related to how warm the planet will become. The more emissions we produce through our activities, the more severe and damaging climate change impacts will be.

Reducing—or mitigating—our emissions locally will help to limit the amount of warming we will experience globally and will mean fewer negative impacts on our community and region. Reducing emissions can help protect our infrastructure and the health and safety of our families.

1.2 A Foundation of Regional Sustainability Planning

The Thurston Climate Mitigation Plan builds on many years of sustainability work across our region. Prior to this planning effort, Thurston County and the cities of Lacey, Olympia, and Tumwater had all adopted plans or resolutions expressing their commitments to address climate change by reducing greenhouse gas emissions.

- **Thurston County:** The Board of County Commissioners adopted Resolution 14395 in 2010 that set the County on a “pathway to zero greenhouse gas emissions” from its municipal operations and says the County shall develop and implement an “adaptable, long-term plan considering all aspects of Thurston County operations as they relate to energy and greenhouse gas emissions.”
- **Lacey:** In 2009, Lacey completed the *Carbon Reduction and Resiliency Plan (CR2)*, which identified climate risks to the city and outlined actions to mitigate those impacts through preparedness and greenhouse gas reductions. The Lacey City Council adopted the CR2 plan as an appendix to the Lacey Comprehensive Plan in 2016.
- **Olympia:** In response to a citizen asking the Olympia City Council about what the City was doing to address the issue of global warming, the first interdepartmental team to address climate change was formed in 1990. Based on the team’s work, the City committed to a three-part strategy to address the “challenge of global climate change,” including the reduction of greenhouse gases. Since 1990, Olympia has taken steps to reduce its municipal greenhouse gas emissions through concrete actions such as installing solar panels on city facilities, has shown its commitment to climate mitigation through participation in organizations such as the Global Covenant of Mayors and has revised its Comprehensive Plan to include climate policies.
- **Tumwater:** In 2008, Tumwater completed a Climate Action Plan, which measured and projected the city’s municipal emissions, identified existing mitigation actions, and proposed additional measures to reduce emissions from municipal operations.
- **Thurston Regional Planning Council:** In 2013, TRPC adopted *Sustainable Thurston*, which set a priority goal for the Thurston region to “move toward carbon neutrality,” and identified “find resources to work on climate change” as a first action step.

Climate Adaptation

In 2018, TRPC adopted the [Thurston Climate Adaptation Plan](#), which includes a summary of observed and projected impacts from climate change on the Thurston region (see sidebar), a vulnerability assessment of the risks those changes pose to community goals, and a list of more than 90 actions to help our region prepare for and adjust to climate impacts. The Thurston Climate Mitigation Plan builds on that same science-based foundation, to address local contributions to the causes of climate change. Together, the two documents form a comprehensive Climate Action Plan for the Thurston Region.

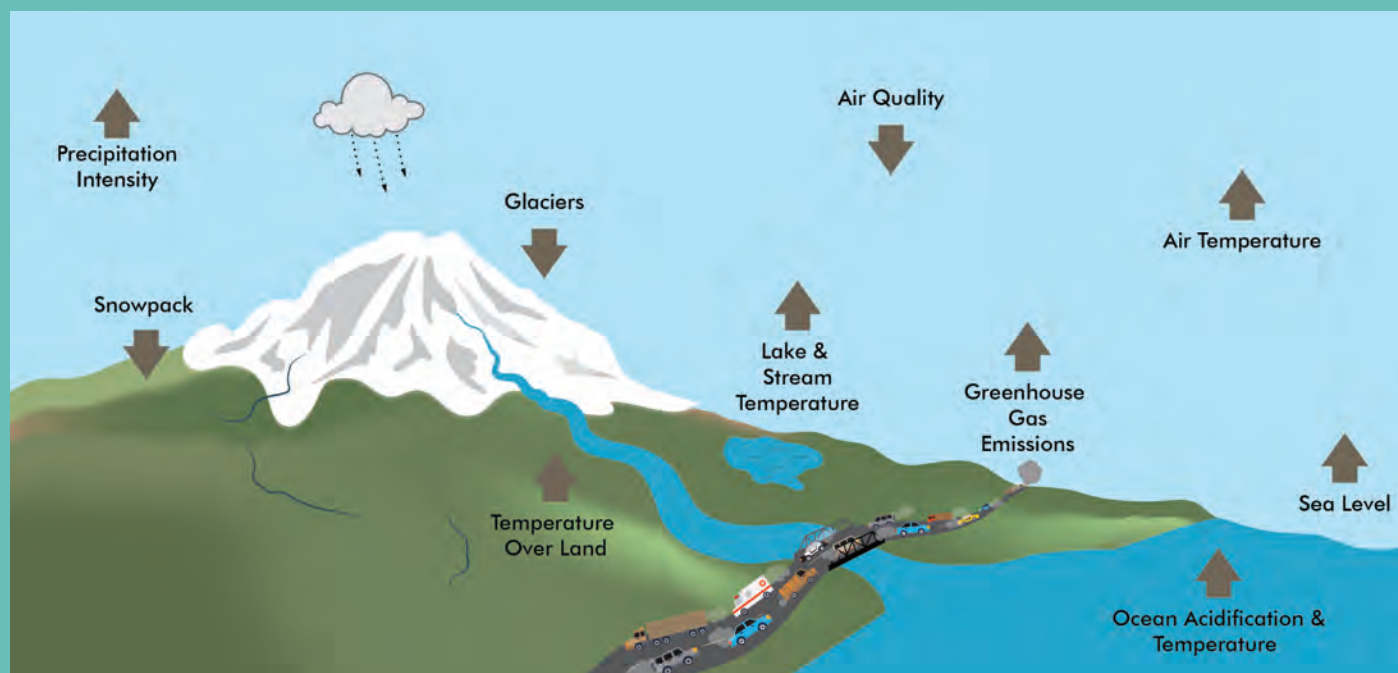
THURSTON CLIMATE ADAPTATION PLAN

How Will Climate Change Affect the Thurston Region?

Our climate is changing in ways that will have significant implications for human and natural systems. The Thurston Climate Adaptation Plan summarized observed and projected climate change impacts, using information from the United Nations Intergovernmental Panel on Climate Change (IPCC) and the University of Washington Climate Impacts Group. This report informed a Vulnerability Assessment that identified major risks to our area from climate change:

Outlook

The region's average annual air temperature will continue to rise over the 21st Century. While there will continue to be variability from year to year, due in part to atmospheric cycles like El Nino and La Nina, we can generally expect to experience hotter, drier



Pictured above are key indicators of the region's changing climate. Arrows show increasing or decreasing trends, based on empirical data and modeling. Source: TRPC, adapted from image in U.S. Global Change Research Program's (USGCRP) 2014 National Climate Assessment

In 2019, the City of Olympia, the LOTT Clean Water Alliance, and the Port of Olympia completed the jointly funded *Olympia Sea Level Rise Response Plan*. This plan identifies the actions that are required to protect Downtown Olympia and the Port peninsula from rising seas.

summers and warmer, wetter winters. These changes are anticipated to worsen existing hazards—like floods, landslides, and wildfires—and introduce new threats—like invasive plants, insects, and infectious diseases.

Climate scientists predict that without significant reductions in greenhouse gas emissions by the 2050s, we can expect:

- Temperature on hottest days to increase by 6.5 degrees. Our average high in August will increase to 94 degrees, from 88 degrees.
- Summer rainfall to decrease by 22 percent, and minimum streamflows in the Nisqually River to drop by 27 percent.
- More frequent rain events in winter, with the heaviest storms dropping 20 percent more precipitation.
- Less winter precipitation falling as snow, with peak river flows arriving up to a month earlier.

Risks and Impacts

- Shrinking snowpack →→ changes streamflow timing, affecting groundwater recharge and fish habitat.
- Changing oceans (acidification and temperature) →→ threaten local subsistence and commercial fisheries.
- Rising sea levels →→ exacerbate coastal flooding and erosion, and undermine infrastructure and wells.
- Warming lakes and streams →→ threaten water quality, increase algae blooms, impacting human health and aquatic species.
- Intensifying storms →→ increase flood damage to structures and endanger people.
- Deepening droughts →→ spur water shortages, wildfires, crop and livestock losses.
- Expanding wildfires →→ endanger people and property and increase health impacts from air pollution.

Review the *Thurston Climate Adaptation Plan* for additional information on these risks and regional actions to reduce our vulnerability.

1.3 What is in this Plan... and What is Not

The Thurston Climate Mitigation Plan is the sum of many parts completed over a more than year of conversations, research, and analysis. Those pieces include:

- A shared vision for how climate mitigation activities align with community goals. (Chapter 2—Vision, Goals, & Guiding Principles)
- An understanding of the activities in our community that contribute greenhouse gas emissions that cause climate change. (Chapter 3—Background)
- A list of communitywide strategies and actions that aim to lower greenhouse gas emissions and help our region progress toward adopted reduction targets. (Chapter 5—Strategies & Actions)
- An estimate of how those strategies and actions can—collectively—enable our region to achieve the substantial emission reductions targeted by the four partner jurisdictions. (Chapter 4—Plan Development, Section 4.4 – Emissions Target Analysis)
- A strategy for implementing climate mitigation actions (Chapter 6—Implementation Strategy)

Taken together, the Thurston Climate Mitigation Plan lays out a road map for continuing regional collaboration on reducing local contributions to climate change.

This plan is not a decision-making document under the State Environmental Policy Act. It is intended to provide perspective on the challenge of meeting emission reduction goals and provide a selection of actions that, if implemented, would help achieve these goals.

More to Learn

While we learned a lot, this process also revealed many gaps in our knowledge that we'll need to fill as we move ahead. This plan is intended to provide Thurston County and the cities of Lacey, Olympia, and Tumwater with a framework of solid strategies that will guide next steps, not lock them into specific tasks that may not make sense as we work out the details. We'll need to do more to understand the potential costs of actions, how they may impact different parts of our community, and the tools and resources available to get the work done. We'll need to better understand and quantify the role carbon sequestration can play in our overall strategy. We'll need to continue listening to what our community needs and wants and bring even more voices into those conversations.

We completed this plan as the Thurston region grappled with the impact of the COVID-19 pandemic. This global public health emergency has revealed how fast, and how thoroughly, our expectations about the future can be upended. Our analysis is based on assumptions about what the future will look like and what we can or cannot do to change it. However, in the coming years, new laws, technologies, scientific discoveries, and economic and social disruptions (including disruptions from climate impacts) will undoubtedly shake up the options available to us for addressing climate change in ways we can't predict today. These changes have the potential to unlock new solutions, if we are prepared to respond with flexibility and creativity. The project partners acknowledge that successful implementation will require adapting to changing conditions and new information as we go.

We also recognize that though this plan focuses on what local governments can do to reduce greenhouse gas emissions, that is only a portion of the change that will be needed across our society to avoid the most severe impacts of climate change. According to a recent survey, while seven in ten Americans say they wish there were more they could do to combat climate change, more than half say they don't know where to start¹. Throughout this plan, we highlight climate mitigation efforts already underway in our community. These examples demonstrate just a fraction of the incredible energy and ingenuity that people in the Thurston region are bringing to this challenge.

Climate change is a global threat that has no borders. It will take meaningful action from governments and individuals across the country and around the world to change course. The Thurston region makes up just a small portion

of that large puzzle. But by starting locally, we can do our part and show others the way. Our action, when multiplied by millions, can change the world. The four jurisdictions involved in this plan recognize that though they bring different perspectives and priorities to this challenge, by working together, we can amplify our impact. Together, we can build a more resilient, sustainable, and equitable future.

What We Heard...

"None of us will have a future if we don't save our planet, which is why we are demanding:

1. *Major legislation be passed to combat climate change at state and local levels.*
2. *Adopt practices to shift our country to 100% clean, renewable, and net-zero emission energy sources through a fair and just transition for all communities and workers.*
3. *Declare the climate crisis a national emergency, because that's what it is.*

We will continue to demand these things, and if adults don't listen, trust me, I'm prepared to yell louder."

-- Elyanna Calle,
Timberline High School student,
organizer of the 2019 Olympia Climate Strike

¹ American Psychological Association, February 2020.

View of the Capitol Dome and Black Hills.
Source: TRPC



2. Vision, Goals, and Guiding Principles

“Thurston County, Lacey, Olympia, and Tumwater, and neighboring tribes recognize the urgent threat and opportunity that climate change poses to our community’s economy, public health, public safety, and environment. We will work together to identify and boldly implement the most effective, efficient, and equitable actions to reduce locally generated greenhouse gas emissions to protect current and future generations from the most severe impacts of climate change.”

– Vision Statement,
Thurston Climate Mitigation Plan

From the start of this planning process, community members and policymakers expressed a desire to focus on action. They emphasized the need to understand what it will take to achieve meaningful progress on reducing local contributions to climate change, and to build broad community support for investment in those solutions. While much about the coming decades is uncertain—how exactly climate change will affect us, what technology may become available, what policy direction may come from the state and federal government—the partners on this project committed to finding tangible, practical steps that will put our region on the path toward a more secure and thriving future.

Climate Advisory Workgroup Members' most frequently used terms when asked, "What do you hope the Thurston Climate Mitigation Plan will Accomplish?"



VISION STATEMENT

MITIGATION

The vision for the *Thurston Climate Mitigation Plan* is:

“Thurston County, Lacey, Olympia, and Tumwater, and neighboring tribes recognize the urgent threat and opportunity that climate change poses to our community’s economy, public health, public safety, and environment. We will work together to identify and boldly implement the most effective, efficient, and equitable actions to reduce locally generated greenhouse gas emissions to protect current and future generations from the most severe impacts of climate change.”

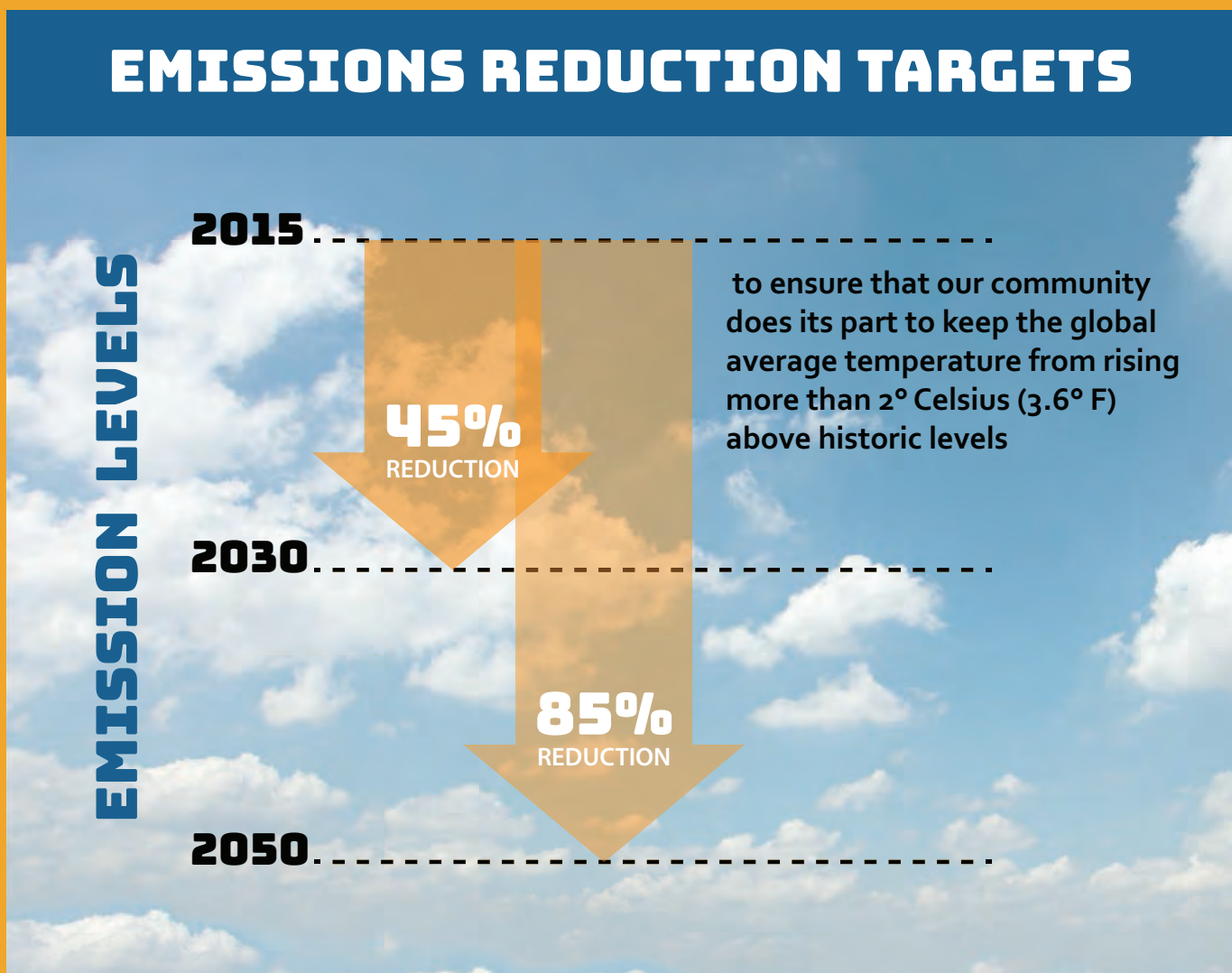
This statement, coupled with the one below from the *Thurston Climate Adaptation Plan*, constitute an overall vision for climate action in the Thurston region.

ADAPTATION

“In addition to doing its part to reduce greenhouse gas emissions, the Thurston County region will remain resilient in the face of climate change impacts during the 21st century and beyond.”

2.2 Emissions Targets and Project Goals

The primary focus of the *Thurston Climate Mitigation Plan* is to identify actions that will enable our region to work collectively to minimize the causes of climate change. To that end, in 2018 the four jurisdictions adopted shared emissions reduction targets (Appendix 10.1). These targets are in line with those set by other countries and communities around the world and ensure that our community does its part to address global climate change.



Emissions Reduction Target

Reduce net communitywide greenhouse gas emissions 45% below 2015 levels by 2030 and 85% below 2015 levels by 2050 to ensure that our community does its part to keep the global average temperature from rising more than 2° Celsius (3.6° F) above historic levels.

Along with the emissions targets, the Steering Committee adopted regional goals that emphasize the co-benefits of climate action in supporting the strength and resilience of the broader community. These 12 goals are drawn from TRPC’s 2013 *Creating Places—Preserving Spaces: A Sustainable Development Plan for the Thurston Region* (Sustainable Thurston), and guided the *Thurston Climate Adaptation Plan*.

REGIONAL GOALS

- 1

Create vibrant centers, corridors, and neighborhoods while accommodating growth.
- 2

Preserve environmentally sensitive lands, farmlands, forest lands, prairies, and rural lands, and develop compact urban areas.
- 3

Create a robust economy.
- 4

Protect and improve water quality, including groundwater, rivers, streams, lakes and Puget Sound.
- 5

Plan and act toward zero waste in the region.
- 6

Ensure that residents have the resources to meet their daily needs.
- 7

Support a local food system to increase community resilience, health and economic prosperity.
- 8

Ensure that the region’s water supply sustains people in perpetuity while protecting the environment.
- 9

Move toward a carbon-neutral community.
- 10

Maintain air quality standards.
- 11

Provide opportunities for everyone in the Thurston Region to learn about and practice sustainability.
- 12

Make strategic investments to advance sustainability regionally.



How do our emissions reduction targets compare to international and state targets?

In 2014, the Intergovernmental Panel on Climate Change (IPCC) concluded that the United States and other industrialized countries need to reduce emissions 85-90 percent from 1990 levels by 2050 to stabilize atmospheric concentrations of carbon dioxide and other heat-trapping gases at 450 parts per million. Achieving this target will likely keep the global average temperature from rising 2° Celsius above pre-industrial levels by the end of this century, and thus avoid the most severe climate impacts. These are the goals that were included in the 2016 Paris Agreement, which has been signed by 194 individual countries and the European Union. The IPCC has further recommended that countries aim to limit global warming to 1.5° Celsius by accelerating reductions in the coming decades—reducing emissions by 45 percent from 2010 levels by 2030 and achieving “net zero” by 2050.

In 2020, as this plan was being developed, Washington State adopted updated greenhouse gas emission limits for consistency with the most recent science assessments:

- By 2020, reduce emission to 1990 levels
- By 2030, reduce to 45 percent below 1990 levels
- By 2040, reduce to 70 percent below 1990 levels
- By 2050, reduce to 95 percent below 1990 levels, and achieve net zero greenhouse gas emissions

Washington State also adopted strong emission reduction targets for the operation of state agencies, many of which are based in Thurston region, and make up a significant portion of the local employment base.

During the public review period, many commenters requested that the region consider adopting a carbon neutrality target and commit to a more aggressive reduction in emissions. While a route to carbon neutrality was not assessed as part of the analysis for this plan, such a target could be considered as a stretch goal that reaches beyond the targets adopted for the region. For example, in 2019 the City of Olympia worked with local youth to adopt a Climate Inheritance Resolution, which set a goal to achieve net-zero emissions by 2040. Successful implementation of this plan will include periodically reviewing and revising its goals and targets as new information changes our understanding of the best routes to address climate impacts. Going forward, actions at the state, national, and international level will influence the Thurston region’s ability to achieve our goals locally.

2.3 Guiding Principles

In addition to the project goals, ten guiding principles governed the planning process. These principles built on those from the *Thurston Climate Adaptation Plan* and influenced all pieces of this climate mitigation strategy.

1. **Holistic.** Think in terms of multiple generations and connected built and natural systems, as well as view local and regional decisions through the lens of social, economic, and environmental sustainability.
2. **Action-oriented.** Develop actions and strategies that are meaningful and realistic: go beyond general guidance to identify the specific steps needed to make changes that are effective at reducing greenhouse gas emissions below the emission targets.
3. **Adaptive.** Consider both the short- and long-term impacts of climate change, regularly report on progress, and review and revise targets and approaches as needed to address emerging information about the timing and severity of climate impacts or the effectiveness of policies.
4. **Co-benefits.** Identify and leverage climate change mitigation strategies and actions that offer other benefits to the community, such as increasing resilience or access to resources, reducing energy or other costs, improving health outcomes, or addressing equity.
5. **Science-based.** Utilize sound scientific research, modeling, economic analysis, and other tools to understand the outcomes of strategies to reduce greenhouse gas emissions.
6. **Track record.** Incorporate and complement work produced by others, including successful examples from existing local and regional climate action plans.
7. **Equity.** Consider how the costs and benefits of mitigation actions will be shared across all communities: including both urban and rural areas, low-income households, communities of color, and other populations that historically have been impacted by environmental hazards or are otherwise vulnerable to climate impacts.
8. **Tribal sovereignty.** Recognize and support protection of local indigenous tribes' community health and well-being, including natural resources security and self-determination.
9. **Public engagement.** Seek broad community input, educate residents about climate change, and inspire them to take action.
10. **Readiness.** Consider and prioritize strategies that can be launched and realized quickly using existing resources and/or networks.

What We Heard...

"Strategies that center our tribes—Squaxin Island, Nisqually, Chehalis"

Comment at
Olympia Arts Walk

"Create realistic list of actions that individuals can do to help."

Response on
community
questionnaire

"Make sure that all residents of the county, regardless of income levels or background, can participate in the clean energy economy and benefit from it."

Response on community questionnaire

2.4 Equity and Climate Action

Climate change and climate action have the potential to reshape our society in ways that either worsen existing inequalities or that uplift and strengthen the most vulnerable in our community. Solutions to reduce greenhouse gas emissions can impact all aspects of people's lives and, if ill-designed, can leave many behind. Equity was one of the guiding principles that informed the development of the *Thurston Climate Mitigation Plan*. The project partners recognize that addressing the challenge of climate change will need to occur in tandem with uprooting the legacies of racism and other systemic inequalities that undermine the vision for our region as one that supports and provides opportunities for all. Climate mitigation action cannot occur in isolation from our region's work to address housing affordability, health, and economic disparities. This section reviews how equity was considered in the planning process—it was added in response to comment during the public review period and refers to pieces of the plan that are described more fully in later sections.

What is Climate Equity?

When people say climate action should be equitable, they can mean multiple things. A 2014 report by the Urban Sustainability Directors Network defined equity in the following way: “Equity in sustainability incorporates procedures, the distribution of benefits and burdens, structural accountability, and generational impact. This includes:

- **Procedural Equity**—inclusive, accessible, authentic engagement and representation in processes to develop or implement sustainability programs and policies.
- **Distributional Equity**—sustainability programs and policies result in fair distributions of benefits and burdens across all segments of a community, prioritizing those with highest need.
- **Structural Equity**—sustainability decision-makers institutionalize accountability; decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups.
- **Transgenerational Equity**—sustainability decisions consider generational impacts and don't result in unfair burdens on future generations.”

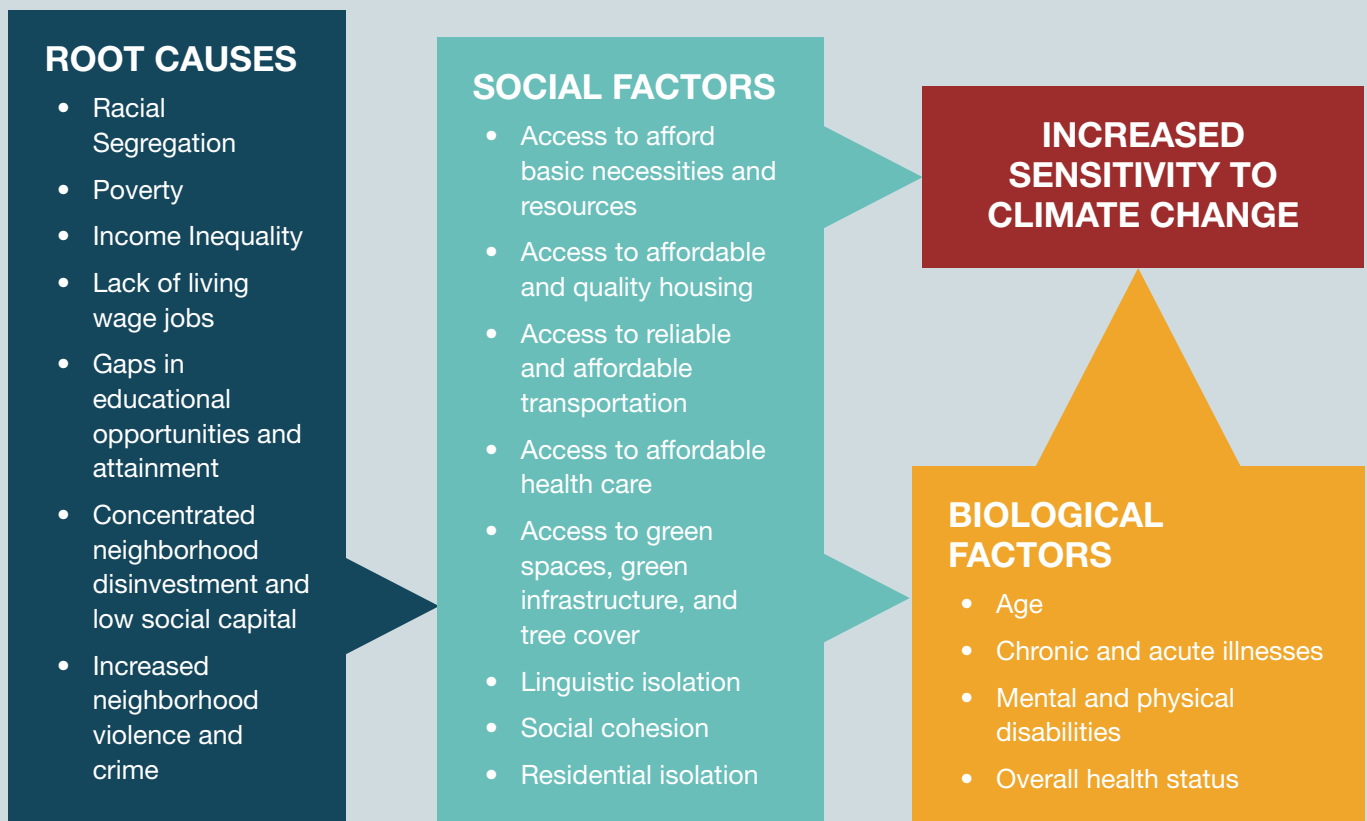


Figure 1. Root causes and factors that contribute to climate change vulnerability.

Source: Urban Sustainability Directors Network Guide to Equitable, Community-driven Climate Preparedness Planning

Though climate change affects everyone, not all people are impacted equally. Communities of color, immigrants, lower-income populations, and the elderly are often more vulnerable to climate impacts like increased heat, flooding, food insecurity, and air quality impacts. The same people may experience multiple, overlapping structural, social, and biological factors that limit their ability to respond and adapt to climate change (see Figure 1). The result is that populations that have contributed the least to create the climate crisis, are set to bear the greatest burden of its impacts. The vision of the *Thurston Climate Mitigation Plan* begins with the principle that it is our responsibility to do our part to protect vulnerable communities by reducing our local contributions to climate change.

The *Thurston Climate Mitigation Plan* addressed several facets of equity in its development:

- **Procedural**—The planning process involved broad outreach to a wide variety of groups as well as key audiences, including tribes, communities of color, low income, and rural communities. The planning team used a variety of methods to provide opportunities for people to engage in the work, such as by offering representation on the Climate Advisory Workgroup, hosting information booths at community fairs, asking for interviews with key representatives, and reaching out to community liaisons. TRPC recorded and posted online all meeting materials to enable people to participate at convenient times and offered translation of materials on request. Despite these opportunities, not all facets of the community were well represented among those who participated. Going forward, regional partners can improve in this area by continuing to build authentic relationships with key contacts for populations often left out of planning decisions and by investing time and resources in building the capacity for climate leadership among different sectors of the community.
- **Distributional**—The multicriteria analysis (see Section 4.3 or Appendix 10.4) included an assessment of how well each action supported social equity as a co-benefit, by asking whether the action would either:
 - “Ensure that residents have the resources to meet their daily needs;” or
 - “Increase equal distribution of or access to housing, financial incentives, open space, economic opportunity, or other resources, among disadvantaged or marginalized communities.”

This criterion was interpreted narrowly, and only applied to actions that explicitly offered greater benefits to a marginalized community, rather than to actions that may affect such populations indirectly. In practice, limiting the application of actions to certain groups often meant the action would have a smaller scope for reducing greenhouse gases. The Climate Advisory Workgroup and Steering Committee agreed it will be more meaningful to consider and address equity impacts as actions are implemented, than to use equity to filter actions that reduce greenhouse gases. Costs and benefits for a subset of priority actions, and the distribution of those costs and benefits, will be considered in a supplemental analysis that will be completed in mid-2021.

- **Structural**—The project partners identified a need to better identify and understand the existing inequities in our region that contribute to climate vulnerability (Action G4.4) and the need to incorporate those social costs into decisionmaking (Action G4.6) as two of the priority actions included in this plan. Several climate-equity indicators are included in the Monitoring Protocol developed for the plan (Appendix 10.7) to track and monitor how our region integrates equity considerations into climate action.

- **Transgenerational**—The Steering Committee acknowledges a responsibility for future generations in the vision for this plan, and youth perspectives were represented throughout the process. A youth representative served on the Climate Advisory Committee and youth and educator priorities were one of the factors used to identify priority actions for the plan in the multicriteria analysis (see Section 4.3 or Appendix 10.4).

In addition, the *Thurston Climate Mitigation Plan* identifies strategies and actions that can support low income and marginalized communities while reducing greenhouse gas emissions, including in the areas of:

- **Transportation**—Focus on building out a transportation network that enables people to get where they need to go through modes like biking, walking, and transit rather than requiring dependence on a personal vehicle. (Strategies T1, T4, and T5)
- **Housing**—Support for more and greater varieties of housing in urban hubs and along transit corridors, paired with anti-displacement policies to maintain affordable housing options. (Strategy T1)
- **Energy costs**—Increased financing options for energy efficiency improvements that reduce energy costs, especially in rental housing, which disproportionately serves lower income and people of color. (Strategy B1)
- **Green technology**—Increased access to emission-reducing technologies like solar infrastructure and electric vehicles. (Strategies B5, and T3)
- **Health**—Policies that support clean outdoor and indoor air, clean water, access to greenspace, and areas for recreation and physical exercise. (Strategies B6, T1, T2, T5, and A6)

A key principle to embrace as we move forward is that everybody has the right to take part in building a climate forward region. Communities of color, lower income, and otherwise disadvantaged groups are at higher risk of being left behind or harmed, but they can benefit the most from climate solutions that improve livelihoods, services, and human health. Delivering an equitable approach to mitigating climate change will require that policymakers be deliberate in how they shape climate actions, and a focus on equity should continue to guide climate action in the Thurston region.



Traffic flows along Martin Way, one of the region's major transportation corridors. Source: Thurston County Public Works.

3. Background

“Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems. These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.”

IPCC, 2018

Every kilowatt we use, mile we travel, and ounce of food and waste we produce contributes —either directly or indirectly—to our carbon footprint. As the Thurston region grows, more buildings, more vehicles, and more demand for goods and services come at a cost we'll eventually pay in impacts from climate change. Bringing down concentrations of carbon dioxide (CO₂), methane (CH₄), and other heat-trapping gases in the atmosphere is the most important action we can take to slow the warming of our planet. That's why the *Thurston Climate Mitigation Plan* sets ambitious goals to reduce local generation of greenhouse gases. This chapter describes what we know about our current contributions to climate change and presents success stories of how our community is already working to reduce our impact.

3.1 Greenhouse Gas Emissions

Sources of greenhouse gas emissions in the Thurston region include:

- **Buildings and energy**, including electricity and natural gas consumption.
- **Transportation and land use**, including fuels used to power vehicle travel.
- **Waste and wastewater**, including solid waste management and wastewater treatment.
- **Agriculture and forests**, including animal farming and land fertilization.
- Other sources such as refrigerant use, street lighting, and land clearing.

Currently, the majority of our region's inventoried contributions to climate change come from powering, heating, and cooling our buildings and driving vehicles. The built environment and transportation account for 90 percent of the Thurston region's total measured emissions. Emissions related to solid waste disposal, wastewater treatment, and agriculture also contribute to the region's total, but a much smaller percentage. Some sources of greenhouse gases—including emissions from refrigerant leakage, land use practices, and products manufactured outside the Thurston region—currently are not measured or included in our regional inventory (see "Greenhouse Gas Inventory" or Appendix 10.2).

Figure 2. Sources of
Thurston County Inventoried
Greenhouse Gas Emissions,
2018. Source: Thurston
Climate Action Team (TCAT),
2020

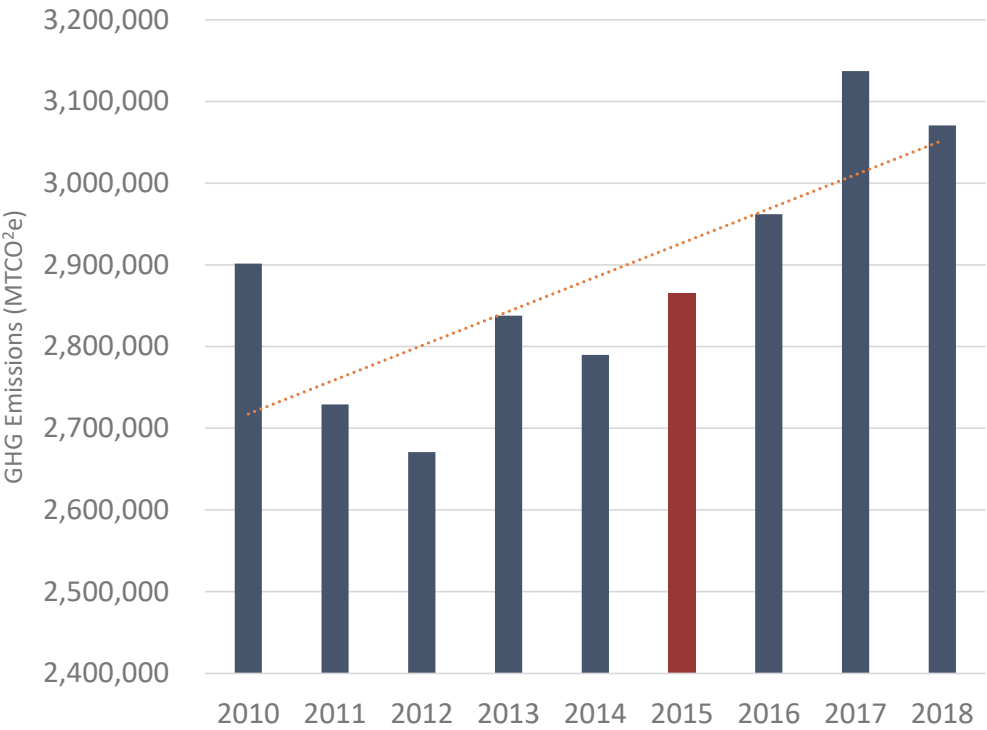
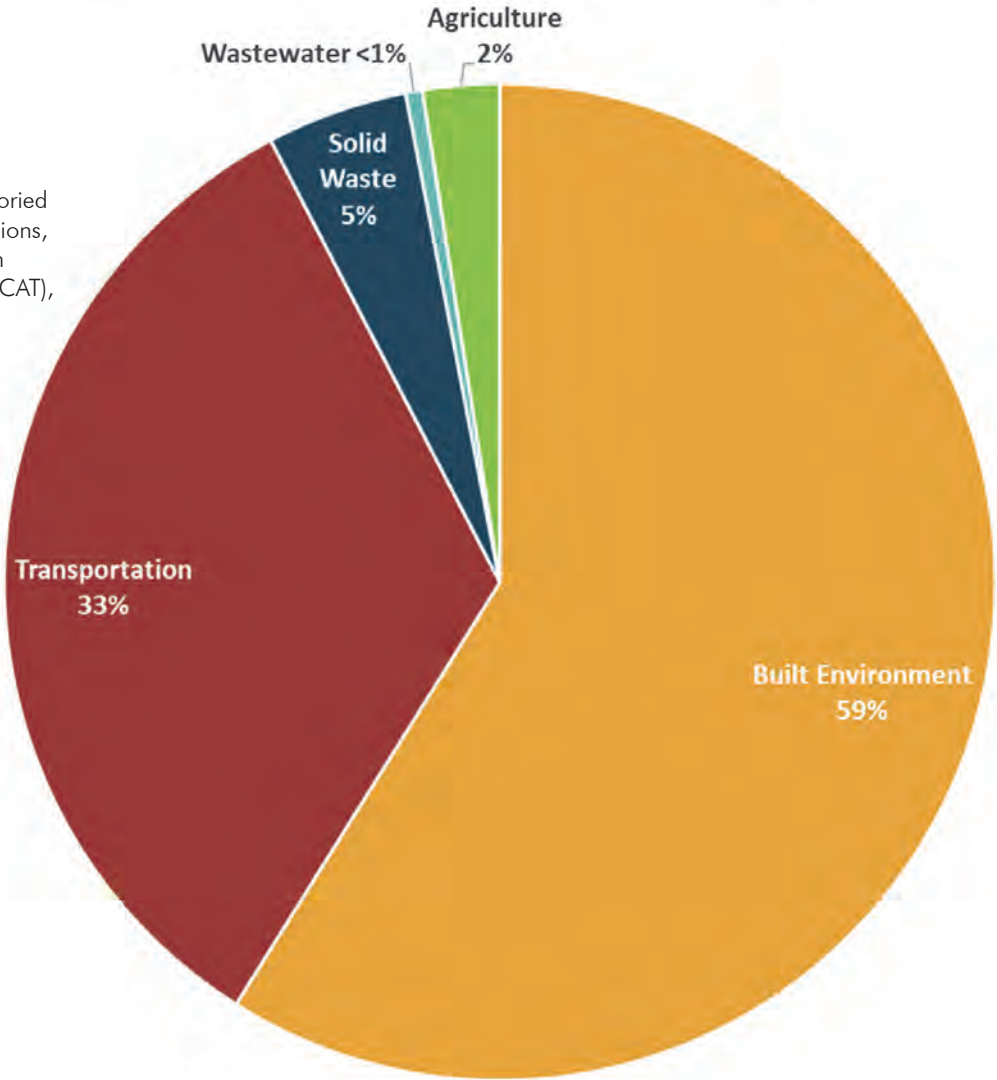


Figure 3. Total Thurston
County Greenhouse
Gas Emissions, 2010-
2018. The baseline
target year 2015 is
highlighted. Source:
TCAT, 2020.

The Thurston region’s total measured carbon footprint in 2018 was more than three million metric tons of carbon dioxide equivalent (MTCO₂e)—that amount is equivalent to the emissions from more than 650,000 passenger vehicles in a year. While annual emissions have fluctuated over the past decade, our total emissions increased over time—including by more than seven percent since our target baseline year 2015. This upward trend will make our emissions targets that much more challenging to reach.

On a per-capita basis, each Thurston region resident emitted an average of 11 MTCO₂e in 2018. A Thurston region resident contributes fewer emissions than the average residents of Washington State as a whole, and less than the average American, but more than the average residents of King, Kitsap, Pierce, and Snohomish Counties. While emissions per person has held relatively steady over the past decade, Thurston County is one of the fastest growing regions in Washington. That population growth accounts for some of our increases in emissions.

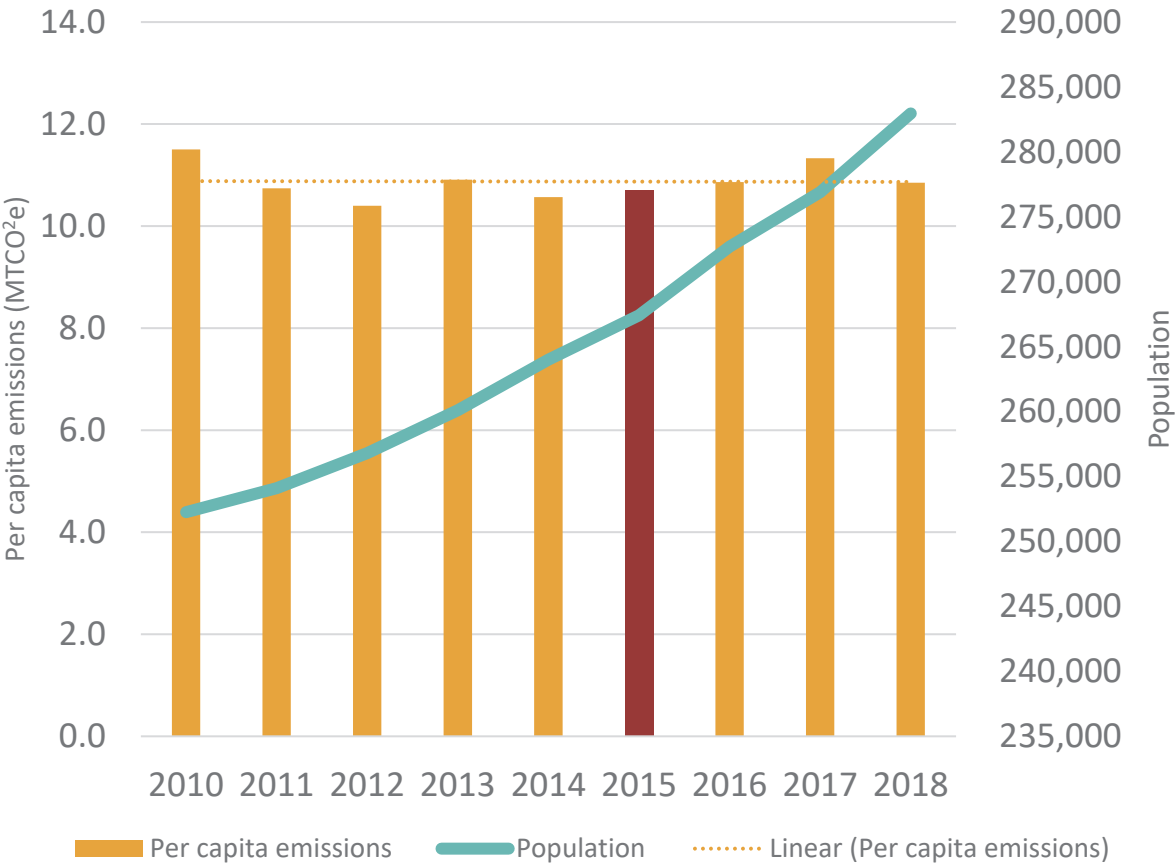


Figure 4. Thurston County Per Capita Emissions and Population, 2010-2018. The Baseline Target Year 2015 is Highlighted. Source: TCAT, 2020.

Greenhouse Gas Inventory

The Thurston Climate Action Team (TCAT) has tracked our regional carbon footprint regularly since 2010. TCAT is a local non-profit made up of experts and members of the public who develop data and advocate for climate change action in our community. TCAT uses a protocol developed by the International Council of Local Environmental Initiatives (ICLEI) and the World Resources Institute to calculate our regional carbon footprint. (Greenhouse Gas Inventory, Appendix 10.2)

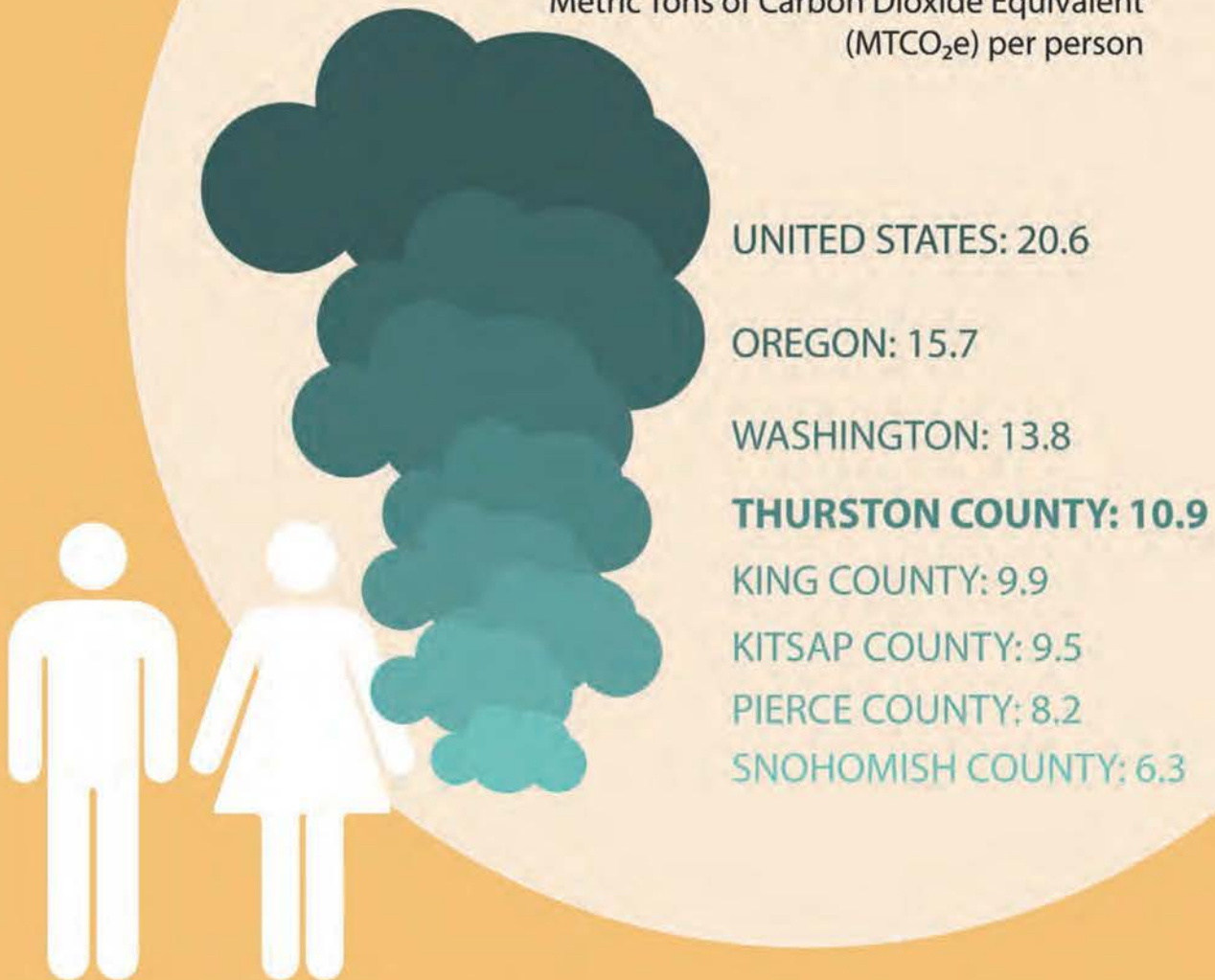
What about emissions from goods and other sources produced outside the Thurston region?

The method TCAT currently uses to develop the Greenhouse Gas Inventory only tracks emissions from activities that occur within the Thurston region. That means it does not measure the impact of many choices made by people in the Thurston region that contribute to global emissions, such as travel beyond the county boundary (including all air travel) and goods purchased and consumed here that are manufactured elsewhere. This is why solid waste and agriculture make up such a small proportion of the current emissions inventory. A full account of the community's climate impact should recognize these consumption-based emissions. While TCAT currently lacks a reliable way to accurately measure consumption-based emissions, the partners involved in this project recognize the large role they play in our region's carbon footprint. These activities may be incorporated into future updates of the plan as better information becomes available.



HOW DO WE COMPARE?

Metric Tons of Carbon Dioxide Equivalent
(MTCO₂e) per person



While per-capita emissions increased only 2 percent since our 2015 baseline year, the population of Thurston County increased 6 percent over the same period, and total emissions increased by 7 percent.

3.2 Emissions Sectors

We can't mitigate climate change if we don't know what behaviors and choices need to change. What activities are contributing the most to our regional carbon footprint? The following sections describe key sectors in more detail to help identify our options to reduce regional greenhouse gas emissions and help to limit climate change impacts.

Buildings and Energy

When we turn on the lights, turn up the heat, or power up an appliance in our homes and workplaces, we are tapping some source of energy. The Buildings and Energy sector includes the generation, transmission, and distribution of electricity and natural gas for heating, cooling, lighting, and other uses. Greenhouse gases are released during the combustion of fossil fuels—such as coal, oil, and natural gas—to heat buildings and produce electricity.

- The buildings and energy sector is the greatest contributor to emissions in the Thurston region, accounting for around 60 percent of total emissions. Residential buildings are the largest source of emissions within this sector, followed by commercial and government buildings, industrial facilities, and outdoor area lighting including street lights.
- Electricity accounts for the largest portion of this sector's emissions—about 76 percent. Most Thurston region residents get electricity from Puget Sound Energy, and coal-fired power plants make up over a third of the utility's current fuel mix (see "Greening Our Grid" on the following page).
- Natural gas is the second biggest portion of emissions at 21 percent, and a growing proportion. Other fuels such as fuel oil, liquid petroleum gas (LPG), and wood make up a much smaller part—about 3 percent combined.

Reducing emissions from this sector will require shifting away from using dirtier fuels like coal and natural gas for electricity and heating by expanding renewable energy generation and use, as well as improvements in building materials and management that increase energy efficiency. Engaging and empowering individuals and organizations to make changes in the way they use energy can also lead to considerable reductions, and actions related to demand response can reduce energy emissions during peak times, which in turn allows utilities to rely less on their dirtiest power sources.



Greening Our Grid

Most people in the Thurston region get electricity from Puget Sound Energy, which uses a mix of different fuel sources to provide a reliable source of power to its customers. Hydroelectricity has long produced a portion of that energy mix, and renewable sources like wind are increasing, but fossil fuels like coal and natural gas still supply the majority of power to our electrical grid. This reliance on fossil fuels leads to the high levels of emissions we see from use of electricity in our building sector. (Note that this section only refers to natural gas that is part of the fuel mix for electricity. Puget Sound Energy also supplies natural gas directly to customers for heating and cooking—emissions from this source are included in the emissions from the built environment sector shown in Figure 2.)

In 2019, Washington State passed the Clean Energy Transformation Act (CETA), which sets milestones for utilities such as Puget Sound Energy to transition toward a clean fuel standard. Under CETA, utilities must eliminate coal-fired electricity from their mix by 2025, become greenhouse-gas neutral by 2030 (using offsets, if necessary), and provide 100 percent renewable energy by 2045. Other recent state legislation lays out steps toward production of renewable natural gas and greater energy efficiency.

Supporting the transition of our electrical grid to clean energy is one of the most powerful things we can do locally to achieve our greenhouse gas reduction targets (see Chapter 6—Implementation Strategy).

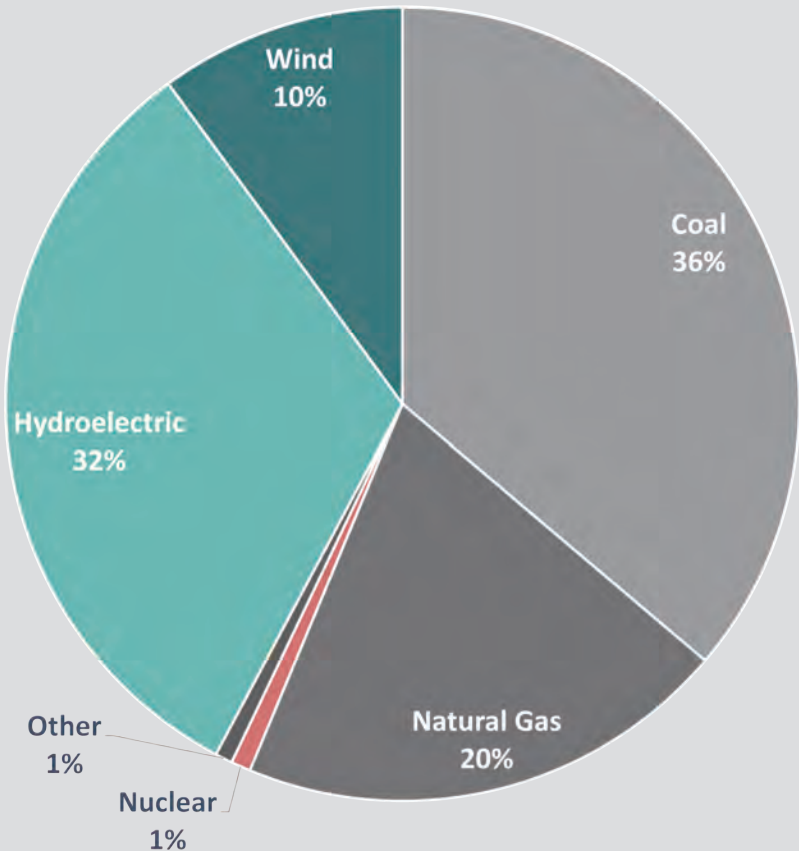


Figure 5. Puget Sound Energy 2018 Electricity Fuel Mix. Source: Washington Department of Commerce and Puget Sound Energy

SUCCESS STORY:

Climate Change Mitigation by Increasing Efficiency and Equity

The Community Action Council of Lewis, Mason, and Thurston Counties is a regional non-profit whose Weatherization Program helps low-income households make their homes more energy efficient. Weatherization efforts can include weather-stripping and caulking to improve air seals, installing or replacing insulation, replacing windows, and similar repairs. The Weatherization Program helps these households decrease energy use by providing many services free of charge. Lower income populations are more likely to experience respiratory illnesses, like asthma and chronic obstructive pulmonary disease (COPD). This work also supports the health and safety of families by helping identify and repair heating system troubles and indoor air quality issues. Programs like this one reduce our local contributions to climate change while also increasing the distribution of resources among people who might otherwise find energy efficiency improvements out of their reach.

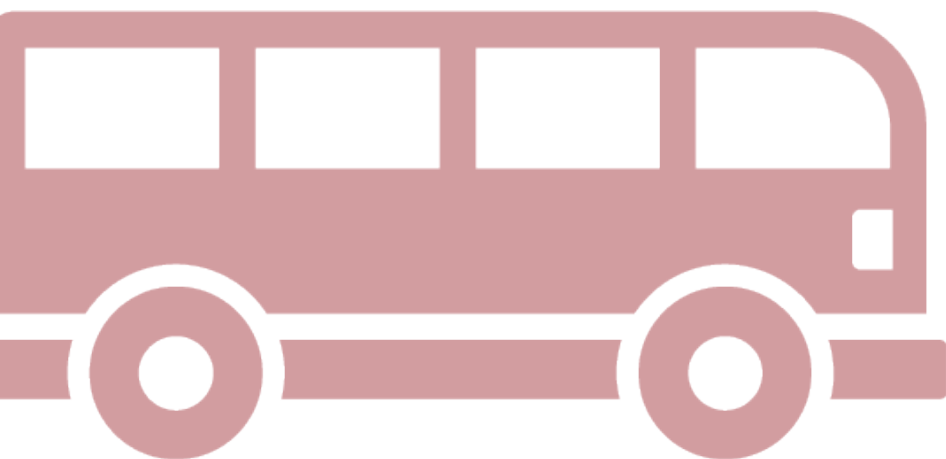


Transportation and Land Use

Moving people and goods efficiently is a key function of a thriving community. However, all that driving, and sitting in traffic, adds up to a big emission bill we'll pay in climate impacts. The majority of greenhouse gas emissions from transportation result from the use of fossil fuel-based products, like gasoline, in internal combustion engines.

- Transportation is the second largest source of emissions in our region (33 percent). Passenger vehicles are the largest source of on-road emissions, followed by heavy duty trucks, and commercial vehicles.
- Regional transit options like buses and vanpools make up less than one percent of transportation-related emissions.

As the Thurston region continues to grow, low-emission transportation will become even more important. This will require that we drive less, telework more, use more fuel-efficient vehicles, and promote alternative forms of travel, like biking and walking. Focusing a high proportion of future development in urban centers and along major transportation corridors, and reducing sprawl can help support this transition.



In 2020, Intercity Transit adopted a Zero Fare model to reduce delays and increase access for passengers. Source: Northwest News Network

429

ZERO-FARE
JUST GET ON & GO!

SUCCESS STORY:

Climate Change Mitigation by Encouraging Public Transit

Increasing access to public transit is a strategy that has benefits beyond its climate impact. In 2020, both Intercity Transit and ruralTransit stopped charging for rides on their buses. Revenue from bus passes contributed a small percentage of Intercity Transit's funding—less than 2 percent. In 2018, voters approved a local sales tax increase to improve transit funding, making bus fare effectively prepaid by local economic activity. Intercity Transit's zero-fare program is a five-year demonstration project intended to both increase the efficiency of transit operation and reduce barriers to taking the bus. The strategy can also support climate mitigation, by making it easier for people to opt for a less-carbon intensive way to get around town, decreasing the number of polluting vehicles on the road. More than 75 percent of residents in our region support or strongly support zero-fare services, and in just the first month of the pilot project, Intercity Transit saw a 20 percent increase in ridership. Over the longer term, a zero-fare system can increase return on taxpayer investment, reduce congestion, and provide more equitable service to all, all while helping to reduce greenhouse gas emissions.

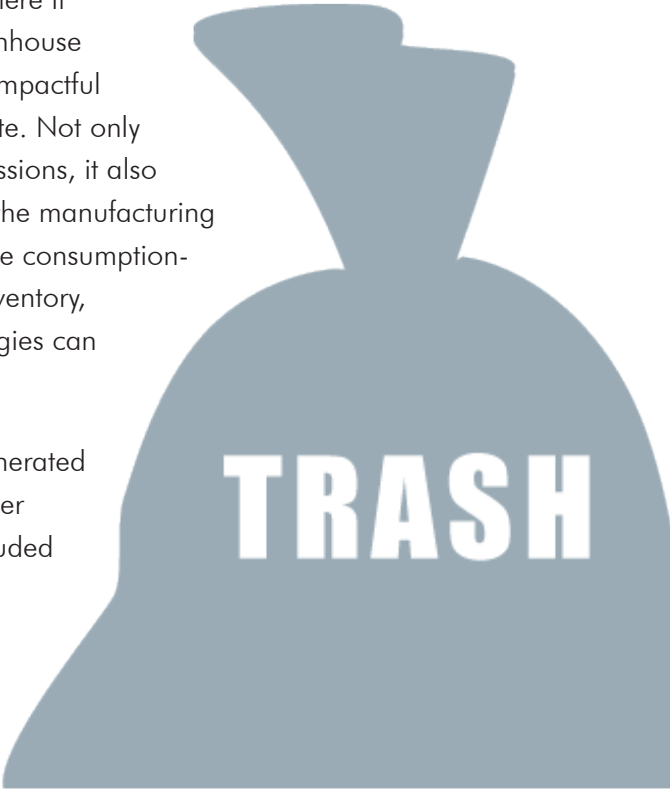
Water and Waste

As a rapidly growing region, the amount of water we use and waste we produce are also on the rise. Trash produced by Thurston County residents and businesses is sent to a landfill to decompose. During the decomposition process, solid waste produces methane—a gas that can be 84 times more potent than carbon dioxide during the first two decades after its release. If uncaptured, this leakage can be a primary source of greenhouse gas emissions from solid waste disposal. Waste collection, transportation, and processing require energy as well, which is often derived from the combustion of fossil fuels. There are similar emissions related to wastewater: wastewater must be collected, transported, treated, and released back into the environment—all of which requires energy and, in some cases, releases potent methane.

- In 2018, waste-related emissions contributed to a little over four percent of Thurston County's total emissions. Methane leaks are often a major source of solid waste emissions—however, the Roosevelt Regional Landfill where most of Thurston County's waste ends up is a leader in methane capture (see sidebar). Other solid waste emissions originated from processing and transportation of solid waste.
- The Thurston region has one of the most innovative wastewater treatment facilities in the country in the LOTT Clean Water Alliance. Wastewater treatment only makes up a small fraction of Thurston County's total emissions (less than one percent). The largest sources of wastewater emissions were related to digester and methanol emissions—both of which are necessary in treating wastewater solids.

Diverting waste keeps materials out of landfills, where it would traditionally break down and produce greenhouse gases. Reducing the sources of waste is the most impactful way to cut the emissions associated with solid waste. Not only does source reduction decrease direct landfill emissions, it also can drive reductions in emissions associated with the manufacturing and transport of products and services. While these consumption-side emissions are not currently included in our inventory, incentivizing reduction, reuse, and recycling strategies can ultimately have a big influence on emissions.

Reducing water use also can reduce emissions generated from the energy used to heat water and pump water and wastewater. These emissions are typically included in the building sector totals discussed above, and they can be among the largest electricity demands for households and municipalities.



TRASH



Methane being captured and turned into Renewable Natural Gas (RNG) at the Roosevelt Regional Landfill in Klickitat County. Source: Republic Services

SUCCESS STORY:

Climate Change Mitigation by Improving Waste Processes

Reusing our excess waste can be a win-win mitigation strategy. The Roosevelt Regional Landfill in southern Washington is the destination for much of the Thurston region's trash. Since the late 1990s, it has generated power through a waste-to-energy project, and now has transitioned from generating electricity to renewable natural gas (RNG). The initial power plant at the landfill generated 26 megawatts of electrical power, or enough electricity to power more than 20,000 homes. In 2018, the Klickitat Public Utility District began investigating using methane from the landfill to generate renewable natural gas in partnership with Republic Services. In 2020, the PUD shifted entirely from electricity generation to the generation of RNG. Since methane is a powerful greenhouse gas, redirecting any methane emissions from the atmosphere can help reduce local contributions to climate change. By the end of the system's 80-year lifespan, it will offset a total of 35.4 million tons of carbon dioxide emissions, and the land will be returned to agricultural use. The project generates more than 1.6 million dekatherms of renewable natural gas per year—a portion of which may circulate back to heat Thurston region homes through an agreement with Puget Sound Energy.

Agriculture, Forests, and Prairies

Farms, forests, prairies, and other open space are important to the identity of the Thurston region, and they can play an essential role in achieving our emission reduction targets by sequestering carbon and helping limit urban sprawl. While these sectors make up only a small proportion of the Thurston region's emissions (two percent), agricultural activities, forest practices, and land conversion can contribute greenhouse gas emissions in a variety of ways:

- **Deforestation** causes the carbon stored in trees to be released into the atmosphere. Deforestation also prevents trees from capturing more carbon from the atmosphere—a process known as carbon sequestration.
- **Poor land management practices** on agricultural soils can lead to increased concentrations of nitrogen in the soil and result in emissions of nitrous oxide (N₂O), a potent greenhouse gas. Specific activities that emit N₂O emissions include the application of synthetic and organic fertilizers and inefficient irrigation practices.
- **Livestock**, especially cattle, produce methane (CH₄) as part of their normal digestive processes—another potent greenhouse gas. This process, called enteric fermentation, represents nearly half of the emissions from Thurston County's agriculture sector.
- **Manure management** from livestock also emits potent methane and nitrous oxide gases. The amount of gases produced varies depending on the manure treatment and storage method.
- **Development of prairies** reduces opportunity for stored carbon and contributes to urban sprawl.

Carbon sequestration refers to the ability of plants, soils, and other organic material to capture and store carbon from the atmosphere. By planting trees, amending soils, and creating natural drainage systems with certain plant species, the Thurston region can remove carbon from the atmosphere and store it in plant matter and soils. Carbon sequestration strategies can bring other benefits as well. For example, adding organic matter to soil supports soil structure and microbiology, retains water, reduces erosion and stormwater run-off, and filters out pollutants. Carbon sequestration is not currently measured in the greenhouse gas inventory, so we don't have a good baseline of the role it plays in our emissions picture. Improving our understanding of the mechanics of sequestration in our region will be an important next step in order to better assess the potential impact of new sequestration actions.

Livestock help with weed control, one of several regenerative agriculture practices on Sapsucker Farm in Olympia. Source: Sierra Smith, Sapsucker Farm



SUCCESS STORY:

Climate Change Mitigation Through Farming Practices and Preservation

Thurston County loses more than 1,000 acres of farmland a year to other uses, yet this land is critical for our regional goals of maintaining a local food network, preserving open space and wildlife habitat, and offsetting local greenhouse gas emissions. This loss of local farmland forces us to source more of our food from outside our region, making our community more dependent on outside suppliers while increasing transportation emissions and undermining local food security. Programs that fund farmland preservation include the Washington Wildlife and Recreation Program, and Thurston County's Conservation Futures and Transfer of Development Rights programs, which purchase property or development rights, allowing these areas to remain as open space available for farming. In 2017, Conservation Futures' funding helped purchase an agricultural conservation easement for Oyster Bay Farm, permanently preserving 39 acres for future generations of food production. Preservation of working farmland will be essential to support both a reliable local food supply and climate mitigation.

Farmers also can make a positive contribution to climate change mitigation with the way they manage their land. In particular, regenerative agriculture is an approach to farming that aims to capture carbon in both soil and plants. It employs a suite of practices including no-till, managed grazing, and selective planting of crops and trees that also benefit local biodiversity and ecosystem health. These techniques are used at farms of all sizes and styles. Sapsucker Farm in Olympia makes the most of its six acres to raise a mix of sheep, cattle, turkeys, geese, and chickens by using rotational grazing, keyline water management, and a silvopasture system that will intersperse nut- and fruit-bearing trees with grazing areas—all with the goal of providing carbon-negative meat. Calliope Farm in the Littlerock area has 18 acres where they are working to build soil health and sequester carbon. Their vegetables grow interspersed with "harvest lanes" that help prevent soil erosion and create habitat for beneficial insects. In 2020, the Washington State Legislature established the Sustainable Farms and Fields grant program, which will aid farmers and ranchers in adopting practices that increase carbon storage. These resources allow families to continue farming land they have worked on for generations and provide Washingtonians with healthy local food and a diverse economy. Agricultural land preservation and the stewardship practices adopted by local farmers, including those profiles above, will play a key role in future climate solutions.

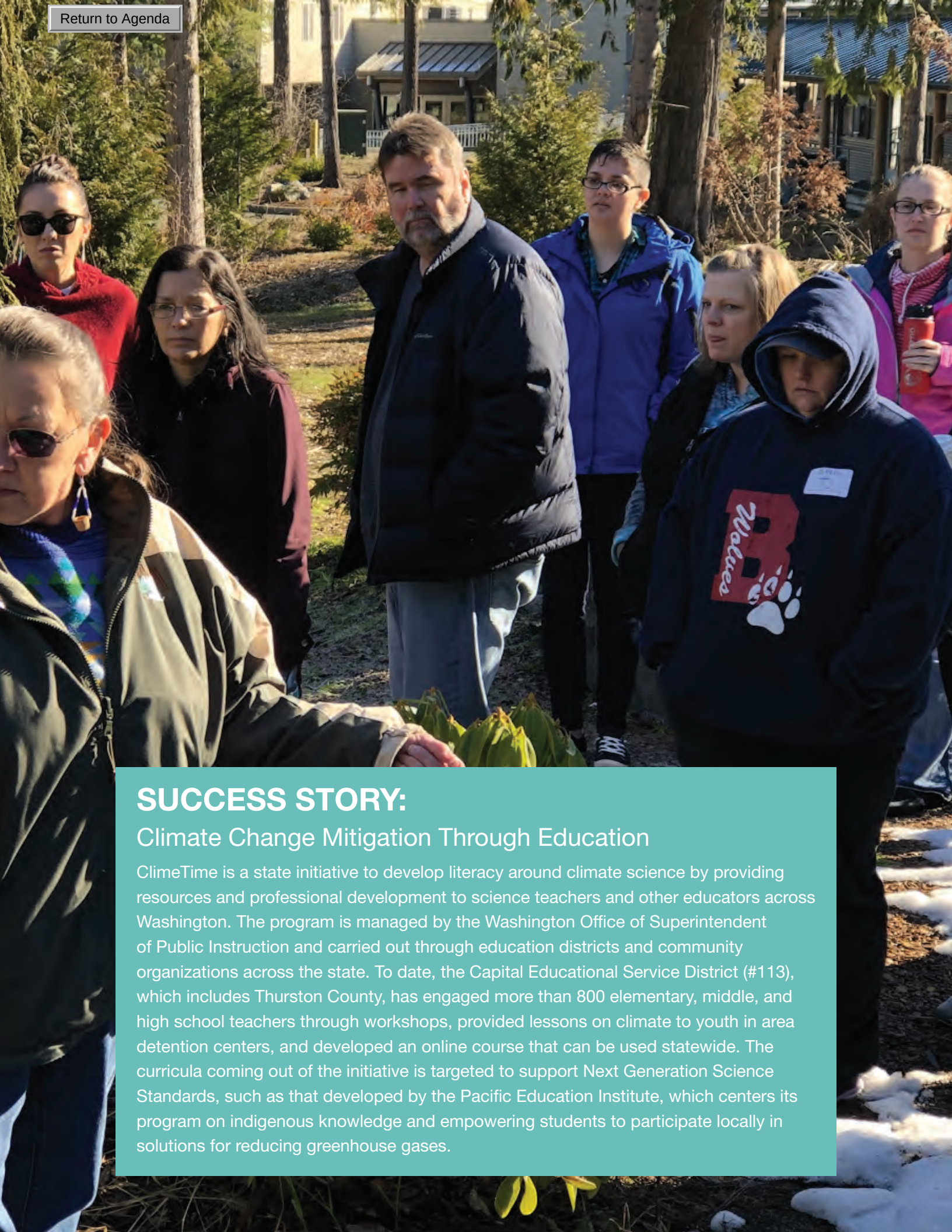




Cross-Cutting Concerns

Climate change poses a fundamental threat to the future health and well-being of our community and addressing it will require a strong response from across society. In addition to addressing specific local sources of greenhouse gas emissions, such as those described in the previous sections, success will depend on building the resources, expertise, and constituency within our community to carry out the change we need and amplify its impact. Through effective and strategic education, advocacy, monitoring, and policy development, the Thurston region can increase awareness of, participation in, and impact of climate mitigation efforts.





SUCCESS STORY:

Climate Change Mitigation Through Education

ClimeTime is a state initiative to develop literacy around climate science by providing resources and professional development to science teachers and other educators across Washington. The program is managed by the Washington Office of Superintendent of Public Instruction and carried out through education districts and community organizations across the state. To date, the Capital Educational Service District (#113), which includes Thurston County, has engaged more than 800 elementary, middle, and high school teachers through workshops, provided lessons on climate to youth in area detention centers, and developed an online course that can be used statewide. The curricula coming out of the initiative is targeted to support Next Generation Science Standards, such as that developed by the Pacific Education Institute, which centers its program on indigenous knowledge and empowering students to participate locally in solutions for reducing greenhouse gases.

4. Plan Development

“[The plan should] establish clear connections on how these actions impact climate change and have a positive impact on our environment.”

Interview with Lola Flores, Hispanic Roundtable

“Reduced carbon pollution should not be the sole measurement of success. [Criteria] needs to encompass the health of our environment and citizens now and in the future.”

Response to community questionnaire

The *Thurston Climate Mitigation Plan* is the result of more than a year of technical analysis and engagement with Thurston region stakeholders, including local governments, businesses, community organizations, and residents. An overview of this planning process is provided below.

4.1 Plan Development Framework

Several groups met regularly to inform and provide oversight of all aspects of the planning process:

- **Interjurisdictional Project Team.** This group consisted of lead staff from TRPC and each of the four partner jurisdictions: Thurston County and the cities of Lacey, Olympia, and Tumwater. The Project Team provided staff-level direction and coordination throughout the project, reviewed draft products, and facilitated development of implementation plans.
- **Consultant Team.** Seattle-based Cascadia Consulting Group and sub-consultant Hammerschlag LLC contributed technical support throughout the project, including developing the public engagement strategy and outreach materials, developing and analyzing actions, and quantifying emission reductions from those actions.
- **Climate Advisory Workgroup.** This committee included public- and private-sector members of the community with subject matter expertise in one of five sectors: Buildings and Energy, Transportation and Land Use, Water and Waste Management, Agriculture and Forestry, and Cross-cutting. The Climate Advisory Workgroup was tasked with identifying, evaluating, and recommending a list of impactful actions to achieve the emissions reduction goal. Workgroup members also reviewed and provided input on project goals and guiding principles, public engagement strategy, scenario results, and implementation strategies.

On two occasions, members of the Climate Advisory Workgroup split into their five **Sector Focus Groups**, which included additional subject matter experts and interested members of the public. One round of the Sector Focus Groups included a meeting dedicated to youth and educator perspectives. All meetings of the Climate Advisory Workgroup were open to the public, and time for public comment was provided at each meeting.

- **Steering Committee.** The Steering Committee was composed of elected officials and staff from each of the four partner jurisdictions and was the decision-making body for the plan. This committee used a consensus-based decision-making process to approve each stage of the planning process. All meetings of the Steering Committee were open to the public, and time for public comment was provided at each meeting. The Steering Committee approved the *Thurston Climate Mitigation Plan* on December 10, 2020.

Each jurisdiction’s policymaking body (Board of Commissioners or City Council) will ultimately consider a resolution that accepts the *Thurston Climate Mitigation Plan* as a framework for future action and affirms the jurisdiction will further explore implementation of these strategies.



Figure 6. Plan Development Structure of the *Thurston Climate Mitigation Plan*

WHAT DO YOU THINK?

THURSTON CLIMATE MITIGATION PLAN

What actions or ideas should be included in the Climate Action Plan?

STOP making
Zoos and Trapping
innocent Insect
Animals for your
Enjoyment

Carbon
Farming ↓
★ biochar

More electric
cars
(on different fuels)

More Carpooling
Carpool lanes

STOP Dumping Garbage
in the Ocean and
Polluting the air

Expand recycling
reduce plastics
Plant more trees

Use goats to mow
your lawn

Increase the amount of
things we can reuse/
recycle locally

More Rural Transit
(Rochester) ★

Grow
Hemp
Industrially!

Stop cutting down trees
in our area and in
developments.

Don't use that
much power

Reduce water
usage and
conserve energy

less wasted plastic
within restaurants

Ride bikes

Put fans around the planet
- longer old

Embrace it. Enjoy it.
Change with it.
Take more wine
less beer.

Tax hog
gas
vehicles.

Tax business
waste like Saremba
does

Less air pollution

deal with lack of
funding for low income
cars w/ old links, &
high gas usage

Shuttles to
popular hiking
spots

STOP
Deforestation
!!!

Educate for population
reduction =
smaller family
sizes

Electricity in need
of using gas

Your Bike Don't

Cars and Gas

Invest in renewable energy
sources, recharge water bottles
correctly, recycle

alternative
energies
address homeless
as to not
pollute downtown

Ferry: frequent
service to
Seattle

Recycle/
Ride in

4.2 Community Engagement

The benefits and costs of climate mitigation actions will affect everyone in the Thurston region. Therefore, it was crucial to gather as many perspectives as possible to inform the plan. The following goals and objectives guided public engagement during the planning process:

- A. Lay the groundwork for continued community engagement on climate action.
 - Deliver honest and consistent messaging to the public.
 - Build relationships with trusted community liaisons to help engage hard-to-reach populations such as communities of color, low-income, rural, youth, and elderly communities, and military families.
 - Provide a range of engagement options to suit different lifestyles, availability, and ways of processing information.
- B. Promote alignment between community and government climate priorities, while recognizing the separate roles, responsibilities, and interests of individuals and organizations.
 - Solicit meaningful input from a diverse and representative set of partners and stakeholders.
 - Capture areas of convergence and divergence regarding climate action priorities throughout the Thurston region, including gaps and unmet needs, where applicable.
- C. Build public support for climate action across the Thurston region.
 - Develop broad awareness of anticipated climate impacts throughout Thurston County and the cities of Lacey, Olympia, and Tumwater and efforts to address them, including the co-benefits of action and the costs of inaction.
 - Meet participants where they are, with respect for their involvement in climate change action and their different needs, wants, and priorities regarding climate mitigation.
 - Clearly describe the focus and boundaries of the Thurston Climate Mitigation Plan, how the plan is to be used, and the role that public input and informed decision making will play in plan implementation.

Input from the community was used to inform the development, refinement, and prioritization of actions in the draft plan. To ensure a robust engagement process across our region, the planning process included both broad and targeted engagement. Responses from the public are shown throughout this plan. A few of the methods used are summarized below—for a complete description of community engagement activities, see Appendix 10.8.

Community Questionnaire

In 2019, an online community questionnaire gathered a baseline understanding of the community's priorities, perspectives, and concerns. The survey was shared through the TRPC website, social media, e-newsletters, listservs, and partner networks. The survey was open from August 12 to September 30, 2019, and received 1,397 responses.

Pop-Up Events

The Project Team engaged with the community at local events early in the planning process, including Tenino Oregon Trail Days; Thurston County Fair; the Yelm, Olympia, and Tumwater Farmers Markets; Tumwater Brewfest; and the Olympia Fall Arts Walk, among others. These pop-up events provided an opportunity for visitors to learn more about the project, ask questions to project staff, and provide input through interactive activities.

Community Presentations

The Project Team gave presentations to organizations upon request. These presentations gave an overview of the project and an opportunity to provide high-

level recommendations for the plan's development. In addition to regular updates to City Councils and the County Commissioners, staff made presentations to the South Thurston Economic Development Initiative (STEDI), Olympia Master Builders, Deschutes Estuary Restoration Team, Transportation Policy Board, Nisqually River Council, Thurston County Solid Waste Advisory Committee, and Lacey Youth Council, among others.

Interviews

To better understand the impacts of the strategies and actions being considered, the Consultant Team conducted interviews with representatives from key sectors and organizations. Interview subjects included representatives from the Thurston County Food Bank, Confederated Tribes of the Chehalis Reservation, Olympia Master Builders, Hispanic Roundtable, and Homes First. Interviewees provided feedback on their organization's climate impact mitigation work; climate impacts to the communities in which they work; as well as concerns, challenges, and potential barriers to implementation of the actions.



Tumwater city staff host an information booth at Tumwater Brewfest in August 2019.

Source: City of Tumwater

Online Open House & Feedback Survey

Cascadia Consulting Group created an interactive online open house at www.ThurstonClimatePlan.com where members of the public could explore an overview of the plan contents and share their feedback and priorities through an online survey. The online open house was available 24-hours a day during the public review period—more than 650 unique users attended the online open house.

Virtual Community Meetings

TRPC hosted two virtual Community Meetings during the public review period. Each meeting included an overview presentation on the planning process and draft plan, a panel discussion among people involved in developing the plan, and an opportunity for attendees to ask questions of the panelists and staff. More than 100 participants attended the virtual meetings.

Public Comments

Members of the public had opportunities to comment throughout the planning process. Time for public comments was set aside at all Steering Committee and Climate Advisory Workgroup meetings. Public comments also were received through direct email and voicemail messages to TRPC staff. Between February 2019 and December 2020, TRPC staff tracked 307 comments from 198 separate individuals. The majority of comments (160) were received during the draft plan review period.

Website, Contact List, Social and Traditional Media

Throughout the project, TRPC maintained a dedicated website which was frequently updated with meeting materials and other relevant project information. Visitors to the website had the option to sign up to receive project updates via email, a list of 674 interested parties as of October 2020. TRPC promoted opportunities for public input at key decision points through social media posts and press releases.



Attendees of a Youth and Educator Focus Group prioritize actions in November 2019. Source: TRPC

Key Themes from Early Community Outreach

- **Across outreach methods, participants showed the broadest support for Buildings and Energy sector actions.** Whether prioritizing focus areas, investing fictitious money, or choosing the personal actions they would like to take, survey respondents showed the broadest support for actions to shift to more renewable and clean energy sources, and to make buildings more energy-efficient and carbon-smart. This includes exploring incentives, subsidies, and mandates to encourage renewable energy; investing in renewable energy; and improving building energy-efficiency.
- **Transportation and Land Use actions were a focus at public events and of actions people would like to take.** At public events, actions to support transportation and land use were the overwhelming choice. Ideas included investing in bicycle and pedestrian facilities, electric vehicles, and public transit, and encouraging high-density areas that improve resource sustainability and efficiency. Similarly, two of the four most popular actions survey respondents said they would like to take are purchasing or driving an all-electric vehicle (48 percent) and driving a high-efficiency vehicle (25 percent).
- **The individual actions of greatest interest to survey respondents are those the *Thurston Climate Mitigation Plan* could support:** These include investing in solar panels for home or business (57 percent), purchasing or driving an all-electric vehicle (48 percent), participating in a renewable energy program through local utility (30 percent), and driving a high-efficiency vehicle (25 percent).
- **People favored balancing multiple goals when identifying priority actions.** Impact (how much carbon pollution will be reduced) was considered the most important driver of action.
- **Priority focus areas and the most important drivers of action varied by factors like age, where survey respondents lived, and their income.**

Key Themes from Fall 2020 Draft Plan Review Period

- Across outreach methods, **a large majority of participants supported the Thurston Climate Mitigation Plan and think local jurisdictions should adopt this plan.** Many commenters, especially the many youth who commented on the plan, highlighted their concerns about how climate change will impact their lives, and asked that the four cities and County take urgent action to begin implementation.
- Most survey respondents believed the plan **presents a clear path for meeting regional climate goals and provides a roadmap for elected government and staff.** While some commenters requested the region consider a more aggressive carbon neutrality goal and others wished to see more specific details about the actions, equity impacts, and costs of implementation, many noted that the plan is a good starting place for action.
- **People wanted to understand the costs of actions and are concerned about how climate mitigation actions might unintentionally worsen inequality and housing affordability in our region.** Realtors and builders worry about the impact of focusing on regulatory approaches to increase energy efficiency and shifting away from natural gas. Others note that strategies and actions must be implemented in ways that support a just transition toward greater sustainability.
- **A majority of survey respondents (70%) indicated that all strategies included in the plan are a priority.** Strategies with strongest support include preserving trees and managing forests to sequester carbon, reducing energy use in existing buildings, increasing density in urban areas to support more efficient transportation options, reducing energy use in new construction, and increasing the production and use of local renewable energy.

There will be additional opportunities for community engagement as individual jurisdictions work to implement actions in the years to come.

If you had \$1,000 dollars to invest to reduce carbon pollution, how would you spend it?

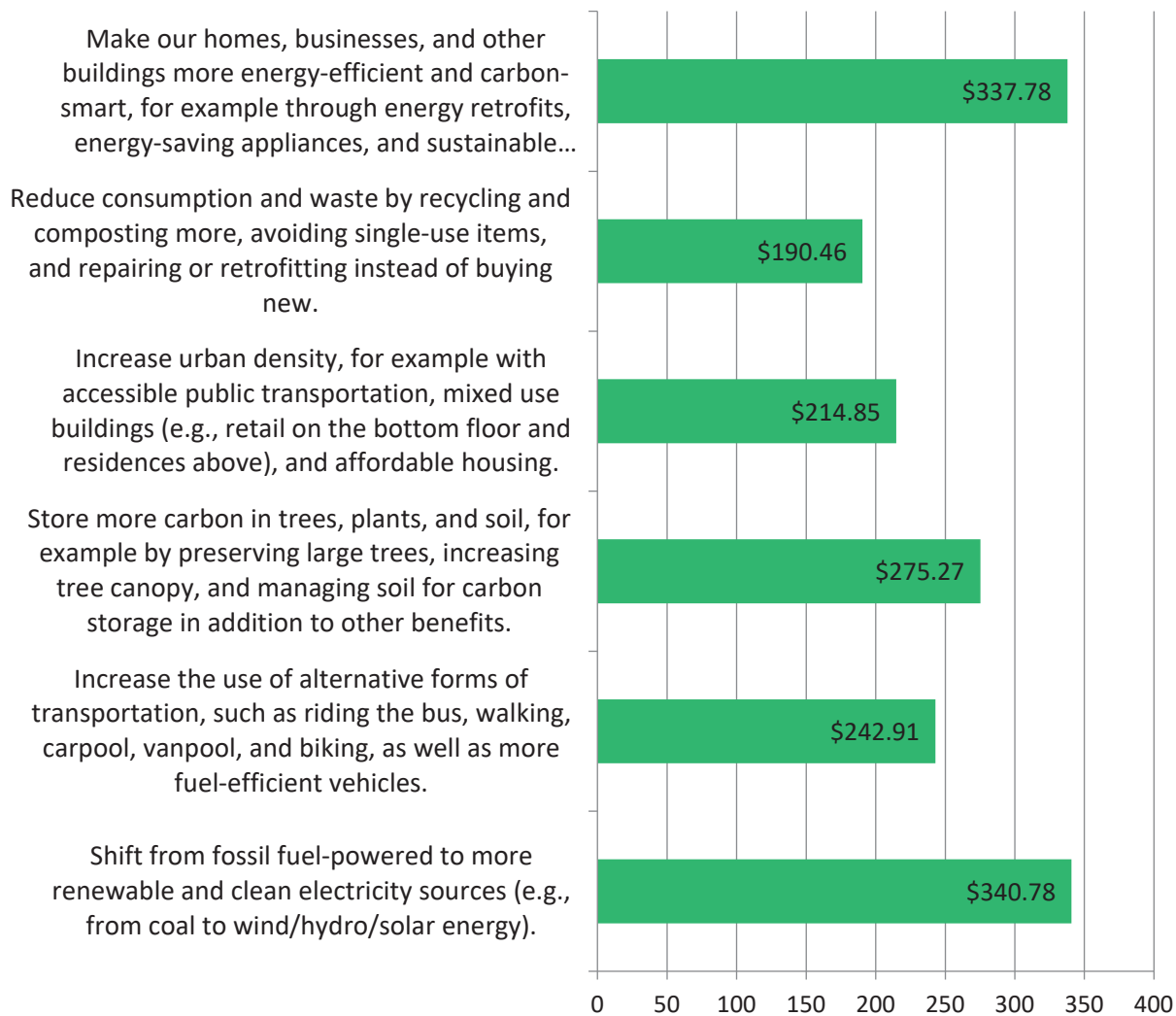
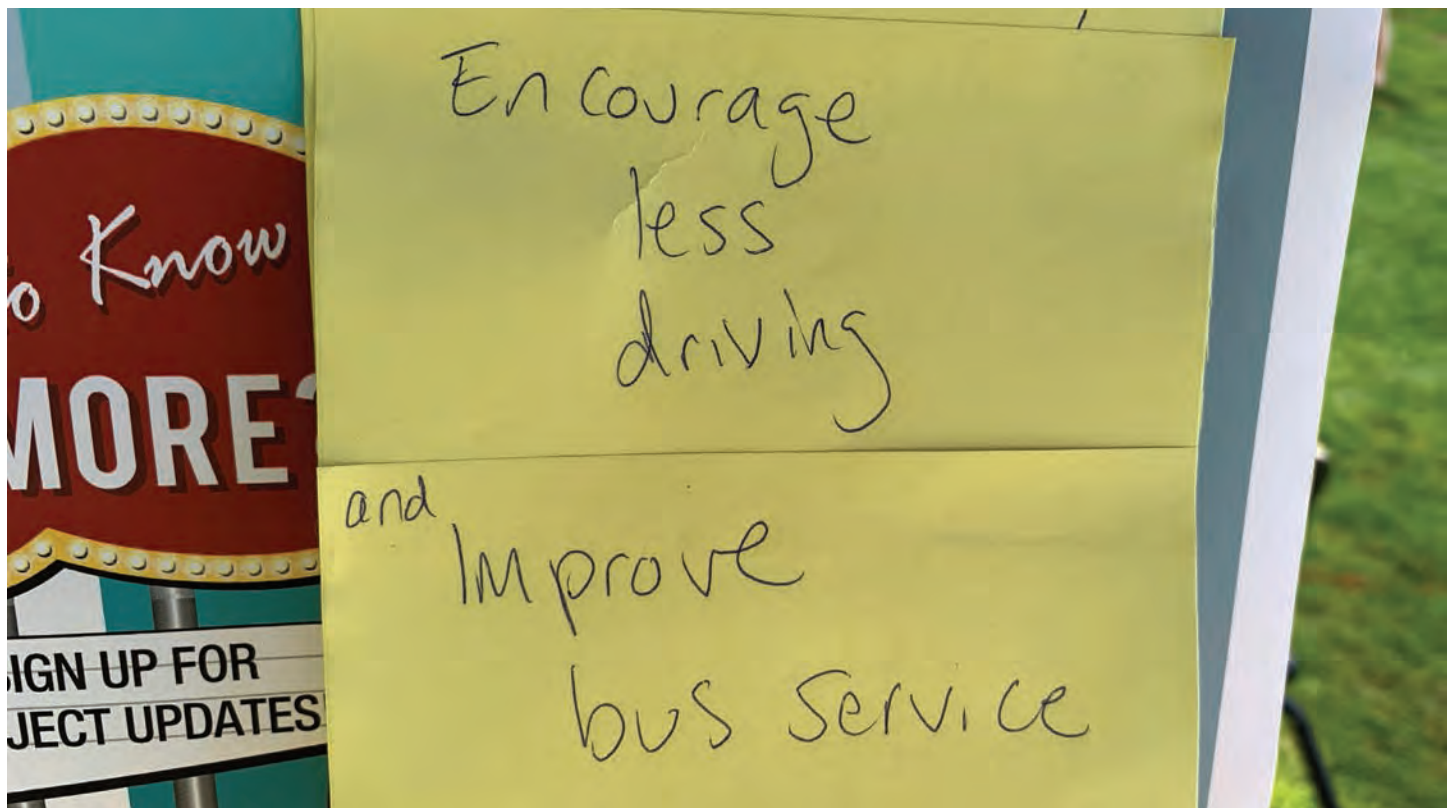


Figure 7. Responses to Climate Mitigation Community Questionnaire, September 2019.



4.3 Communitywide Action List

The *Thurston Climate Mitigation Plan* includes a list of communitywide actions to reduce greenhouse gas emissions in order to meet the adopted emissions reduction target. The planning process began by compiling a comprehensive initial list of potential strategies and actions. Between May and September 2019, the Project Team and Consultant Team gathered ideas from the Climate Advisory Workgroup, Steering Committee, sector focus groups, survey respondents, general public, and other climate planning efforts to develop a list of over 300 potential actions to reduce greenhouse gas emissions. Contributors also provided details on likely partners, resources, funding opportunities, and barriers to implementation.

This initial list of actions was refined and consolidated, resulting in a list of 242 actions addressing a wide variety of sectors and strategies. While the shorter list of actions assessed for this draft plan focuses on where local government can play a leading role, addressing the causes of climate change will require action from the state and partners throughout our community—including the private sector, nonprofits and nongovernmental organizations, and individuals. The complete list of actions is full of great ideas that can and should be taken up by others seeking to create change; it is available in Appendix 10.3.



Attendees of a Transportation and Land use Focus Group prioritize actions in December 2019.
Source: TRPC

Prioritizing Actions

To focus time and resources on actions that could best achieve the goals set for this process, the project partners narrowed the long list of actions using a multicriteria analysis. The Consultant Team, Climate Advisory Workgroup, and technical experts assessed each action against four criteria: impact on greenhouse gas emissions, speed of deployment, local control, and community co-benefits. Stakeholders reviewed and discussed the outcomes from this multicriteria analysis to arrive at the priority actions assessed for this draft plan (see Chapter 5—*Strategies & Actions*). For a thorough description of the multicriteria analysis, see Appendix 10.4.

CRITERIA	DESCRIPTION
GHG reduction potential	The annual quantity of greenhouse gas emissions (GHG) an action will avoid or sequester as of 2030.
Speed of deployment	Minimum time possible between decision to recommend an action, and achievement of the annual GHG reduction potential.
Control	One or more of the four project partners can likely influence the implementing party(ies) or can create the necessary regulatory structure.
Co-benefits • ecosystem health • social equity • economic benefit • other	Supports one or more of the regional goals (aside from #9 – carbon neutrality).

Figure 8. Criteria Used to Prioritize Actions for the Thurston Climate Mitigation Plan

4.4 Emissions Target Analysis

The next step was to understand what it would take to reach the adopted greenhouse gas emission reduction targets, and whether the actions we prioritized would do enough. The Consultant Team developed a tool to display the impacts of climate policies on future emissions. Their analysis, summarized below, shows that the emissions reduction targets adopted by the four partner jurisdictions are ambitious, but achievable. For a thorough discussion of the Scenario Analysis, see Appendix 10.5.

“Business as Usual” Scenario

This analysis began by assessing the amount of emissions we can expect if energy and climate policies remain fixed as they were in 2018. This “business-as-usual” scenario looked at how greenhouse gas emissions for the Thurston region would grow between now and 2050, with our anticipated population growth and no new climate action at the federal, state, or local level.

The “business-as-usual” scenario projects that without any action, our local emissions will grow by more than 760,000 metric tons of greenhouse gases over the next 10 years—a 26 percent increase from 2015 (see Figure 6). By 2050, that footprint could grow again by half—more than a million additional tons of greenhouse gases each year, compared to where we are today. This upward trajectory is tied to anticipated population growth, and it would put current and future residents of the Thurston our region on the path to experiencing the most severe impacts from climate change.

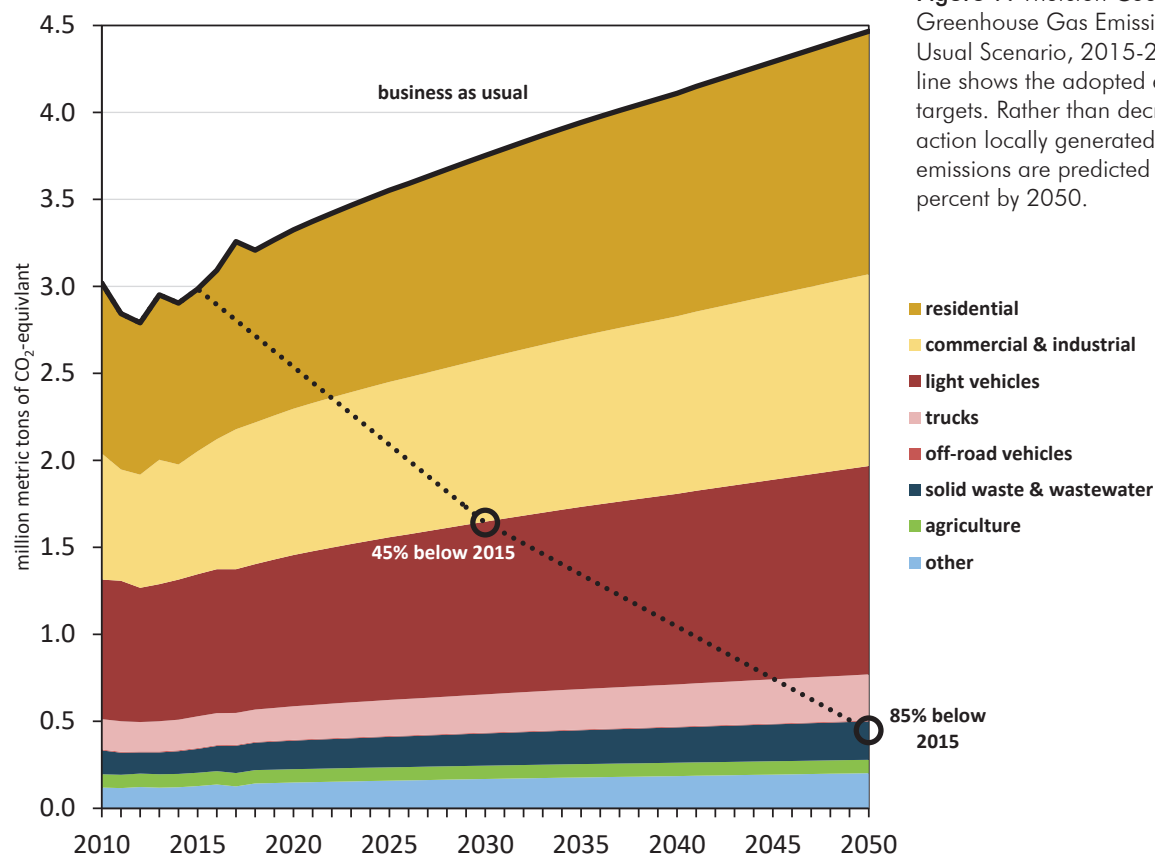


Figure 9. Thurston County Projected Greenhouse Gas Emissions: Business as Usual Scenario, 2015-2050. The dotted line shows the adopted emission reduction targets. Rather than decrease, without action locally generated greenhouse gas emissions are predicted to increase by 50 percent by 2050.

State Policy-Adjusted Scenario

The Consultant Team then assessed how recent federal and state actions will contribute to local greenhouse gas emission reductions over the next 30 years. This “policy-adjusted forecast” estimated the impact of the following recently adopted state laws:

- Updates to Washington State Building and Energy Code.** Code changes that were set to go into effect in 2020 will significantly increase energy performance requirements for new residential and commercial buildings. In June 2020, the Washington State Building Code Council voted to extend the effective date of the new standards to February 1, 2021. This extension was not reflected in the Consultant Team’s analysis.
- Clean Energy Transformation Act (CETA).** State legislation adopted in 2019 requires that electric utilities operating in the state
 - eliminate coal as a fuel source by 2025, and source 100 percent of the electricity they supply to Washington customers from renewable and non-greenhouse-gas-emitting resources by 2045.
- Low-Emission Vehicle Standard.** State legislation adopted in 2018 requires that vehicles sold or licensed in Washington State must meet the same emissions standards as those set by the California Air Resources Board (CARB). CARB standards require efficiency increases of 3.7 percent each year from 2020-2026, resulting in a similar standard as the Obama-era Corporate Average Fuel Economy (CAFE) rule. Additional state legislation passed in 2020 extends these requirements to medium-duty trucks. The state Low-Emission Vehicle Standard currently is unaffected by the Trump administration’s replacement of the CAFE standards with lower federal efficiency requirements.



State legislation plays a large role in local greenhouse gas emissions. The Clean Energy Transformation Act, adopted in 2019, sets a timeline for shifting Washington State’s electricity grid to renewable sources.

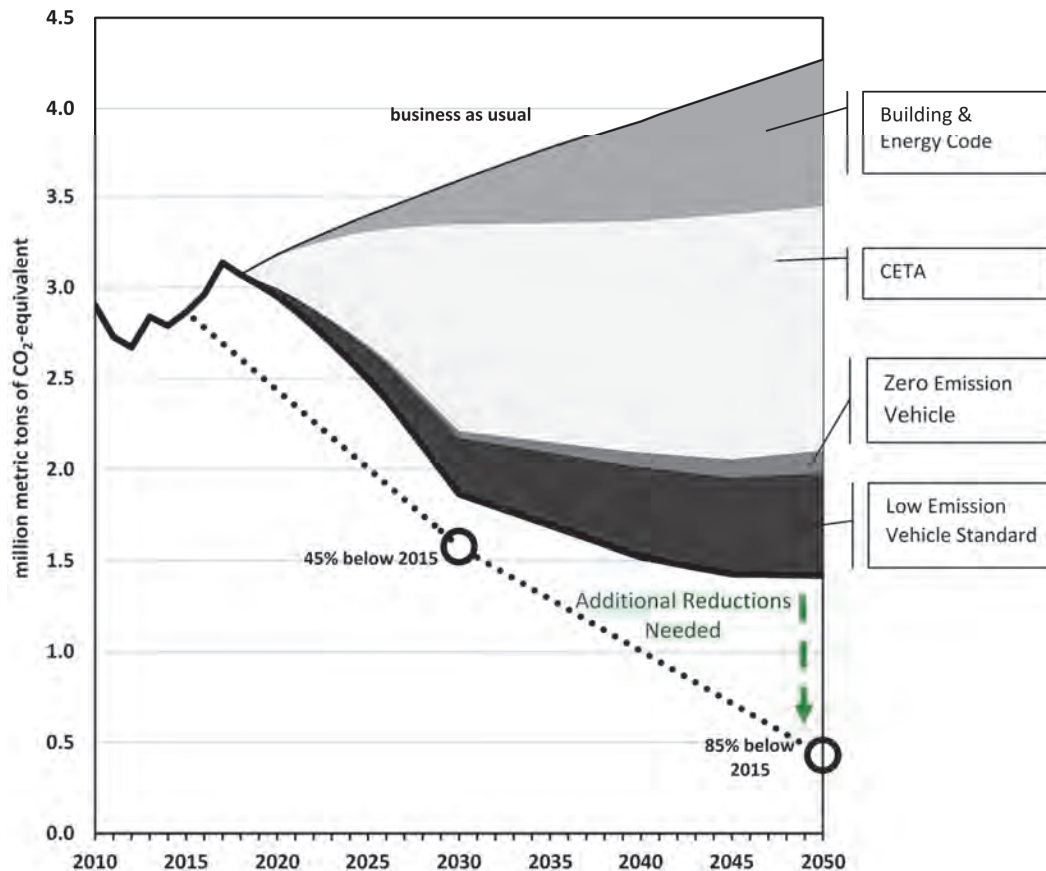


Figure 10. Potential Reduction in Thurston County Emissions from State Policies. The dotted line shows the adopted emission reduction targets. Source: Hammerschlag 2020

- Zero-Emission Vehicle Standard.** State legislation adopted in 2020 requires car manufacturers selling vehicles in Washington State to follow California’s zero emission vehicle (ZEV) standards here as well. An increasing portion of vehicles provided for sale in Washington State must be ZEV, or car manufacturers may obtain credits equal to that portion.

There are additional actions happening at a state level that will affect local emissions, directly and indirectly. This analysis was not intended to provide a comprehensive account of the potential impact of all state actions. The Consultant Team highlighted those that seemed most likely to directly affect the Thurston region’s largest emission sectors.

As shown in Figure 7, state action can have a large impact on emissions from the Thurston region. Taken together these four policies could reduce emissions by nearly half (46 percent) by 2030, when compared with the “business-as-usual” scenario—and by nearly two-thirds (64 percent) by 2050. In particular, the Clean Energy Transformation Act (CETA) can play a critical role in reducing emissions in the near-term, by removing coal as a source of the Thurston region’s electricity by 2025, and fully transitioning our electrical grid to clean energy sources by 2045. These changes will dramatically reduce emissions from the building sector, currently our region’s largest source of emissions. If implemented as intended, electricity will go from contributing almost half of our local emissions (43 percent) to contributing zero.

By comparison, building code changes and increased fuel efficiency will take longer to impact emissions—this is because it will take time for people to trade up for newer, more fuel-efficient cars, and even longer to replace our current building stock with new or remodeled energy-efficient structures. These improvements play an increasingly important role as we look out toward achieving our 2050 goal.

Local Action Scenario

After evaluating the impact of state policies, the Consultant Team estimated how local actions can close the remaining gap and put our region on track to a 45 percent reduction in emissions by 2030 and an 85 percent reduction by 2050. Using the list of actions prioritized in the multicriteria analysis, they assessed how those actions could work together to affect different greenhouse gas contributors (see Table 1 and Appendix 10.5).

These pathways assume that each assessed action is feasible and will be completed with the full support of local and state officials and other relevant partners. In many cases, the emission reductions, which were estimated by the Consultant Team, will require a significant level of focus and sustained commitment from local partners.

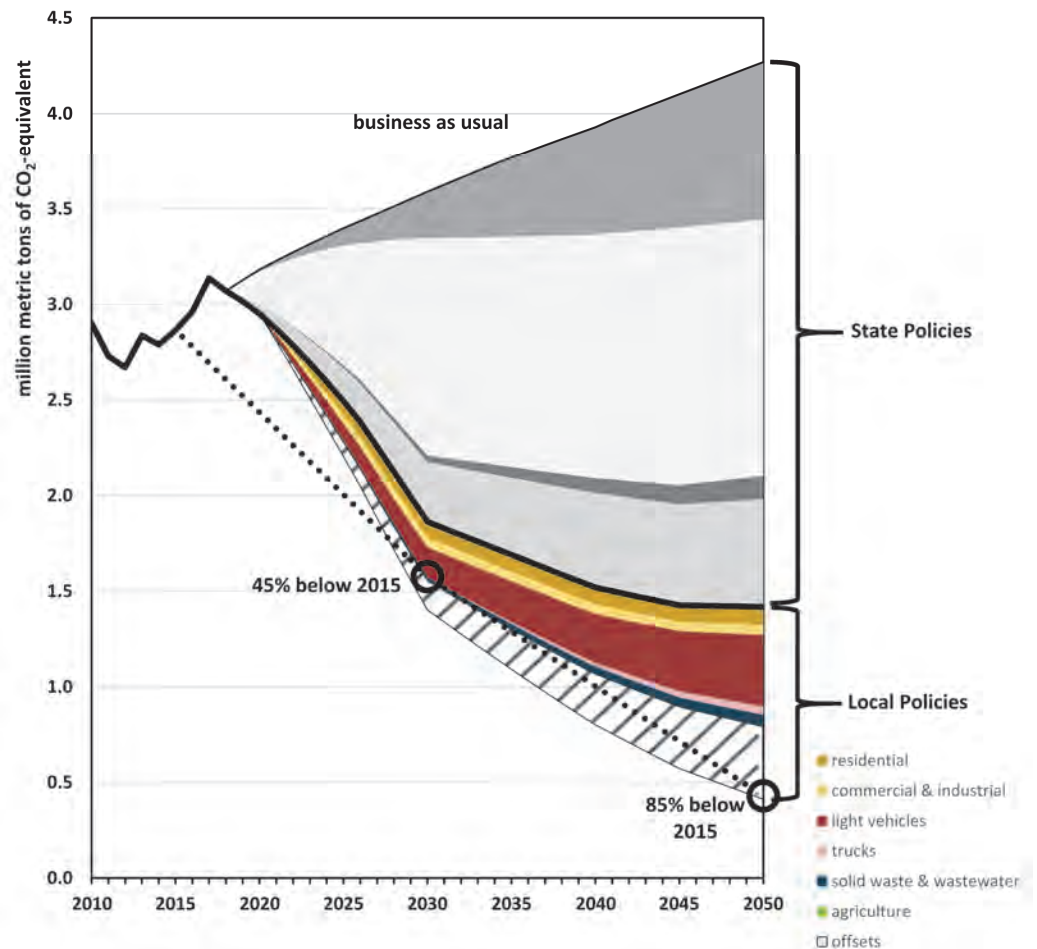
Figure 8 shows how this suite of local actions, when paired with state policies, could reduce emissions enough to meet our target. While all the actions identified play a part, a few strategies stand out as bringing about the most substantial reductions. These include strategies that:

- reduce natural gas use
- reduce the amount that people drive and increase fuel efficiency for when they do
- store additional carbon in soil and plants

GREENHOUSE GAS EMISSIONS SOURCE	ESTIMATED REDUCTION FROM 2015 BASELINE	
	2030	2050
ENERGY USE		
Residential		
Electricity use	20%	30%
Natural gas use	20%	50%
Other fuels (LPG, wood)	10%	20%
Commercial		
Electricity use	20%	30%
Natural gas use	20%	50%
Industrial		
Electricity use	2%	5%
Natural gas use	10%	30%
TRANSPORTATION		
Passenger vehicles		
Vehicle miles traveled	5%	20%
Fuel efficiency	20%	60%
Light-duty trucks		
Vehicle miles traveled	10%	15%
Fuel efficiency	10%	40%
Heavy-duty trucks		
Vehicle miles traveled	0%	20%
Fuel efficiency	0%	10%
WATER & WASTE		
Solid waste	10%	30%
Wastewater treatment	20%	20%
AGRICULTURE		
Fertilizer use	20%	50%
OFFSETS		
Carbon Sequestration	4%	12%

Table 1. Estimated Impacts of Assessed Actions on Various Greenhouse Gas Emission Sources. Source: Hammerschlag 2020

Figure 11. Potential Reduction in Thurston County Emissions from State Policies and Local Actions. The dotted line shows the adopted emission reduction targets. Colored wedges show reduction to individual emissions sectors. Reductions in the agriculture sector are too small to be visible. the hashed area shows offsets from actions that increase carbon sequestration. Source: Hammerschlag 2020



It is important to note that this analysis only considers the potential for certain policies and actions to reduce greenhouse gas emissions—it does not weigh the impact those actions may have on other important factors, such as any additional cost to consumers of energy or housing. It does not look at how the costs and benefits of the actions are distributed to different people within our community, and whether those costs or benefits would accrue disproportionately to some people over others. These factors are considered elsewhere in this plan and can and should be considered as the project partners move ahead and determine how to take action.

In addition, this analysis presents just one of many possible pathways for reducing greenhouse gas emissions. New discoveries, technologies, or legislation at the state and federal level could dramatically change the picture, and that uncertainty increases as we look ahead ten and twenty years. For example, a clean fuel standard that significantly reduces the carbon intensity of vehicle fuels could have an impact on local transportation emissions similar to that of CETA on local building emissions, reducing the amount of local investment needed in sequestration or other actions.

Despite these caveats, looking at these potential futures led to some conclusions that guide the priorities laid out in this plan:

- **Our adopted emission reduction targets are achievable, but only with significant attention on many fronts.** No single action will reduce local emissions enough to reach our targets; local governments will need to show leadership across many different programs to meaningfully address climate change.
- **State action will play a large role in our ability to achieve our targets.** Recent legislation, especially the Clean Energy Transformation Act, is helping to bring our emission reduction targets within reach. Our ability to achieve that goal is dependent on those rules being rolled out as envisioned.
- **Electricity is an ally.** Today, electricity use is our largest source of local emissions. With a cleaner electrical grid, that picture changes completely. Additional reductions are possible by shifting more uses to that greener power source. This means transitioning away from heating and cooking with natural gas and accelerating the adoption of electric vehicles.
- **Transportation is where local government action can affect the largest reductions.** While the building sector is our largest source of emissions today, those sources will be substantially reduced by state legislation. That leaves transportation as the area where the attention of local governments can make the biggest difference, by influencing what, where, and how much people drive.
- **Land use and building code changes will be more important over the long term.** The benefits of these changes will take longer to observe, but they need to be put in place in the near term to enable the urban

density, bicycle and pedestrian networks, and greener buildings that are critical to achieving the 2050 target.

- **Carbon sequestration will need to be a part of the package.** Without new technology or state or federal action, even aggressive local action to reduce emissions may not be sufficient to achieve our longer-term 2050 target. To succeed, we'll need to tap the carbon-storing potential of local farms and forests, and we'll need to consider the role existing trees and other habitats serve in sustaining our climate.
- **Good data can help us better understand how individual actions translate to emission reductions.** The scenarios described in this section estimate future emissions based on general assumptions about how certain actions could affect human behavior in the future. This was the best information available at the time this plan was being developed, and it simplifies the complex interactions of the world. We will need to identify and gather more specific data to track and reflect the real outcomes of our actions, in order to truly understand where we lag and where we are making progress. This is particularly true for the assumptions around the potential to offset emissions through sequestration.





Solar package added by developer at the Jubilee development in City of Lacey. Source: City of Lacey

What We Heard...

"[Housing, transportation, and access to services that address the needs of low-income families and individuals should be a major part of the climate justice plan.]"

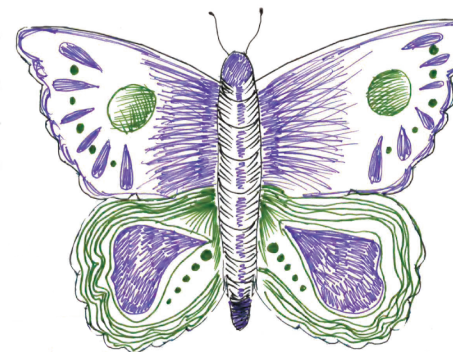
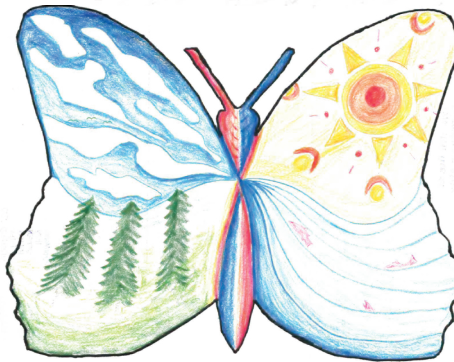
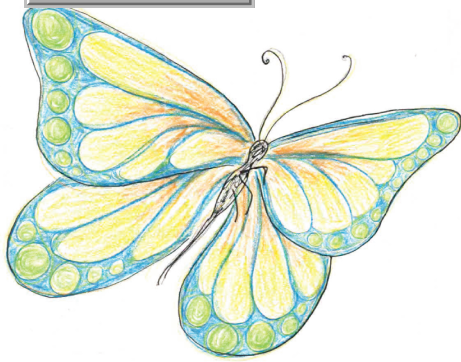
Community Questionnaire

"Work with current partners, build on what already exists, leverage all assets and skills, create a phased approach with clear deliverables. But in the end do something."

Interview with Robert Coit, Thurston County Food Bank

"Listen to the teenagers. They'll be the ones to suffer if we don't act."

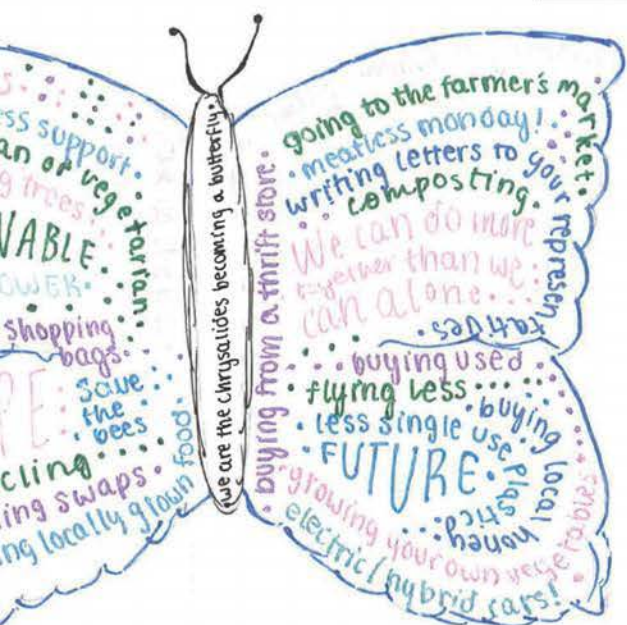
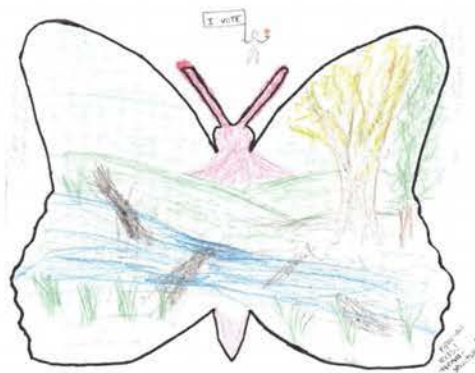
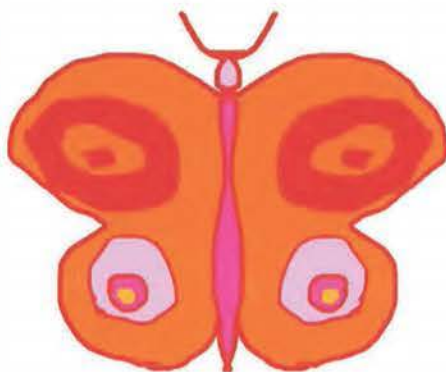
Public comment at Thurston County Fair



Transforming Together

During the development of the Thurston Climate Mitigation Plan, community members have spoken out in different ways about their hope for action to address climate change. The Chrysalis Project, an effort developed by local artist Carrie Ziegler working with Thurston Climate Action Team, invited participants in online workshops to express themselves creatively, using the metaphor of a caterpillar transforming into a butterfly as inspiration for envisioning the transformative change they would like to see in our community. Participants then mailed their artwork as comments to local elected officials asking for strong climate action. Several hundred people have participated in the project, with a small selection of their work shown here. For more information on the project, visit <https://thurstonclimateaction.org/the-chrysalis-project-transforming-together/>





Rows of vegetables grow at Calliope Farm
near Littlerock in Thurston County.
Source: Calliope Farm



5. Mitigation Strategies and Actions

“In the fight against climate change, cities and counties have become important leaders because of their role as laboratories, incubators, and implementers of climate solutions. Because local governments can be more responsive than those at the state and federal levels, and because and they are so, cities are playing a prominent role on the international stage in galvanizing climate action.”

Center for Climate and Energy Solutions

5.1 Chapter Organization

The *Thurston Climate Mitigation Plan* lays out a framework of strategies and actions to put Thurston County and the cities of, Lacey, Olympia, and Tumwater on track to reach the 2050 goal of an 85 percent reduction in greenhouse gas emissions.

This chapter is structured around three levels: sectors, strategies, and actions.

Sectors

The strategies and actions are grouped to address the emissions sectors described in Chapter 3—Background:

- Buildings and energy
- Transportation and land use
- Water and waste
- Agriculture and forests
- Cross-cutting

Strategies

Strategies are methods or pathways to address a particular sector. The strategies form the frame of our plan, providing a structure for future action. They lay out the broad routes we'll use to achieve our vision for climate mitigation over the next 30 years.

Assessed Actions

The assessed actions listed below each strategy are potential means to address that strategy and emissions sector. They are the launching point for the partner jurisdictions as they develop specific work plans. Jurisdictions may opt how and whether they implement these actions, and they may be modified as those implementation strategies are developed in detail.

These actions emerged as priorities from the full list of potential climate mitigation actions proposed by stakeholders and community members (Appendix 10.3). They include those that rose to the top of the multicriteria analysis overall, as well as actions that address key sectors or strategies identified as important by members of the Climate Advisory Workgroup and Steering Committee. The impact icons next to each action show how it ranked for several categories in the multicriteria analysis (Appendix 10.4). To find out how these actions combine to help meet the goals of the Thurston Climate Mitigation Plan, review the results of the scenario analysis in Chapter 4—Plan Development and Appendix 10.5.

Relationship Between Sectors, Strategies, and Actions

This plan lays out a framework for climate mitigation over the next 30 years, based on our best understanding today. As the plan is carried out, we anticipate that sectors and strategies will largely persist as the backbone of that framework, while the actions needed will change over time as some actions are completed or found to not be feasible or desirable, and as new actions are considered.

Targets and Indicators

Performance measures can help us track whether we are making progress toward our climate mitigation goals and determine whether our actions have been effective. Each sector includes one or more targets based on the scenario analysis described in Chapter 4—Plan Development. To track progress for some strategies, we may need to set supplemental targets as part of the longer-term monitoring of the plan. Key performance indicators are the quantitative metrics that measure progress toward the targets over time. Targets and indicators are part of the monitoring and evaluation plan included in Appendix 10.7.

Considerations for Implementation

This section summarizes potential opportunities, obstacles, barriers, or tradeoffs raised throughout the process that we should consider as we move into implementation.

HOW TO READ THE ACTION TABLES IN THIS CHAPTER

SECTOR: A grouping of related strategies

Strategy: methods or pathways to address a particular sector

Strategy background and details.

ASSESSED ACTIONS

B1.1

Action Number

Assessed Action Details

Actions listed below each strategy are potential means to address that strategy and emissions sector.

Impact GHG

icons

Greenhouse Gas Reduction Potential

Impact OTHER

icons

Co-Benefits and Youth Priority

Greenhouse Gas Reduction Potential

The estimated annual quantity of greenhouse gas emissions an action will avoid or sequester as of 2030. This measure was the most important factor used to identify priority actions.



High: Addresses a large emissions source (e.g., energy use or transportation), has broad reach, and high enforceability.



Medium/High: Addresses a large emissions source, but relies on voluntary action.



Medium: Addresses a large emissions source, but has limited reach.



Medium/Low: Addresses a small or unmeasured emissions source (e.g., agriculture, solid waste), and has broad reach or high enforceability.

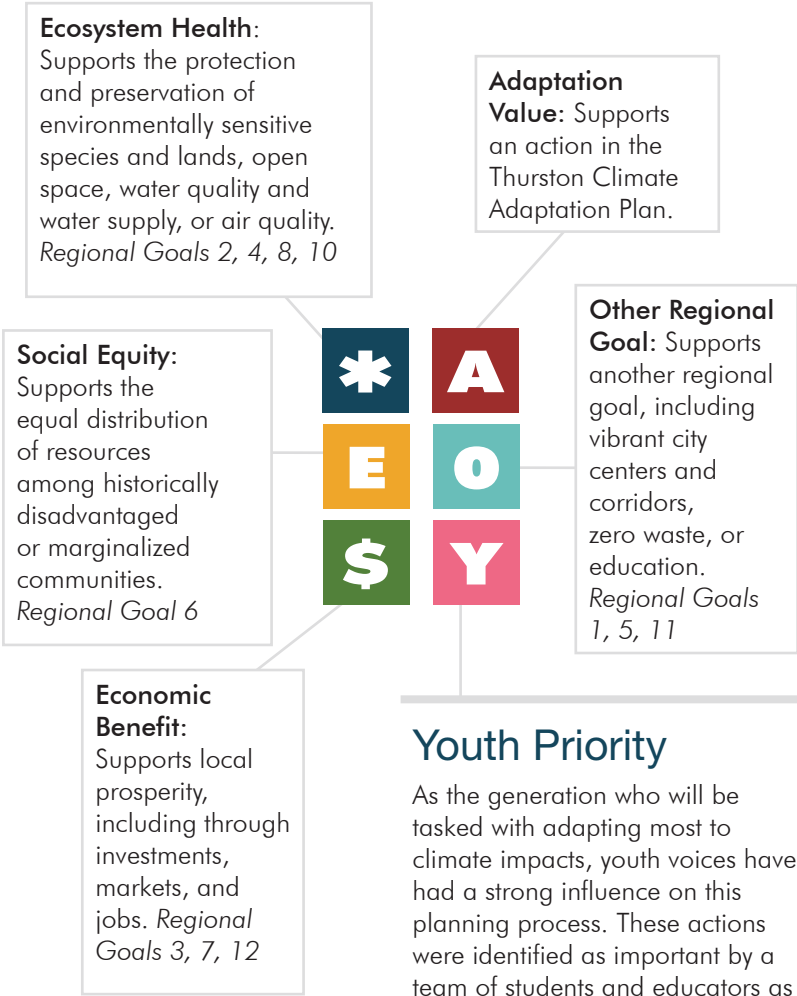


Low: Addresses a low emissions source, and has limited scope or enforceability; or lays the foundation for other actions, although it may not reduce emissions directly.

WHAT THE ICONS MEAN

Co-Benefits

Nearly all the assessed actions support one or more of the Regional Goals adopted for this planning process (see Chapter 2). The icons below indicate an action’s potential benefits to the community, in addition to its ability to address emission sources.



Youth Priority

As the generation who will be tasked with adapting most to climate impacts, youth voices have had a strong influence on this planning process. These actions were identified as important by a team of students and educators as part of the multicriteria analysis.



5.2 Buildings & Energy Sector

Strategy B1. Reduce energy use in existing residential buildings.

Residential energy use currently is the largest source of greenhouse gas emissions in our region. While newer buildings may be constructed to meet greener standards, the majority of homes in the Thurston region were built before 1988, with one in five dating back 50 or more years. Looking at our emission reduction targets, more than two-thirds of the housing units that will exist in 2050 already exist today, so retrofitting existing buildings is a key strategy. While energy efficiency improvements can pay for themselves over time through reduced heating and cooling expenses, the upfront cost may be a barrier for many. More than a third of homes in the Thurston region are rented, which means their occupants may have less control over choosing appliances or making building improvements that increase efficiency. The actions described below will support a transition toward higher efficiency homes by providing more information to consumers about home energy use and incentives for efficiency upgrades.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
B1.1	residential energy performance ratings. Require energy performance ratings and disclosures for homes at time of sale, lease, or rent so that owners, tenants, and prospective buyers are informed before making purchasing or rental decisions			
B1.2	residential energy audits. Develop and adopt policies that require residential properties to undertake an energy audit at the time of sale or during a substantial remodel. Work with financial institutions to develop mortgage products that incorporate audited energy efficiency recommendations.			
B1.4	rental housing energy efficiency incentives. Provide incentives such as property tax breaks for landlords who install energy conservation measures in rental housing.			
B1.5	property tax credit. Create incentives such as a property tax credit for property owners who participate in energy efficiency.			
B1.6	rental housing energy efficiency baseline. Require rental units to meet baseline levels of energy efficiency and make more stringent over time.			

Potential Impact:

Greenhouse Gas
Reduction PotentialEcosystem
HealthSocial
EquityEconomic
BenefitAdaptation
ValueOther
Regional GoalYouth
Priority

Strategy B2. Reduce energy use in existing commercial/industrial buildings.

Energy used to power businesses contributes to more than a quarter of our local carbon footprint (26 percent). Operations range from small retail and professional offices to sprawling warehouses. Improving efficiency across this sector will require approaches that target these different scales. The Thurston region currently has more than 42 million square feet of commercial and industrial area, but it is distributed unevenly. The greatest proportion of commercial building area is in the city of Olympia, while industrial space is concentrated in Lacey and Tumwater. As home to the headquarters of many state agencies, the Thurston region’s stock of office space includes a large share of public sector buildings—these organizations can show leadership by increasing efficiency and reduce long-term energy costs to taxpayers. While it is hard to predict our future needs for work space, commercial and industrial buildings must be adapted over the coming decades to help reduce greenhouse gas emissions and accommodate the more than 50,000 new jobs anticipated to be added in our region between now and 2045.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
B2.1	commercial energy benchmarking & disclosure. Require energy performance ratings for commercial structures be disclosed so that owners, tenants, and prospective buyers are informed before making purchasing or rental decisions.			
B2.3	LED lighting. Install LED lighting in public-sector buildings and infrastructure (e.g., streetlights, traffic signals).			
B2.6	cool roofs. Create an incentive program for the installation of reflective roofs on commercial buildings to reduce building energy consumption and the urban heat island effect.			
B2.8	performance standard. Set energy efficiency performance standards for commercial buildings with gross floor areas smaller than 50,000 square feet.			

Potential Impact:

Greenhouse Gas Reduction Potential

Ecosystem Health

Social Equity

Economic Benefit

Adaptation Value

Other Regional Goal

Youth Priority

What We Heard...

"The greenest development is updating and fixing old neighborhoods."

Public comment
at Thurston County Fair



Strategy B3. Reduce energy use across building types.

Increasing efficiency in our built environment will require builders and contractors to learn and adapt to new materials and practices. The following actions will help support that transition by providing technical assistance to share what works and celebrating development that takes on this challenge.

ASSESSED ACTIONS		Impact GHG	Impact OTHER
B3.1	energy education. Provide educational resources and technical assistance to industry professionals, building owners and managers on all aspects of energy efficient building design, retrofits, and operations for new and existing buildings.		
B3.4	exemplary buildings. Partner with public, private, non-profit, and faith-based organizations to facilitate rapid deployment and public awareness of high-profile demonstration buildings that use innovative energy efficiency and/or technology to limit energy use.		
B3.5	green building tracking. Develop data methodology to monitor use and impacts of green building incentives, to inform future incentives and develop recommendations for policy or programs		

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

Strategy B4. Reduce energy use in new construction or redevelopment.

To meet the needs of a growing population, our region will need to add approximately 30,000 new housing units by 2030 and nearly 55,000 new units by 2050, as well as around 23 million square feet of additional commercial and industrial space. Standards for energy efficiency in new development are generally set by the State Building Code Council, and requirements scheduled to go into place in 2021² set stricter emissions thresholds for most new buildings. Developers can incorporate greener practices more easily in new construction than existing structures, but such requirements can increase upfront costs—incentives and tools like the actions listed below can help to encourage the adoption of green building practices while balancing the need to keep housing affordable and local business costs down.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
B4.4	green public buildings. Require that new local government facilities and other public buildings demonstrate green building technologies and practices.		* E \$ A O Y	
B4.5	permitting incentives. Offer streamlined permitting, lower fees, or other incentives for projects that meet green building certification standards.		* E \$ A O Y	
B4.6	energy efficiency tax exemptions. Create a local property tax reduction or credit for new buildings that meet an energy efficiency performance standard.		* E \$ A O Y	
B4.7	land use incentives. Provide land use incentives (such as floor area ratio, density bonus, height bonus, or parking reductions) for zero-net carbon buildings or other applications that dramatically increase energy efficiency.		* E \$ A O Y	
B4.9	permit counter technical assistance. Hire or contract with dedicated green building specialists to provide technical assistance through the permitting and development process.		* E \$ A O Y	
B4.11	grid-connected appliances. Require smart appliances in new construction, especially water heaters that control timing of demand.		* E \$ A O Y	
B4.12	multifamily submetering. Require submetering for new multifamily buildings so residents can track energy use.		* E \$ A O Y	
Potential Impact: Greenhouse Gas Reduction Potential * Ecosystem Health E Social Equity \$ Economic Benefit A Adaptation Value O Other Regional Goal Y Youth Priority				

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

² In response to the COVID-19 pandemic, Governor Inslee delayed scheduled implementation of changes to the State Building Code from July 1, 2020 to February 1, 2021.

Strategy B5. Increase the production of local renewable energy.

Shifting our reliance for electricity away from polluting fossil fuels toward renewable sources like wind and solar power is one of the most important strategies we have to reduce emissions. Action at the state level, with the adoption of the Clean Energy Transformation Act, will move us a long way toward this end, but smaller-scale installation of renewable energy infrastructure can help support the transition as well, while saving ratepayers money over time and increasing local resilience. As of 2020, more than a thousand residential customers and over 60 businesses in the Thurston region have installed solar panels that feed into the power grid, generating nearly 10 million kilowatt hours each year.³ The actions identified below are intended to set the stage for broader access to this technology.

ASSESSED ACTIONS		Impact GHG	Impact OTHER
B5.3	public building solar. Install solar photovoltaics on all available and feasible municipal sites, including building rooftops, city hall, schools, police and fire stations, community centers, municipal water pump sites, and transit depots.		     
B5.5	SolSmart. Evaluate and adopt elements of SolSmart program and adopt solar friendly practices.		     
B5.8	solar-ready. Amend local development code to require solar-ready construction for all building types.		     
B5.10	group purchasing. Develop/support a city-sponsored group solar purchasing program.		     

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

What We Heard...

"Approve more options for very small, well-designed, affordable housing using incentives to cultivate interest by builders to construct."

Response to community questionnaire

³ Puget Sound Energy, data provided 4/16/2020.



Strategy B6. Convert to cleaner fuel sources.

Greening our electrical grid is essential to achieving the climate targets, but electricity is not our only fuel source. Although it has a reputation for being “cleaner than coal,” natural gas also contributes to climate change, particularly by leaking methane, a powerful greenhouse gas far more potent than carbon dioxide, although less prevalent. Natural gas also can affect both indoor and outdoor air quality, causing impacts to public health.⁴ Approximately 32 percent of the Thurston region households rely on natural gas as their primary source of heat at home.⁵ Across the partner jurisdictions, that proportion is highest in Lacey (45 percent), although the greatest number of households that use natural gas are in unincorporated Thurston County (12,487 homes). Actions assessed for this plan would restrict new natural gas connections and encourage those with existing connections to shift to cleaner options.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
B6.1	natural gas to electric conversions. Educate business owners and residents on the options for electric appliances and the benefit of pairing electrification with the installation of renewable energy. Create incentives to support fuel switching.		 	
			 	
			 	
B6.2	electric appliances in new construction. Update municipal code to require electric appliances in new construction.		 	
			 	
			 	
B6.4	natural gas transition. Phase out new natural gas connections in new buildings over time.		 	
			 	
			 	

Potential Impact:  Greenhouse Gas Reduction Potential  Ecosystem Health  Social Equity  Economic Benefit  Adaptation Value  Other Regional Goal  Youth Priority

⁴ Zhu, Y, et al., April 2020.
⁵ U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates.



Buildings and Energy Sector: TARGETS AND INDICATORS

TARGETS

Baseline Year: 2015

- Reduce residential and commercial electricity consumption by 20 percent by 2030 and 30 percent by 2050.
- Reduce industrial electricity consumption by two percent by 2030 and five percent by 2050.
- Reduce residential and commercial natural gas consumption by 20 percent by 2030 and 50 percent by 2050.
- Reduce industrial natural gas consumption by ten percent by 2030 and 30 percent by 2050.
- Reduce residential consumption of other fuels (liquid petroleum gas, wood) by ten percent by 2030 and 20 percent by 2050.

KEY PERFORMANCE INDICATORS

- Annual residential, commercial, and industrial electricity consumption
- Annual residential, commercial, and industrial natural gas consumption
- Residential energy use per capita
- Commercial energy use per square foot

SUPPLEMENTAL PERFORMANCE INDICATORS

- Proportion of housing units with electric heat
- Grid-supplied renewable electricity
- Number of energy efficiency upgrades
- Proportion of households cost-burdened by energy and housing costs as a percentage of household income

Buildings and Energy Sector: CONSIDERATIONS FOR IMPLEMENTATION

The Thurston region is experiencing rising home prices and a severe lack of affordable housing. Actions taken to reduce emissions from the building sector must be designed with consideration of their impact to the cost of housing. Local builders already face a steep learning curve changing their practices in response to the new requirements of the state Building Code and a lack of local markets for some newer materials. A concern is that additional, restrictive requirements will favor large chains over local builders and contractors, who will be less able to purchase greener construction materials at scale.

The Clean Energy Transformation Act's push toward clean sources for electricity can dramatically reduce emissions from the building sector, but the tradeoffs include the need for new energy infrastructure and the potential for higher energy costs. Locally, we can support that transition by increasing energy efficiency of our building stock, including in lower income and senior households, and by enabling streamlined permitting for projects that support the energy grid of the future. This may include establishing clear expectations for how to proceed when renewable energy infrastructure conflicts with other community priorities, such as tree preservation. The most efficient way to shift our grid will likely involve large scale renewable energy infrastructure in other areas of the state and county, however, advancing more locally distributed renewable energy sources can help support local resilience and independence.

Actions that focus on changing price signals through subsidies and incentives must carefully consider their potential impacts. Property tax and permit fee reductions reduce revenue sources that fund schools and support staff, undercutting our ability to develop local expertise, update infrastructure, process permits for greener construction, and advocate for further climate mitigation measures. Tax and fee reductions should only be proposed when offset by new or different revenue sources. Incentives must be designed by first understanding what market or social factors create barriers to developing more energy efficient buildings. Such programs should be targeted to benefit disadvantaged groups, or to projects that go above and beyond to set a model for others. Pilot programs that begin through incentives can lay the groundwork to understand where regulatory requirements can be most effective.

5.3 Transportation and Land Use Sector

Strategy T1. Set land use policies that support increased urban density and efficient transportation networks and reduce urban sprawl.

When people opt to live close to the places they work, shop, and meet up with others, they make fewer, and shorter, driving trips—this is how increased density leads to reduced greenhouse gases. Planning for more compact growth in urban centers supports many of our regional goals, by making our cities and neighborhoods more vibrant, creating a robust economy, and reducing development pressure on environmentally sensitive areas. This strategy reinforces other approaches for reducing transportation emissions, by improving the viability of transit and making it safer and easier to get around by foot or bicycle.

The land use vision set out in *Sustainable Thurston* includes the following targets:

- By 2035, 72 percent of all (new and existing) households in our cities, towns, and unincorporated urban growth areas will be within a half-mile (comparable to a 20-minute walk) of an urban center, corridor, or neighborhood center.
- By 2035, at least 17 percent of homes in Lacey, Olympia, and Tumwater’s urban areas will be located in an urban corridor or center.
- Between 2010 and 2035, no more than 5 percent of new housing will locate in the rural area.

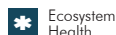
As of 2019, our region is not on track to achieve these targets. The concentration of housing within walking distance of urban centers, corridors, and neighborhood centers has stalled around 46 percent, although recent development in downtown urban areas is pointing the way toward increases in density.

ASSESSED ACTIONS		Impact GHG	Impact OTHER
T1.1	coordinated long term planning-future infill and urban sprawl reduction. Coordinate long-term plans with transit agencies to project where increased density would support more transit corridors. Then change zoning/density that would support new transit corridors and variety of household incomes. Promote long-term equity and healthy communities by developing incentives such as density bonuses for development where a percentage of the units will be permanently affordable for household incomes. Look for opportunities to meet the Sustainable Thurston land use vision by reducing urban sprawl.		
T1.2	middle-density housing. Reevaluate and change zoning as needed to allow for a range of housing types to promote social economic integration of housing near our region’s urban centers or moderate-density zones.		
T1.3	Eco districts. Identify potential Eco districts to advance innovative district-scale urban development, sustainability, and neighborhood equity. Then make necessary code/zoning changes to support their development and set ambitious performance outcomes to ensure their long-term success.		

Potential Impact:



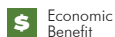
Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority





Intercity Transit buses line up at the Olympia Transit Center in downtown Olympia. Source: Intercity Transit

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T1.4	20-minute neighborhoods. Increase the number of 20-minute neighborhoods (walkable environment, destinations that support a range of basic living needs and a residential density). Identify key infrastructure components needed to grow the number of 20-minute neighborhoods, then change zoning and codes if needed and coordinate with other jurisdictions to make public investments where necessary.			
T1.9	ADUs. Amend development codes to allow for attached and detached accessory dwelling units (ADUs) in urban residential areas.			
T1.11	land use efficiency. Set integrated goals to consider network efficiency and reduce urban sprawl in land use decisions, including how density in certain areas supports transit, increases efficiency of utility service, and other support facilities. Consider vehicle miles traveled (VMT) in identifying locations for large employment facilities.			

Potential Impact: Greenhouse Gas Reduction Potential Ecosystem Health Social Equity Economic Benefit Adaptation Value Other Regional Goal Youth Priority

Strategy T2. Increase efficiency of the transportation system.

The minutes spent waiting in traffic can add up to a substantial climate impact. Actions that improve congestion on our roads, either through investments in transportation infrastructure or by reducing the number of people driving at peak periods, will reduce emissions while also improving air quality and the ability of people and goods to get where they need to go.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T2.2	transportation efficiency. Fund programs and projects to increase transportation efficiency, reduce delay, and reduce emissions such as signalization coordination improvements along with application of speed harmonization techniques (ex. reevaluate speed limits, roundabouts vs signalized intersection, street connectivity). Added benefits are decreased idling time (pollution) and improve fuel efficiency (cost savings to driver).		 *	 A
			 E	 O
			 \$	 Y
T2.4	vehicle efficiency outreach. Develop educational campaigns about benefits (reduced greenhouse gas emission, increase fuel efficiency, safety) of properly inflated tires, including signage at gas stations and local businesses and partnering with schools.		 *	 A
			 E	 O
			 \$	 Y
T2.17	teleworking/flex work. Increase opportunities for employee teleworking options and staggering workdays or schedules to reduce employees driving during peak traffic times.		 *	 A
			 E	 O
			 \$	 Y
T5.13	telecommuting infrastructure. Develop grants and provide financial resources for installation of infrastructure necessary to support telecommuting.		 *	 A
			 E	 O
			 \$	 Y

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

Strategy T3. Increase adoption of electric vehicles.

As our energy sources become cleaner, with electricity coming mostly from renewables, vehicles powered by gas and diesel will become our greatest local source of emissions. One of the easiest shifts we can make is to also power our transportation using electricity. As of April 2020, the Thurston region has 2,162 registered electric vehicles or EVs.⁶ This number will need to increase substantially over the coming years to make a dent in transportation emissions. At the state level, the Zero Emission Vehicle standard adopted in 2020⁷ will likely push auto companies toward offering a greater range of electric vehicles to consumers. Even as new EVs become more prevalent at dealerships, we know that generally one-third of the miles traveled in an average year in our region are driven in vehicles that are more than ten years old.⁸ The actions assessed for this plan will help set the stage locally for greater adoption of EVs by reducing technical and economic barriers.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T3.1	EV parking new construction. Require large commercial and residential buildings to dedicate a percentage of parking spots for electric vehicle charging.		 	 
			 	
T3.2	free EV parking. Allow free parking for all electric vehicles at local government buildings and in city centers to encourage the adoption of all electric vehicles. Increase cost of parking for non-EV vehicles.		 	 
			 	
T3.5	EV-ready building code. Require all new residential construction be built EV ready. Create a simple and consistent residential charging station permitting process to reduce costs and time to development.		 	 
			 	
T3.7	EV integration. Reevaluate regulations and make necessary changes to ensure charging stations are able to be permitted in locations where they are needed.		 	 
			 	
T3.10	zero emission fleets. Investigate options then set appropriate timetables and policies for municipal and other governmental entities to replace public fleets with cleaner, energy-efficient vehicles to reduce long term fuel costs, improve air quality, and reduce greenhouse gas emissions.		 	 
			 	
T3.11	EV education. Partner with environmental and other agencies to increase consumer awareness about EV options and incentives for use and purchase		 	 
			 	

Potential Impact:



Greenhouse Gas Reduction Potential

Ecosystem Health

Social Equity

Economic Benefit

Adaptation Value

Other Regional Goal

Youth Priority

⁶ Washington Department of Licensing.

⁷ Washington Legislature, SB 5811.

⁸ Resource Systems Group 2013.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T3.14	EV mass purchase discounts. Create a group purchase program for residents to get deep discounts on EVs, other fuel efficient and alternative fuel vehicles.		 	 
T3.15	EV purchase incentives. Partner with car sale and lease dealerships to provide incentives for purchase of electric vehicles by Thurston County residents. Look to establish pilot programs with those neighborhoods, individuals with greatest VMT potential.		 	 

Strategy T4. Increase the use of public transit.

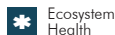
Public transportation connects people with jobs, school, healthcare, and community services in ways that are more carbon efficient than driving alone. Applying many of the actions assessed for this strategy, Intercity Transit's 2019-2024 Strategic Plan predicts a minimum 40 percent increase in ridership in the next five years. Continued investment in transit will most aid those who don't have access to other forms of transportation due to disabilities, age, or income, but also brings broader community benefits, such as better access to employment, workforce recruitment, and improvements in air pollution.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T4.1	increase transit. Increase local public transit routes/frequency with a focus on ensuring the greatest number of riders have access to a low-carbon transportation option. Any expansion of service should include an analysis of climate impacts to ensure the program does not result in an increase in greenhouse gas emissions.		 	 
T4.3	transit connections. Identify and implement first/last mile, low carbon solutions to connect neighborhoods without the population to support fixed routes transit options. Engage homeowners associations for representation and feedback. Any expansion of service should include an analysis of climate impacts to ensure the program does not result in an increase in greenhouse gas emissions.		 	 
T4.4	fareless system. Maintain a fareless system for public transit.		 	 
T4.10	rider education/benefits. Maintain and expand a regional online page that lists all the mode shift education efforts and employer benefits opportunities (Thurston Here-To-There). Include a comments section for suggestions to further transit education and ridership.		 	 
T4.15	promote transit benefits. Work with employers and transit agencies to develop ways to incentivize employee ridership (ex. rebates for employees who give up use of employer parking facilities).		 	 

Potential Impact:



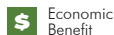
Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority



Strategy T5. Increase use of active forms of travel (such as, bicycling, walking).

Currently, most Thurston region residents drive alone to work and use a car for most other trips. While many residents enjoy walking and bicycling for recreation, just three percent of commute trips are made using these active modes.⁹ Making it easier for people to walk and bike for typical errands, rather than driving a car, will help reduce emissions while also supporting our regional goals and improved public health. These actions can benefit low income and other marginalized communities by reducing the need to rely on a private vehicle. The actions identified below will help address gaps and barriers in our current network.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
T5.1	walk/bike infrastructure. Coordinate bicycle and pedestrian plans of the cities and Thurston County into a large regional plan to expand walking and bicycling infrastructure, including separated and protected opportunities. Coordinate efforts to maximize funding mechanisms and opportunities.		  	  
T5.2	barriers to active transportation. Develop a regional inventory to identify gaps in connectivity for safe cycling and walking. Then develop a strategy to prioritize projects and a plan for funding.		  	  
T5.4	school drop-off alternative modes. Maintain and expand a walking/ bicycling incentive program with safety education for families.		  	  
T5.11	mode-shift targets and car-free areas. Reevaluate long term plans and update to prioritize people walking and riding bikes. Set goals for mode shift and plans on how to achieve those goals like developing car-free corridors in commercial and mixed-use areas to encourage mode shift.		  	  

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

What We Heard...

"More incentives to bike. More protected bike lanes along with improving the existing network of trails/current bike lanes."

Response to community questionnaire

⁹ U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates.

Transportation and Land Use Sector:

TARGETS AND INDICATORS

TARGETS

Baseline Year: 2010

- By 2035, 72 percent of all (new and existing) households in our cities, towns, and unincorporated urban growth areas will be within a half-mile (comparable to a 20-minute walk) of an urban center, corridor, or neighborhood center.
- By 2035, at least 17 percent of homes in Lacey, Olympia, and Tumwater's urban areas will be located in an urban corridor or center.
- Between 2010 and 2035, no more than 5 percent of new housing will locate in the rural area.

Baseline Year: 2015

- Reduce vehicle miles traveled in passenger vehicles by five percent by 2030 and 20 percent by 2050.
- Reduce vehicle miles traveled in light-duty trucks by ten percent by 2030 and 15 percent by 2050.
- Reduce vehicle miles traveled in heavy-duty trucks by 20 percent by 2050.
- Increase average fuel efficiency of passenger vehicles by 20 percent by 2030 and 60 percent by 2050.
- Increase average fuel efficiency of light-duty trucks by ten percent by 2030 and 40 percent by 2050.
- Increase average fuel efficiency of heavy-duty trucks by ten percent by 2050.

KEY PERFORMANCE INDICATORS

- Vehicle miles traveled
- Average vehicle carbon intensity

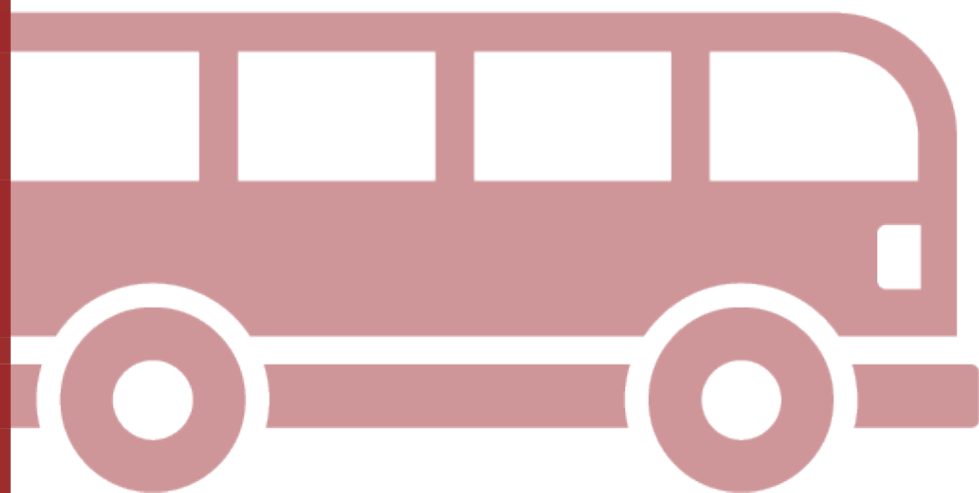
SUPPLEMENTAL PERFORMANCE INDICATORS

- Number of public transit passenger boardings
- Number of registered electric vehicles
- Number of public electric vehicle charging stations
- Proportion of vehicle trips made using modes other than driving alone (walk, bicycle, transit, carpool)
- Median household transportation costs as a percentage of median household income

Transportation and Land Use Sector: CONSIDERATIONS FOR IMPLEMENTATION

The transportation strategies included in this framework use different levers for reducing emissions: some rely on changing the conditions in which people behave, others rely on people deciding to change their behavior. Increasing the adoption of electric vehicles, for example, allows people to reduce their carbon footprint without substantially changing the amount that they drive alone. Actions that focus on reducing vehicle miles traveled, in contrast, rely on people behaving in different ways than we see today, by living in denser communities and choosing to walk or take the bus instead of driving.

In implementing these actions, we will need to consider who benefits from these strategies and ensure we are distributing those benefits equitably and where they will make the most sense. Actions that focus on creating a denser transportation network have many community co-benefits, increasing equity and access, but only if implemented in a way that does not lead to higher costs that drive lower-income families farther away from the urban center. Actions to support electric vehicles may be best targeted for residents in rural communities where mass transit is not an efficient option to reduce emissions. Incentive programs could be targeted to benefit low income or other disadvantaged groups, although reducing the number of people who have access to such programs may reduce the amount of emissions they reduce.



5.4 Water and Waste Sector

Strategy W1. Increase the efficiency of water and wastewater infrastructure.

Strategy W2. Reduce water consumption.

Strategy W3. Reduce emissions from wastewater treatment operations.

While water and wastewater management contribute only a small piece of our regional greenhouse gas inventory, the energy used to power these utilities are large contributors to the carbon footprint of individual jurisdictions. The actions identified below center on ways for city and county governments to reduce waste and save money, while reducing their own emissions.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
W1.1	municipal energy efficiency. Conduct efficiency improvements to municipal water and sewage treatment systems. Prioritize components that consume the most energy and have high greenhouse gas emissions.		 	 
W2.2	water audits. Conduct water audits of city and county facilities to determine prioritization of capital improvements.		 	 
W3.1	nitrous oxide capture. Research and implement nitrous oxide mitigation strategies and strategies to avoid or reduce nitrous oxide emissions in wastewater processing. Present findings and cost vs benefits analysis to policy makers to determine what changes should be made.		 	 

Potential Impact:

 Greenhouse Gas Reduction Potential
  Ecosystem Health
  Social Equity
  Economic Benefit
  Adaptation Value
  Other Regional Goal
  Youth Priority

Strategy W4. Divert more solid waste from landfills.

Strategy W6. Reduce consumption of carbon-intensive goods and services.

Although emissions generated outside the Thurston region by manufacturing and transporting goods consumed here are not measured as part of our current inventory, many people involved in developing this plan were interested in addressing the impacts of consumption and waste. In *Sustainable Thurston*, our region set a goal to move toward zero waste, but currently, we are not on track to meet this goal. Waste collected on a per capita basis has increased from a low of 1,140 pounds per person in 2012 to 1,318 pounds per person in 2016.¹⁰

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
W4.4	waste audits. Provide waste audits for business owners and education on practices that decrease waste (such as composting, recycling, and reuse).		  	  
W4.10	waste less food program. Expand Thurston County’s “Waste Less Food” program.		  	  
W6.6	supply chain. Provide free technical assistance to local businesses in reducing the carbon intensity of their supply chains.		  	  

Potential Impact:

 Greenhous Gas Reduction Potential

 Ecosystem Health

 Social Equity

 Economic Benefit

 Adaptation Value

 Other Regional Goal

 Youth Priority

¹⁰ Thurston County Solid Waste.



Water and Waste Sector: TARGETS AND INDICATORS

TARGETS

Baseline Year: 2015

- Reduce emissions from wastewater treatment by 20 percent by 2030.
- Reduce solid waste generated per capita by 10 percent by 2030 and 30 percent by 2050.

KEY PERFORMANCE INDICATORS

- Tons of waste disposed to landfill
- Annual emissions from wastewater treatment

SUPPLEMENTAL PERFORMANCE INDICATORS

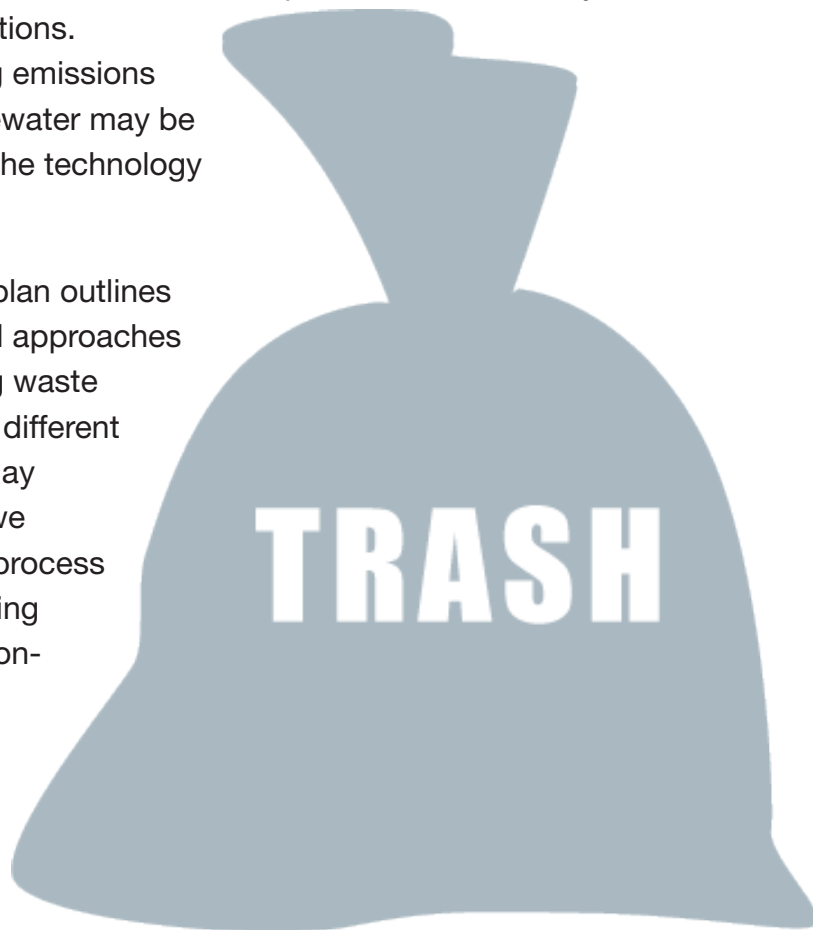
- Proportion of disposed waste that is compostable
- Number of septic tanks

Water and Waste Sector: CONSIDERATIONS FOR IMPLEMENTATION

A first step for this sector will involve reviewing the assumptions behind calculating emissions from water and waste. The current methods used in the greenhouse gas inventory may not sufficiently account for the innovative work already being done at the LOTT Treatment facility and Roosevelt Regional Landfill. These calculations should be updated to ensure they reflect our local conditions.

Addressing emissions from wastewater may be limited by the technology available.

While this plan outlines some initial approaches to reducing waste emissions, different priorities may emerge if we develop a process for measuring consumption-based emissions.



5.5 Agriculture, Forests, and Prairies Sector

Strategy A1. Reduce emissions from agricultural practices.

Strategy A2. Support agricultural practices that sequester carbon.

Agriculture in Thurston County is remarkably diverse—it includes everything from large commercial dairy and egg operations to orchards to specialty vegetables grown on small urban lots. Our average farm size is small at 14 acres. Around 500 farms have livestock—mostly cattle and chickens—and a large portion of agricultural land is managed minimally for grazing and growing hay.¹¹ While farms can reduce their impact with better management of animal waste and fertilizer, they can also play a role in offsetting the community's emissions as a whole. Land management practices like cover cropping, no-till and minimum tillage conservation practices, crop rotations, soil amendments, and changes in grazing management have been shown to increase the rate of carbon stored in plants and soil. In 2020, the Washington State Legislature established the Sustainable Farms and Fields grant program, which will aid farmers and ranchers in adopting practices that increase carbon storage.

ASSESSED ACTIONS		Impact GHG	Impact OTHER
A1.2	nutrient management. Provide education and incentives (e.g., grants, loans, technical assistance) to encourage practices that reduce emissions from manure and fertilizer.		     
A2.1	regenerative agriculture. Expand regenerative agricultural practices among farmers that aim for a “whole farm” approach. Provide education on how to increase organic matter content and water retention in soils within urban and agricultural settings.		     

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

¹¹ USDA 2017 Agricultural Census



Strategy A5/A6/A7. Preserve tree canopy and manage forests and prairies to sequester carbon.

Trees have been called the lungs of our planet, and they also can be very effective at removing carbon from the air and storing it in the soil. Historically, tall stands of Douglas fir, cedar and other tree species covered far more of Western Washington than they do today. Conserving existing tree canopy and forest areas and restoring areas that have been cleared can help to offset emissions from other activities, while providing a host of benefits for our local environment from storing and cleaning water to providing habitat for many sensitive species. Prairies can sequester large amounts of carbon in the roots of plants, and this sequestering is less vulnerable to fires than trees. Furthermore, working to preserve prairies will not only help several endangered species survive, it will reduce opportunities for urban sprawl. In enacting this strategy, it will be important to balance the carbon sequestering capacity of forests and prairies with the emission reducing potential of dense urban development and renewable energy infrastructure.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
A5.1	reforestation & afforestation program. Develop a coordinated reforestation/afforestation program. Begin by identifying priority areas where reforestation and afforestation may have carbon reduction benefits.			
A6.5	municipal canopy. Maximize tree canopy on jurisdiction owned or managed land, where appropriate in balance with other jurisdictional goals.			
A6.9	tree canopy preservation. Develop a tree canopy ordinance that establishes a baseline for current urban canopy and sets goals for future canopy to increase resilience. Combine direct cooling value (urban heat island mitigation) with carbon sequestration value when evaluating urban tree management.			
A7.3	prairie preservation. Support aggressive implementation of habitat conservation plans that provide for preservation and restoration of prairie habitat for endangered and threatened prairie species. NOTE: the sequestration role of prairies was not assessed for the plan, and language and actions related to prairies were added after the multicriteria analysis for the plan wer completed, at the direction of the Steering Committee.			

Potential Impact: Greenhous Gas Reduction Potential Ecosystem Health Social Equity Economic Benefit Adaptation Value Other Regional Goal Youth Priority

What We Heard...

"The number one priority needs to be preservation of wooded areas that contain our trees for carbon reduction."

Response to community questionnaire



Agriculture, Forests, and Prairies Sector: TARGETS AND INDICATORS

TARGETS

Baseline Year: 2015

- Reduce acres of conventionally fertilized land by 20 percent by 2030 and 50 percent by 2050.
- Manage 6,600 acres of agricultural land to store carbon through regenerative agriculture practices by 2050.
- Manage forestland and prairies sufficient to sequester 375,000 tons of CO₂ annually by 2050.

KEY PERFORMANCE INDICATORS

- Acres of fertilized farmland
- Tons of sequestered carbon

SUPPLEMENTAL PERFORMANCE INDICATORS

- Percent tree canopy cover
- Acres of land using regenerative agriculture practices
- Acres of trees planted
- Acres of tree canopy protected
- Acres of prairie protected

Agriculture and Forest Sector: CONSIDERATIONS FOR IMPLEMENTATION

Carbon sequestration was not included in the original suite of strategies proposed for climate mitigation but was added in response to community members who link the benefits of connecting land conservation and land management practices with climate mitigation goals. The wedge analysis shows carbon sequestration as a sizeable slice of our overall pathway to meet the 2050 emissions target. An important next step is to further analyze what actions will be required on the ground to meet our current carbon sequestration assumptions, and whether those assumptions are feasible. This may also include considering how preservation and restoration of other ecosystems, such as prairies and marine areas, may contribute to an overall carbon sequestration target.

Some stakeholders would prefer greater investment in reducing sources of emissions, before bringing sequestration into the mix of actions. If we are more effective at reducing the sources of emissions, we may need to rely less on sequestration to achieve our targets.

Another factor that will need to be addressed in implementation is how to balance preservation of trees and prairie habitat with other priorities, such as strategies that support increased urban density and development.

We will need to better define where and at what scale sequestration can be most effective, while considering other priorities.



5.6 Cross-Cutting Sector

Strategy G1. Conduct education and outreach across climate mitigation areas.

This plan focuses on the ways local government can reduce local contributions to climate change but achieving those reductions will require action from people at all levels. Many local businesses, community partners, and residents have already expressed their desire for climate action and demonstrate their commitment to improving our community. This strategy acknowledges the need for the partner jurisdictions to understand and work out how climate policies and programs can be tailored to best meet the needs of the people they serve, and how to communicate in ways that inspire the change we need to meet our goals.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
G1.7	social research and behavior change campaigns. Work with higher education institutions to research effective behavior change through marketing and education. Use this information in developing campaigns to reduce high emissions greenhouse gases.		 	
			 	
			 	

Potential Impact:

 Greenhouse Gas Reduction Potential

 Ecosystem Health

 Social Equity

 Economic Benefit

 Adaptation Value

 Other Regional Goal

 Youth Priority

Strategy G4. Enhance monitoring and evaluation of climate mitigation measures and outcomes.

The actions included under this strategy will not reduce emissions directly, but they will help our community understand whether we are making progress toward achieving our goals. They also aim to fill information gaps identified over the course of this planning process and highlight ways to correct our course as we learn more.

ASSESSED ACTIONS		Impact GHG	Impact OTHER	
G4.1	emissions inventory. Prepare and publish an annual emissions inventory that tracks greenhouse gas emissions by jurisdiction and source category. Review and update emissions inventory methodology as necessary to address improvements to data or methodologies, improve consistency, incorporate changes to state or federal policies, or report on issues of local interest.		 	 
			 	
G4.2	performance measures. Develop performance measures to determine progress toward greenhouse gas reduction targets and other regional goals. Regularly update and publicize for community to track their progress.		 	 
			 	
G4.3	other emission sources and sinks. Expand sources and sectors in future emissions inventories to inform future regulatory policy to reduce greenhouse gas emissions. Connected to actions T1.5 and W6.1, and sequestration actions.		 	 
			 	
G4.4	vulnerable populations. Develop a data and monitoring mechanism that is specific to marginalized groups and their needs related to climate change and climate reality (e.g., access to transportation, access to air conditioning, proximity to cooling centers) and develop a plan to address these vulnerabilities with solutions that help reduce greenhouse gas emissions.		 	 
			 	
G4.6	social cost of carbon. Develop and adopt policies that require the use of a “social cost of carbon measure” in zoning, development, construction, and transportation decisions.		 	 
			 	

Potential Impact:



Greenhouse Gas Reduction Potential



Ecosystem Health



Social Equity



Economic Benefit



Adaptation Value



Other Regional Goal



Youth Priority

Strategy G5. Advocate for climate-mitigating state and federal policy.

While this planning process has helped answer the question of what local governments can do to address sources of climate change, it also has shed light on the limits of local authority when it comes to triggering large-scale transitions in our energy and transportation systems. The partnership among four jurisdictions that has powered this process is one of our greatest tools. By working together to advocate for strong state and federal climate action, we can amplify our influence on policy debates to come.

ASSESSED ACTIONS		Impact GHG	Impact OTHER
G5.5	legislative agenda. Prioritize climate mitigation policy in the municipalities' legislative agenda each year. Instruct municipal lobbyists to track and report on climate bills, and advocate for those bills that will help reduce local emissions. Work with other jurisdictions across the state to add this to the priorities for the Association of Washington Cities and Washington State Association of Counties.		

Potential Impact:

Greenhouse Gas Reduction Potential

Ecosystem Health

Social Equity

Economic Benefit

Adaptation Value

Other Regional Goal

Youth Priority





City of Lacey's Judd Street Bike Corridor.
Source: City of Lacey

6. Implementation Strategy

“[Climate change] is an issue that is happening right now. It’s not something in the future, it’s right now, and we need to fix it right now, because if we start worrying about it in 10 years, that’s when it’s too late.”

Elyanna Calle,
Timberline High School student,
organizer of the 2019 Olympia Climate Strike





Table 2. Framework for Climate Mitigation Action

Achieving the vision and goals laid out for this plan will require bold leadership and, just as important, a sustained commitment to realizing the change necessary. It will require the attention, buy-in, and creativity of people in many different areas of our community and economy.

The *Thurston Climate Mitigation Plan* sets a framework for addressing the causes of climate change through strategies and actions that will reduce local sources of greenhouse gas emissions (see Figure 9). It also lays out the steps each of the four partner jurisdictions (Thurston County and the cities of Lacey, Olympia, and Tumwater) will need to take in the near term to get on track to achieving the 2030 and 2050 emission reduction targets.

This implementation strategy draws from the list of communitywide actions described in Chapter 5—*Strategies & Actions*, the results of the scenario analysis described in Chapter 4—*Plan Development*, as well as from perspectives provided by community members throughout the planning process.

6.1 Implementation Approaches

The broad strategies identified in Chapter 5—*Strategies & Actions* form the basis for implementation of the plan and the realization of the plan’s vision.

The suite of actions identified through the planning process cover a wide range of solutions. By including them in this plan, the intent is not to lock local jurisdictions into specific assignments, but to outline tangible, practical next steps worthy of further attention. As the plan is carried out over the next 30 years, it is expected that actions will change (be accomplished, found not effective, or new ones added), while the strategies will remain mostly unchanged. Prior to implementation, each action will require additional work to understand their feasibility, costs, and impacts.

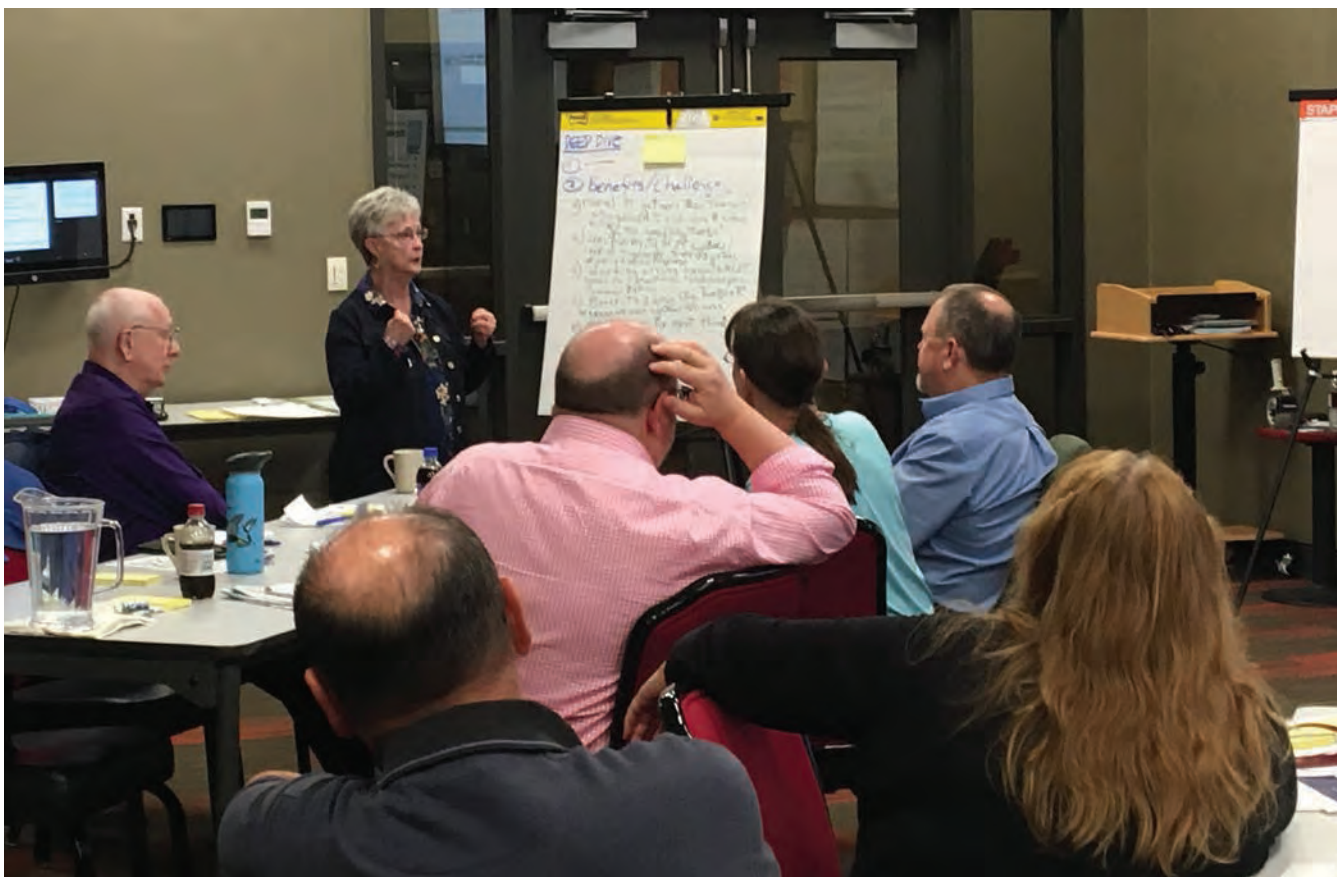
To start that process, staff from the four partner jurisdictions grouped actions into four general approaches: legislative agenda, regionally coordinated, individual jurisdictions, and supporting partner.

Legislative Agenda

Over the course of the planning effort, it became clear that one of the most powerful actions available to local governments would be to use their shared influence to advocate for changes at the state level.

A number of assessed actions require steps by the state legislature to create additional authority or make other changes to state law before action can occur at the local level. For other actions, jurisdictions believe state direction would provide a more effective or efficient approach. Under the legislative agenda, partner jurisdictions commit to working together to advocate for changes to state law that advance our climate mitigation priorities, such as:

- Establish additional financial incentives for property owners to invest in energy efficiency upgrades, such as authority to provide local tax credits or exemptions. Such incentives should address all types of buildings, but in particular target improvements to rental housing units. Local jurisdictions can track properties receiving such incentives, once they are authorized.
- Set requirements that ensure standard building energy efficiency information is provided to prospective tenants and consumers during real estate transactions, at times of sale, lease, or rent.
- Build on changes in the state Building and Energy code to support an even faster shift toward efficient and electric appliances in new construction, and greater efficiency in smaller commercial buildings (less than 50,000 square feet).



Regional Coordination

One of the great strengths our region brings to this challenge is our history of collaborative partnership. A number of actions identified in the plan would build on existing regional programs. Others would require new partnerships to develop a shared approach. Partner jurisdictions commit to work together in the following areas:

- **Buildings and permitting**
 - Develop standard approaches to incentivize and track green building practices across our region.
 - Develop standard approaches to consider climate impacts in permitting decisions.
 - Develop model regional standards or codes for priority climate actions, including for green public buildings, land use incentives, solar and electric vehicle-ready buildings.
- **Transportation planning**
 - Support, and in some cases expand, existing programs, including the Commute Trip Reduction Program, Thurston Here-To-There, and Safe and Active Walks to School.

- Consider, and where appropriate, address climate mitigation goals, targets, and actions in upcoming regional projects, such as the Regional Trails Plan and Capitol Campus Telework project.
- Prioritize funding for transportation projects that advance climate mitigation priorities, including through congestion mitigation and supporting walk/bike infrastructure.
- **Food waste.** Support and expand Thurston County’s waste less food program.
- **Carbon sequestration.** Develop a regional program to track and certify carbon sequestration, including through afforestation, prairie preservation and enhancement, and regenerative agriculture.
- **Monitoring and assessment.**
 - Monitor our region’s progress on climate action, by continuing to track regional greenhouse gas emissions and progress toward climate mitigation targets. Incorporate additional information.
 - Regularly report on performance so our strategy can adapt as our understanding evolves.
- **Ongoing climate coordination and public engagement**
 - Support ongoing regional coordination of climate action, through the continuation of the current Steering Committee or other governance body.
 - Keep the community informed about climate mitigation activities and provide additional opportunities for public involvement in climate mitigation actions.
 - Seek and support funding for climate mitigation priorities.

Individual Jurisdictions

Many of the actions identified in the plan can be taken on by individual jurisdictions. Partner jurisdictions commit to addressing the following areas through their various departments and work programs:

- **Municipal Operations.**
 - Look for ways to reduce emissions from government operations, including by increasing energy efficiency of lighting and water systems, installing solar or other renewables on public buildings, and transitioning to electric fleets. Consider and prioritize climate impacts in capital improvement decisions.



Intercity Transit is a key partner for reducing emissions from transportation. In addition to its fixed bus routes, Intercity Transit operates a vanpool program and provides outreach programs to reduce car trips by commuters and students. Source: *Intercity Transit*

- Increase use of remote meetings, teleworking, and flexible work schedules to minimize emissions from employee travel.
- **Code and Regulatory Changes.** Review and update zoning and development codes and other regulatory programs to address priority climate actions, including solar-ready development, dense neighborhoods, electric vehicle infrastructure, and tree canopy preservation.
- **Staff development.** Dedicate resources to develop staff expertise to provide technical assistance to support climate mitigation actions like green building permitting.

Supporting Partner

Some actions identified in the plan would be best led by a different entity in the community, rather than a local government. Partner jurisdictions commit to support climate mitigation actions led by other organizations that include, but are not limited to:

- Intercity Transit
- Thurston Conservation District
- LOTT Clean Water Alliance
- Thurston Economic Development Council
- Puget Sound Energy

In addition, some actions assessed in the plan may be best achieved through public-private partnerships or other types of sponsorship or collaboration.

6.2 Levers and Mechanisms for Implementation

Local governments use different levers to change underlying conditions in a system and motivate individuals and organizations to change behaviors and investment to support climate actions. As shown in Figure 13, the strategies and actions included in the *Thurston Climate Mitigation Plan* employ a variety of levers. Often, local governments use different levers in sequence to achieve a strategy as a progression from voluntary action, to price signals and investments, and only turn to mandates as a last resort if other levers fail to achieve the desired outcome.

The project partners identified likely mechanisms to achieve each action, including through an existing program, new program, capital improvement, regulatory or code change, or support of a third-party partner. The type of mechanism helps determine the type of costs for an action (such as staff, one-time, or operating costs) as well as the potential timing. Details on the primary mechanism for each action are included in Appendix 10.6.

What We Heard...

"If you're going to recommend actions, there need to be financial resources to help implement actions to keep housing affordable for low-income people, especially.."

Interview with Trudy Soucoup,
Homes First

"Give very thoughtful consideration of impacts to rural areas. We have low income people, higher vulnerability people with limited access and resources. People here have to drive long distances. The bus doesn't get you where you need to go."

Interview with Amy Loudermilk,
Confederated Tribes of the Chehalis
Reservation

LEVER: Voluntary Action

DEFINITION: Providing information, challenges, learning opportunities, technical assistance, examples, and other support can motivate people to try new behaviors.

PRIMARY MECHANISM: New or Existing Program / Support of a third-party

Example Actions from Thurston Climate Mitigation Plan

Buildings & Energy	Transportation & Land Use	Water & Waste	Agriculture & Forests
B3.1 energy education B3.4 exemplary buildings B3.5 green building tracking B4.9 permit counter technical assistance B5.5 SolSmart B6.1 natural gas to electric conversions	T1.11 land use efficiency T2.4 vehicle efficiency outreach T2.17 teleworking T3.11 EV education T4.10 rider education/benefits T4.15 promote transit benefits T5.4 school drop-off alternative modes T5.11 mode shift targets	W4.4 waste audits W4.10 waste less food program W6.6 supply chain	A1.2 nutrient management A2.1 regenerative agriculture

LEVER: Price Signals

DEFINITION: Changing the economic impacts—the cost of consumption and other behaviors and the return on investment – through subsidies and incentives can motivate new behaviors and investment.

PRIMARY MECHANISM: New or Existing Program; Regulatory/code change

Example Actions from Thurston Climate Mitigation Plan

Buildings & Energy	Transportation & Land Use	Water & Waste	Agriculture & Forests
B1.4 rental housing energy efficiency incentives B1.5 property tax credit B2.6 cool roofs B4.5 permitting incentives B4.6 energy efficiency tax exemptions B4.7 land use incentives B5.10 group purchasing	T3.2 free EV parking T3.14 EV mass purchase discounts T3.15 EV purchase incentives		A5.1 reforestation/afforestation

LEVER: Public Investments

DEFINITION: Investing government funds, short- and long-term, can create conditions that stimulate others to behave in new ways, and also significantly change the government’s own carbon footprint.

PRIMARY MECHANISM: Capital Improvement

Example Actions from Thurston Climate Mitigation Plan			
Buildings & Energy	Transportation & Land Use	Water & Waste	Agriculture & Forests
B2.3 LED lighting B4.4 green public buildings B5.3 public building solar	T1.4 20-minute neighborhoods T2.2 transportation network efficiency T5.13 telecommuting infrastructure T3.10 convert to EV fleets T4.1 increase transit T4.3 transit connections T4.4 fareless system T5.1 walk/bike infrastructure T5.2 barriers to active transportation	W1.1 municipal energy efficiency W2.2 water audits W3.1 nitrous oxide capture	

LEVER: Mandating Change

DEFINITION: Requiring behavior and enforcing the requirements can result in widespread compliance.

PRIMARY MECHANISM: Regulatory/Code Change

Example Actions from Thurston Climate Mitigation Plan			
Buildings & Energy	Transportation & Land Use	Water & Waste	Agriculture & Forests
B1.1 residential energy performance ratings B1.2 residential energy audits B1.6 rental housing energy efficiency baseline B2.1 commercial energy benchmarking B2.8 performance standard B4.11 grid-connected appliances B4.12 multifamily metering B5.8 solar-ready development code B6.2 electric appliances in new construction B6.4 natural gas transition	T1.1 coordinated planning-future infill T1.2 middle density housing T1.3 Eco districts T1.9 ADUs T3.1 EV parking new construction T3.5 EV-ready building code T3.7 EV integration		A6.5 municipal canopy A6.9 tree canopy preservation

Figure 13. Levers for Climate Action. Adapted from the Carbon Neutral Cities Alliance.

6.3 Funding the *Thurston Climate Mitigation Plan*

Funding the work necessary to address climate change and meet the adopted emission reduction targets will require leadership and creativity. This is especially true as local governments and partner agencies face lower revenues and difficult budget decisions as a result of the COVID-19 pandemic.

Many climate strategies and actions have the potential to create economic benefits for the Thurston region by supporting new industries and job growth. They may also lead to savings for individuals or businesses, such as through reduced transportation or energy costs. Climate mitigation actions also increase the region's resilience and ability to both avoid and bounce back from natural disasters.

Detailed cost estimates for specific actions—and for regional climate mitigation as a whole—will depend on how jurisdictions decide to proceed in implementation. There are many decisions about staffing, program structure, and outside partnerships that may affect the total price tag for an action. Such detail was beyond the scope of this planning effort. Costs and benefits for a subset of priority actions will be considered in a supplemental analysis that will be completed in mid-2021.

The consultant team developed high-level estimates of potential direct costs to the four partner jurisdictions to complete an action or get it substantially underway (ex. staff or other resources). The estimates do not include broader costs to community members, outside agencies, private businesses, or other potential partners.

The communitywide implementation strategy (Appendix 10.6) also includes a breakdown of potential sources of funding for climate mitigation actions. While these are good starting places, City and County budgets, sources of funding, and estimated costs may change substantially over the life of this plan.

6.4 Implementation Timeline

The *Thurston Climate Mitigation Plan* identifies strategies and actions for reducing contributions to climate change over the next thirty years, based on our understanding today. Some of these actions will need to begin in the near term to realize impacts within that timeframe, others can have immediate impacts, and others are dependent on some enabling action. Some actions are one-time changes while others will require an ongoing effort to keep running. Not all actions assessed for the plan will be implemented in Year 1; some are sequential. For example, actions focused on fuel switching and encouraging adoption of electric vehicles are likely to be timed to kick in when our electrical grid uses cleaner sources of energy than it does currently.

Additional details on the communitywide implementation strategy, including leads, partners, timeframe and potential funding sources, is available in Appendix 10.6.

What Can YOU DO to Take Climate Action?

Dramatic and lasting change comes from countless small shifts throughout society. Governments, business, families, and individuals all have a role to play. While this plan focuses on actions Thurston County, and the cities of Lacey, Olympia, and Tumwater can take to reduce local contributions to climate change, there are many things you can do to support that goal. Here are some ways to get started:

- ✓ **Start a conversation.** National surveys have shown that while most Americans believe global warming is happening and are worried about its impacts, the majority say they rarely or never hear it discussed among their friends and family. Researchers call this the “climate change spiral of silence” —people concerned about climate change avoid talking about their concerns because they don’t hear other people talking about it.¹² That silence can leave us feeling isolated and overwhelmed. You don’t need to be an expert on the science to let others know your hopes, fears, experiences, and actions when it comes to climate change—you might find out you share more common ground than you thought.
- ✓ **Rethink your ride.** Try increasing the number of trips you make by transit, carpooling, walking, or biking. Check out your options on [Thurston Here to There](#). Support your city in development that creates high density and mixed-use areas to reduce the need for driving. Buying a new car? Test drive an electric vehicle to see if it makes sense for you.
- ✓ **Reduce energy use.** Take an online [home energy assessment from Puget Sound Energy](#), and consider upgrading to higher efficiency appliances and fixtures. If you rely on natural gas for heat, consider switching to a ductless heat pump or other electric heat source. Investigate options for using more renewable energy at your home, place of worship, or business.
- ✓ **Buy smart, buy local.** Buying smart and buying less can lower your greenhouse gas footprint. Measure the food that you throw away and take the [Waste Less Food Challenge](#). Try a meat-free meal once a week. Choose items with less packaging and buy local to reduce emissions from shipping and packaging.
- ✓ **Advocate for change.** Tell your elected officials that addressing climate change is important to you, so they know to prioritize it when making work plans and budget decisions. If you have found it difficult to take a climate action, let them know what would make it easier or less expensive. Get together with your friends, neighbors, co-workers, or a local community organization to talk about what to do next.

¹² Maibach, E. et al, 2016.

The Reserve - Senior Housing
Development in the City of Lacey.
Source: *City of Lacey*



7. Next Steps

“The urgency to reduce emissions and prepare for global warming’s inevitable impacts has never been greater. The window of time for limiting warming to 1.5°C and 2°C continues to narrow. At the same time, additional emissions commit us to increasingly severe global and local impacts.”

- Climate Impacts Group

Plans are only as good the work they spark—the *Thurston Climate Mitigation Plan* is no exception. With the close of this planning process, focus can shift to carrying out the strategies and actions identified in the plan. Knowing the threat climate change poses to current and future generations of the Thurston region’s residents, there is no time to lose. While the breadth of work and extent of change needed can feel daunting, this challenge presents many opportunities to build a future for our community that is innovative, resilient, and more equitable. The good news is that our region has incredible resources and spirit to make that change happen.

Following a public review period, this plan will be finalized and put forward for acceptance by the four partner jurisdictions. Supporting pieces of this plan will include:

- A monitoring framework to gauge accountability and track progress toward achieving the regional greenhouse gas emission targets. A description of the monitoring framework is included in Appendix 10.7.
- A resolution for accepting of the *Thurston Climate Mitigation Plan* to be considered by the four partner jurisdictions of Thurston County and the cities of Lacey, Olympia, and Tumwater. Appendix 10.9

In 2020, Puget Sound Energy installed its first public electric vehicle charging station at the Hub at Lacey. A network of fast, convenient EV charging stations will help support a transition to greener transportation in the region. Source: Puget Sound Energy



- An interlocal agreement that outlines commitments among the four partner jurisdictions for implementation of the *Thurston Climate Mitigation Plan* and continued collaboration on regional climate action. Appendix 10.10
- A supplementary assessment of the costs and benefits of priority actions, and ways to address social equity in implementation of the *Thurston Climate Mitigation Plan*. This assessment has been awarded funding through a grant from the Washington State Department of Commerce and is scheduled to be completed by mid-2021.

While the focus of this planning process has been on what Thurston County, and the cities of Lacey, Olympia, and Tumwater can do to reduce greenhouse gas emissions and mitigate impacts from climate change, the project partners encourage all community members—individuals, neighborhoods, businesses, service organizations, and agencies—to use the information gathered here to inform your own plans and commitments to address climate change. Many adaptation and mitigation actions—large and small—are needed to help our region and planet remain resilient in the face of climate change. To succeed, each of us will need to do our part, so let's get to work.

What We Heard...

"While local governments are the primary implementor, secondary ones will be builders, and you'll need them to translate those actions on the ground. Make sure to liaise with the building community to understand best practices, so when it comes time to put ideas into code, things will go smoothly."

Interview with Erin Hall,
Olympia Master Builders

"Identify credible performance measures that are meaningful to the public and policy makers that can show if we are making progress."

Response to
community questionnaire



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8. Glossary and Acronyms

8.1 Glossary

Action—a specific service, program, incentive, regulation or other mechanism that local governments or other partners uses to implement a strategy.

Equity—a measure of how costs and benefits of action will be distributed fairly across communities or whether actions will avoid disproportionately affecting the most vulnerable in our communities. A 2014 report by the Urban Sustainability Directors Network defined equity in the following way: “Equity in sustainability incorporates procedures, the distribution of benefits and burdens, structural accountability, and generational impact. This includes:

- **Procedural Equity**—inclusive, accessible, authentic engagement and representation in processes to develop or implement sustainability programs and policies.
- **Distributional Equity**—sustainability programs and policies result in fair distributions of benefits and burdens across all segments of a community, prioritizing those with highest need.
- **Structural Equity**—sustainability decision-makers institutionalize accountability; decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups.
- **Transgenerational Equity**—sustainability decisions consider generational impacts and don’t result in unfair burdens on future generations.”

Sector—a grouping of sources of greenhouse gas emissions (such as, Buildings and energy), and related strategies and actions that address those sources.

Sequestration or Carbon Sequestration—a natural or artificial process by which carbon dioxide is removed from the atmosphere and held in solid or liquid form. Atmospheric carbon dioxide may be taken up by trees, grasses, and other plants through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils.

Strategy—a method or general approach to achieve a desired goal; in this case, a reduction in greenhouse gas emissions from a particular sector.

8.2 Acronyms

ADU—Accessory Dwelling Unit

CAFE—Corporate Average Fuel Economy

CARB—California Air Resources Board

CETA—Clean Energy Transformation Act

CO₂—Carbon dioxide

COPD—Chronic obstructive pulmonary disease

CR2—Carbon Reduction and Resiliency Plan (City of Lacey)

EV—Electric Vehicle

ICLEI—International Council of Local Environmental Initiatives

IPCC—United Nations Intergovernmental Panel on Climate Change

LPG—Liquid petroleum gas

CH₄—Methane

MTCO₂e—Metric tons of carbon dioxide (CO₂) equivalent

N₂O—Nitrous oxide

RNG—Renewable natural gas

STEDI—South Thurston Economic Development Initiative

TCAT—Thurston Climate Action Team

TRPC—Thurston Regional Planning Council

VMT—Vehicle miles traveled

ZEV—Zero emission vehicle

9. References

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10. Appendices

- 10.1. Resolutions Adopting Common Targets to Reduce Communitywide Greenhouse Gas Emissions
- 10.2. 2018 Greenhouse Gas Emissions Inventory
- 10.3. Communitywide Actions List
- 10.4. Multicriteria Analysis
- 10.5. Scenarios Analysis Report
- 10.6. Communitywide Implementation Strategy
- 10.7. Monitoring Protocol
- 10.8. Community Engagement Summary
- 10.9. Resolution Accepting the Thurston Climate Mitigation Plan

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MINUTES

Lacey Planning Commission Meeting
Tuesday, May 18, 2021 – 5:00 p.m.
Conducted remotely via videoconference

Meeting was called to order at 5:00 p.m. by Dave Wasson.

Planning Commission members present: Dave Wasson, Gail Madden, Peg Evans-Brown, Daphne Retzlaff, Kyrian MacMichael, Mark Mininger, Eddie Bishop, and Robin Vasquez. Staff present: Rick Walk, Ryan Andrews, Martin Hoppe, and Jessica Brandt.

Dave noted a quorum present.

Gail Madden made a motion, seconded by Mark Mininger, to approve the agenda for tonight's meeting and the May 4 meeting minutes. All were in favor, the motion carried.

1. **Public Comments:** None.
2. **Commission Members Reports:** None.
3. **Director's Report:** Rick Walk reported that Shaunesy Behrens has resigned from Planning Commission and the position is open to applicants.
4. **Public Hearings:**
 - 6-Year Transportation Improvement Plan (TIP): Martin Hoppe, Transportation Manager.**
 - Martin Hoppe explained that the TIP is a list of projects the City plans to start in the next six years, and its main purpose is to track State and Federal funds and identify regionally significant projects through TRPC.
 - Martin went over the projects and answered questions.
 - No public testimony was given. Dave closed the public hearing.
 - **Peg Evans-Brown made a motion, seconded by Robin Vasquez, to refer the 6-year TIP to Council for approval. All were in favor, the motion carried.**

2021 Comprehensive Plan Amendments: Ryan Andrews, Planning Manager; Jessica Brandt, Associate Planner.

- **Thurston Climate Mitigation Plan.**
 - o Jessica Brandt gave some background info and went over survey results.
 - o Wayne Olsen, Sue Madeiros, Lynn Fitz-Hugh, Roy Treadway, Aaron Dumas, Sally Vogel, Carolyn Treadway, Robert Jensen, and Heather MacMaster spoke in favor of the plan and urged Planning Commission to refer it to Council for approval.
 - o Dave closed the public hearing. A brief discussion followed.
 - o **Gail Madden made a motion, seconded by Robin Vasquez, to refer the TCMP to Council highly recommended by Planning Commission for approval. All were in favor, the motion carried.**
- **Housing Action Plan.**
 - o Ryan Andrews gave some background info, went over the plan, and answered questions.
 - o Wayne Olsen spoke in favor of the Urban Forest Management Plan and asked that staff ensure that the housing plan does not conflict with the TCMP. Sally Vogel agreed.
 - o Sue Madeiros and Carolyn Treadway thanked staff and Planning Commission for all the work they've done on this plan.
 - o Robert Jensen asked Planning Commission to consider the recreational aspect, more people in the City means more recreation is needed and more of a need to preserve recreational areas.
 - o There was a discussion as to whether Planning Commission should refer the plan to Council or discuss further. Staff answered questions and clarified some issues.
 - o **Robin Vasquez made a motion, seconded by Peg Evans-Brown, to refer the Housing Action Plan to Council for approval. All were in favor, the motion carried.**

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 1:03 PM
To: 'Dianne Hurst'
Cc: Jessica Brandt
Subject: RE: Mitigation Plan

Dianne: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

-----Original Message-----

From: Dianne Hurst <dianneshurst49@gmail.com>
Sent: Tuesday, May 18, 2021 11:49 AM
To: Ryan Andrews <Randrews@ci.lacey.wa.us>
Subject: Mitigation Plan

[Warning! External Email]

I want to see the Lacey City Council all approve the Climate Mitigation Plan!

Dianne Hurst

Richard Hurst

Jessica Brandt

From: Ryan Andrews
Sent: Monday, May 3, 2021 8:46 AM
To: Daphne Retzlaff; David Wasson; Eddie Bishop; Gail Madden; Jessica Brandt; Kyrian MacMichael; Mark Mininger; Peg Evans-Brown; Rick Walk; Robin Vazquez; S Behrens
Cc: Leah Bender
Subject: FW: Panorama Residents' Petition in Support of the Thurston Climate Mitigation Plan (TCMP)
Attachments: TCMP Petition fm Panorama to Lacey City Council.pdf

Planning Commission: Attached is correspondence regarding support of the Thurston Climate Mitigation Plan from Panorama residents.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Wayne Olsen
Sent: Saturday, May 01, 2021 2:04 PM
To: Ryan Andrews
Cc: Jessica Brandt ; Peri Edmonds
Subject: Fwd: Panorama Residents' Petition in Support of the Thurston Climate Mitigation Plan (TCMP)

External Email Warning! Use caution before clicking links or opening attachments.

Hi Ryan, info Jessica,

As suggested by your City Clerk, Peri Edmonds, I am requesting that you pass my correspondence along to the Planning Commissioners. However, I do not see the petition itself attached to my original email, so will attach it below.

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 1:05 PM
To: 'Wayne Olsen'
Cc: Jessica Brandt
Subject: RE: Support for Thurston Climate Mitigation Plan (TCMP)

Hi Wayne. Thanks for your comments. They have been received and will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Wayne Olsen
Sent: Tuesday, May 18, 2021 9:28 AM
To: PublicComment ; Rick Walk ; Ryan Andrews ; Jessica Brandt
Subject: Support for Thurston Climate Mitigation Plan (TCMP)

External Email Warning! Use caution before clicking links or opening attachments.

Please Pass to Lacey Planning Commissioners, info Lacey City Councilmembers:

I am a resident of Panorama at Lacey, and my background is a 30 year Navy career primarily as an oceanographer and meteorologist, followed by 9 more years teaching ocean and atmospheric science courses, including climate change, at Pierce College. I urge you to forward the Thurston Climate Mitigation Plan (TCMP) to the Lacey City Council with your strongest endorsement that they adopt it into the Comprehensive Plan, then fully implement and fund it.

Thank you, both the Planning Commission and the Lacey Planning Staff, for your work on this TCMP, including the Virtual Open House, survey, and a presentation to Panorama as part of your public outreach plan. At the end of that Panorama presentation, we conducted a Zoom poll with the question "Do you support implementation of the TCMP". Although a small sampling size, 95% answered "Yes". As a reminder, the staff also included in your briefing packet the Panorama Residents' Petition in which 129 Panorama residents added their names in support of the TCMP. We care about our grandkids' futures.

I would like to say a few words in response to those who have stated that the TCMP is too expensive to implement. Of the 21 TCMP action items designated for municipal action, there does

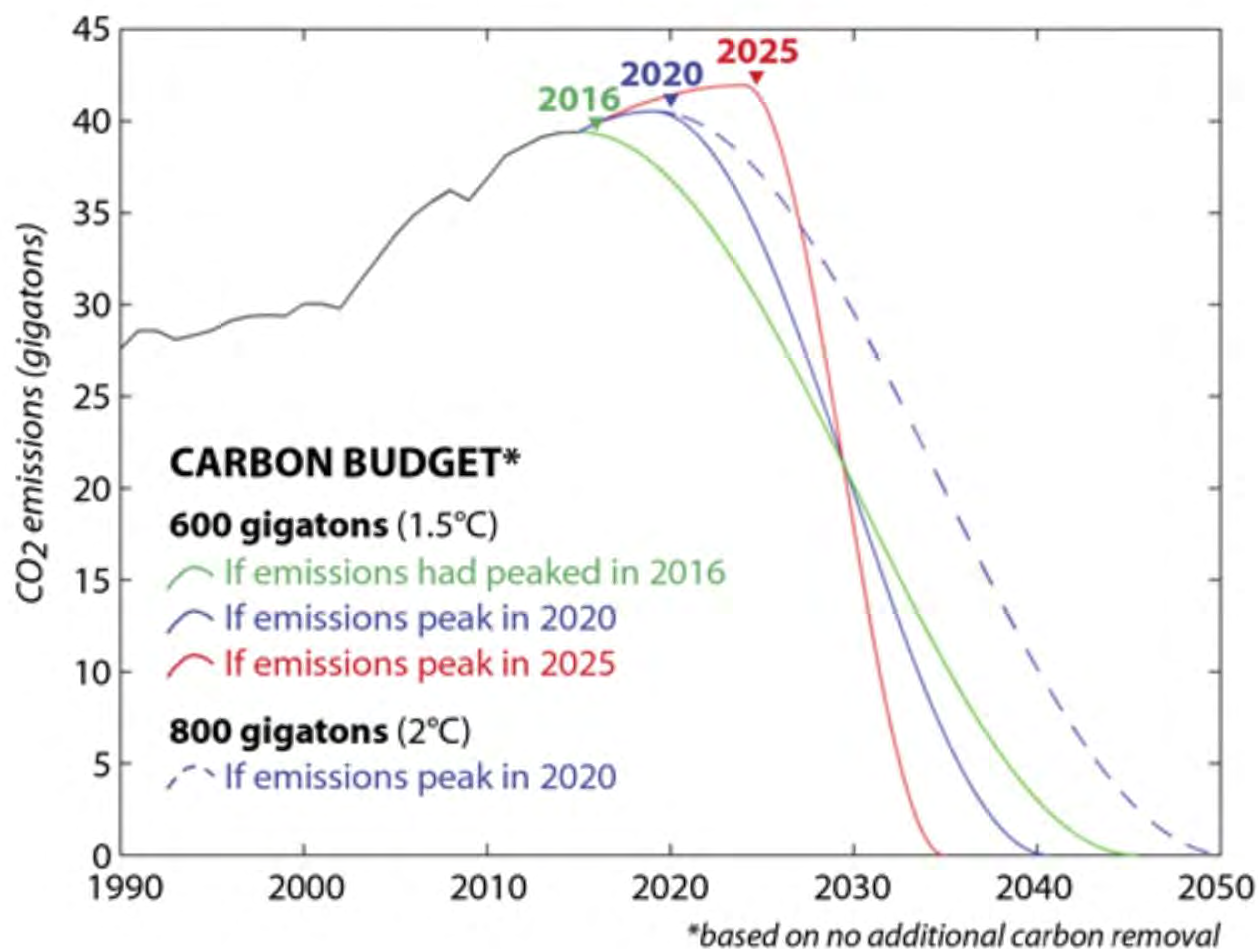
not appear to be any large ticket items except 1) solar PV systems on municipal buildings, and 2) transition to electric municipal vehicles, both of which are listed as already existing Lacey programs. Most of the city's cost on the 21 items appears to be staff time. From my limited viewpoint, I believe the size of your planning staff is a mismatch with their workload, and so I recommend that the city hire additional staff, especially considering that the TCMP is a 30 year program, likely to be modified, extended, and more intensely watched as we continue toward worsening global climate effects and tipping points.

The Regional Planning Council planners and developers of the TCMP reiterated to the TCMP Steering Committee that ALL of the 72 action items must be implemented in order to reach the goal of 85% greenhouse gas reduction by 2050. That means that ALL of the items must be funded to the fullest extent possible. Your survey asked for funding priorities, implying that some actions will be fully funded, while others may have to wait. I believe that this is NOT the time to take shortcuts. That would truly be penny-wise but pound foolish. Globally, we need to be nearly half way to our emission reduction goal within a decade to give ourselves a chance of avoiding the worst of climate effects. If you HAVE to trim costs, I recommend picking the low hanging fruit ... those actions which will reduce the greatest amount of carbon emissions the fastest. I believe those are to greatly encourage and incentivize 1) installation of solar panels on homes and commercial buildings (think of those expansive flat, empty roofs at Hawks Prairie Industrial Park), and 2) rapid transition to electric vehicles.

The below illustrates the urgency of reducing global greenhouse gas emissions by nearly half in this decade.

Staying Within a 1.5°C Carbon Budget

To keep global temperatures from rising more than 1.5°C, a goal of the Paris climate accord, the world is limited in how much carbon dioxide emissions it can still release. In 2017, that budget was estimated to be around 600 gigatons of CO₂ for a medium chance of staying under 1.5°C. This chart shows how much faster countries will have to cut emissions the longer they wait to act.



SOURCE: Stefan Rahmstorf, 2017

InsideClimate News

From <https://insideclimatenews.org/news/27082019/12-years-climate-change-explained-ipcc-science-solutions/>, based on conclusions and graphics contained in Intergovernmental Panel on Climate Change (IPCC) Special Report “Global Warming of 1.5°C” online at <https://www.ipcc.ch/sr15/>

On the vertical scale is the world’s annual greenhouse gas emissions, now approaching 40 billion tons and **still increasing** annually. We have to rapidly bend that curve downward to at least net-zero. The **area under** the family of solid curves is our carbon budget to keep average global temperatures from increasing 1.5°C; and under the dashed line from increasing 2.0°C. Beyond 2.0°C, scientists conclude that we will pass the threshold into the most severe of climate effects. With the current pledges by the nations from the Paris Climate Accord to reduce carbon emissions, latest

climate model output points to us passing 1.5 C increase between 2026 and 2042, and passing 2.0C between the 2040s and 2070s.

https://www.carbonbrief.org/analysis-when-might-the-world-exceed-1-5c-and-2c-of-global-warming?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_content=20201207&utm_medium=email&utm_source=Revue%20Daily

We have dallied too long and have now run out of time. Please implement and fully fund the TCMP now.

Very respectfully,
Wayne Olsen
Captain, U.S. Navy (Ret.)
2010 Cardinal LN SE
Lacey, WA 98503

Ryan Andrews

From: Peri Edmonds
Sent: Monday, May 17, 2021 10:13 AM
To: 'David Peltó'
Cc: Ryan Andrews; Jessica Brandt
Subject: RE: Adoption of the TCMP

Good morning, David,

The Planning Commission will conduct a public hearing relating to the Thurston Climate Mitigation Plan on May 18 at 5 pm. Your email will be forwarded to Ryan Andrews, Planning Manager, who is taking written public comments for the hearing.

Please contact Ryan at 360.412.3190 or randrews@ci.lacey.wa.us if you have any questions.

Thank you.

Peri

Peri Edmonds, CMC
City Clerk
City of Lacey
360.486.8704
pedmonds@ci.lacey.wa.us



LACEY CARES

Let's shape our future together.

Please take our survey and share your vision for Lacey. You can enter to win \$250!

TAKE THE SURVEY

Haga la encuesta | 請完成調查

Tham gia Khảo sát | 설문 조사를 해주세요

-----Original Message-----

From: David Peltó <djfpelto@gmail.com>
Sent: Sunday, May 16, 2021 11:28 AM
To: PublicComment <PublicComment@ci.lacey.wa.us>
Subject: Adoption of the TCMP

[Warning! External Email]

Members of Lacey City Council,

I wish to add my voice to the public hearing scheduled for this week on the Thurston County Climate Mitigation Plan. Perhaps the most powerful statement of optimistic action for the future of our community (and our planet) would be your unanimous support of the TCMP.

These are historic times with historic challenges. This past year has forced us all to confront social upheaval and a worldwide health threat. Citizens are rising to meet these challenges in unprecedented numbers. With the pandemic in retreat we must turn our attention to the health of our community for the future. Adoption of the TCMP will demonstrate that our city will act with equity for all in order to assure a healthy world for generations to come.

Seize this moment to act. Do not bow to naysayers who only think in terms of keeping the status quo. The status quo will no longer suffice to meet our health and safety needs. Give the TCMP your resounding approval and know that you are doing something both right and historic for our community.

Thank you,

David Pelto
3980 Woodmere Ln SE
Lacey, WA
98503

Sent from my iPad

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 4:43 PM
To: 'Margaret Green'
Cc: Jessica Brandt
Subject: RE: Climate Mitigation Plan

Margaret: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

-----Original Message-----

From: Margaret Green <67mlffg22@gmail.com>
Sent: Monday, May 17, 2021 4:12 PM
To: Ryan Andrews <Randrews@ci.lacey.wa.us>
Subject: Climate Mitigation Plan

[Warning! External Email]

Dear Mr. Andrews and Planning Commission Members, I would like to express my concern and sincere desire for the Commission to move forward on recommending to Council, the implementation of actions which support the climate mitigation plan. The policies in place which direct all City activities should include actions that support climate mitigation and reduce actions that include tree clearing and habitat destruction. There are many good policies in place, such as The Urban Forestry Management Plan and 14.32 Tree and Vegetation Protection ordinance, but as far as I can tell, it's implementation is not affecting the Growth Management Zones and there needs to be a top down emphasis on how seriously the City believes this issue should be taken and on enforcement. Science supports the need for these actions. Generations that follow us should be in the position to be grateful that we acted in time, not shaking heads and fingers at us for doing nothing.

Thank you for your consideration.

Regards,
Margaret Green
4732 Orcas Ct. NE
Lacey, WA

Sent from my iPad

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 4:44 PM
To: 'Shirley Garrison'
Cc: Jessica Brandt
Subject: RE: Climate mitigation plan

Shirley: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Shirley Garrison
Sent: Monday, May 17, 2021 4:35 PM
To: Ryan Andrews
Subject: Climate mitigation plan

External Email Warning! Use caution before clicking links or opening attachments.

Climate change is evident in our many recent disasters, and it's only going to get worse unless we act NOW! In order to escape irreversible climate catastrophe, we have to meet and exceed the TCMP's stated targets . We need to adopt all measures suggested by the committee.

Shirley Garrison
253-677-8420

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 9:15 AM
To: 'Carolyn Treadway'
Cc: Jessica Brandt
Subject: RE: Comments for the MAY 18 meeting of the Lacey Planning Commission: Please support the TCMP

Carolyn: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Carolyn Treadway
Sent: Sunday, May 16, 2021 5:29 PM
To: Ryan Andrews
Subject: Comments for the MAY 18 meeting of the Lacey Planning Commission: Please support the TCMP

External Email Warning! Use caution before clicking links or opening attachments.

Dear Ryan Andrews:

Please send the letter below to each of the Lacey Planning Committee members. It holds my comments to the Commissioners about including the Thurston Climate Mitigation Plan in the Lacey Comprehensive Plan for the Tuesday, May 18 meeting.

Thank you.

Carolyn Treadway

1951 Circle Lane SE
Lacey, WA 98503
May 15, 2021

Dear Lacey Planning Commissioners:

As a resident of Lacey, I urgently request that you adopt the Thurston Climate Mitigation Plan (TCMP) as part of Lacey's Comprehensive Plan.

We are *already* in the midst of climate emergency! This is true for our entire planet, including Thurston County. If all of us do not immediately change our ways and stop adding greenhouse gasses to our atmosphere, we will soon be at the brink of "tipping points" which will thrust us into inexorable climate changes that threaten survival of most species currently on Earth. Our time is running out to preserve life on Earth as we have known it.

In early January 2007, I was trained by Al Gore and his colleagues in the Climate Reality Project (CRP) and have been active as a climate leader ever since. Over these fourteen years, I have become more and more terrified by the ever-increasing rapidity and velocity of climate change. Many effects of climate change which were presented in my first CRP training as worst case scenarios that *could possibly occur by the end of this century* have ALREADY happened. Just 14 years later! Polar ice melt—which will affect sea level rise globally and in Olympia, WA—is only one example.

There are countless indications that climate change is already affecting Thurston County. I will not start to list them because I am sure you know many of them already, and have your own list. There are at least 72 action items in the TCMP. Each item is important, but I want to put in a special plea for immediate action on tree preservation, tree planting and re-generative agriculture .

Carbon dioxide molecules stay in the atmosphere for 100 *years*. If we stopped all carbon emissions this very day, we would *still* have excessive carbon remaining in the atmosphere, heating our Earth. How can *remove* that carbon? "New and shiny" technology inventions to do this are being considered. But in fact we already have the solutions, if we stop destroying them: trees and fertile soil! **Trees** are Creation's invention to remove carbon dioxide from the air and sequester it in roots and soil. Mature, old-growth trees can sequester vastly more carbon than small new trees. In fact, cutting down even one 30" tree would require replanting it with *seventy* 3" trees to draw down the same amount of carbon in the next year. **Healthy soil** can sequester enormous amounts of carbon, along with holding water/preventing runoff, improving the nutritional value of food grown in this soil, and much more. Protecting the old trees we do have can start immediately, and planting of thousands more trees needs to start soon. Re-generataive agriculture in any form needs official support.

Please give strong support to implementing the Thurston Climate Mitigation Plan as part of Lacey's Comprehensive Plan. Implementing the TCMP will cost time, effort, and money—all of which will be minuscule compared to the future costs of runaway climate change if it is not halted.

Most Sincerely,

Carolyn Treadway

Carolyn@PlanetCare.us

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:53 AM
To: 'Jill McDowell'
Cc: Jessica Brandt
Subject: RE: Support for TCMP

Jill: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Jill McDowell
Sent: Monday, May 17, 2021 8:51 PM
To: Ryan Andrews
Subject: Support for TCMP

External Email Warning! Use caution before clicking links or opening attachments.

Please add my name as supporting the entire Thurston Climate Mitigation Plan. Please advise the Planning Commission that I am in favor of the proposal.

Thank you.
Jill McDowell
8712 Vashon Ct. NE
Lacey, WA 98516

Ryan Andrews

From: Peri Edmonds
Sent: Monday, May 17, 2021 10:19 AM
To: Ryan Andrews
Cc: Jessica Brandt
Subject: FW: Thurston Climate Mitigation Plan

FYI

From: Peri Edmonds
Sent: Monday, May 17, 2021 10:16 AM
To: 'Paul Dav'
Subject: RE: Thurston Climate Mitigation Plan

Good morning, Paul,

The Planning Commission will conduct a public hearing relating to the Thurston Climate Mitigation Plan on May 18 at 5 pm. Your email will be forwarded to Ryan Andrews, Planning Manager, who is taking written public comments for the hearing.

Please contact Ryan at 360.412.3190 or randrews@ci.lacey.wa.us if you have any questions.

Thank you.

Peri

Peri Edmonds, CMC
City Clerk
City of Lacey
360.486.8704
pedmonds@ci.lacey.wa.us



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Let's shape our future together.

Please take our survey and share your vision for Lacey. You can enter to win \$250!

TAKE THE SURVEY

Haga la encuesta | 請完成調查

Tham gia Khảo sát | 설문 조사를 해주세요

From: Paul Dav <pdav221@gmail.com>
Sent: Sunday, May 16, 2021 4:03 PM
To: PublicComment <PublicComment@ci.lacey.wa.us>
Subject: Thurston Climate Mitigation Plan

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I wish to add this, in comment for the public hearing scheduled for this week on the Thurston County Climate Mitigation Plan.

I support Lacey's participation in the Thurston Climate Mitigation Plan (TCMP) with the cities of Tumwater and Olympia and Thurston County.

We, the current adults, need to take responsibility for issues related to climate change that are causing life on our planet to become more uncomfortable and less sustainable including tumultuous temperatures, uncontrolled wildfires, increasing pollution, and rising seas.

I'm impressed by the thoughtfulness and detail that went into compiling this document. The climate mitigation priorities listed including: actions to be done, mechanisms for implementation, partners to do the work, completion time frame, and funding sources to pay for the work inspire my confidence in the planners. The responsibility breakdown by individual jurisdictions, including operations, local regulatory changes, and staff development make it understandable and measurable for success.

I know the proposed fix will not be easy or inexpensive, but delaying this needed work would only make it much less effective and much more expensive for all of us.

Paul Davallou
1723 Circle Loop SE
Lacey, WA 98503

Ryan Andrews

From: Peri Edmonds
Sent: Monday, May 17, 2021 10:20 AM
To: Ryan Andrews
Cc: Jessica Brandt
Subject: FW: Thurston County Mitigation Plan Hearing on May 18, 2021

FYI

From: Peri Edmonds
Sent: Monday, May 17, 2021 10:18 AM
To: 'Judith Anderegg'
Subject: RE: Thurston County Mitigation Plan Hearing on May 18, 2021

Good morning, Judith,

The Planning Commission will conduct a public hearing relating to the Thurston Climate Mitigation Plan on May 18 at 5 pm. Your email will be forwarded to Ryan Andrews, Planning Manager, who is taking written public comments for the hearing.

As indicated in your email, I will also forward to the Lacey City Council.

Please contact Ryan at 360.412.3190 or randrews@ci.lacey.wa.us if you have any questions.

Thank you.

Peri

Peri Edmonds, CMC
City Clerk
City of Lacey
360.486.8704
pedmonds@ci.lacey.wa.us



LACEY CARES

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TAKE THE SURVEY

Haga la encuesta | 请完成调查

Tham gia Khảo sát | 설문 조사를 해주세요

From: Judith Anderegg <judith.anderegg@gmail.com>
Sent: Sunday, May 16, 2021 11:41 AM
To: PublicComment <PublicComment@ci.lacey.wa.us>
Subject: Thurston County Mitigation Plan Hearing on May 18, 2021

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I noticed an error of omission on the last line of my email (reference to just the action of city council and not including city planning commission) so decided to make the correction and resubmit my comments. My apologies and thank you for taking in my revised email.

I support Lacey's participation in the Thurston Climate Mitigation Plan(TCMP) with the cities of Tumwater and Olympia and Thurston County. We, the current adult population, need to take responsibility for dealing with issues related to climate change that are causing life on our planet to become more uncomfortable and less sustainable including tumultuous temperatures, increasing pollution, and rising seas.

The TCMP has taken a holistic and practical approach to addressing reduction of greenhouse gases. By incorporating county and city efforts into one plan, it increases the efficacy of our efforts. As I reread and reviewed the Thurston Climate Mitigation Plan to write this comment I find my hopes are rejuvenated. Maybe we can make a difference for our small part of the country.

As I reviewed the local jurisdictional efforts part of the TCMP, I was heartened by the thoroughness and forethought that went into pulling together this document. The climate mitigation priorities listed including: actions to be done, mechanisms for implementing, partners to do the work, time frame for completion, and funding sources to pay for the work are well-thought out and seem complete to me. The breakdown by individual jurisdictions, municipal operations, local regulatory changes, and staff development was easy to understand and follow.

I know this won't be an easy or cheap "fix", but I support wholeheartedly the work proposed in the Thurston Climate Mitigation Plan. Please support the TCMP as our city council and city planning commission.

Judith Anderegg

Ryan Andrews

From: Wayne Olsen <oceanguyolsen@comcast.net>
Sent: Tuesday, May 18, 2021 9:36 AM
To: Rick Walk; Ryan Andrews; Jessica Brandt
Subject: Planning for Lacey's Implementation of Thurston Climate Mitigation Plan (TCMP)

[Warning! External Email]

Hi Rick, Ryan, and Jessica,

Thanks again for the excellent presentation and responses to our questions at the Panorama Green Team meeting last Wednesday. Despite the small crowd, I think it was very received well.

Besides the formal comments I have prepared for the Comp Plan public hearing this afternoon and the extended comments by my other email to you this morning, I have some extra suggestions or questions to pass informally to you by this email with the intent of helping to make the TCMP a little better... a little more effective at reducing our carbon emissions. These came out of rummaging around the virtual open house as well as preparing my backup questions for the Green Team meeting with you. Don't feel you need to spend the time to prepare a response back to me about them,... I'm just offering them up as thoughts for you to mull over, or maybe pass a few of them to the Planning Commissioners if you think they might be useful.

1. I hope my comments about the three of you being overworked will help convince the Council and City Manager that you need an extra FTE or two.
2. Besides the 21 action items for Lacey primary action, another 21 TCMP actions have been designated for regional coordination, but will presumably require municipal funding and staffing for implementation. Will these action items be individually tracked and implemented so that they do not become surprise funding requirements for Lacey year to year? Will they be included in the Comprehensive Plan as action is transferred to local funding and execution?
3. I noted that the Lacey City Council had a joint working session with the North Thurston School District two weeks ago. Will the City Council be coordinating with the School District on TCMP implementation? The district has a large acreage of roofs ideal for solar and a requirement for numerous school buses (EV). Many school districts throughout the country are reducing their taxes on homeowners by transitioning to renewable energy generated onsite.. How is the District factored in as part of Lacey's Plan and accounted for as part of the monitoring effort?

[https://yaleclimateconnections.org/2021/02/arkansas-school-district-goes-solar-boosts-teacher-pay/?ct=t\(EMAIL_CAMPAIGN_DAILY_021721\)](https://yaleclimateconnections.org/2021/02/arkansas-school-district-goes-solar-boosts-teacher-pay/?ct=t(EMAIL_CAMPAIGN_DAILY_021721))

https://generation180.org/will-the-feds-get-an-a-for-electric-school-buses/?utm_campaign=GEN%20Communications&utm_medium=email&_hsmi=126802737&_hsenc=p2ANqtz--z6WX9-gkM7ozSiG-gBksQc-mvkTKiNCcBIUT4zWQvS24PDs0wydaWXiJ58lyZZ03SHc9S5cQYHd_vbkZRWeGruty7VRz7RsVDmGO4ktGY65BuCA0&utm_content=126802737&utm_source=hs_email

4. Implicit in a number of the 72 TCMP action items is education. The TCMP was really aimed at developing government actions to incentivize residents to action. Our residents are the ones who make the big time decisions to remodel a home or apartment using incentives offered by the federal, state, or local governments or industry, or buy an EV rather than hold on to their gas guzzler. But if they don't know about incentives, or the underlying reason to reduce carbon emissions, they may not do it, and our global temperature will continue to rise. Education is listed as a Regional

Coordination item, but so far it has not been addressed by the Steering Committee in their first three meetings. Lacey's Public Participation Plan calls for continuous education. Aside from the 30 day Virtual Open House and May 18th Public Hearing, what continuous education programs do you anticipate promoting? Do you anticipate funding for it? I recall Allison Osterberg at the last Steering Committee meeting said there was "very little funding" set aside for education. Gail Madden also mentioned education as her 30 second lightning round answer to my question at the end of the Green Team meeting. And Rick, I think that you said at the TCAT meeting a few months ago that the city met its part of the goal of carbon reduction, but the Lacey residents did not, in part due to lack of knowledge about the CR2 plan. Sounds like a good lesson learned to apply now to the TCMP.

5. Action item B5.3, titled Municipal building solar: The price of solar panels has dropped 80% to 90% over the last decade, and is expected to drop another 50% this decade as mass production continues to stamp up. Have you done a rough scoping yet on how many municipal buildings will be suitable for outfitting with solar panels?

6. Related to #5, congratulations that the Cities of Lacey, as well as Olympia and Tumwater, participate in the PSE Green Direct program to obtain power for all their municipal needs from renewable energy sources. Do you believe that this fulfills the intent and guidelines of completing action item B5.3?

(I don't have the answer to this Q above. Debate continues that renewable energy sources by themselves cannot meet future electricity demand due to scarcity of enough land for solar farms. On the other side of the debate, TCMP stated goals are to reduce energy consumption as well as to shift energy sources toward fossil-free electricity. Whatever rooftops are available locally for solar systems reduces the extent of distant solar farms needed by PSE to meet the demand. In addition, with net metering, the power produced locally is obtained wholly from a for-profit utility (PSE). Though PSE electricity will become fossil-fuel free, for example, it is not mandated until 2045. One thing for sure: the faster we get to net-zero carbon globally, the less our global temperature will rise. You got a good electricity price from your 20 year contract for Skookumchuck wind and Kittitas solar, but PSE still makes a profit as a middleman; local capital investment in solar here have a free energy source for the life of the equipment.)

7. Action item T3.10 titled Convert to EV fleets, one of the big ticket items for municipal costs: EV battery costs, the major cost of an EV, has also dropped 80%-90% in the last decade, will continue to drop with mass production and is expected to make EVs the same price as internal combustion cars or even lower within the next 2-3 years. Lifetime maintenance costs are much lower than internal combustion cars as well. The transportation sector is the elephant in the room regarding major carbon emission sources for the County.

Q: How large a fleet of cars and light trucks suitable for replacement by all-electric does the City of Lacey have? (I'm just curious) Do you have any EVs already (not including hybrid)? Does your motor pool have EV chargers installed or planned?

8. Action item T1.9 titled ADUs. Congratulations to Lacey for your groundbreaking work on this program. Do these units meet code requirements, such as for insulation and energy efficiency?

9. Several of the action items for local regulatory changes proposed incentives, listing "incentives for cool roofs to reduce urban heat island effect", and "incentives for solar energy installation". I had always considered the federal government as having the means to offer monetary incentives, and to a lesser extent the state, but never thought of the city in this category. What type or level of incentives would you anticipate that Lacey might be able to offer and afford in order to promote a meaningful response from its residents?

10. Forests and agricultural techniques have become an important part of the TCMP, because it was realized by all those taking part in the TCMP development that we could not reach our 85% carbon reduction goal by 2050 WITHOUT enhancing carbon sequestration by our county forests and agricultural lands. As shown by the discussion at the previous Planning Commission meeting (May 4th), there appeared to be a difference in philosophy between the TCMP and the Urban Forest Management Plan (UFMP), at least in the way that Lacey's tree removal permitting process protects (or doesn't protect) against the removal of healthy trees in open spaces, for example, with Homeowners Associations. Or is this just of problem of enforcement? For the entire county, I sense that we will have a real problem finding 37,000 acres

for planting of new trees for additional carbon sequestration, while still keeping existing forested areas from being thinned or clearcut. I understand the pressure the City Council is under to permit something like a warehouse, or a new subdivision which requires trees to be cut. Solutions (besides “build denser urban areas up, not out”) ?

Thanks very much for hearing me out, and thanks for all superb work that you do.

Wayne

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:52 AM
To: 'Sherry Walton'
Cc: Jessica Brandt
Subject: RE: TCMP

Sherry: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

-----Original Message-----

From: Sherry Walton <waltonsherry38@yahoo.com>
Sent: Monday, May 17, 2021 6:59 PM
To: Ryan Andrews <Randrews@ci.lacey.wa.us>
Subject: TCMP

[Warning! External Email]

Good evening,

I am writing to let you know that as a long-time registered voter, I support the entire TCMP. Given current research data about the importance of enacting meaningful and immediate actions to help address the many impacts of climate changes, I believe it is imperative that Lacey join Tumwater and Olympia in supporting and enacting this plan. I would be quite upset and embarrassed were the Lacey Planning Commission to shirk this essential responsibility. Please share this letter and my position with the Commission.

Thank you!

Respectfully,
Sherry Walton

Sent from my iPhone

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 9:13 AM
To: 'ctufford'
Cc: Jessica Brandt
Subject: RE: Thurston Climate Mitigation Plan

Cindy: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: ctufford
Sent: Saturday, May 15, 2021 12:22 PM
To: Ryan Andrews
Subject: Thurston Climate Mitigation Plan

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Mr. Andrews

Please pass these comments along to the Lacey Planning Commission for the May 18th meeting. I want to voice my support for the implementation of the Thurston Climate Mitigation Plan. I consider climate change to be a world-wide emergency. And I firmly believe in the saying "think globally, act locally". Therefore it is time for the city of Lacey to do it's part in conjunction with Tumwater, Olympia, and Thurston County to address our contribution to climate change. The time to act is now.

Cindy Tufford
8614 Anderson Ct NE
Lacey 98516

Sent from my Verizon, Samsung Galaxy smartphone

Ryan Andrews

From: Ryan Andrews
Sent: Friday, May 14, 2021 1:03 PM
To: 'Dan Tufford'
Cc: Jessica Brandt
Subject: RE: Thurston Climate Mitigation Plan

Dan: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Dan Tufford
Sent: Friday, May 14, 2021 10:38 AM
To: Ryan Andrews
Subject: Thurston Climate Mitigation Plan

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Hello Mr. Andrews,

Here are some comments related to the Thurston Climate Mitigation Plan. Please include them in the record of public comments about the plan to be reviewed by the Lacey Planning Commission.

To: City of Lacey Planning Commission

RE: Thurston Climate Mitigation Plan (TCMP)

First I would like to express my appreciation to the City for embracing the TCMP. Addressing climate warming and its resulting impacts on almost all sectors of our lives is one of the major and consequential challenges of our era. As you know, the Plan is the result of a major effort on the part of multiple jurisdictions and stakeholder groups to develop a path forward for our county and cities.

Although climate as a phenomenon seems invisible its effects are clear. We are seeing the effects of climate warming already and can expect them to worsen in our lifetimes, even now and in coming years.

The TCMP is a thoughtful road map for us to follow as we do our part to mitigate past and ongoing contributions to warming.

As you consider the Plan, please keep in mind that it does not recommend 100% compliance on all actions at once. Rather it is an evolutionary implementation. But we must focus our attention and efforts to begin the process with significant actions as soon as possible.

I urge you to carry forward this immense responsibility.

Thank you,
Daniel L Tufford, PhD
8614 Anderson Ct NE
Lacey, WA 98516

Ryan Andrews

From: Ryan Andrews
Sent: Monday, May 17, 2021 9:14 AM
To: 'Costumier Medeiros'
Cc: Jessica Brandt
Subject: RE: Urge commitment to TCMP

John and Sue: We have received your comments and they will be provided to the Planning Commission at their public hearing on May 18th.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Costumier Medeiros
Sent: Sunday, May 16, 2021 12:16 PM
To: Ryan Andrews
Subject: Urge commitment to TCMP

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May 16, 2021

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
randrews@ci.lacey.wa.us

To Ryan Andrews, the Lacey Planning Commission and the Lacey City Council

We are heartened by the fact that the cities of Lacey, Olympia and Tumwater have worked together to create the Thurston Climate Mitigation Plan. We urge Lacey to join Olympia and Tumwater by accepting and implementing every action stated in the plan.

Since moving to beautiful Lacey, we have been dismayed to witness the wholesale removal of old growth trees, only to be replaced by young trees that will take many, many years to be able to capture carbon as effectively. Wild fires in Washington, Oregon, California and British Columbia have sometimes made our air almost unbreathable, most notably during the summer of 2020 when it became dangerous even for children to play outside.

We must act now to mitigate the risk of further destruction of our planet. Lacey must join the coalition of our neighboring cities to act against further destruction. There has never been a better time to act. The cost of solar panels is falling dramatically. Our young people are willing to act now, and perhaps best of all, we have the opportunity to unite with our neighboring cities to implement the entire Thurston Climate Mitigation Plan.

John and Sue Medeiros
4952 Cypress Dr NE
Lacey, Washington 98516

suesjca@gmail.com

Ryan Andrews

From: Wayne Olsen <oceanguyolsen@comcast.net>
Sent: Tuesday, May 18, 2021 9:28 AM
To: PublicComment; Rick Walk; Ryan Andrews; Jessica Brandt
Subject: Support for Thurston Climate Mitigation Plan (TCMP)

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Please Pass to Lacey Planning Commissioners, info Lacey City Councilmembers:

I am a resident of Panorama at Lacey, and my background is a 30 year Navy career primarily as an oceanographer and meteorologist, followed by 9 more years teaching ocean and atmospheric science courses, including climate change, at Pierce College. I urge you to forward the Thurston Climate Mitigation Plan (TCMP) to the Lacey City Council with your strongest endorsement that they adopt it into the Comprehensive Plan, then fully implement and fund it.

Thank you, both the Planning Commission and the Lacey Planning Staff, for your work on this TCMP, including the Virtual Open House, survey, and a presentation to Panorama as part of your public outreach plan. At the end of that Panorama presentation, we conducted a Zoom poll with the question "Do you support implementation of the TCMP". Although a small sampling size, 95% answered "Yes". As a reminder, the staff also included in your briefing packet the Panorama Residents' Petition in which 129 Panorama residents added their names in support of the TCMP. We care about our grandkids' futures.

I would like to say a few words in response to those who have stated that the TCMP is too expensive to implement. Of the 21 TCMP action items designated for municipal action, there does not appear to be any large ticket items except 1) solar PV systems on municipal buildings, and 2) transition to electric municipal vehicles, both of which are listed as already existing Lacey programs. Most of the city's cost on the 21 items appears to be staff time. From my limited viewpoint, I believe the size of your planning staff is a mismatch with their workload, and so I recommend that the city hire additional staff, especially considering that the TCMP is a 30 year program, likely to be modified, extended, and more intensely watched as we continue toward worsening global climate effects and tipping points.

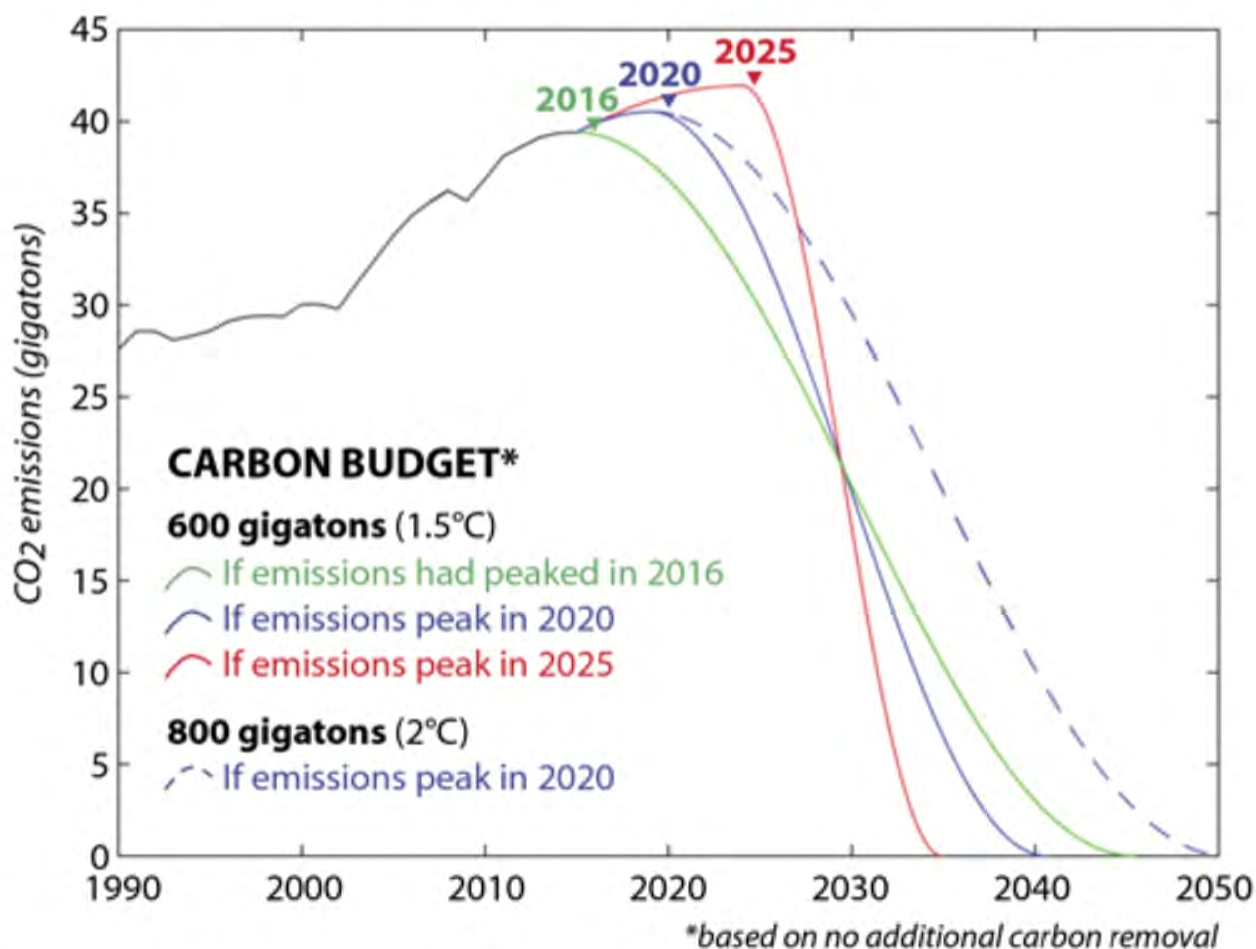
The Regional Planning Council planners and developers of the TCMP reiterated to the TCMP Steering Committee that ALL of the 72 action items must be implemented in order to reach the goal of 85% greenhouse gas reduction by 2050. That means that ALL of the items must be funded to the fullest extent possible. Your survey asked for funding priorities, implying that some actions will be fully funded, while others may have to wait. I believe that this is NOT the time to take shortcuts. That would truly be penny-wise but pound foolish. Globally, we need to be nearly half way to our emission reduction goal within a decade to give ourselves a chance of avoiding the worst of climate effects. If you HAVE to trim costs, I recommend picking the low hanging fruit ... those actions which will reduce the greatest amount of carbon emissions the fastest. I believe those are to greatly encourage and incentivize 1) installation of solar panels on homes and commercial

buildings (think of those expansive flat, empty roofs at Hawks Prairie Industrial Park), and 2) rapid transition to electric vehicles.

The below illustrates the urgency of reducing global greenhouse gas emissions by nearly half in this decade.

Staying Within a 1.5°C Carbon Budget

To keep global temperatures from rising more than 1.5°C, a goal of the Paris climate accord, the world is limited in how much carbon dioxide emissions it can still release. In 2017, that budget was estimated to be around 600 gigatons of CO₂ for a medium chance of staying under 1.5°C. This chart shows how much faster countries will have to cut emissions the longer they wait to act.



SOURCE: Stefan Rahmstorf, 2017

InsideClimate News

From <https://insideclimatenews.org/news/27082019/12-years-climate-change-explained-ipcc-science-solutions/>, based on conclusions and graphics contained in Intergovernmental Panel on Climate Change (IPCC) Special Report “Global Warming of 1.5°C” online at <https://www.ipcc.ch/sr15/>

On the vertical scale is the world's annual greenhouse gas emissions, now approaching 40 billion tons and **still increasing** annually. We have to rapidly bend that curve downward to at least net-zero. The **area under** the family of solid curves is our carbon budget to keep average global temperatures from increasing 1.5C; and under the dashed line from increasing 2.0C. Beyond 2.0C, scientists conclude that we will pass the threshold into the most severe of climate effects. With the current pledges by the nations from the Paris Climate Accord to reduce carbon emissions, latest climate model output points to us passing 1.5 C increase between 2026 and 2042, and passing 2.0C between the 2040s and 2070s.

(https://www.carbonbrief.org/analysis-when-might-the-world-exceed-1-5c-and-2c-of-global-warming?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_content=20201207&utm_medium=email&utm_source=Revue%20Daily)

We have dallied too long and have now run out of time. Please implement and fully fund the TCMP now.

Very respectfully,
Wayne Olsen
Captain, U.S. Navy (Ret.)
2010 Cardinal LN SE
Lacey, WA 98503

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:55 AM
To: 'Barbara Lane'
Cc: Jessica Brandt
Subject: RE: TCMP

Barbara: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Barbara Lane
Sent: Tuesday, May 18, 2021 8:20 AM
To: Ryan Andrews
Subject: TCMP

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Ryan: I am a registered voter and I support the TCMP in its entirety. Please forward this support to the Council members. I urge their yes vote on this important issue.

Barbara Lane

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:53 AM
To: 'PAMELA WIMP'
Cc: Jessica Brandt
Subject: RE: TCMP

Pamela: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: PAMELA WIMP
Sent: Monday, May 17, 2021 7:49 PM
To: Ryan Andrews
Subject: TCMP

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I support all of TCMP. Please share with committee.

Thank you.
PamelaWimp
Dems of Jubilee

Ryan Andrews

From: Ryan Andrews
Sent: Tuesday, May 18, 2021 8:52 AM
To: 'kathy.package@gmail.com'
Cc: Jessica Brandt
Subject: RE: TCMP support

Kathy: We have received your comments and they will be provided to the Planning Commission at tonight's public hearing.

Thanks,
Ryan

Ryan Andrews, Planning Manager
City of Lacey Community and Economic Development
420 College St. SE
Lacey, WA 98503
(360) 412-3190
randrews@ci.lacey.wa.us

From: Kathy Package
Sent: Monday, May 17, 2021 5:36 PM
To: Ryan Andrews
Subject: TCMP support

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I support the Thurston Climate Mitigation Plan and am urging the Lacey Planning Commision to vote to recommend the plan to the City Council. We delay at our peril on this important mitigation plan.

--
#nasty women vote

Kathy Package
Cell 206.819.1949
kathy.package@gmail.com

- **Urban Forest Management Plan and Associated Regulations.**

- o Jessica went over the plan amendments and timeline, and discussed public outreach.
- o Wayne Olsen reiterated the importance of coordination between TCMP and Urban Forest Management Plan.
- o Sue Madeiros asked that the city stop allowing clearcutting to make way for warehouse development.
- o Lynn Fitz-Hugh asked Planning Commission to not approve the plan but to send back to the committee for further amendments as it does not reflect the committee's dialog, include the survey results, or meet the tree goals of the TCMP.
- o Roy Treadway said he'd like to see a stronger tree plan for Lacey.
- o Marianne Thompkins spoke on the importance of protecting large trees.
- o Sally Vogel agreed with previous speakers.
- o Carolyn Treadway seconds the previous comments and would like to see the plan amended.
- o Robert Jensen urged Planning Commission to review the plan further and try to strengthen tree protection measures.
- o Lisa Ceazan urged Planning Commission to send the plan back to tree task force to be reworked to provide more protection and align with State regulations and TCMP.
- o Phyllis Farrell expressed her concerns over the loss of Lacey's tree canopy over the years and the importance of protecting older trees. She urged Planning Commission to review the plan further.
- o A brief discussion followed.
- o **Robin Vasquez made a motion, seconded by Eddie Bishop, to discuss the plan further before referring to Council. All were in favor, the motion carried.**
- o Dave closed the public hearing. Rick noted discussion of the plan will be added to the next agenda.

5. **Communications and Announcements:** None.

6. **Next meeting:** June 1, 2021.

7. **Adjournment:** 7:25 p.m.

HOUSING ACTION PLAN

for the
City of Lacey

September 16, 2021



City of Lacey Staff

Rick Walk	Community & Econ. Development Director
Ryan Andrews	Planning Manager
Jessica Brandt	Associate Planner

Thurston Regional Planning Council Staff

Katrina Van Every	Project Manager, Senior Planner
Michael Ambrogi	Project Manager, Senior GIS Analyst
Karen Parkhurst	Planning and Policy Director
Lester Tobias	Planning Technician
Sarah Selstrom	Communications and Outreach Specialist II
Burlina Lucas	Administrative Assistant
Dorinda O’Sullivan	Office Specialist III
Veena Tabbutt	Deputy Director
Marc Daily	Executive Director

This plan was funded by the cities of Lacey, Olympia, and Tumwater through grants from the Washington State Department of Commerce.

CONTENTS

Executive Summary.....1

Chapter 1. Introduction.....3

 Sources of Actions..... 4

 Addressing Housing Gaps and Needs 4

 Equity in Housing Affordability 5

 Defining Terms Used..... 6

 Assumptions..... 7

Chapter 2. Actions Already Implemented9

Chapter 3. Actions.....11

 Strategy 1: Increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income. 13

 Strategy 2: Make it easier for households to access housing and stay housed. 19

 Strategy 3: Expand the overall housing supply by making it easier to build all types of housing projects. 22

 Strategy 4: Increase the variety of housing choices. 26

 Strategy 5: Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies..... 29

 Strategy 6: Establish a permanent source of funding for low-income housing..... 31

Chapter 4. Legislative Needs35

Appendix A. Action Details37

 Strategy 1: Increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income. 38

 Strategy 2: Make it easier for households to access housing and stay housed. 43

 Strategy 3: Expand the overall housing supply by making it easier to build all types of housing projects. 46

 Strategy 4: Increase the variety of housing choices. 52

 Strategy 5: Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies..... 54

 Strategy 6: Establish a permanent source of funding for low-income housing..... 55

Appendix B. Considered Actions58

LIST OF FIGURES

Figure 3-1. Household income in Lacey, Olympia, and Tumwater combined by race and ethnicity, 2014-2018 average..... 14

Figure 3-2. Tenure by race and ethnicity in Lacey, Olympia, and Tumwater combined, 2014-2018 average 19

Figure 3-3. Relationship between Housing Types, Price and Rent, Unit Size, and Residential Density 27

LIST OF TABLES

Table 1-1. Metrics for equity in housing 5

Table 3-1. Households making 80 percent or less of the area median income by jurisdiction, 2012-2016 estimate and 2045 projection..... 13

Table 3-2. Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income. 15

Table 3-3. Actions that make it easier for households to access housing and stay housed..... 20

Table 3-4. Actions that expand the overall housing supply by making it easier to build all types of housing projects. 23

Table 3-5. Actions that increase the variety of housing choices 28

Table 3-6. Actions that improve implementation of housing strategies through collaboration, public understanding, and continually building on resources..... 30

Table 3-7. Maximum affordable housing costs at various income levels, 2020 31

Table 3-8. Example of costs associated with developing an apartment complex 32

Table 3-9. Actions that establish a permanent source of funding for low-income housing 33

Table A-1. Adopted SEPA Exemptions as of January 2021 49

Table A-2. Additional costs to households with a \$0.50 per \$1,000 property tax levy 55

Table A-3. Potential affordable housing funding from maximum property tax levy..... 56

Table A-4. Potential affordable housing funding from maximum affordable housing sales tax in 2019 ... 57

Executive Summary

This Housing Action Plan is a collaborative effort between the Cities of Lacey, Olympia, and Tumwater. It is intended to inform local comprehensive plan policies and guide implementation strategies to help each city meet its housing needs and strategic objectives.

What's in the Housing Gap?

Seven housing gaps were identified through the Housing Needs Assessment, including the need to:

1. Reduce housing costs for low-income and cost-burdened households.
2. Increase the overall housing supply.
3. Increase the variety of housing sizes and types.
4. Increase senior housing options.
5. Maintain in good condition and improve the existing housing stock.
6. Provide safe, stable options for both renters and homeowners.
7. Increase permanent housing options for people with disabilities and those at risk of or experiencing homelessness.

COVID-19 Pandemic and the Housing Action Plan

In response to the outbreak of the COVID-19 pandemic, Governor Inslee issued a series of proclamations and declarations aimed at reducing the spread of the virus in Washington state, including requiring all non-essential workers to stay home and stay healthy and extending a moratorium on evictions to protect renters. As a result, significant changes in the Lacey, Olympia, and Tumwater area occurred, affecting businesses and residents alike.

The cities will continue to monitor the impact of the pandemic on housing in the coming months and develop plans for implementing appropriate actions whether included in this plan or not.

How to Create an Equitable Housing Market?

About one in four Thurston County residents is a person of color – those who are Hispanic or Latino of any race and those who are any race other than white alone. People of color generally have more people in their household, are less likely to own their own home, have a smaller household income, and are more likely to experience homelessness than their white, non-Hispanic counterparts. Increasing housing equity is not a single action but an overarching theme in this plan. Affordable housing opportunities cannot be created without also reducing housing-related inequities faced by people of color. Each strategy in this report includes a discussion of how it — and the actions associated with it — will reduce inequity in our community.

Taking Action Locally

The City of Lacey is actively implementing actions that remove barriers and encourage appropriate housing development. Of the actions considered in developing this plan, Lacey has already implemented many actions, including making strategic investments in infrastructure, reducing setback requirements, relaxing ground floor retail requirements, and simplifying requirements for accessory dwelling units. The City adopted an Affordable Housing Strategy into its Comprehensive Plan in 2019 which is also being implemented.

In addition to the work the city has already accomplished, this plan identifies a menu of actions Lacey can take to address housing gaps, needs, and equity:

- Actions that help increase the supply of permanent, income-restricted affordable housing.
- Actions that make it easier for households to access housing and stay housed.
- Actions that help expand the overall housing supply.
- Actions that help increase housing variety.
- Actions that help maintain forward momentum in implementing housing strategies.
- Actions that help establish a permanent source of funding for low-income housing.

The menu of options is intended to provide the city flexibility as implementing the specific actions to address specific housing needs.

Setting a Legislative Agenda

While this plan outlines actions Lacey can take to address housing gaps, needs, and equity, barriers also exist at the state and federal levels. By far, the largest barrier is a lack of funding for low-income and income-restricted housing – whether it is construction, improvement, rehabilitation, or rental subsidies. Other barriers include condominium liabilities for builders, tariffs on construction materials imported to the United States, and the impact of prevailing wage requirements tied to federal funding for small, non-profit housing developers.

Chapter 1.

Introduction

Thurston County is one of the fastest growing counties in Washington State. The pressure to ensure all households have affordable access to housing is also growing and represents a significant challenge for all stakeholders. The challenge to provide sufficient affordable housing is complicated by rising construction costs, insufficient inventory, and a greater need for coordinated responses between jurisdictions.

In 2019, the Washington State Legislature passed HB 1923 encouraging cities planning under the state Growth Management Act to take actions to increase residential building capacity. These actions include developing a housing action plan *“...to encourage construction of additional affordable and market rate housing in a greater variety of housing types and at prices that are accessible to a greater variety of incomes, including strategies aimed at the for-profit single-family home market”* (RCW 36.70A.600).

In recognition of the cross-jurisdiction need for affordable housing, the Cities of Lacey, Olympia, and Tumwater chose to collaborate with Thurston Regional Planning Council to develop housing action plans. Funding was provided by the Washington State Department of Commerce. The project includes four components:

- A regional housing needs assessment.
- A household income forecast to identify future housing needs.
- A survey of landlords and rental property owners to better understand housing costs.
- A housing action plan – to be adopted by the cities – identifying a menu of options for the cities to implement to encourage development of a housing stock adequate and affordable for current and future residents.

The Housing Action Plan is intended to identify a menu of actions for the City of Lacey to implement. Such actions should encourage development of a housing stock adequate and affordable for current and

future residents of all income levels. This information will be to update the Housing Elements of the Comprehensive Plan and joint plans covering the urban growth areas (in collaboration with Thurston County).

Appendix A provides more detailed information on each action while Appendix B lists all actions considered through the development of this plan. Where appropriate, explanations as to why an action was not included is provided.

Sources of Actions

This plan combines data and action ideas from a range of sources. Key sources include:

- **Washington State Department of Commerce.** Actions identified in Commerce’s “Guidance for Developing a Housing Action Plan (public review draft)” were used as a starting point for the action list.
- **Comprehensive Plans.** Project staff reviewed housing elements in the cities’ comprehensive plans for actions to include.
- **Stakeholder Committee.** A stakeholder committee that included the Housing Authority of Thurston County, other low-income housing providers, real estate professionals, housing developers (low-income and market rate), and representatives of the Thurston Thrives Housing Action Team added to, and reviewed, the action list.
- **Staff from the Cities of Lacey, Olympia, and Tumwater.** City staff provided feedback on actions that have already been completed or are underway, added actions that were local priorities, and removed actions that were outside of the cities’ authority.
- **Other Sources.** Outreach was done to additional stakeholders as needed, including Habitat for Humanity, the Low-Income Housing Institute, Northwest Cooperative Development Center, and the Thurston Housing Land Trust.

Addressing Housing Gaps and Needs

This Housing Action Plan was preceded by a Housing Needs Assessment. The Housing Needs Assessment reviewed data available on the region’s housing needs and the available housing stock to identify gaps. The most pressing needs identified were:



Affordability. Reduce the cost of housing for low-income and cost-burdened households.



Supply. Increase the inventory of housing for all households.



Variety. Increase the variety of housing sizes and types



Seniors. Increase the stock of housing options needed for aging seniors.



Improvements. Maintain the existing housing stock, including improving energy efficiency and air quality.



Stability. Increase household wealth by providing safe, stable options for rental housing and pathways to homeownership.



Supportive Housing. Increase permanent housing options for people with disabilities and those at risk of or experiencing homelessness.

Many actions included in this plan address multiple housing gaps/needs, and each action in this plan identifies which area of need it addresses.

Equity in Housing Affordability

Not all households have access to affordable housing. Across Thurston County, people of color — those identifying as Hispanic or a race other than white alone — have lower incomes, are less likely to own their own home, are more likely to be housing cost-burdened, and are more likely to be homeless (Table 1-1).

Table 1-1. Metrics for equity in housing

Metric	Person of Color	White, Non-Hispanic
Cost Burdened Households	37%	31%
Homeowners	52%	66%
People Experiencing Homelessness	~ 4.4 per 1,000	~2.4 per 1,000
Household with an Income Less than \$50,000	41%	33%

Across the United States – including Thurston County and its communities – policies have led to and reinforce housing inequities faced by people of color:

- **Redlining.** Neighborhoods with a large number of people of color were denied access to financing for home improvement and construction. This made it harder for people of color to build financial equity and stay or move out of poverty. While redlining is now illegal, people of color are still more likely to have mortgage applications denied or pay higher interest rates.
- **Zoning.** Zoning regulations explicitly barred racial and ethnic minorities. While this, too, is illegal, zoning regulations today may implicitly bar people of color by placing restrictions on the sizes and types of housing that are affordable and accessible to disadvantaged populations. Zoning that exclusively allows single-family neighborhoods — an estimated 75 percent of all residential-

zoned land across major U.S. cities — perpetuates this legacy of barring racial and ethnic minorities.

- **Covenants.** Privately enforced housing covenants used to exclude racial and ethnic minorities from predominantly white neighborhoods. Racial covenants became more common after racial zoning ordinances were deemed unconstitutional by the U.S. Supreme Court.

Cities can help reverse the disparities caused by these problems by creating more opportunities for affordable housing. Cities are also responsible for ensuring new policies — not just around housing — do not exacerbate inequities. Resources like the Government Alliance on Race and Equity’s “Racial Equity Toolkit” can help cities incorporate equity considerations in policy making.

How is Equity Addressed in the Plan?

Because creating affordable housing opportunities goes hand-in-hand with reducing housing-related inequities faced by people of color, increasing equity is not a single action but an overarching theme in this plan. Each strategy in this plan includes a discussion of how it — and the actions associated with it — work to reduce inequity in our community.

An action that promotes affordable housing — especially for the most vulnerable in our community — is an action that will promote equity.

Defining Terms Used

The following terms are used in this plan.

Affordable Housing. Housing for which the household pays no more than 30 percent of its gross income for housing costs, including utilities.

Income Restricted Housing. Housing for which the occupancy of the units is restricted to households making 80 percent or less of the area median family income, as defined by the U.S. Department of Housing and Urban Development.

Low-Income Housing. Housing that is affordable for households making 80 percent or less of the area median family income, as defined by the U.S. Department of Housing and Urban Development. Low-income housing can take the form of income-restricted housing units or subsidized housing — whether the unit itself is subsidized or the household receives a housing voucher to subsidize market-rate rent conditions.

Manufactured Home Park. A site under single ownership where ground space is made available for mobile homes, manufactured homes, or a combination of the two. Mobile homes and manufactured homes are both factory-built and considered dwellings for habitation rather than vehicles (such as an

RV). Mobile homes refer to those units factory-constructed prior to June 15, 1976, while manufactured homes are units factory-constructed after that date.

Permanent Supportive Housing. Permanent housing intended specifically for chronically homeless and permanently disabled individuals and families. Supportive services (medical, mental health, enrichment programs, etc.) and case management are available on site or closely coordinated to reduce barriers the inhibit households from accessing such services.

Assumptions

Four primary assumptions guided development of this plan:

Menu of options. This plan is intended as a menu of options for the City of Lacey to consider implementing. Not all actions will be utilized. Actions that can only be taken by other entities are not included in this plan.

Analysis before implementation. The City of Lacey is a unique communities with different priorities, development patterns, and resources than neighboring communities. This plan cannot respond to every issue and need, but it can provide a framework for the community to consider how best to act. Further analysis on an action should be undertaken to determine how well it will respond to the specific need or gap the city attempts to fill.

People experiencing homelessness. This action plan addresses permanent housing solutions. The Thurston County Homeless Crisis Response Plan guides the region's emergency response to homelessness. Although there will be some overlap, this plan is limited to actions that result in or support the creation/preservation of affordable and low-income housing, including permanent supportive housing. Permanent housing is a fundamental part of solving the homelessness crisis our region is experiencing. Despite having a coordinated entry system designed to quickly connect people experiencing homelessness to housing, being responsive to needs is hampered by high housing costs and a lack of housing units.

The City of Lacey also participates in the newly formed Regional Housing Council, created to leverage resources and partnerships to promote equitable access to safe and affordable housing in Thurston County. The Regional Housing Council looks at funding issues for responding to homelessness and housing affordability in the region.

Addressing household income. This plan does not address the income side of the housing equation. Attracting living wage jobs, increasing the minimum wage, and other actions impacting a household's income could help make housing more affordable. Lacey's Economic Development Element of the Comprehensive Plan and associated Economic Development Strategy with assistance from the Thurston Economic Development Council guide the region's response to economic development, which has a

direct impact on household incomes. Although there will be some overlap, this plan is limited to actions that result in or support the creation/preservation of affordable and low-income housing units.

Chapter 2.

Actions Already Implemented

As of January 31, 2021, the following actions have been implemented by the City of Lacey as well as the Cities of Olympia and Tumwater. This list comprises only those actions implemented by all three cities.

- **Adopt design standards that assist new forms of high-density housing and promote infill.**
- **Allow accessory dwelling units in all residential zones.**
- **Simplify requirements for accessory dwelling units (ex: title notification, owner living on site, etc.).**
- **Allow group homes in all residential zones and commercial zones that allow residential uses.** Group homes are a source of housing for people with disabilities, seniors, those undergoing treatment for a variety of medical concerns, children in foster care, etc.
- **Establish a multifamily tax exemption (MFTE).** The Multifamily Tax Exemption (MFTE) Program is intended to encourage the construction of new, rehabilitated, or converted multifamily housing within designated areas. MFTE is limited to multifamily units with four or more units. Eligible projects typically receive an eight-year tax break or twelve years if the property owner/developer commits to renting or selling at least 20 percent of the units to households with an income at or below 115 percent of the median family income during the same period of time. Once the period lapses, the owner/developer is free to rent or sell units at market rate.
- **Make strategic investments in infrastructure expansion to reduce development costs.** Each city makes a concerted effort to invest in infrastructure expansion where it makes the most sense, thereby reducing development costs and spurring needed development in the right locations. Although each community makes such strategic investments, new development constructs the majority of infrastructure, impacting the overall cost of housing in that development.

- **Process short plat applications administratively.** Short platting is the division of land into a limited number of lots. Typically, approving land divisions is a legislative function of the city council. However, state law requires cities to have a short plat process and approve such requests administratively. As of 2020, the Cities of Lacey, Olympia, and Tumwater all allow administrative short plats for land divisions of nine or fewer lots, the state's current limit for short platting.
- **Recognize modular/manufactured housing as a viable form of housing construction.** Since 2004, state law has recognized the value manufactured housing has on housing affordability. Cities must treat manufactured housing the same as it does traditionally built housing and must also allow mobile and manufactured homes to locate in existing manufactured home parks.
- **Reduce setbacks and increase lot coverage/impervious area standards.**
- **Relax ground floor retail requirements to allow residential units.** In commercial zones, retail uses are often required on the ground floor for mixed-use developments. The Cities of Lacey and Olympia have relaxed their requirements, while the City of Tumwater has never established a requirement for ground floor retail in a mixed-use development.
- **Require minimum residential densities.**
- **With major comprehensive plan updates, confirm land is suitably zoned for development of all housing types.** Cities and counties are required to include housing elements in their comprehensive plans. The Growth Management Act requires housing elements to include information on the types of housing available in the community and to confirm there is enough land available for such uses. As part of these updates, the Cities of Lacey, Olympia, and Tumwater confirm whether the land itself is zoned properly to sufficiently allow the types of units envisioned in the community in the quantities necessary to meet housing needs.

In addition to these actions, the Cities of Lacey, Olympia, and Tumwater are also taking advantage of a local revenue-sharing program established by [HB 1406](#), which allows the cities to receive a portion of the State's existing sales and use tax to fund affordable housing programs and services. The three cities plan to pool their resources with guidance from the Regional Housing Council.

Chapter 3.

Actions

This chapter identifies six strategies for addressing housing needs in the City of Lacey:

1. Increase the supply of permanent, income-restricted affordable housing.
2. Make it easier for households to access housing and stay housed.
3. Expand the overall housing supply by making it easier to build all types of housing projects.
4. Increase the variety of housing choices.
5. Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies.
6. Establish a permanent source of funding for low-income housing.

All of the actions are associated with one of the six strategies, and each action fills one or more of the seven gaps identified in the Housing Needs Assessment:



Affordability. Reduce the cost of housing for low-income and cost-burdened households.



Supply. Increase the inventory of housing for all households.



Variety. Increase the variety of housing sizes and types



Seniors. Increase the stock of housing options needed for aging seniors.



Improvements. Maintain the existing housing stock, including improving energy efficiency and air quality.



Stability. Increase household wealth by providing safe, stable options for rental housing and pathways to homeownership.



Supportive Housing. Increase permanent housing options for people with disabilities and those at risk of or experiencing homelessness.

The table of actions associated with each strategy includes key information to know:

- Gaps or needs addressed by the action (as indicated by the above icons).
- Implementation status for each city, as represented by the following symbols:



The action is pending. The city has begun the work necessary to implement the action, but it is not yet fully implemented.



The action is implemented. The city has completed the work necessary to implement the action.

More detailed information on each action is provided in Appendix A. For a complete list of actions considered as part of the development of this plan, see Appendix B.

Neither the strategies nor the actions associated with them are in in priority order. Not all actions will be utilized by the city, and actions that can only be taken by other entities are not included in this plan.

Strategy 1: Increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.

Strategy 1 includes actions that increase the supply of permanently affordable housing for low-income households (those making 80 percent or less of the area median family income) and actions that support the providers of low-income housing.

Why is this strategy important?

Demand for housing is straining the limited supply of affordable options. For households with the lowest incomes – such as those headed by a retail clerk, a home health aide, or a childcare provider – market rate housing is unlikely to be an affordable option. For these households, even home maintenance costs – let alone rent or mortgage payment costs – can be unaffordable.

How do these actions reduce housing costs?

These actions increase the supply of housing where costs are kept permanently affordable to those earning the lowest incomes in our community. The need is great: according to the Housing Needs Assessment, about 20,200 households in Lacey, Olympia, and Tumwater have an income of 80 percent or less of the median family income (Table 3-1). Another 13,800 households in the same category are anticipated over the next 25 years.

Table 3-1. Households making 80 percent or less of the area median income by jurisdiction, 2012-2016 estimate and 2045 projection

Projection	Households with an Income* of:			TOTAL HOUSEHOLDS
	<= 30% of area median	30% to 50% of area median	50% to 80% of area median	
2012-2016 Estimate				
Lacey	1,800	1,900	3,600	7,200
Olympia	3,300	2,700	3,500	9,500
Tumwater	1,200	900	1,400	3,500
Cities Combined	6,200	5,500	8,500	20,200
2045 Projection				
Lacey	2,200	3,000	5,500	10,700
Olympia	5,200	5,200	6,500	16,900
Tumwater	1,900	1,700	2,800	6,400
Cities Combined	9,300	9,900	14,800	34,000

*Household income as a percent of the area median family income. Excludes people experiencing homelessness and other group quarters populations. Estimates are only for current city limits and do not include unincorporated UGAs.

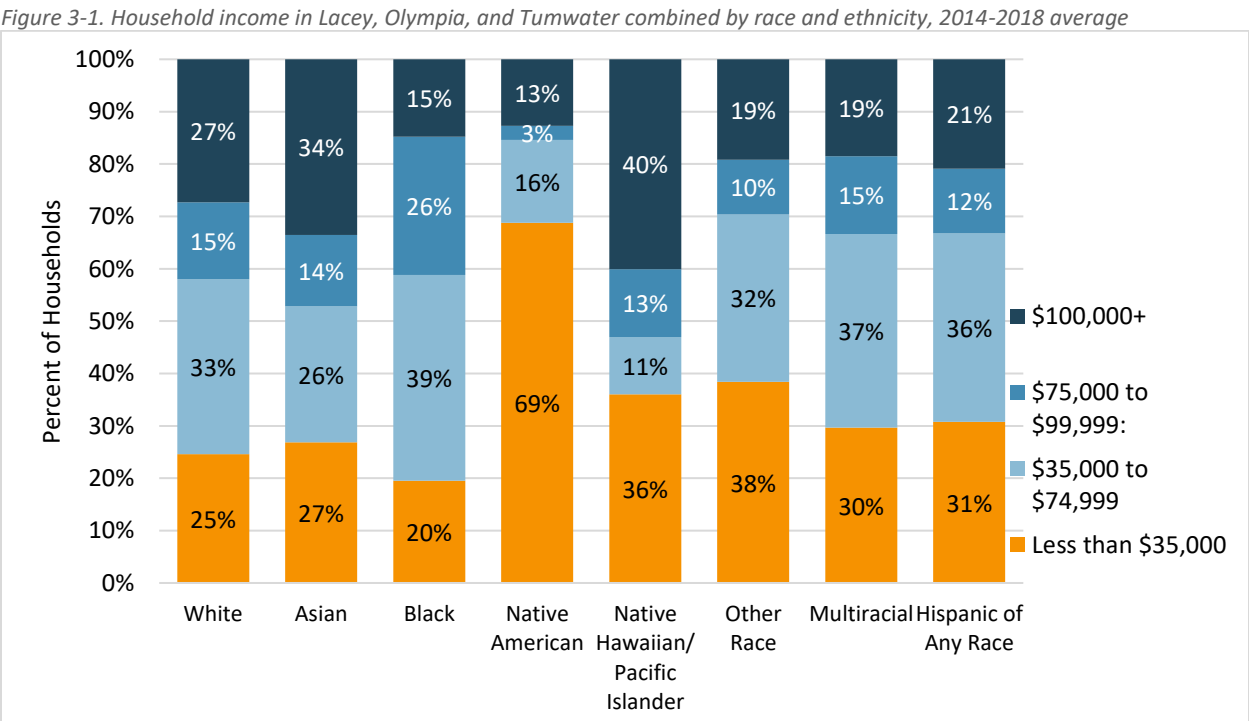
Source: Thurston Regional Planning Council

Reducing the cost of renting and owning a home are both part of the solution. For households looking toward homeownership, the up-front costs associated with purchasing a home can put this option out of reach. Low-income households, however, can benefit from the stabilization in housing costs owning a home offers – in general, monthly mortgage payments stay the same over 30 years while monthly rent payments increase.

These actions also address the need for permanent supportive housing. For people moving out of emergency housing situations – such as a homeless shelter – permanent supportive housing provides not only affordable housing but also access to health and social services. These services build stability and decrease the likelihood residents will experience homelessness again.

How do these actions address equity?

The lowest income households in Thurston County are disproportionately headed by people of color (Figure 3-1). The same is true for people experiencing homelessness. Permanently affordable housing for households that make 80 percent or less of the area median income directly benefits both these populations by providing affordable, stable housing options. Housing affordable to households with the lowest incomes can be rental or owner units, both of which help stabilize households. Programs that expand homeownership opportunities can significantly improve a household’s wealth; this is especially important to addressing inequities for households of color stemming from historical policies like redlining and exclusionary zoning.



Note: In the figure above, householders who are Latino or Hispanic are only represented in “Hispanic of Any Race.”
Source: U.S. Census Bureau American Community Survey.

Table 3-2. Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.

Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.		Implementation Status
1.a. Donate or lease surplus or underutilized jurisdiction-owned land to developers that provide low-income housing. <i>Gaps/Needs Addressed:</i>  		
1.b. Require Planned Residential Developments (PRDs)/Planned Unit Developments (PUDs) for low-density development and include standards for including low-income housing. <i>Gaps/Needs Addressed:</i>     		
1.c. Adopt a “Notice of Intent to Sell” ordinance for multifamily developments. <i>Gaps/Needs Addressed:</i> 		
1.d. Provide funding for the Housing Authority of Thurston County and other non-profit organizations to buy income-restricted units proposed to be converted to market rate housing. <i>Gaps/Needs Addressed:</i>  		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.		Implementation Status
1.e. As part of comprehensive plan and development code changes, include an evaluation of the impact such changes will have on housing affordability, especially for low-income households. <i>Gaps/Needs Addressed:</i>   		
1.f. Provide funding for renovating and maintaining existing housing that serves low-income households or residents with disabilities. <i>Gaps/Needs Addressed:</i>    		
1.g. Allow manufactured home parks in multifamily and commercial areas. <i>Gaps/Needs Addressed:</i>   		
1.h. Provide funding for low-income and special needs residents to purchase housing through community land trusts. <i>Gaps/Needs Addressed:</i>     		
1.i. Offer density bonuses for low-income housing. <i>Gaps/Needs Addressed:</i>    		
Key Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing Implementation Status  Action Pending  Action Implemented		

Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.		Implementation Status
1.j. Define income-restricted housing as a different use from other forms of housing in the zoning code. <i>Gaps/Needs Addressed:</i>  		
1.k. Offer and/or expand fee waivers for low-income housing developments. <i>Gaps/Needs Addressed:</i>    		
1.l. Require low-income housing units as part of new developments. <i>Gaps/Needs Addressed:</i>     		
1.m. Fund development projects that increase low-income housing through grants or loans. <i>Gaps/Needs Addressed:</i>      		
1.n. Establish a program to preserve and maintain healthy and viable manufactured home parks. <i>Gaps/Needs Addressed:</i>   		
1.o. Enhance enforcement of property maintenance codes to keep housing in good repair. <i>Gaps/Needs Addressed:</i>   		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.		Implementation Status
1.p. Partner with low-income housing developers (such as Habitat for Humanity) to expand homeownership opportunities. <i>Gaps/Needs Addressed:</i>  		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Strategy 2: Make it easier for households to access housing and stay housed.

Strategy 2 actions address housing stability by preventing evictions and displacement and creating opportunities to build financial equity through homeownership.

Why is this important?

Housing stability is an important component of housing affordability. When households face housing insecurity due to income or other issues, there can be a fine line between being housed and being homeless. Evictions and foreclosures are both destabilizing and can lead to long-term poverty. These events also make it more likely a household will experience homelessness.

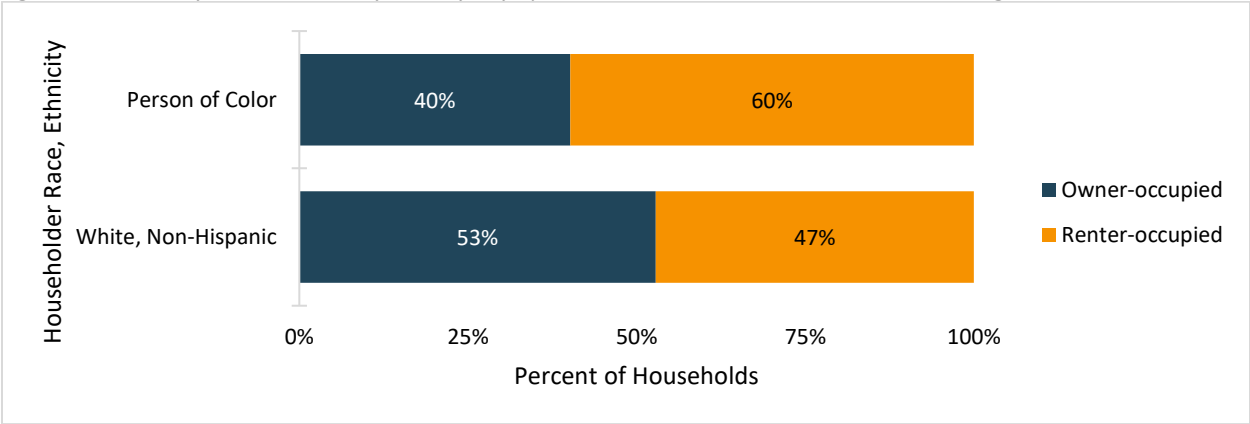
How do these actions reduce housing costs?

Preventing homelessness in the first place is more cost-effective than housing someone already experiencing homelessness. Households that can avoid evictions and foreclosures also avoid likely increases in their monthly housing costs – if they are even able to find a new home to live in. For renters, the cost of finding new housing can also include application fees, deposits, and other charges that create additional financial hurdles.

How do these actions address equity?

People of color are more likely to rent (Figure 3-2) and more likely to have a lower income than their white, non-Hispanic counterparts. This makes them particularly vulnerable to eviction when rent increases exceed their ability to pay. This concern is reflected in the population experiencing homelessness, which is also disproportionately people of color.

Figure 3-2. Tenure by race and ethnicity in Lacey, Olympia, and Tumwater combined, 2014-2018 average



Source: U.S. Census Bureau American Community Survey.

Homeownership is an important way for a household to build financial equity, move people out of poverty, and create generational wealth. Creating these opportunities for people of color – who were historically denied access to mortgages and loans – is particularly important.

Table 3-3. Actions that make it easier for households to access housing and stay housed.

Actions that make it easier for households to access housing and stay housed.		Implementation Status
2.a. Provide displaced tenants with relocation assistance. <i>Gaps/Needs Addressed:</i>  		
2.b. Partner with local trade schools to provide renovation and retrofit services for low-income households as part of on-the-job-training. <i>Gaps/Needs Addressed:</i>    		
2.c. Rezone manufactured home parks to a manufactured home park zone to promote their preservation. <i>Gaps/Needs Addressed:</i>  		
2.d. Adopt a “right to return” policy. <i>Gaps/Needs Addressed:</i>  		
2.e. Adopt short-term rental regulations to minimize impacts on long-term housing availability. <i>Gaps/Needs Addressed:</i>  		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Actions that make it easier for households to access housing and stay housed.		Implementation Status
2.f. Establish a down payment assistance program. <i>Gaps/Needs Addressed:</i>  		
2.g. Identify and implement appropriate tenant protections that improve household stability. <i>Gaps/Needs Addressed:</i>   		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Strategy 3: Expand the overall housing supply by making it easier to build all types of housing projects.

Strategy 3 includes actions that streamline the development and construction of market rate housing — both owner and renter-occupied homes.

Why is this important?

Between 2020 and 2045, the population of Lacey, Olympia, and Tumwater and their urban growth areas is projected to increase by over 60,000 people. This growth will require nearly 30,000 new housing units. When demand for housing is high — as it is now — but supply remains low, housing costs increase, reducing affordability. The increase in costs affects both renters and potential buyers.

How do these actions reduce housing costs?

The Housing Needs Assessment showed that we will likely see a growth of households in all income categories, from the lowest earning ones to those earning well above the median income. This will require the construction of housing affordable to a wide range of incomes.

Expanding the housing supply also means people can find housing better suited their needs. For example: high prices for condos and rentals means empty nesters who want to downsize are more likely to stay in their single-family home. A young family looking to buy their first home may continue to rent or pay more than 30 percent of their household income on a mortgage if home sale prices are too high.

How do these actions address equity?

When housing costs rise, those with the lowest incomes — who are disproportionately people of color — are most affected. Rising rents are correlated with increased evictions and homelessness. Rising home prices mean homeownership — a way for disadvantaged households to build equity — becomes more difficult. Increasing costs can also lead to cultural displacement as people move to new neighborhoods that lack the businesses and institutions important to their community. While this process may be voluntary, it can be destabilizing for communities of color. When higher income households — those that can afford to rent or purchase at market rates — find housing that better meets their needs and budgets, more units are freed up that lower income households can afford. Expanding the overall housing stock also slows the rent/housing price increases that disproportionately affect people of color.

Market rate housing alone will not address the needs of the most disadvantaged populations, and pressure to develop market rate housing in communities of color can cause displacement. Strategy 1 includes actions to increase the supply of housing for the lowest-income households while Strategy 2 includes actions to make it easier for households to access housing and stay housed.

Table 3-4. Actions that expand the overall housing supply by making it easier to build all types of housing projects.

Actions that expand the overall housing supply by making it easier to build all types of housing projects.		Implementation Status
3.a Offer developers density and/or height incentives for desired unit types. <i>Gaps/Needs Addressed:</i>    		
3.b Allow third-party review of building permits for development projects. <i>Gaps/Needs Addressed:</i> 		
3.c Develop a plan for adapting vacant commercial space into housing. <i>Gaps/Needs Addressed:</i>      		
3.d Expand allowance of residential tenant improvements without triggering land use requirements. <i>Gaps/Needs Addressed:</i>  		
3.e Reduce parking requirements for residential uses, including for multifamily developments near frequent transit routes. <i>Gaps/Needs Addressed:</i> 		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Actions that expand the overall housing supply by making it easier to build all types of housing projects.		Implementation Status
3.f	Identify strategically placed but underdeveloped properties and determine what barriers exist to developing desired housing types. <i>Gaps/Needs Addressed:</i>  	
3.g	Increase minimum residential densities. <i>Gaps/Needs Addressed:</i> 	
3.h	Reduce minimum lot sizes. <i>Gaps/Needs Addressed:</i> 	
3.i	Lower transportation impact fees for multifamily developments near frequent transit service routes. <i>Gaps/Needs Addressed:</i>   	
3.j	Expand the multifamily tax exemption to make it available in all transit corridors. <i>Gaps/Needs Addressed:</i>     	
3.k	Allow deferral of impact fee payments for desired unit types. <i>Gaps/Needs Addressed:</i> 	

Key	
Gaps and Needs  = Affordability  = Supply  = Improvements  = Stability	 = Variety  = Supportive Housing  = Seniors
Implementation Status  Action Pending  Action Implemented	

Actions that expand the overall housing supply by making it easier to build all types of housing projects.		Implementation Status
3.l	Simplify land use designation maps in the comprehensive plan to help streamline the permitting process. Gaps/Needs Addressed:   	
3.m	Integrate or adjust floor area ratio standards. Gaps/Needs Addressed:    	
3.n	Maximize use of SEPA threshold exemptions for residential and infill development. Gaps/Needs Addressed:      	
3.o	Consult with Washington State Department of Transportation as part of the SEPA review process to reduce appeals based on impacts to the transportation element for residential, multifamily, or mixed-use projects. Gaps/Needs Addressed:    	
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Strategy 4: Increase the variety of housing choices.

Strategy 4 actions address ways to increase the variety of housing options, including duplexes, triplexes, accessory dwellings, and other housing forms that are not as common in the Lacey area.

Why is this important?

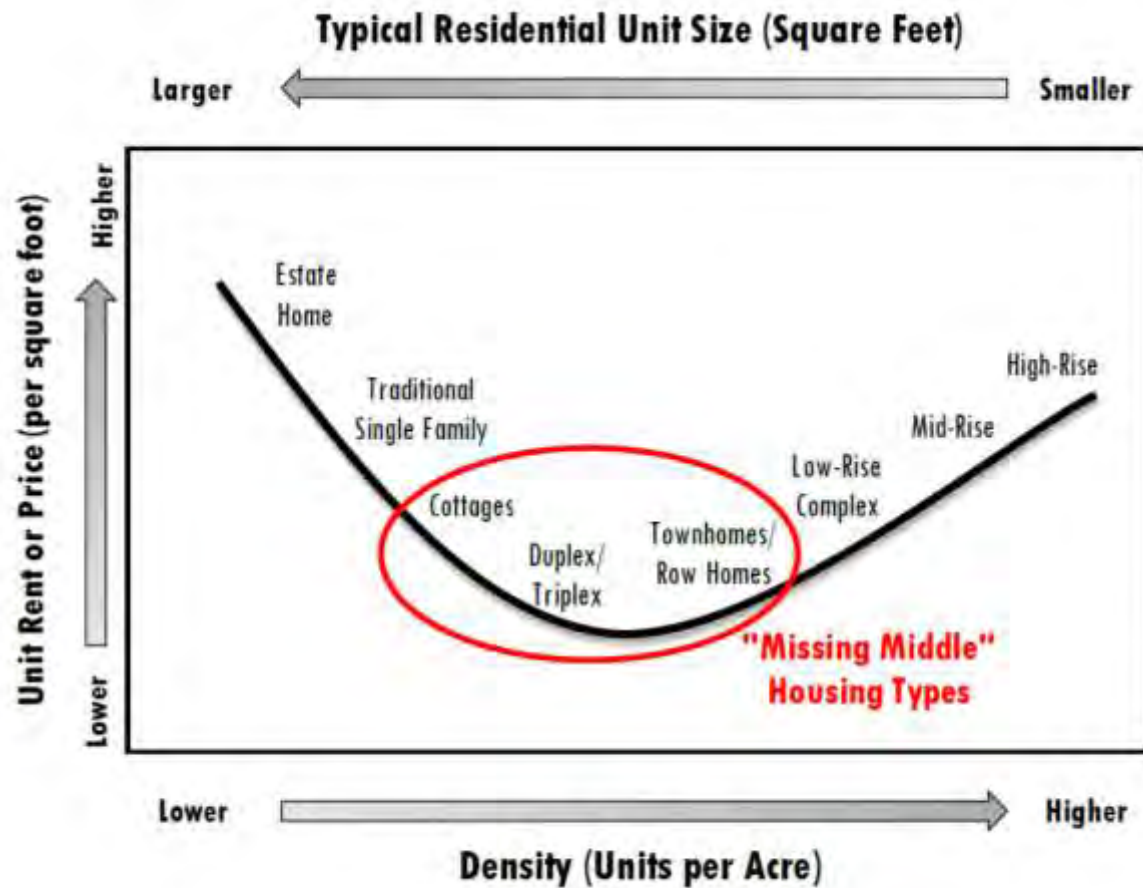
Household sizes in Thurston County have gotten smaller – reaching an average of 2.5 people per household today. There are more single-parent families and householders living alone. As household formation and composition have changed over time, so have housing needs. Increasing the variety of housing types allows more choices for households and creates a dynamic housing market better able to meet the needs of people living in Lacey.

How do these actions reduce housing costs?

“Middle density” housing – a small part of Lacey’s current housing stock – is an important part of an affordable housing strategy. Middle density housing includes small multifamily housing (duplexes and triplexes), attached townhomes, cottage housing, and accessory dwellings. Per-unit costs tend to be lower than single family homes because the homes are smaller, and developers can benefit from economies of scale. Per-unit costs are also less than high-density multifamily because they are stick built (they don’t require structured parking or other concrete and steel structures) and are typically in neighborhoods with existing infrastructure. This leads to lower costs both for homeowners and renters (Figure 3-3).

Diversifying the housing stock also recognizes that households are unique and have a wide range of housing needs. This is particularly true as our population ages. Middle density housing provides seniors a way to downsize while remaining in the neighborhoods they love.

Figure 3-3. Relationship between Housing Types, Price and Rent, Unit Size, and Residential Density



Source: Washington State Department of Commerce, *Housing Memorandum: Issues Affecting Housing Availability and Affordability* (2019), p. 85. <https://deptofcommerce.app.box.com/s/npwem3s3rvcsya15nylbroj18e794yk7>.

How do these actions address equity?

Increasing the variety of housing options provides more affordable housing options for low-income households, who are disproportionately people of color. Middle density housing can be both rental and owner-occupied. Affordable owner-occupied units would be a potential way to build financial equity.

Middle density housing also expands the housing options available in predominantly single-family neighborhoods, leading to a mix of household incomes. This allows low-income households to access some of the resources – such as better school districts or healthier neighborhoods – available to higher-income households.

Table 3-5. Actions that increase the variety of housing choices

Actions that increase the variety of housing choices		Implementation Status
4.a. Increase the types of housing allowed in low-density residential zones (duplexes, triplexes, etc.). <i>Gaps/Needs Addressed:</i>      		
4.b. Allow more housing types in commercial zones. <i>Gaps/Needs Addressed:</i>  		
4.c. Adopt a form-based code for mixed-use zones to allow more housing types and protect the integrity of existing residential neighborhoods. <i>Gaps/Needs Addressed:</i>   		
4.d. Allow single-room occupancy (SRO) housing in all multifamily zones. <i>Gaps/Needs Addressed:</i>  		
4.e. Strategically allow live/work units in nonresidential zones. <i>Gaps/Needs Addressed:</i>   		
Key		
Gaps and Needs  = Affordability  = Supply  = Improvements  = Stability		Implementation Status  Action Pending  Action Implemented
 = Variety  = Seniors  = Supportive Housing		

Strategy 5: Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies.

Strategy 5 actions recognize the need for the City of Lacey to engage with the community and establish strong partnerships with affordable housing providers to address housing affordability.

Why is this important?

While the City of Lacey does not build or manage low-income housing, the policies the City enacts can affect how much housing can be built and at what cost.

How do these actions reduce housing costs?

By establishing partnerships and collaborations with organizations who serve low-income households, the cities can ensure that they are directing their resources and enacting policies that best serve low-income households.

For some, changes brought on by growth and new development in their established neighborhoods can be threatening. As a result, residents may support more affordable housing while at the same time seek to prevent actions needed to increase affordable options. By engaging with the community, the cities can also build a shared understanding of the challenges faced by low-income households and develop informed consent around the strategies needed to increase housing affordability.

How do these actions address equity?

Building public understanding around the challenges faced by low-income households includes recognizing the historical reasons why they are disproportionately people of color.

The people who typically engage in public review processes – especially land use processes – are often white and of higher income. Developing relationships with people of color as well as organizations that work with or represent communities of color and disadvantaged groups can help the Cities of Lacey, Olympia, and Tumwater better:

- Identify who benefits or is burdened by an action.
- Examine potential unintended consequences of taking an action.
- Mitigate unintended negative consequences of taking an action.
- Build in strategies to advance racial equity.

Proactive efforts to ensure engagement in decision-making processes are broadly inclusive and grounded in achieving equity are necessary. With broader input representative of the whole community, decisions are better balanced and actions the cities take can be more successfully implemented in an equitable fashion.

Inviting and bringing in people of all walks of life into the community conversation provides the most direct way to get feedback. Collaborating with community leaders and trusted representatives among disadvantaged populations can help make this happen and ensure government action does not increase inequities faced by people of color.

Table 3-6. Actions that improve implementation of housing strategies through collaboration, public understanding, and continually building on resources

Actions that improve implementation of housing strategies through collaboration, public understanding, and continually building on resources		Implementation Status
5.a	Conduct education and outreach around city programs that support affordable housing. <i>Gaps/Needs Addressed:</i>   	
5.b.	Fund Housing Navigators to assist households, renters, homeowners, and landlords with housing issues. <i>Gaps/Needs Addressed:</i>   	
5.c.	Identify and develop partnerships with organizations that provide or support low-income, workforce, and senior housing as well as other populations with unique housing needs. <i>Gaps/Needs Addressed:</i>       	
5.d.	Establish a rental registration program to improve access to data and share information with landlords.	
Key		
Gaps and Needs  = Affordability  = Supply  = Improvements  = Stability		Implementation Status  Action Pending  Action Implemented
 = Variety  = Seniors  = Supportive Housing		

Strategy 6: Establish a permanent source of funding for low-income housing.

Strategy 6 actions address the need to increase funding for low-income housing and to provide a regional strategy for distributing funds.

Why is this important?

While the private sector will build most of the housing needed to meet demand in the Lacey, Olympia, and Tumwater area, a significant portion of households earn less than 80 percent of the median area income. Paying market rate rents or mortgages may not be affordable for them (Table 3-7).

Table 3-7. Maximum affordable housing costs at various income levels, 2020

HUD Income Limit* for a:	Yearly Income	Hourly Wage (Full Time)**	Maximum Monthly Affordable Rent or Mortgage Payment
2-Person Family			
Extremely Low Income (30%)	\$20,800	\$10.00	\$500
Very Low Income (50%)	\$34,700	\$16.70	\$900
Low Income (80%)	\$55,500	\$26.70	\$1,400
4-Person Family			
Extremely Low Income (30%)	\$26,200	\$12.60	\$700
Very Low Income (50%)	\$43,350	\$20.80	\$1,100
Low Income (80%)	\$69,350	\$33.30	\$1,700

*For 2020, Housing and Economic Development (HUD) income limits are based on a median family income of \$86,700 for Thurston County.

**Assumes one household member works full time at 40 hours per week.

Source: Thurston Regional Planning Council.

Whether developer is a nonprofit or a for-profit organization, there are real costs to consider in making a development project feasible. Table 3-8 provides an example of the monthly costs associated with developing a 100-unit apartment complex. This example is intended to give readers an idea of the costs associated with multifamily development; actual numbers for a real project will vary based on a variety of factors.

In this example, each apartment unit costs \$250,000 to develop, a total that includes acquiring land, engineering and architectural fees, environmental review, appraisals, city fees, construction costs, etc. Most developers do not have the cash to develop a project without financing. Some may not have funds for even a down payment to qualify for a development loan. Developers must also consider the ongoing costs once the development is up and running – such as costs for managing the property, taxes and insurance, and reserving funds for basic and more extensive repairs. In this example, monthly costs per unit would need to be \$1,695 just to cover the financing and ongoing operating costs; this does not take into account any profit – only the cost to break even on the project and ensure the developer does not lose any money.

Table 3-8. Example of costs associated with developing an apartment complex

	Per Unit Cost – Not Grant Funded	Per Unit Cost – 25% Grant Funded	Per Unit Cost – 100% Grant Funded
Total Cost of Development <i>Covers the total cost of development including land acquisition, engineering and architectural fees, environmental reports, appraisals, city fees, construction, etc.</i>	\$250,000	\$250,000	\$250,000
Monthly Cost for Down Payment Financing <i>approximately 25% of overall development cost. Assumes 5.8% return on investment.</i>	\$300	\$0	\$0
Monthly Cost for Loan Payment <i>approximately 75% of overall development cost. Assumes 4% interest rate.</i>	\$895	\$895	\$0
Monthly Cost for Ongoing Operating Costs and Reserves* <i>Covers property taxes and insurance; utilities; landscaping and general maintenance; basic repairs; property management; and maintenance reserves for painting, new roofs, appliance replacements, etc.</i>	\$500	\$500	\$500
TOTAL Cost per month over 30-year loan term	\$1,695	\$1,395	\$500

*Per the Housing Authority of Thurston County, \$500 per unit is likely a modest amount for well-maintained properties.

Note: This example is intended to give readers an idea of the costs associated with development; actual numbers for a real project will vary.

Source: Housing Authority of Thurston County.

If a non-profit developer has the down payment covered through grant funding (about 25 percent of the total project cost), the cost per unit can be reduced to \$1,395 per month. If the non-profit developer is able to obtain grant funding for the total cost of development, the developer would still need about \$500 per unit per month to cover maintenance and operation costs. For households with extremely low incomes - making less than \$21,000 per year – this may still be a hard ask.

How do these actions reduce housing costs?

Providing affordable housing for the lowest income households and those experiencing homelessness requires significant resources. Right now, those resources are scarce, leaving many households unable to afford a decent and affordable place to live. Many of the actions identified in this plan will not be possible without more funding. The City of Lacey can play a significant role in leveraging local, state, and federal dollars for low-income housing. The City also recognizes the need to collaborate regionally on a funding strategy so that funds are used efficiently and distributed to the areas of greatest need. With

more funding, housing units become more affordable for households when costs for developing and maintaining units are reduced.

While the City has some capacity to increase funding, Chapter 4 recognizes the need for action at the state and federal level to increase funding for affordable housing.

How do these actions address equity?

People of color are disproportionately low-income, at risk of experiencing homelessness, or homeless. However, many of the actions in this plan to address these issues will be impossible to implement without additional funding.

Table 3-9. Actions that establish a permanent source of funding for low-income housing

Actions that establish a permanent source of funding for low-income housing		Implementation Status
6.a. Develop a comprehensive funding strategy for affordable housing that addresses both sources of funding and how the funds should be spent. <i>Gaps/Needs Addressed:</i>       		
6.b. Establish an affordable housing property tax levy to finance affordable housing for very low-income households. <i>Gaps/Needs Addressed:</i>  		
6.c. Establish an affordable housing sales tax. <i>Gaps/Needs Addressed:</i>    		
6.d. Establish a regional housing trust fund to provide dedicated funding for low-income housing. <i>Gaps/Needs Addressed:</i>  		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Actions that establish a permanent source of funding for low-income housing		Implementation Status
6.e. Capture the value of city investments (utilities, roads, etc.) that increase private investments in neighborhoods, especially in areas with planned or existing transit. <i>Gaps/Needs Addressed:</i>  		
Key		
Gaps and Needs  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing		Implementation Status  Action Pending  Action Implemented

Chapter 4.

Legislative Needs

The Housing Action Plan identified a number of barriers to affordable housing that need to be addressed at the state or federal level. Cities the size of Lacey, Olympia, and Tumwater are not the best suited to leverage sufficient funding to meet the needs identified in this plan. They need state and federal government relief to fill the gap. Loss of funding at either the state or federal level can have severe impacts at the local level. A joint legislative agenda developed by the Cities of Lacey, Olympia, and Tumwater will be necessary to address these issues.

Many of the actions in this plan require funding — especially actions to create affordable housing for the lowest income households and people moving out of emergency and temporary housing situations. Therefore, an important part of this legislative agenda is the need for funding for the construction and maintenance of low-income housing and permanent supportive housing.

State Legislative Agenda

- Increase funding for low-income housing construction.
- Increase funding for permanent supportive housing for those recently experiencing homelessness and moving out of emergency/transitional housing.
- Increase funding for renovating low-income housing to address accessibility upgrades, energy efficiency retrofits, and indoor health (e.g. lead and mold).
- Reform Washington’s condo liability laws.
- Amend the Manufactured/Mobile Home Landlord-Tenant Act — such as in [HB2610](#) — to provide protections for tenants in the event of a sale.

-
- Allow tax increment financing.
 - Require a portion of the Washington State Housing Trust Fund to be used for affordable homeownership projects.
 - Update the multifamily tax exemption program to include projects that support homeownership opportunities.

Federal Legislative Agenda

- Reduce tariffs that raise housing construction costs, making it more expensive to build housing. Example: the cost of softwoods (heavily used in construction) from Canada are up by about 25 percent.
- Increase federal Housing and Urban Development (HUD) funding for affordable housing, including housing vouchers and funding for the Community Development Block Grant (CDBG) program, the Self-Help Homeownership Opportunity Program (SHOP), and the Home Investment Partnerships Program (HOME).
- Examine the effect of Davis-Bacon Act prevailing wage requirements on small, non-profit housing developers.
- Increase funding for down payment assistance. This could include providing tax credits for first-time home buyers with low-income, targeted down payment assistance for disadvantaged populations and communities of color, and increased funding for homeownership savings programs like Assets for Independence and the Family Self-Sufficiency initiative.
- Support the Neighborhood Homes Improvement Act tax credit, which would make it economically feasible to rehabilitate distressed homes for homeownership and expand affordable homeownership opportunities for local residents.

Appendix A.

Action Details

This appendix includes a fuller description of what each action included in this plan entails. Where appropriate, the appendix includes applicable information on what the Cities of Lacey, Olympia, and Tumwater can or have done as well as resources with more information. The actions are grouped into their strategy categories:

1. Increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.
2. Make it easier for households to access housing and stay housed.
3. Expand the overall housing supply by making it easier to build all types of housing projects.
4. Increase the variety of housing choices.
5. Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies.
6. Establish a permanent source of funding for low-income housing.

Strategy 1: Increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.

1.a. Donate or lease surplus or underutilized jurisdiction-owned land to developers that provide low-income housing.

In areas with high land costs, acquiring suitable land can add significant expense to an affordable housing project. Public lands can be donated or leased to affordable housing developers, thereby reducing the cost of development. In this case, affordable housing means housing for households with incomes 80 percent or less of the area median income.

When a jurisdiction does not own land appropriate for housing development, purchasing such land may be an appropriate measure. The land can then be donated or leased to developers that provide low-income housing.

For more information on donating public lands, see [RCW 39.33.015](#).

1.b. Require Planned Residential Developments (PRDs)/Planned Unit Developments (PUDs) for low-density development and include standards for including low-income housing.

Planned Residential Developments (PRDs) and Planned Unit Developments (PUDs) are intended to provide a developer flexibility when designing very large subdivisions. Generally, flexibility is provided in terms of lot size and housing types. Requiring low-income housing as part of low-density PUDs/PRD can introduce a greater variety of housing of low-density housing types (duplexes, small apartment buildings, cottage housing, etc.) into a new neighborhood and ensure the neighborhood is affordable for a wider range of households. This may also encourage the private sector to partner with non-profits such as Habitat for Humanity to develop detached single-family homes for low-income households.

Low-density developments are more likely to consist only of detached single-family homes. Requiring PRDs/PUDs for low-density development can encourage more housing types in such developments. Requiring low-income housing in PRD/PUD proposals is a type of inclusionary zoning (income-restricted affordable housing must be included as part of new developments).

1.c. Adopt a “Notice of Intent to Sell” ordinance for multifamily developments.

Requiring notice to the city, housing officials, and tenants when the owner of a multifamily development intends to sell gives the city the opportunity to preserve low-income units for the same purpose and tenants ample additional time to prepare for a potential move. Not every multifamily development is appropriate for purchase to preserve affordability, but the notice allows jurisdiction staff the time to consider it. Cities may consider developing a list of criteria to determine the types of multifamily developments they want to preserve, including units currently required to be dedicated for low-income households but which may be converted to market-rate units in the future.

Resources

- National Housing Preservation Database. Provides information on developments that have received housing subsidies. As of December 2020, more than 3,000 multifamily units (two or more units in a building) in Thurston County have active subsidies.

1.d. Provide funding for the Housing Authority of Thurston County and other non-profit organizations to buy income-restricted units proposed to be converted to market rate housing. Income-restricted housing units developed or rehabilitated with federal money may in the future be converted to market-rate units. Partnering with HATC and other nonprofit organizations to purchase such units can help preserve housing options for low-income households.

1.e. As part of comprehensive plan and development code changes, include an evaluation of the impact such changes will have on housing affordability, especially for low-income households. Changes to comprehensive plans and development codes should include an evaluation of how they would affect the amount of housing, the types of housing allowed, and the cost to permit, construct, and renovate housing. Evaluating the potential for displacement when affordable units are likely to be lost to redevelopment (such as a mobile home park that is redeveloped) is also appropriate. Particular attention should be given to areas of need identified in the Housing Needs Assessment, including low-income and permanent supportive housing, housing for seniors, and improving and retrofitting existing low-income housing.

1.f. Provide funding for renovating and maintaining existing housing that serves low-income households or residents with disabilities.

Low-income households and landlords that serve such households may not be able to afford costs for improving housing units that require renovation or rehabilitation. Need-based assistance to make home repairs, weatherization improvements, energy efficiency upgrades, and safety upgrades can ensure existing housing affordable to low-income households remains healthy for inhabitants, affordable, and in good repair. Assistance may be in the form of loans, tax reductions, or grants for landlords, homeowners, and tenants.

See also Action 2.b.

1.g. Allow manufactured home parks in multifamily and commercial areas.

Manufactured home parks serve as one of the most affordable housing options for households in the region. If a city has not adopted a dedicated zone for manufactured home parks, it should consider allowing such developments in commercial areas and all multifamily zones.

See also Actions 1.n and 2.c.

This strategy could make it easier to enhance enforcement of property maintenance codes (see Action 1.o.).

1.h. Provide funding for low-income and special needs residents to purchase housing through community land trusts.

Community land trusts provide permanently affordable housing opportunities by holding land on behalf of a place-based community. A non-profit organization, housing land trusts help make homeownership both possible and affordable for low-income households. Locally, the Thurston Housing Land Trust serves all of Thurston County.

1.i. Offer density bonuses for low-income housing.

Density bonuses allow developers to build more housing units than typically allowed if a certain percentage of units are low-income or income restricted. This policy is best implemented in coordination with low-income housing providers. Density bonuses are viable in areas where there is market demand for higher-density housing but do not pencil out where the demand is weak.

1.j. Define income-restricted housing as a different use from other forms of housing in the zoning code.

Defining income-restricted housing as a specific use allows cities to explicitly identify income-restricted housing as a permitted use in residential zones. It also allows cities to establish development regulations specific to low-income housing to streamline its design and permitting, making it a more attractive type of development for developers.

1.k. Offer and/or expand fee waivers for low-income housing developments.

Impact fees, utility connection fees, project review fees, and other fees increase the cost of housing construction. Reducing or waiving fees for low-income housing developments reduces their development costs and acknowledges that providing low-income housing has a positive impact on a community by:

- Ensuring vulnerable households can afford a home.
- Preventing individuals and families from becoming homeless.
- Reducing the cost of providing social services for households in crisis.

The costs for such offsets must be made up elsewhere. According to the Washington State Department of Commerce, reducing or waiving impact fees are most effective when paired with other housing affordability incentives.

See also Action 3.k.

For more information on fee waivers for low-income housing, see:

- [RCW 82.02.060](#) for exempting impact fees for low-income housing.
- [RCW 35.92.380](#) and [RCW 35.92.020](#) for waiving utility connection and other utility fees for low-income persons.
- [RCW 36.70A.540](#) for waiving or exempting fees for affordable housing.

1.l. Require low-income housing units as part of new developments.

Future Thurston County households will have a range of incomes, and a portion of residential development will need to be affordable to low-income households. Requiring low-income housing units – whether for rent or ownership – ensures such units will be built as part of development. Consideration should be given to the number of low-income units required, how they are integrated with market-rate units, and whether thresholds should be enacted that exempt smaller developments from this requirement. This policy is best implemented in coordination with low-income housing providers.

1.m. Fund development projects that increase low-income housing through grants or loans.

Cities can provide funding directly to low-income and permanent supportive housing providers through grants or loans. This recognizes the need for public funding to build low-income housing beyond what market-driven incentives can provide. This action can be best implemented for projects located close to transit and with good access to organizations and agencies that serve low-income households.

1.n. Establish a program to preserve and maintain healthy and viable manufactured home parks.

Manufactured home parks can be prime locations for higher density redevelopment in communities with strong demand for new housing. However, they also serve as one of the most affordable housing options for households in the region. A program that seeks to preserve and maintain healthy and viable manufactured home parks may consider ways to assist:

- Unit owners to purchase the park outright.
- Unit owners to maintain and repair individual manufactured homes.
- Unit owners with funding to replace units that would be better replaced than repaired.
- Unit owners with funding for relocation when a park cannot be preserved.
- Park owners with making service and utility upgrades.
- Park owners with converting from septic to sewer service.

See also Actions 1.g and 2.c.

1.o. Enhance enforcement of property maintenance codes to keep housing in good repair.

Property maintenance codes are intended to ensure the health, safety, and welfare of the public is adequately protected. Improved enforcement can help ensure pest infestations, lack of sanitary conditions, presence of mold, and structural issues are addressed in a timely fashion, thereby protecting homeowners, tenants, and the public at large. Enforcing adopted property maintenance codes is difficult due to the time, staffing, and funding needed to identify and address issues as they arise.

This strategy could have a negative impact on low-income households if resources are not also made available to such households (or their landlords) to make required repairs (see Action 1.f).

1.p. Partner with low-income housing developers (such as Habitat for Humanity) to expand homeownership opportunities.

Affordable homeownership opportunities allow low-income households to build wealth. Local jurisdictions can go beyond their own capabilities to encourage affordable homeownership opportunities by partnering with local housing groups and non-profit developers. This may include providing funding, gifting publicly owned property, supporting grant applications, providing assistance to property owners, and other programs that increase affordable homeownership opportunities. See also Action 1.a.

Strategy 2: Make it easier for households to access housing and stay housed.

2.a. Provide displaced tenants with relocation assistance.

Displacement can happen for a variety of reasons through no fault of the tenant. As redevelopment becomes a more attractive option than keeping a development as is, households – especially low-income households – can be displaced. Moving costs money, and low-income households may not have the funds available for making a required move. State law authorizes local governments to adopt an ordinance requiring developers to provide displaced tenants with relocation assistance to households that have an income of 50 percent or less of the area median income. Cities and counties can also dedicate public funds or use a combination of public and private funds for relocation assistance. When public action results in tenant displacement, relocation assistance is required.

For more information on relocation assistance, see RCW 59.18.440 (developer action) and RCW 8.26 (public action).

2.b. Partner with local trade schools to provide renovation and retrofit services for low-income households as part of on-the-job-training.

According to a 2019 housing memorandum prepared by PNW Economics, LLC and LDC, Inc. for the Washington State Department of Commerce, the majority of general contracting firms struggle to find skilled tradespeople (Issues Affecting Housing Availability and Affordability, p. 71.) Trade schools, apprenticeship programs, and other professionals that provide repair, retrofit, and renovation services to homeowners can scale up training with the help of homeowners who are in need of services at reduced rates.

This action may require additional assistance to the household to accomplish (Action 1.f).

2.c. Rezone manufactured home parks to a manufactured home park zone to promote their preservation.

Manufactured home parks provide some of the most affordable, non-subsidized forms of housing in Thurston County. Occupants of manufactured and mobile homes who own their unit lease the land under the unit. As property values rise, pressure to redevelop manufactured home parks increases, putting unit owners at risk of having to move (which can be costly) and being unable to find a new place to establish their home. Rezoning such developments to a manufactured home park zone can limit the types of development allowed in the zone and result in a more thorough public review process if rezoning is proposed.

See also Actions 1.g and 1.n.

2.d. Adopt a “right to return” policy.

A “right to return” policy prioritizes down payment assistance for first-time home buyers that have been displaced due to direct government action. Establishing a right to return policy should only occur if the city has also established a down payment assistance program (see Action 2.f.).

2.e. Adopt short-term rental regulations to minimize impacts on long-term housing availability.

When a property owner rents out an entire living unit on a short-term basis (generally a period of time less than 30 days), that housing unit cannot be used for the community's long-term housing needs. Regulating short-term rentals can reduce negative impacts to the housing market as well as the neighborhood where the short-term unit is located. While this action is most effective in communities that attract a robust tourism base, establishing regulations/registration for this use ensures the city can track the impact short-term rentals have on long-term rentals.

2.f. Establish a down payment assistance program.

Washington State has a number of programs that provide down payment assistance to first time and low-income home buyers. Establishing a down payment assistance program at the local level can assist more households in the Thurston County community towards the goal of homeownership. Down payment assistance typically takes the form of a low- or no-interest loan to the home buyer, which can be paid back as part of the mortgage or at the time the mortgage is paid off, the home is sold/transferred to a new owner, or the property is refinanced.

For more information on state down payment assistance programs, see the Washington State Housing Finance Commission.

2.g. Identify and implement appropriate tenant protections that improve household stability.

Tenant protections help avoid or slow the process of displacement for households by preserving housing units, a household's tenancy, or access to information and assistance. Examples of tenant protections include but are not limited to:

- Adopting a just cause eviction ordinance that requires landlords to provide tenants with a legally justifiable reason for the eviction.
- Adopting a preservation ordinance, requiring developers to replace affordable housing units demolished as part of redevelopment.
- Adopting an eviction mitigation ordinance to find ways to mutually end a rental agreement rather than evicting tenants.
- Adopting an opportunity to purchase policy that better involves tenants in the decision-making process when a dwelling unit is to be sold.
- Developing a program to incentivize landlords to accept tenants with poor credit or criminal history.
- Improving enforcement of landlord/tenant laws.
- Increasing a tenant's access to legal assistance for landlord/tenant issues.
- Limiting or regulating fees associated with rental housing applications.
- Requiring landlords to establish payment plans for tenants that get behind on rent.

Each tenant protection has positive and negative aspects that should be reviewed and considered before implementing, and both tenants and landlords should be involved in the review process. For

more information on protections offered by the Residential Landlord Tenant Act, see [Chapter 59.18 RCW](#).

Strategy 3: Expand the overall housing supply by making it easier to build all types of housing projects.

3.a. Offer developers density and/or height incentives for desired unit types.

Increasing height limits or the number of dwelling units per acre can provide an incentive for developers to include desired unit types. Desired unit types depend on the neighborhood or policy context and could include defining the type of building (courtyard apartment or manufactured home, for example), the need for income-restricted units, units of a certain size, or units containing a certain number of bedrooms.

3.b. Allow third-party review of building permits for development projects.

While retaining control of issuing building permits, a city may find third-party reviews helpful for maintaining good customer service and ensuring reviews are timely as demand for reviews increase or the permit counter is short-staffed. Third-party reviews may also be employed if expedited review policies are established.

As of January 2021, the Cities of Lacey, Olympia, and Tumwater have each indicated building permit review times are generally within acceptable time frames for review.

3.c. Develop a plan for adapting vacant commercial space into housing.

New technology – and the current COVID-19 pandemic – are changing how people work and shop. The increase in telework decreases the need for office space. More online shopping increases the need for warehouses but decreases the need for brick-and-mortar retail space.

Planning for converting vacant commercial office and retail space with low market value into residential use can meet the needs of property owners losing rents and households needing housing. A streamlined permitting process can help transition vacant commercial space into needed residential units.

3.d. Expand allowance of residential tenant improvements without triggering land use requirements.

For improvement projects that add housing but have minimal neighborhood impacts – such as accessory dwelling units (ADUs) or conversions from single-family to a duplex or triplex, – waiving building, engineering, and land use requirements can reduce the cost to the property owner or developer. Before implementing, cities should consider the impact of waiving requirements for parking, frontage improvements, landscaping improvements, etc. as waving some standards may not be appropriate given the context of the neighborhood.

3.e. Reduce parking requirements for residential uses, including for multifamily developments near frequent transit routes.

Because parking can be expensive to install or take up valuable site area, reducing parking associated with new development or redevelopment can lower overall development costs. Reducing parking requirements can result in increased density and be an appropriate trade-off when the development is near transit routes that receive frequent service. Additionally, fewer residents are likely to own vehicles in areas within walking distance of frequent bus service or neighborhood centers.

3.f. Identify strategically placed but underdeveloped properties and determine what barriers exist to developing desired housing types.

It is not always clear why a property especially suitable for residential development is underutilized. Identifying existing barriers can lead to a better understanding of how existing codes, infrastructure, and market conditions affect the viability of development projects that contain desired unit types. Desired unit types depend on the neighborhood or policy context and could include defining the type of building (four-story building or courtyard apartments, for example), the need for income-restricted units, units of a certain size, or units containing a certain number of bedrooms. Identifying barriers may lead to the city making investments in roads or utilities and present an opportunity to capture the value of city investments that spur private development (see Action 6.e). Barrier identification may also lead to changes to improve/streamline city codes, policies, and processes.

3.g. Increase minimum residential densities.

Increasing minimum residential densities allows more dwelling units to be built per acre of land, can reduce the cost of each housing unit, increases the likelihood of public transit ridership, improves a neighborhood's walkability, and reduces the per housing unit cost of providing urban services (water, sewer, garbage, etc.).

3.h. Reduce minimum lot sizes.

Like increasing minimum residential densities, reducing minimum lot sizes allows more dwelling units to be built per acre of land, can reduce the cost of each housing unit, increases the likelihood of public transit ridership, improves a neighborhood's walkability, and reduces the per housing unit cost of providing urban services (water, sewer, garbage, etc.). For low-density developments like single-family neighborhoods, it also allows for smaller and low-maintenance yards.

3.i. Lower transportation impact fees for multifamily developments near frequent transit service routes.

Transportation impact fees are one-time charges assessed by a local government against a new development project to help pay for establishing new or improving existing public streets and roads. The streets and roads must be included in a community's Comprehensive Plan. The fee must directly address the increased demand on that road created by the development. For multifamily developments near

frequent transit service routes, the idea is that many residents and visitors are able to utilize the public transit system, thereby reducing the impact of the development on public streets and roads.

January 2021 Transportation Impact Fees (rounded to the nearest dollar)

- **Lacey:** \$610-\$3,989 per dwelling unit. Varies according to unit type with detached single-family dwellings having the highest fees.
- **Olympia:** \$728-\$3,219 per dwelling unit. Varies according to unit type with detached single-family dwellings having the highest fees.
- **Tumwater:** \$497-\$3,919 per dwelling unit. Varies according to unit type with detached single-family dwellings having the highest fees. Assisted living facilities have a fee of \$439 per bed.

3.j. Expand the multifamily tax exemption to make it available in all transit corridors.

The Cities of Lacey, Olympia, and Tumwater have each established a multifamily tax exemption (MFTE) program but utilize the program for specific areas of their respective communities where they desire a more urban residential or mixed-use pattern of development. The target areas as of January 2021 are:

- **Lacey:** Applies to the Woodland District.
- **Olympia:** Generally applies to downtown Olympia and portions of Harrison Avenue and State/Fourth Avenues.
- **Tumwater:** Generally applies to the Brewery District, Capitol Boulevard Corridor, Tumwater Town Center, and the Littlerock Road Subarea.

Opening the program to transit corridors can lead to more units being constructed in areas with low transportation costs and more units – at least for a time – affordable to low-income households.

3.k. Allow deferral of impact fee payments for desired unit types.

New development impacts existing municipal and community investments, and impact fees are a way to ensure new development pays their fair share. Impact fees may be delayed, but they must be paid before the impact is realized. Delaying payment of such fees allows a developer building desired unit types to spread the costs of a development over a longer period of time. State law already requires the Cities of Lacey, Olympia, and Tumwater to establish a system for deferring impact fee payments for small, single-family residential developments. This action would expand the deferral program to developments with desired unit types.

Desired unit types depend on the neighborhood or policy context and could include defining the type of building (courtyard apartment or manufactured home, for example), the need for income-restricted units, units of a certain size, or units containing a certain number of bedrooms.

See also Action 1.k.

3.l. Simplify land use designation maps in the comprehensive plan to help streamline the permitting process.

Development must be consistent with a community’s comprehensive plan; broad land use categories in the comprehensive plan provide the vision while more precise land use zones provide the implementation framework. Land use designations that are too specific in a comprehensive plan may require a developer to apply for a comprehensive plan amendment in addition to a zone change. Because comprehensive plan amendments are typically considered only once a year, this can slow the permitting process down substantially.

- **Lacey:** 33 land use designations in the Comprehensive Plan implemented by 33 land use zones.
- **Olympia:** 15 future land use designations in the Comprehensive Plan implemented by 33 land use zones.
- **Tumwater:** 19 future land use designations in the Comprehensive Plan implemented by 19 land use zones.

3.m. Integrate or adjust floor area ratio standards.

Floor area ratio (FAR) is the ratio of a building’s total floor area to the size of the property it sits on. Using FAR in place of density limits provides flexibility for developers to utilize more units and unit types. FAR can be used in place of density limits and when larger buildings are desired but using both standards (FAR and density limits) can result in limiting the number of units developed as well as the size of buildings constructed. FAR standards can also be paired with design guidelines to ensure the building form is consistent with existing or desired development.

3.n. Maximize use of SEPA threshold exemptions for residential and infill development.

The State Environmental Policy Act (SEPA) review process is intended to ensure government actions have fully taken into consideration the environment before a decision is made. Actions that will likely result in an adverse impact on the environment must go through a more rigorous review (an environmental impact statement or EIS). Some projects are exempt from the SEPA review process because their impact on the environment is generally considered to be minimal and not adverse, but developments must still meet environmental standards. Single-family and multifamily developments with four or fewer units are automatically exempt from review under SEPA, and state law allows cities to adopt more flexible exemptions. The Cities of Lacey, Olympia, and Tumwater may exempt single-family developments with up to 30 units and multifamily developments with up to 60 units from SEPA review.

Table A-1. Adopted SEPA Exemptions as of January 2021

Exemptions	Development Type	
	Single-Family	Multifamily
Allowed per SEPA	30 units	60 units
Lacey	4 units	60 units
Olympia	9 units	No exemption
Tumwater	9 units	60 units

Infill Exemptions

In order to accommodate infill development, the Cities of Lacey, Olympia, and Tumwater may adopt SEPA exemptions for infill development to help fill in urban growth areas.

To qualify for the infill exemption:

- An EIS must already be issued for the comprehensive plan or the city must prepare an EIS that considers the proposal's use or density/intensity in the exempted area.
- The density of the area to be infilled must be roughly equal to or lower than what the adopted comprehensive plan calls for.
- The development must be residential, mixed-use, or non-retail commercial development. Commercial development that exceeds 65,000 square feet does not qualify for the exemption.
- Impacts to the environment from the proposed development must be adequately addressed by existing regulations.

If a city takes action to adopt an infill exemption before April 1, 2023, the city's action cannot be appealed through SEPA or the courts.

Planned Actions

Up front review and analysis of impacts to the environment can help streamline the process for developments. Individual developments projects associated with an adopted plan (subarea plan or master planned development, for example) can be exempted from further SEPA review when a threshold determination or EIS has been issued for the adopted plan. The threshold determination or EIS for the adopted plan must detail the project-level impacts of the proposed development, thereby forgoing the need for review when the specific project applies for permitting.

For more information, see:

- RCW 43.21C.229 (infill exemptions).
- RCW 43.21C.440 (planned actions).

3.o. Consult with Washington State Department of Transportation as part of the SEPA review process to reduce appeals based on impacts to the transportation element for residential, multifamily, or mixed-use projects.

The State Environmental Policy Act (SEPA) provides citizens with a process for challenge decisions made by jurisdictions and government agencies. While an important tool for holding government accountable, SEPA appeals can slow down projects, adding time and costs to the approval process.

HB 1923 – passed into law in 2019 – recognized that SEPA appeals add cost to infill and affordable housing projects while having minimal impact on transportation systems. The law provides cities with an option to protect SEPA decisions from appeal based on impacts to the transportation element of the environment when:

- The approved residential, multifamily, or mixed-use project is consistent with the adopted transportation plan or transportation element of the comprehensive plan.
- The required impact fees and/or traffic and parking impacts are clearly mitigated under another ordinance.

-
- Washington State Department of Transportation (WSDOT) determines the project would not present significant adverse impacts to the state-owned transportation system.

Consultation with WSDOT as part of the SEPA review process can help streamline the development process. For residential, multifamily, and mixed-use projects that do not meet the criteria above, the right to appeal the SEPA decision is maintained.

For more information, See [RCW 43.21C.500](#).

Strategy 4: Increase the variety of housing choices.

4.a. Increase the types of housing allowed in low-density residential zones (duplexes, triplexes, etc).

As previously discussed, zoning regulations may unintentionally bar disadvantaged populations, including people of color, from neighborhoods due to restrictions on the size and types of housing that are affordable and accessible such to them. When housing in low-density residential zones is generally limited to single-family homes, the zone does not meet community needs for ensuring affordable housing options are available to a wider array of households. Examples of housing types that may be appropriate for low-density zones include but are not limited to:

- Duplexes, triplexes, and quadplexes.
- Townhouses.
- Accessory dwelling units.
- Courtyard apartments.

Not every low-density zone is the same, and some types of housing are more appropriate than others. Cities will need to determine the most appropriate housing types for low-density residential zones.

4.b. Allow more housing types in commercial zones.

Like low-density residential zones, commercial zones may benefit from more diversity in housing types, especially as changes in consumer shopping habits and employer work policies (telework, for example) open opportunities to convert commercial space into housing. Examples of housing types that may be appropriate for commercial zones include but are not limited to:

- Live/work units.
- Multifamily units.
- Townhouses.
- Courtyard apartments.

Not all housing types are appropriate in commercial zones, and analysis will need to be done to determine the most appropriate housing types for a commercial zone.

4.c. Adopt a form-based code to allow more housing types and protect the integrity of existing residential neighborhoods.

A form-based code uses the physical form and design of the public realm (building façade and streetscape) as the framework for regulation rather than the need to separate uses. Because of this, form-based codes are most useful in mixed use zones where the widest variety of uses are already allowed and encouraged. Form-based codes are also useful when the goal is to protect an existing neighborhood character or where developing a cohesive character is desired.

4.d. Allow single-room occupancy (SRO) housing in all multifamily zones.

Single room occupancy housing are rentals units consisting of small rooms intended for a single person to occupy. Kitchen and bathroom facilities are typically shared, as are other amenities offered by the housing facility. SROs and other types of micro housing (dormitories, small efficiency dwelling units, etc.) offer affordable options at both subsidized and market rates. Such uses are appropriate for and can integrate well in multifamily zones.

4.e. Strategically allow live/work units in nonresidential zones.

A live/work unit is a single dwelling unit consisting of both a commercial/office space and a residential component that is occupied by the same resident who has the unit as their primary dwelling. The intent is to provide both affordable living and business space for a resident/business owner. The configuration of the live/work unit can vary:

- Live-within. The workplace and living space completely overlap.
- Live-above. The workplace is below the living space with complete separation between the two.
- Live-behind. The workplace is in front of the living space with complete separation between the two possible.
- Live-in-front. The workplace is behind the living space (typically a single-family dwelling) with some overlap between the two possible.

Although home occupations are a type of live/work unit, the emphasis here is on a more intensive nonresidential component (size, traffic generation, employees on site, etc.) that may not be appropriate to classify as a home occupation. Live/work units may also be appropriate in residential zones. In either case, cities will need to conduct additional analysis to determine the locations and types of uses appropriate for live/work units.

Strategy 5: Continually build on resources, collaboration, and public understanding to improve implementation of housing strategies.

5.a. Conduct education and outreach around city programs that support affordable housing.

Providing the public and developers information about affordable housing programs can help households in need find assistance and developers identify resources for building desired unit types. Desired unit types depend on the neighborhood or policy context and could include defining the type of building (triplex or single-room occupancy building, for example), the need for income-restricted units, units of a certain size, or units containing a certain number of bedrooms. Education and outreach can also invite community dialogue on the need for diverse housing options in the community.

5.b. Fund Housing Navigators to assist households, renters, homeowners, and landlords with housing issues.

Housing issues are complex, and so are the resources available to households and landlords. When problems arise or a party needs to find information, having a designated resource to navigate issues and identify resources (development funding, tax assistance, housing opportunities, legal aid, weatherization programs, etc.) gives people more tools to reach their goals.

5.c. Identify and develop partnerships with organizations that provide or support low-income, workforce, and senior housing as well as other populations with unique housing needs.

Both for-profit and non-profit agencies provide or support low-income, workforce, and senior households. They often have expertise to deliver programs and housing the Cities of Lacey, Olympia, and Tumwater do not have as well as access to funding streams unavailable to the cities. Identifying shared vision and goals can help each organization leverage funding and improve household access to assistance.

5.d. Establish a rental registration program to improve access to data and share information with landlords.

Understanding how many dwelling units are being rented, the types of units being rented, and the cost of rent is important information needed to understand the impacts on landlords and tenants of many of the actions in this plan. It also provides the Cities of Lacey, Olympia, and Tumwater with an easy way to reach out to landlords and tenants, who are both important stakeholders when enacting many of the actions in this plan. This action is particularly suited to being implemented at the regional level and may be appropriate for the cities to develop through the Regional Housing Council. Doing so would ensure the same data is collected across the jurisdictions effectively and economically.

Strategy 6: Establish a permanent source of funding for low-income housing.

6.a. Develop a comprehensive funding strategy for affordable housing that addresses both sources of funding and how the funds should be spent.

Without a comprehensive funding strategy, it will be difficult to ensure dollars earmarked for developing affordable housing in the community are used to their full effect and meet the greatest need. A comprehensive funding strategy takes into consideration how the funds can be used, whether they can be leveraged to obtain other funding (grants, loans, etc.), and the types of projects the funding can support. This action is particularly suited to being implemented at the regional level and may be appropriate for the cities to develop through the Regional Housing Council.

6.b. Establish an affordable housing property tax levy to finance affordable housing for very low-income households.

The Cities of Lacey, Olympia, and Tumwater may impose a property tax levy up to \$0.50 per \$1,000 of a property’s assessed value to fund affordable housing. The levy must be used for low-income households.

The levy, which lasts for up to 10 years, can only be enacted if:

- The city declares an emergency exists concerning the availability of affordable housing for households served by the levy.
- A majority of voters approve it.
- The city adopts a financial plan for spending the money.

If a property tax levy were enacted at the maximum rate of \$0.50 per \$1,000 of assessed value, homeowners can expect their property taxes to go up. This amounts to \$175 per year for a home valued at \$350,000 (Table A-2). Households that rent can expect their monthly rent to increase on average between \$6.71 and \$11.91 each month, depending on the type of unit rented.

Table A-2. Additional costs to households with a \$0.50 per \$1,000 property tax levy

Owner-Occupied*		Renter-Occupied	
Assessed Value	Additional Property Taxes (annual)	Building Size	Additional Monthly Rent (average) per unit
\$350,000	\$175	Single-Family Dwelling	\$11.91
\$450,000	\$225	2-, 3-, and 4-plex units	\$9.04
\$550,000	\$275	5+ unit apartments	\$6.71

Note: Rates for owners only apply to detached single-family homes. Costs – which are rounded – are based on the 2017 total assessed value of all taxable non-exempt properties and are adjusted for inflation to 2020 dollars.
Source: Thurston County Assessor.

Thurston County also has the ability to establish a property tax levy. If both cities and Thurston County impose the levy, the last jurisdiction to receive voter approval for the levies must be reduced or eliminated so that the combined rate does not exceed the \$0.50 per \$1,00 of assessed property value.

If the Cities of Lacey, Olympia, and Tumwater each enact the levy, nearly \$9.7 million could be collected for affordable housing in 2021 (Table A-3). If the tax levy were adopted countywide, more than \$30 million would be available to serve low-income households in 2021. This includes developing new housing, enabling affordable homeownership, and making home repairs.

Table A-3. Potential affordable housing funding from maximum property tax levy

Jurisdiction	2020 Assessed Property Values	Potential Affordable Housing Funds
Lacey	\$7.4 billion	\$3.7 million
Olympia	\$8.2 billion	\$4.1 million
Tumwater	\$3.9 billion	\$1.9 million
TOTAL (cities only)	\$19.5 billion	\$9.7 million
TOTAL (Countywide)	\$31.5 billion	\$31.5 million

Note: Values – which are rounded – are based on the 2020 total assessed value of taxable non-exempt properties. Potential affordable housing funds are based on the total assessment of all properties combined.

Source: Thurston County Assessor.

Property Tax Levies

- **Lacey:** has not established a property tax levy.
- **Olympia:** has not established a property tax levy.
- **Tumwater:** has not established a property tax levy.
- **Thurston County:** has not established a property tax levy.

For more information, see [RCW 84.52.105](#).

6.c. Establish an affordable housing sales tax.

Beginning in 2020, cities may establish a 0.1 percent affordable housing sales tax by legislative authority or by voter approval. At least 60 percent of the revenue must be used for one or more of the following:

- Constructing affordable housing (new construction or retrofitting an existing building).
- Constructing facilities providing housing-related services.
- Constructing mental and behavioral health-related facilities.
- Funding the operations and maintenance costs of the above three projects.

Thurston County can also establish the affordable housing sales tax. If it does so before the Cities of Lacey, Olympia, and Tumwater, the cities will not be able to establish their own funds. If the cities and Thurston County impose the sales tax, the County must provide a credit to the cities for the amount they would have collected. If the Cities of Lacey, Olympia, and Tumwater had been able to enact an

affordable housing sales tax in 2019, nearly \$5 million would be available to serve low-income households (Table A-4).

For more information, see [RCW 82.14.530](#).

Table A-4. Potential affordable housing funding from maximum affordable housing sales tax in 2019

Jurisdiction	2019 Taxable Retail Sales	Potential Affordable Housing Funds
Lacey	\$1.5 billion	\$1.5 million
Olympia	\$2.4 billion	\$2.4 million
Tumwater	\$0.9 billion	\$0.9 million
TOTAL (cities only)	\$4.8 billion	\$4.8 million
TOTAL (countywide)	\$6.2 billion	\$6.2 million

Note: Taxable retail sales are rounded.

Source: Washington State Department of Revenue, [Taxable Retail Sales](#).

Affordable Housing Sales Tax

- **Lacey:** has not established an affordable housing sales tax.
- **Olympia:** established an affordable housing sales tax in 2018, referred to as the “Home Fund.” Approximately 65 percent of funds are dedicated to construction projects and 35 percent to housing program operations. Must be re-authorized by voters in 2028.
- **Tumwater:** has not established a sales tax.
- **Thurston County:** has not established an affordable housing sales tax.

6.d. Establish a regional housing trust fund to provide dedicated funding for affordable housing. Housing trust funds are distinct funds established by local governments to receive funding to support housing affordability. It is not an endowment that operates from earnings but acts as a repository, preventing funds from being coopted for other purposes. Establishing a housing trust fund is particularly suited to being implemented at the regional level and may be appropriate for the cities to develop through the Regional Housing Council.

6.e. Use value capture to generate and reinvest in neighborhoods experiencing increased private investment (with a focus on areas with planned or existing transit).

Value capture is a type of public financing that recovers some or all the value public infrastructure generates for private landowners. When roads are improved, water and sewer lines extended, or new parks or public amenities developed, property values tend to increase. Value capture is best planned for from the outset of a project and can include developer contributions and special taxes and fees.

Appendix B.

Considered Actions

In developing this plan, many actions were considered, though not all were included. This appendix provides a full list of the actions considered in the plan’s development. Where appropriate, explanations for why an action was excluded are included. Actions were developed and refined over six months and the wording may not match previous versions.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (1.a)	Donate or lease surplus or underutilized jurisdiction-owned land to developers that provide low-income housing.	
Excluded	Create shovel-ready housing developments that can be handed off to a developer to construct.	Action is out of scale with what our region can reasonably accomplish. Cities do not have the budgets or expertise to perform this action.
Excluded	Purchase property with the intent to donate or lease to developers that provide income-restricted affordable housing.	Combined with Action 1.a.
Included (3.a)	Offer developers density and/or height incentives for desired unit types.	

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (1.b)	Require PRDs/PUDs for low-density development and include standards for including low-income housing.	
Excluded	Make regulations and permit processing more predictable, to remove some uncertainty for both builders and lenders.	Action not specific enough. Other actions more specifically address the need to improve predictability of regulations and permit processing.
Excluded	Allow third-party review and approval of development projects (anytime OR when cities are backlogged).	See Action 3.b.
Included (3.b)	Allow third-party review of building permits for development projects.	
Excluded	Adopt a single development code for Lacey, Olympia, Tumwater, and the UGAs to make regulations and permit processing more predictable.	Each community has a different identity with a desire for different standards.
Excluded	Waive reviews for energy code compliance when a project receives a green building certification.	It does not appear that a green building certification actually makes housing more affordable vs. complying with energy code. In the right market conditions, may be an incentive to buy.
Excluded	Require shot clocks for permit processing.	State law already requires timelines for review, and each city is able to accomplish their reviews in a timely manner.
Included (1.c)	Adopt a "Notice of Intent to Sell" ordinance for multifamily developments.	
Included (1.d)	Provide funding for the Housing Authority of Thurston County and other non-profit organizations to income-restricted units proposed to be converted to market rate housing.	
Included (2.a)	Provide displaced tenants with relocation assistance.	
Implemented	With major comprehensive plan updates, confirm land is suitably zoned for development of all housing types.	
Excluded	On a regular basis, hold a series of community meetings to discuss how housing and zoning regulations affect equity goals.	See Action 5.a.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (4.a)	Increase the types of housing allowed in low-density residential zones (duplexes, triplexes, etc).	
Excluded	Allow more housing types in commercial and industrial zones.	See Action 4.c.
Included (4.b)	Allow more housing types in commercial zones.	
Included (4.c)	Adopt a form-based code for mixed-use zones to allow more housing types and protect the integrity of existing residential neighborhoods.	
Included (3.c)	Develop a plan for adapting vacant commercial space into housing.	
Included (3.d)	Expand allowance of residential tenant improvements without triggering land use requirements.	
Excluded	Prior to finalizing a draft for public review, vet comprehensive plans and development code changes with the development community to ensure desired housing types and locations are supported by market conditions.	See Action 1.e.
Included (1.e)	As part of comprehensive plan and development code changes, include an evaluation of the impact such changes will have on housing affordability, especially for low-income households.	
Implemented	Recognize modular/manufactured housing as a viable form of housing construction.	
Excluded	Provide for a dynamic mix of residential land uses and zones in order to create a diverse mix of sites available for different housing types	This action is already implemented. .
Implemented	Simplify requirements for accessory dwelling units (ex: title notification, owner living on site, etc.).	

Action Status (Plan Reference)	Action	Explanation for Exclusion
Implemented	Allow accessory dwelling units in all residential zones.	
Excluded	Allow accessory dwelling units in commercial zones.	Not an issue that's ever been raised to staff; need to focus on actions that have real and lasting impacts.
Included (3.e)	Reduce parking requirements for residential uses, including for multifamily developments near frequent transit routes.	
Included (3.f)	Identify strategically placed but underdeveloped properties and determine what barriers exist to developing desired housing types.	
Excluded	Identify strategically placed properties where up zoning is appropriate.	see Action 3.f.
Implemented	Require minimum residential densities.	
Included (3.g)	Increase minimum residential densities.	
Included (3.h)	Reduce minimum lot sizes.	
Excluded	Support and plan for assisted housing opportunities using federal, state, or local aid.	Action not clear/specific enough
Excluded	Support diverse housing alternatives and ways for older adults and people with disabilities to remain in their homes and community as their housing needs change.	Action not specific enough. Other actions more specifically address the need to support diverse housing alternatives for seniors.
Excluded	Retain existing subsidized housing.	None of the cities have subsidized units at this time, so it is not an action they would pursue. Other actions can support other entities in retaining existing subsidized housing.
Excluded	Encourage new housing on transportation arterials and in areas near public transportation hubs.	Action not specific enough. See Actions 3.i and 3.e for actions that more specifically address the issue of housing near transportation facilities.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (3.i)	Lower transportation impact fees for multifamily developments near frequent transit service routes.	
Excluded	Reduce parking requirements for multifamily developments near frequent transit routes.	Combined with Action 3.e.
Implemented	Allow group homes in all residential zones and commercial zones that allow residential uses.	
Excluded	Limit the density of group homes in residential areas to prevent concentration of such housing in any one area.	May create a hindrance to ensuring there is enough housing opportunities for seniors. There are nearly 150 adult family homes in Thurston County now; their concentration in any one area is not known to be an issue.
Included (1.f)	Provide funding for renovating and maintaining existing housing that serves low-income households or residents with disabilities.	
Excluded	Support programs to improve energy efficiency, health conditions and public recognition of improvements in low-income rental housing	Statewide need - not just a local need. Combined with Action 1.f.
Excluded	Fund programs that improve the energy efficiency and health conditions in low-income rental housing.	Combined with Action 1.f.
Excluded	Encourage self-help housing efforts and promote programs in which people gain home equity in exchange for work performed in renovation or construction.	Action not specific enough. See Action 1.p.
Included (1.p)	Partner with local trade schools to provide renovation and retrofit services for low-income households as part of on-the-job-training.	
Excluded	Establish a manufactured home park zone to promote their preservation.	See Action 2.c.
Included (2.c)	Rezone manufactured home parks to a manufactured home park zone to promote their preservation.	
Included (1.g)	Allow manufactured home parks in multifamily and commercial areas.	

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (1.h)	Provide funding for low-income and special needs residents to purchase housing through community land trusts.	
Excluded	Fund programs that prevent homelessness for persons returning to the community from institutional or other sheltered settings (including foster care).	Action better suited to the Thurston County Homeless Response Plan.
Excluded	Fund self-sufficiency and transitional housing programs that help break the cycle of homelessness.	Deals with a temporary/emergency housing situation better addressed through the Regional Housing Council and other, more targeted efforts to address homelessness.
Excluded	Provide funding to the Regional Housing Council for temporary emergency housing programs.	Deals with a temporary/emergency housing situation better addressed through the Regional Housing Council and other, more targeted efforts to address homelessness.
Implemented	Adopt design standards that assist new forms or high-density housing and promote infill.	
Included (4.d)	Allow single-room occupancy (SRO) housing in all multifamily zones.	
Included (4.e)	Strategically allow live/work units in nonresidential zones.	
Excluded	Promote PUD/PRD and cluster subdivisions.	See Action 5.a.
Implemented	Establish a multifamily tax exemption.	
Included (6.a)	Develop a comprehensive funding strategy for affordable housing that addresses both sources of funding and how the funds should be spent.	
Excluded	On a regular basis, evaluate the effectiveness of how the multifamily tax exemption is being used to further affordable housing goals.	
Included (6.b)	Establish an affordable housing property tax levy to finance affordable housing for very low-income households.	
Included (6.c)	Establish an affordable housing sales tax.	

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (3.j)	Expand the multifamily tax exemption to make it available in all transit corridors.	
Included (1.i)	Offer density bonuses for low-income housing.	
Excluded	Require developers to provide income-restricted units as part of low-density developments.	The Thurston Region does not have the market to implement this action. Requires a market evaluation before implementing.
Excluded	Require property owners to provide an affordable housing fee when building homes over a certain size.	The Thurston Region does not have the market to implement this action. Requires a market evaluation before implementing.
Excluded	Establish alternative development standards for affordable housing. (standards in the zoning code to support affordable housing)	Action not specific enough. See Action 1.j.
Included (1.j)	Define income-restricted housing as a different use from other forms of housing in the zoning code.	
Included (1.k)	Offer and/or expand fee waivers for low-income housing developments.	
Excluded	Expand fee waivers for affordable housing developments.	Combined w/ Action 1.k.
Included (3.k)	Allow deferral of impact fee payments for desired unit types.	
Included (1.l)	Require low-income housing units as part of new developments.	
Included (1.m)	Fund development projects that increase low-income housing through grants or loans.	
Included (6.d)	Establish a regional housing trust fund to provide dedicated funding for affordable housing.	
Excluded	Establish a local housing trust fund to provide dedicated funding for low-income housing.	Coordination at the regional scale will have more of an impact than developing individual plans.
Excluded	Create partnerships with local housing groups to increase affordable housing options for seniors and other populations with unique needs.	Combined w/ Action 5.c.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Implemented	Make strategic investments in infrastructure expansion to reduce development costs.	
Included (3.l)	Simplify land use designation maps in the comprehensive plan to help streamline the permitting process.	
Excluded	Inventory housing units dedicated for seniors, low-income households, and ADA-accessible units.	Data should support the actions that result in change.
Excluded	Inventory substandard housing units (units with poor energy efficiency, indoor air quality/mold issues, etc.).	Data should support the actions that result in change.
Included (5.d)	Establish a rental registration program to improve access to data and share information with landlords.	
Excluded	Require the owners of rental properties to obtain a business license.	Data should support the actions that result in change.
Excluded	On a regular basis, inventory rental housing.	Data should support the actions that result in change.
Included (3.m)	Integrate or adjust floor area ratio standards.	
Implemented	Relax ground floor retail requirements to allow residential units.	
Implemented	Reduce setbacks and increase lot coverage/impervious area standards.	
Excluded	Maximize SEPA threshold exemptions for single-family and multifamily development proposals.	See Action 3.n.
Included (3.n)	Maximize use of SEPA threshold exemptions for residential and infill development.	
Excluded	Utilize SEPA exemptions to encourage infill development in urban growth areas	See Action 3.n.
Excluded	Create subarea plans with non-project environmental impact statements.	See Action 3.n.
Excluded	Develop SEPA-authorized "planned actions" to streamline permitting process in designated areas.	See Action 3.n.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Included (3.o)	Consult with Washington State Department of Transportation as part of the SEPA review process to reduce appeals based on impacts to the transportation element for residential, multifamily, or mixed-use projects.	
Implemented	Process short plat applications administratively.	
Excluded	Process preliminary long plat applications that meet specific requirements administratively.	Can implement this but if even one person requests a public hearing, a public hearing must be held. May not be worth implementing if a public hearing is always anticipated and it has different noticing requirements from the norm (administrative headaches).
Excluded	Market available housing incentives.	See Action 5.a.
Excluded	Establish a foreclosure intervention counseling program.	Already existing programs that fill this need.
Included (1.n)	Establish a program to preserve and maintain healthy and viable manufactured home parks.	
Excluded	Require developers to provide relocation assistance when a manufactured home park cannot be preserved.	
Excluded	Help residents convert manufactured home parks into cooperatives.	See Action #63
Excluded	Adopt a just cause eviction ordinance.	See Action 2.g.
Included (2.d)	Adopt a “right to return” policy.	
Included (2.e)	Adopt short-term rental regulations to minimize impacts on long-term housing availability.	
Included (2.f)	Establish a down payment assistance program.	
Excluded	Establish a property tax assistance program for low-income homeowners.	This may not be in the cities’ purview.
Excluded	Establish a property tax assistance program for homeowners with disabilities.	This may not be in the cities’ purview.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Excluded	Require an impact analysis for new housing and land use proposals.	This action will lead to an increase in housing costs. Transportation impact analyses are already required where needed.
Excluded	Require subsidized housing be integrated with unsubsidized housing.	See Action 1.l.
Excluded	Develop and implement an education and outreach plan for affordable housing options	See Action 5.a.
Included (5.a)	Conduct education and outreach around city programs that support affordable housing.	
Included (5.b)	Fund Housing Navigators to assist households, renters, homeowners, and landlords with housing issues.	
Excluded	Review and, if necessary, update property maintenance codes (including standards for mold/moisture) to keep housing in good repair.	Enforcement of property maintenance codes is really the issue. See Action #76a
Included (1.o.)	Enhance enforcement of property maintenance codes to keep housing in good repair.	
Excluded	Co-locate emergency, transitional, and permanent affordable housing.	This is an action that is taken by the developer; may not be appropriate for the city to require.
Excluded	Working through the Regional Housing Council, identify appropriate locations for emergency housing within each jurisdiction.	This action deals with a temporary/emergency housing situation better addressed through the Regional Housing Council and other, more targeted efforts to address homelessness.
Included (5.c)	Identify and develop partnerships with organizations that provide or support for low-income, workforce, and senior housing as well as other populations with unique housing needs.	
Excluded	Look at options for creating workforce housing.	Action is not specific enough. Need to define what exactly should the cities be doing.

Action Status (Plan Reference)	Action	Explanation for Exclusion
Excluded	Explore creating dormitory-style housing, similar to what colleges have, with common bathrooms and communal kitchens for transitional housing.	See Action 4.d.
Excluded	Identify underutilized properties ripe for redevelopment.	See Action 3.f.
Excluded	Review the recommendations in the Urban Corridors Task Force Report (TRPC, 2012).	Data should support the actions that result in change.
Excluded	Adopt a preservation ordinance.	Combined with Action 2.g.
Included (1.p)	Partner with low-income housing developers (such as Habitat for Humanity) to expand homeownership opportunities.	
Excluded	Identify and remove code and fee impediments/disincentives to affordable housing.	Like equity, need to review all actions through an affordable housing lens. See Action 1.e.
Included (6.e)	Use value capture to generate and reinvest in neighborhoods experiencing increased private investment (with a focus on areas with planned or existing transit).	
Excluded	Limit or regulate fees associated with rental housing applications.	See Action 2.g.
Excluded	Require landlords to establish payment plans for tenants that get behind on rent.	See Action 2.g.
Excluded	Eviction mitigation to find mutual termination of rental agreement instead of evicting tenants.	See Action 2.g.
Excluded	Improve access to enforcement landlord/tenant laws (court enforcement is a barrier).	See Action 2.g.
Excluded	Increase access to legal assistance for landlord/tenant issues (free or sliding scale).	See Action 2.g.
Excluded	Program to incentivize LLs to accept tenants with poor credit or criminal history.	See Action 2.g.
Included (2.g)	Identify and implement appropriate tenant protections that improve household stability.	

MINUTES

Lacey Planning Commission Meeting
Tuesday, May 18, 2021 – 5:00 p.m.
Conducted remotely via videoconference

Meeting was called to order at 5:00 p.m. by Dave Wasson.

Planning Commission members present: Dave Wasson, Gail Madden, Peg Evans-Brown, Daphne Retzlaff, Kyrian MacMichael, Mark Mininger, Eddie Bishop, and Robin Vasquez. Staff present: Rick Walk, Ryan Andrews, Martin Hoppe, and Jessica Brandt.

Dave noted a quorum present.

Gail Madden made a motion, seconded by Mark Mininger, to approve the agenda for tonight's meeting and the May 4 meeting minutes. All were in favor, the motion carried.

1. **Public Comments:** None.
2. **Commission Members Reports:** None.
3. **Director's Report:** Rick Walk reported that Shaunesy Behrens has resigned from Planning Commission and the position is open to applicants.
4. **Public Hearings:**
 - 6-Year Transportation Improvement Plan (TIP): Martin Hoppe, Transportation Manager.**
 - Martin Hoppe explained that the TIP is a list of projects the City plans to start in the next six years, and its main purpose is to track State and Federal funds and identify regionally significant projects through TRPC.
 - Martin went over the projects and answered questions.
 - No public testimony was given. Dave closed the public hearing.
 - **Peg Evans-Brown made a motion, seconded by Robin Vasquez, to refer the 6-year TIP to Council for approval. All were in favor, the motion carried.**

2021 Comprehensive Plan Amendments: Ryan Andrews, Planning Manager; Jessica Brandt, Associate Planner.

- **Thurston Climate Mitigation Plan.**
 - o Jessica Brandt gave some background info and went over survey results.
 - o Wayne Olsen, Sue Madeiros, Lynn Fitz-Hugh, Roy Treadway, Aaron Dumas, Sally Vogel, Carolyn Treadway, Robert Jensen, and Heather MacMaster spoke in favor of the plan and urged Planning Commission to refer it to Council for approval.
 - o Dave closed the public hearing. A brief discussion followed.
 - o **Gail Madden made a motion, seconded by Robin Vasquez, to refer the TCMP to Council highly recommended by Planning Commission for approval. All were in favor, the motion carried.**
- **Housing Action Plan.**
 - o Ryan Andrews gave some background info, went over the plan, and answered questions.
 - o Wayne Olsen spoke in favor of the Urban Forest Management Plan and asked that staff ensure that the housing plan does not conflict with the TCMP. Sally Vogel agreed.
 - o Sue Madeiros and Carolyn Treadway thanked staff and Planning Commission for all the work they've done on this plan.
 - o Robert Jensen asked Planning Commission to consider the recreational aspect, more people in the City means more recreation is needed and more of a need to preserve recreational areas.
 - o There was a discussion as to whether Planning Commission should refer the plan to Council or discuss further. Staff answered questions and clarified some issues.
 - o **Robin Vasquez made a motion, seconded by Peg Evans-Brown, to refer the Housing Action Plan to Council for approval. All were in favor, the motion carried.**

- **Urban Forest Management Plan and Associated Regulations.**

- o Jessica went over the plan amendments and timeline, and discussed public outreach.
- o Wayne Olsen reiterated the importance of coordination between TCMP and Urban Forest Management Plan.
- o Sue Madeiros asked that the city stop allowing clearcutting to make way for warehouse development.
- o Lynn Fitz-Hugh asked Planning Commission to not approve the plan but to send back to the committee for further amendments as it does not reflect the committee's dialog, include the survey results, or meet the tree goals of the TCMP.
- o Roy Treadway said he'd like to see a stronger tree plan for Lacey.
- o Marianne Thompkins spoke on the importance of protecting large trees.
- o Sally Vogel agreed with previous speakers.
- o Carolyn Treadway seconds the previous comments and would like to see the plan amended.
- o Robert Jensen urged Planning Commission to review the plan further and try to strengthen tree protection measures.
- o Lisa Ceazan urged Planning Commission to send the plan back to tree task force to be reworked to provide more protection and align with State regulations and TCMP.
- o Phyllis Farrell expressed her concerns over the loss of Lacey's tree canopy over the years and the importance of protecting older trees. She urged Planning Commission to review the plan further.
- o A brief discussion followed.
- o **Robin Vasquez made a motion, seconded by Eddie Bishop, to discuss the plan further before referring to Council. All were in favor, the motion carried.**
- o Dave closed the public hearing. Rick noted discussion of the plan will be added to the next agenda.

5. **Communications and Announcements:** None.

6. **Next meeting:** June 1, 2021.

7. **Adjournment:** 7:25 p.m.

Ryan Andrews

From: Cora Davidson <cora@coradavidsonconsulting.com>
Sent: Saturday, May 15, 2021 7:02 AM
To: Ryan Andrews
Subject: Public comment on Housing Actions Plan

External Email Warning! Use caution before clicking links or opening attachments.

Dear Mr. Andrews - thank you for your service to the city of Lacey.

As a supporter of Habitat for Humanity, I want to share my concern about affordable housing in our community and provide public comment regarding the Housing Action Plan.

As a supporter of South Puget Sound Habitat for Humanity, I see firsthand the struggle of hardworking people in Lacey who want nothing more than a safe and affordable place to call their own.

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historic practices of housing discrimination including redlining and predatory lending, as well as contemporary forms of discrimination is compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit "missing middle" for-sale homes.

The City of Lacey must act to reverse these historical wrong doings and develop policies that create an opportunity-rich and inclusive community for all. Habitat for Humanity recognizes that a focus on homeownership can help alleviate parts of the ongoing housing crisis and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty for many, in addition to a further equitable distribution of wealth opportunities.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities (1.p). Homeownership is a wealth-building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program (2.f), down payment assistance is the biggest barrier for first-time homebuyers, this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today's market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Sincerely,

Cora Davidson, MPA
1008 Lybarger St NE, Olympia, WA 98506
Cora Davidson Consulting
She/her pronouns
cora@coradavidsonconsulting.com
coradavidsonconsulting.com
[linkedin.com/in/coradavidson](https://www.linkedin.com/in/coradavidson)
(360) 999-8014

The best compliment you can pay us is your referral.

Ryan Andrews

From: Carly Colgan <carly@spshabitat.org>
Sent: Friday, May 14, 2021 8:49 AM
To: Ryan Andrews
Subject: Comment on the Housing Action Plan
Attachments: Comments for Lacey Housing Action Plan.pdf

External Email Warning! Use caution before clicking links or opening attachments.

Hi Ryan,
Attached are our comments on the Housing Action Plan for the upcoming public hearing.
Thanks,
Carly

--

Carly Colgan (she/her/hers)

Chief Executive Officer

South Puget Sound Habitat for Humanity

711 Capitol Way S, Ste 401 • Olympia, WA 98501

O: 360.956.3456 x16 • D: 360.856.6045

carly@spshabitat.org • www.spshabitat.org



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We build
**strength, stability,
self-reliance
and shelter**



We build **strength**, **stability**, and **self-reliance** through **shelter**.

May 14, 2021

Lacey Planning Commission,

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historic practices of housing discrimination including redlining and predatory lending, as well as contemporary forms of discrimination are compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit "missing middle" for-sale homes.

The City of Lacey must act to reverse these historical wrong doings and develop policies that create an opportunity rich and inclusive community for all. Habitat for Humanity recognizes that a focus on homeownership can help alleviate parts of the ongoing housing crisis and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty for many, in addition to a further equitable distribution of wealth opportunities.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities (1.p). Homeownership is a wealth building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program (2.f), down payment assistance is the biggest barrier for first time homebuyers, this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today's market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Sincerely,

A handwritten signature in black ink, appearing to read "Carly Colgan".

Carly Colgan
Chief Executive Officer

Ryan Andrews

From: Jennifer Arnold <JArnold@olyfed.com>
Sent: Monday, May 17, 2021 8:28 AM
To: Ryan Andrews
Subject: Housing Action Plan comments

External Email Warning! Use caution before clicking links or opening attachments.

Good Morning,

As a resident of Lacey, and a supporter of Habitat for Humanity, I want to share my concern about affordable housing in our community and provide public comment regarding the Housing Action Plan.

As a board member of South Puget Sound Habitat for Humanity, I see firsthand the struggle of hardworking people in Lacey who want nothing more than a safe and affordable place to call their own.

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historic practices of housing discrimination including redlining and predatory lending, as well as contemporary forms of discrimination are compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit “missing middle” for-sale homes.

The City of Lacey must act to reverse these historical wrong doings and develop policies that create an opportunity rich and inclusive community for all. Habitat for Humanity recognizes that a focus on homeownership can help alleviate parts of the ongoing housing crisis and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty for many, in addition to a further equitable distribution of wealth opportunities.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities (1.p). Homeownership is a wealth building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program (2.f), down payment assistance is the biggest barrier for first time homebuyers, this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today’s market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Sincerely,

Jennifer Arnold
SVP Chief Banking Officer
Olympia Federal Savings
P: (360) 754-3400
NMLS #1213019

[Start the Loan Process Today!](#) | [Open an Account Today!](#)



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Ryan Andrews

From: Bob Bredensteiner <bob@bobbredensteiner.com>
Sent: Friday, May 14, 2021 11:23 AM
To: Ryan Andrews
Subject: Housing Action Plan

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Ryan,

As a board member of South Puget Sound Habitat for Humanity, I want to comment regarding Lacey's Housing Action Plan.

I have seen firsthand the struggle of hardworking people in our community who want nothing more than a safe and affordable place to call their own. Unfortunately, homeownership is increasingly unattainable for many across all age, racial and ethnic groups. In part, this is due to public underfunding of affordable homeownership opportunities for low- and moderate-income families.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities because homeownership is a wealth building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program because a down payment is very often the biggest barrier for first time homebuyer. Down payment assistance as a regional approach would allow for greater access to homeownership in today's market.

Habitat for Humanity believes that homeownership can help alleviate part of the ongoing housing crisis, and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty.

We believe the City of Lacey can foster a richer and more inclusive community for all by incorporating these initiatives in its Action Plan.

Sincerely,

Bob Bredensteiner

Treasurer

South Puget Sound Habitat for Humanity

Ryan Andrews

From: Roger Douglas <Dr_RogerDouglas@outlook.com>
Sent: Sunday, May 16, 2021 6:06 PM
To: Ryan Andrews
Subject: Advocate For Affordable Housing

External Email Warning! Use caution before clicking links or opening attachments.

Mr. Ryan Andrews,

As a resident of Lacey, and a supporter of Habitat for Humanity, I want to share my concern about affordable housing in our community and provide public comment regarding the Housing Action Plan.

As a board member of South Puget Sound Habitat for Humanity, I see firsthand the struggle of hardworking people in Lacey who want nothing more than a safe and affordable place to call their own.

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historic practices of housing discrimination including redlining and predatory lending, as well as contemporary forms of discrimination are compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit “missing middle” for-sale homes.

The City of Lacey must act to reverse these historical wrong doings and develop policies that create an opportunity rich and inclusive community for all. Habitat for Humanity recognizes that a focus on homeownership can help alleviate parts of the ongoing housing crisis and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty for many, in addition to a further equitable distribution of wealth opportunities.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities (1.p). Homeownership is a wealth building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program (2.f), down payment assistance is the biggest barrier for first time homebuyers, this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today’s market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Sincerely,

Dr. Roger Douglas

Ryan Andrews

From: dtgrover <dtgrover4975@gmail.com>
Sent: Friday, May 14, 2021 10:20 AM
To: Ryan Andrews
Subject: affordable housing comments

External Email Warning! Use caution before clicking links or opening attachments.

Dear Mr. Andrews...

As a [resident of Lacey, and a] supporter of Habitat for Humanity, I want to share my concern about affordable housing in our community and provide public comment regarding the Housing Action Plan.

As a [volunteer/staff member/board member/supporter] of South Puget Sound Habitat for Humanity, I see firsthand the struggle of hardworking people in Lacey who want nothing more than a safe and affordable place to call their own.

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historic practices of housing discrimination including redlining and predatory lending, as well as contemporary forms of discrimination are compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit "missing middle" for-sale homes.

The City of Lacey must act to reverse these historical wrong doings and develop policies that create an opportunity rich and inclusive community for all. Habitat for Humanity recognizes that a focus on homeownership can help alleviate parts of the ongoing housing crisis and restore racial, ethnic, and economic justice by promoting a break in a cycle of generational poverty for many, in addition to a further equitable distribution of wealth opportunities.

Specifically, we encourage the city to:

- partner with low-income housing developers to expand homeownership opportunities (1.p). Homeownership is a wealth building tool that allows low-income families to exit cycles of poverty, create lasting generational change, and require less public assistance in the future.
- establish a down payment assistance program (2.f), down payment assistance is the biggest barrier for first time homebuyers, this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today's market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Respectfully,
Douglas T. Grover
Board Member
Habitat for Humanity

Ryan Andrews

From: Eileen Dalton <eileen@spshabitat.org>
Sent: Tuesday, May 18, 2021 11:02 AM
To: Ryan Andrews
Subject: SPS Habitat for Humanity Housing Action Plans

External Email Warning! Use caution before clicking links or opening attachments.

As a supporter of Habitat for Humanity, I want to share my concern about affordable housing in our community and provide public comment regarding the Housing Action Plan.

As a staff member of South Puget Sound Habitat for Humanity, I see firsthand the struggle of hardworking people in Lacey who want nothing more than a safe and affordable place to call their own.

Homeownership, even as a concept, has increasingly become unattainable for many in our community, especially for the growing share of young buyers and historically and currently marginalized communities. The racial wealth gap, which is the legacy of historical practices of housing discrimination, including redlining and predatory lending, as well as contemporary forms of discrimination are compounded by public underfunding of affordable homeownership for low- and moderate-income households and underproduction in for-profit “missing middle” for-sale homes.

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Specifically, we encourage the city to:

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- Establish a down payment assistance program (2.f); down payment assistance is the biggest barrier for first-time homebuyers; this is especially true for people of color. Down payment assistance as a regional approach would allow for greater access to homeownership in today’s market.

Habitat for Humanity is asking that you please support affordable homeownership as a means to create lasting change in our community.

Sincerely,

--

Eileen Dalton (she/her/hers)

Housing Coordinator

South Puget Sound Habitat for Humanity

711 Capitol Way S, Ste 401 • Olympia, WA 98501

O: 360.956.3456 x4 • D: 360.529.5284

eileen@spshabitat.org • www.spshabitat.org





LACEY CITY COUNCIL MEETING

September 16, 2021

SUBJECT: 2021 Budget Amendments (2022 Vehicles)

RECOMMENDATION: Adopt ordinance amending the 2021 Budget.

STAFF CONTACT: Scott Spence, City Manager 
Troy Woo, Finance Director 

ORIGINATED BY: Troy Woo, Finance Department

ATTACHMENTS: 1. [Ordinance No. 1600](#)
2. [Summary for Proposed Ordinance](#)

FISCAL NOTE: See attached [Ordinance Exhibit "A"](#).

PRIOR REVIEW:

BACKGROUND:

Throughout the year, adjustments to the budget become necessary as a result of City Council actions, activity levels that were not anticipated during budget development, and grant awards (or other receipts of outside funding). Historically, the budget has been amended once per year immediately prior to the development of the next year's proposed budget document. However, due to the global microchip shortage caused by the COVID-19 public health emergency, vehicle inventory shortages are already impacting the 2022 purchase year. As an example, the City received notice that all 2022 orders for larger Ford pickup trucks must be submitted prior to September 30, 2021. Staff recommends the 2021 Budget be amended to accommodate the earlier order deadline. Also, in anticipation of additional notices for early orders, the proposed amendment includes budget appropriations for the majority of the anticipated 2022 vehicle purchases.

The purchase of replacement vehicles is funded by reserves collected over the life of vehicles within the Equipment Rental Fund, so the majority of the replacement purchases is funded. Shortfalls are paid by the benefiting funds/departments. New vehicles being added to the fleet are funded by reserves within the funds the vehicles will be assigned to.

The full details of the proposed 2022 vehicle order budget amendments are attached to the proposed ordinance as exhibit “A”. The vehicles, which include “placeholder” in the comments, are not expected to be ordered during 2021 unless vendors issue order deadlines or further supply concerns arise. These vehicles are being included in the proposed amendment to provide staff the flexibility to react to the fast-changing environment.

The full City Council was briefed on the vehicle shortage issue at its September 2, 2021, meeting, as part of the normal annual budget amendment presentation.

ADVANTAGES:

1. The proposed adjustments will allow City staff the flexibility to react to potential early 2022 vehicle order deadlines as a result of the challenging global microchip shortage.
2. While the proposed amendment authorizes 2022 vehicle orders in advance of the normal public budget process, the actual purchases will very likely not occur until 2022. The expected 2022 expenditures timeline allows the proposed purchases to be included in the 2022 Budget public process.

DISADVANTAGES:

1. The proposed amendment appropriates funds not expected to be expended, but it preserves the current year’s budget integrity in the event they are expended and provides the vendors assurance of available funds.

ORDINANCE NO. 1600

CITY OF LACEY

AN ORDINANCE AMENDING THE 2021 FISCAL YEAR BUDGET ADOPTED BY ORDINANCE NO. 1574 BY REVISING THE BUDGETED AMOUNTS FOR THE CAPITAL EQUIPMENT, WATER M&O, WASTEWATER M&O, AND EQUIPMENT RENTAL FUNDS AND APPROVING A SUMMARY FOR PUBLICATION.

WHEREAS, there is a need for additional expenditures to be budgeted within the Capital Equipment, Water M&O, Wastewater M&O, and Equipment Rental Funds for expenditures which could not be contemplated at the time of adopting the 2021 fiscal year budget; and

WHEREAS, revenues, as shown on Exhibit "A" attached hereto, are available from the sources indicated on said Exhibit for the making of said expenditures; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

Section 1. The 2021 fiscal year budget and Ordinance No. 1574 adopting said budget are hereby amended by making those certain changes to the 2021 fiscal year budget set forth on Exhibit "A", attached hereto and made a part hereof as though fully set forth herein and for all purposes considered to be a portion of this ordinance.

Section 2. The City Clerk and the codifiers of this ordinance are authorized to make necessary corrections to this ordinance including, but not limited to, the correction of scrivener's/clerical errors, references, ordinance numbering, section/subsection numbers and any references thereto.

Section 3. The summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, on this 16th day of September, 2021.

Approved as to form:

Mayor

City Attorney

ATTEST:

City Clerk

SUMMARY FOR PUBLICATION

ORDINANCE NO. 1600

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on September 16, 2021, Ordinance No. 1600 entitled **“AN ORDINANCE AMENDING THE 2021 FISCAL YEAR BUDGET ADOPTED BY ORDINANCE NO. 1574 BY REVISING THE BUDGETED AMOUNTS FOR THE CAPITAL EQUIPMENT, WATER M&O, WASTEWATER M&O, AND EQUIPMENT RENTAL FUNDS AND APPROVING A SUMMARY FOR PUBLICATION.”**

A section by section summary of this ordinance is as follows:

Section 1 revises the amounts, which were budgeted for revenues and expenditures within the funds listed above by the 2021 fiscal year budget, which had been adopted by Ordinance No. 1574. The reason for revising the budgeted amounts is the fact that there exists a need for additional expenditures within those funds, which could not be contemplated at the time of adopting the 2021 fiscal year budget.

Section 2 provides provisions for corrections.

Section 3 approves this summary.

A copy of the full text of this ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

City Clerk

Published: September 20, 2021

2021 Budget Amendments - Ordinance No. 1600 Exhibit "A"

Account Numbers	Account Description	2021 Budget	Budget Amendment	2021 Budget as Amended	Comments
Capital Equipment Fund					
Revenues					
302-0000-308-0000	Beginning Cash	1,879,461	219,900	2,099,361	Beginning cash
Total Capital Equipment Fund Revenues		2,607,061	219,900	2,826,961	
Expenditures					
302-0102-519-6410	Capital Outlays / Police	861,181	66,200	927,381	Early 2022 Order Placeholder - Proposed Additional Fleet Vehicle
302-0102-519-6410	Capital Outlays / Police	927,381	5,077	932,458	Early 2022 Order Placeholder - Replace #415 Police Utility Patrol (Police Department)
302-0102-519-6410	Capital Outlays / Police	932,458	2,736	935,194	Early 2022 Order Placeholder - Replace #422 Police Utility Sergeant (Police Department)
302-0102-519-6410	Capital Outlays / Police	935,194	4,010	939,204	Early 2022 Order Placeholder - Replace #427 Police Utility Sergeant (Police Department)
302-0102-519-6411	Capital Outlays / Public Works Administration	-	36,600	36,600	Early 2022 Order Placeholder - Proposed Additional Fleet Vehicle
302-0102-519-6412	Capital Outlays / Public Works Parks Maintenance	97,475	75,976	173,451	Early 2022 Order Placeholder - Proposed Additional Fleet Vehicle
302-0102-519-6417	Capital Outlays / City Streets	63,500	29,301	92,801	Early 2022 Order - Replace #265 F250 Pickup (Street Department)
Total Capital Equipment Fund Expenditures		2,607,061	219,900	2,826,961	
Water Utility Fund					
Revenues					
401-0000-308-0000	Beginning Cash	490,752	28,091	518,843	
Total Water Utility Fund Revenues		14,803,563	28,091	14,831,654	
Expenditures					
401-3401-534-6001	Capital Outlays / Capital Outlays - Equipment	-	11,765	11,765	Early 2022 Order - Replace #247 F250 Valve Truck (Water Department)
401-3401-534-6001	Capital Outlays / Capital Outlays - Equipment	11,765	16,326	28,091	Early 2022 Order Placeholder - Replace #377 Ford Transit Connect Locate Van (Water Department)
Total Water Utility Fund Expenditures		14,803,563	28,091	14,831,654	
Wastewater Utility Fund					
Revenues					
402-0000-308-0000	Beginning Cash	4,375	45,800	50,175	
Total Wastewater Utility Fund Revenues		19,261,139	45,800	19,306,939	
Expenditures					
402-3501-535-6001	Capital Outlays / Capital Outlays - Equipment	-	45,800	45,800	Early 2022 Order Placeholder - Proposed Additional Fleet Vehicle
Total Wastewater Utility Fund Expenditures		19,261,139	45,800	19,306,939	

Account Numbers	Account Description	2021 Budget	Budget Amendment	2021 Budget as Amended	Comments
Equipment Rental					
Revenues					
501-0000-308-0000	Beginning Cash	149,690	299,520	449,210	Beginning cash
Total Equipment Rental Fund Revenues		3,414,124	299,520	3,713,644	
Expenditures					
501-4801-548-6002	Capital Outlays - Replacement	435,779	41,948	477,727	Early 2022 Order - Replace #247 F250 Valve Truck (Water Department)
501-4801-548-6002	Capital Outlays - Replacement	477,727	31,218	508,945	Early 2022 Order - Replace #265 F250 Pickup (Street Department)
501-4801-548-6002	Capital Outlays - Replacement	508,945	33,360	542,305	Early 2022 Order Placeholder - Replace #377 Ford Transit Connect Locate Van (Water Department)
501-4801-548-6002	Capital Outlays - Replacement	542,305	62,740	605,045	Early 2022 Order Placeholder - Replace #415 Police Utility Patrol (Police Department)
501-4801-548-6002	Capital Outlays - Replacement	605,045	65,764	670,809	Early 2022 Order Placeholder - Replace #422 Police Utility Sergeant (Police Department)
501-4801-548-6002	Capital Outlays - Replacement	670,809	64,490	735,299	Early 2022 Order Placeholder - Replace #427 Police Utility Sergeant (Police Department)
Total Equipment Rental Fund Expenditures		3,414,124	299,520	3,713,644	



LACEY CITY COUNCIL MEETING September 16, 2021

SUBJECT: Board of Park Commissioners Increased Membership

RECOMMENDATION: Motion to increase the number of general members serving on the Board of Park Commissioners.

STAFF CONTACT: Scott Spence, City Manager *SS*
Jen Burbidge, Parks, Culture and Recreation Director *JB*

ORIGINATED BY: City Manager & Parks, Culture and Recreation Department

ATTACHMENTS: 1. [Letter from Park Board](#)
2. [Proposed Ordinance](#)

FISCAL NOTE: NONE

PRIOR REVIEW: The Board of Park Commissioners discussed at their September 1, 2021, meeting and unanimously recommended the increase.

BACKGROUND:

The Board of Park Commissioners provides leadership in the area of Parks, Culture and Recreation. The Board makes recommendations regarding planning, promotion, management, acquisition, construction, development, maintenance, and operation of Lacey's parks, trails, public recreation facilities and cultural and recreational programs.

With the growth that the City of Lacey has experienced, and in preparation for even more growth to come, the board feels that more community representation would be beneficial. In addition, increased board membership would result in more diversity, and more expertise, which would benefit Lacey Parks, Culture and Recreation department planning, projects and programs.

Therefore, the Board recommends increasing the Board of Park Commissioners from five to seven general members.

ADVANTAGES:

1. More community representation
2. More diversity of representation
3. More expertise to assist department planning, projects and programs

DISADVANTAGES:

1. None.

CITY COUNCIL

ANDY RYDER

Mayor

CYNTHIA PRATT

Deputy Mayor

LENNY GREENSTEIN

MICHAEL STEADMAN

CAROLYN COX

ED KUNKEL

MALCOLM MILLER

CITY MANAGER

SCOTT SPENCE



September 2, 2021

Dear Lacey City Council,

The Board of Park Commissioners respectfully requests your consideration of increasing the number of park board members from five to seven.

With the growth that the City of Lacey has experienced, and in preparation for even more growth to come, the board feels that more community representation would be beneficial. In addition, increased board membership would result in more diversity, and more expertise which would benefit Lacey Parks, Culture and Recreation department planning, projects and programs.

The Board of Park Commissioners discussed increasing the board at their September 1, 2021 meeting and unanimously recommend it to City Council. Thank you for your consideration.

Sincerely,

Sarah Daniels

Sarah Daniels, Chair
Board of Park Commissioners
City of Lacey

ORDINANCE NO. 1601

CITY OF LACEY

AN ORDINANCE OF THE CITY OF LACEY, WASHINGTON RELATED TO THE BOARD OF PARK COMMISSIONERS, AMENDING SECTION 2.44.020 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON as follows:

Section 1. Section 2.44.020 of the Lacey Municipal Code is hereby amended to read as follows:

Membership--Terms.

A. The board shall consist of ~~five~~seven general commissioners and one youth commissioner. Commissioners shall be appointed by the mayor, which appointment shall be subject to confirmation by the city council. At least ~~four~~five of the general commissioners shall be residents of the city of Lacey. The ~~fifth~~remaining two general commissioners may either be ~~a~~ residents of the city of Lacey or reside in Lacey's urban growth management area. However, if a position to be held by a city resident has been vacant for more than three months, a ~~second~~third commissioner who resides in Lacey's urban growth management area may be appointed. Terms for general members shall be for three years. An appointment to fill a vacancy occurring otherwise than through the expiration of a term shall be for the remainder of the unexpired term. General membership on the commission shall be limited to two consecutive terms; provided, however, if there are no applicants for a vacant position one month prior to the expiration of a term, the incumbent may be reappointed to an additional three-year term.

B. The youth commissioner shall be at least sixteen years of age (when appointed), enrolled as a junior or senior in the North Thurston public schools, homeschooled or enrolled in a private school, and be a resident of the city of Lacey or reside in Lacey's urban growth area. The youth commissioner shall be appointed to serve for a term of one year. The incumbent youth commissioner may be reappointed to an additional one-year term. Except as outlined in this section, the youth commissioner shall have the same rights and responsibilities of the general commissioners.

C. A majority of the general members of the board of park commissioners shall constitute a quorum for the transaction of business. The youth commissioners shall not be included in the count to constitute a quorum. Any action taken by a majority of those present when those present constitute a quorum, at any regular or special meeting of the board of park commissioners, shall be deemed and taken as the action of the commission.

D. The commission members shall not receive any salary or other compensation for services rendered on the commission, but necessary expenses actually incurred and within the budget as set by the annual budget ordinance shall be paid.

E. General or youth members may be removed from the parks board prior to the expiration of their term of office by the mayor with approval of the city council, pursuant to the city of Lacey policy procedure manual and boards and commissions standards, protocols, and ground rules handbook.

Section 2. This Ordinance shall take effect five (5) days after its passage and publication as provided by law.

Section 3. SEVERABILITY. If any section, sentence, clause or phrase of this ordinance should be held to be invalid by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

Section 4. CORRECTIONS. The City Clerk and the codifiers of this ordinance are authorized to make corrections to this ordinance including, but not limited to, the corrections of scrivener’s/clerical errors, references, ordinance numbering, section/subsection number and any references thereto.

Section 5. The Summary Attached is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, this
September 16, 2021.

CITY COUNCIL

BY: _____

Mayor

Attest:

Approved as to form:

City Clerk

City Attorney

SUMMARY FOR PUBLIC ATION

ORDINANCE NO 1601

CITY OF LACEY

The City Council of Lacey, Washington passed on September 16, 2021, Ordinance No. 1601, entitled “AN ORDINANCE OF THE CITY OF LACEY, WASHINGTON RELATED TO THE BOARD OF PARK COMMISSIONERS, AMENDING SECTION 2.44.020 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION.”

The main points of the Ordinance are described as follows:

1. The Ordinance amends section 2.44.020 of the Lacey Municipal Code related to the number of Board of Park Commissioners.
2. The Ordinance approves this summary for Publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: September 20, 2021.